GOLDEN STAR

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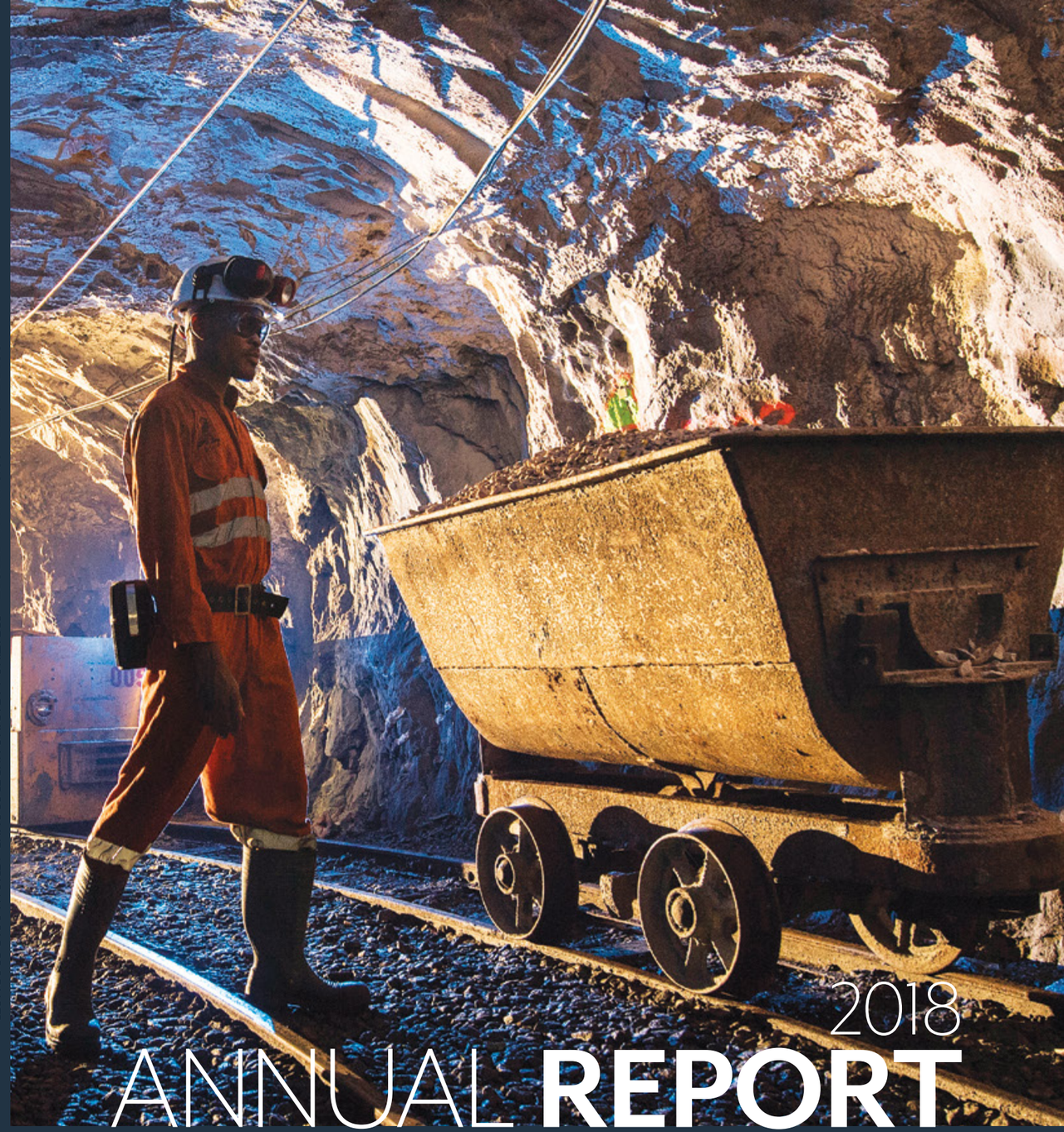
GOLDEN STAR 2018 ANNUAL REPORT CREATING A LEADING UNDERGROUND AFRICAN GOLD PRODUCER



2018 ANNUAL REPORT

CREATING A LEADING UNDERGROUND AFRICAN GOLD PRODUCER

GOLDEN STAR

COMPANY PROFILE

Golden Star is a gold mining company with its head office in Canada and two operating mines in Ghana, West Africa. The Wassa underground mine began commercial production in 2017, and the Prestea underground mine began commercial production in 2018. Both are high grade, low cost underground mines, located on Ghana's prolific Ashanti Gold Belt. Our focus is on continuing to develop our mines to increase operating margins and cash flow.

Golden Star is listed on the Toronto Stock Exchange (TSX: GSC), the New York Stock Exchange (NYSE American: GSS), and the Ghanaian Stock Exchange (GSE: GSR).

For more information, visit www.gsr.com.

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GOLDEN STAR BY THE NUMBERS

~4.7 million
ounces – Golden Star's production history

224,784
ounces produced in 2018 (combined: 149,697 at Wassa, 75,087 at Prestea)

$847
per ounce – cash operating costs* for 2018

220,000-240,000
ounces – projected gold production in 2019

$620-$680
per ounce – projected cash operating costs* for 2019

* See "Non-GAAP Financial Measures" in the MD&A
All U.S. dollar unless otherwise noted.

LETTER FROM THE CHAIR

> "For Golden Star, 2018 was a year of successful transitions. Operationally we became a fully underground mining company with Wassa ramping up into an excellent producing mine. Prestea, however, still has a way to go as various technical issues are being resolved."

For Golden Star, 2018 was a year of successful transitions. Operationally we became a fully underground mining company with Wassa ramping up into an excellent producing mine. Prestea however still has a way to go as various technical issues are being resolved. From a financial and governance standpoint, we transformed our balance sheet with a strategic investment from La Mancha, who are now a 30% partner. By choosing to partner with Golden Star, La Mancha signalled their confidence in our management and direction, in the strength of our assets, and in the long term value that we represent. This investment will enable us to accelerate our exploration and expansion programs at Wassa and Prestea.

Our key value is the health and safety of our people. Following the tragic events of 2017, we commissioned a comprehensive external safety audit, and initiated a series of programs to improve our safety culture and inspire our employees. In 2018, almost all our leaders at both operations took leadership training, and 150 employees participated in safety standards workshops. I am pleased to report a significant reduction in injuries—one Lost Time Injury (LTI) overall occurred in 2018. In addition we closely track lead and lag metrics to assess our safety performance. For instance, our 2018 reporting of near misses increased by 70% over the previous year, and our All Injury Frequency Rate per million hours was 3.82 compared to 5.28 for 2017. For 2019 we will continue to maintain our focus on strong leadership, training and developing a safety-first culture in our mines, and ensuring that every employee goes home safely every day.

Our success in corporate social responsibility earned us international recognition, with the 2018 Award for Environmental and Social Responsibility from the Prospectors and Developers Association of Canada (PDAC). For us, this is meaningful recognition for our commitment to responsible mining, coming from our industry peers. In Ghana, we also won accolades at the 2018 Ghana Mining Industry Awards—perhaps the most notable was for Best Performer in Corporate Social Investment for our Golden Star Oil Palm Plantation. We are especially proud to note that Local Companies in Mining Services, one of the companies whose creation was facilitated and supported by Golden Star, was recognized in the category of Best Performer in Mine Supply and Services.

Looking to 2019, our exploration and expansion initiatives will continue. We expect to invest an additional $13.4 million in exploration to replace and expand our gold reserves and potentially extend the life of both our mines.

I would like to take this opportunity to express my gratitude to Sam and the Golden Star team, whose commitment and hard work has brought us through a time of change. I would like to welcome two new members to the Golden Star Board: Andrew Wray, La Mancha's CEO, and Graham Crew, also of La Mancha. Andrew and Graham bring invaluable experience and insight to the board, and the Company is stronger as a result. Daniel Owiredu, Golden Star's EVP and COO, is stepping down from the board, and Naguib Sawiris, chairman of La Mancha, will be filling La Mancha's third board seat. We thank Daniel for his contribution to the board and look forward to continuing to work with him in his managerial role, and are excited to have Mr. Sawiris bring his entrepreneurial drive and knowledge of Africa to the table.

Tim Baker
Chair

LETTER FROM THE CEO

> "2018 was the year in which Golden Star became an underground mining company, and a leading underground miner in West Africa. It was, naturally, a year of adjustments, and in some cases streamlining. While we did not meet guidance, we are confident that the operational challenges that arose have been overcome. "

With our two underground mines now in commercial production, our focus is on operational excellence. Over the course of the year, we continued to ramp up production at both mines. Our strategy is to target cash flow generation in order to strengthen our financial position, which in turn should drive share price appreciation.

At Wassa, where the underground mining complex has been in commercial production since January 2017, we continue to exceed production expectations. Wassa outperformed its expected mining rate of 2,800 tonnes per day (tpd) by 4%, achieving 2,900 tpd on average over the year. The rate increased steadily, reaching an average of 3,400 tpd in the fourth quarter of 2018. I fully expect to see Wassa mining 4,000 tpd before the end of 2019. With infrastructure upgrades in progress, and a continuing upward trend in productivity, I believe that Wassa is well on its way to becoming a world-class asset.

Since the startup of Prestea Underground, we have faced various production challenges throughout 2018. We have implemented a number of improvement programs, including changes to our mine leadership and rightsizing activities. In 2019 we are continuing with these initiatives and we are expanding our understanding of the ore body through further drilling, however production improvement still remains slower than expected.

In 2018, we produced 224,784 ounces of gold, with 149,697 ounces from Wassa and 75,087 from Prestea. Our cash operating costs were $847 per once, and our all-in sustaining costs per ounce was $1,107. In 2019, we expect to produce 220,000- 240,000 ounces of gold at a cash operating cost per ounce of $620-$680, and an all-in sustaining costs per ounce of $875-$955*.

At a corporate level, we continued to strengthen our financial position. Our strategic partnership with La Mancha, which was completed in October, injected approximately $125.7 million in cash, which gives us the financial strength and flexibility to enable exploration and expansion in our highly prospective land packages.

Beginning in 2017 and continuing through 2018, we renewed active exploration on both our Wassa and Prestea assets. We strongly believe there is significant untapped potential in our properties – and early indications from the Father Brown Complex, an existing ore body near the Wassa mine, are encouraging. Both our processing plants have under-utilized capacity, and a second high grade ore body such as Father Brown could feed the existing Wassa processing plant, and enjoy synergies and efficiencies with Wassa.

As Golden Star takes its place among West Africa's leading gold miners, I would like to extend my gratitude to our host communities, local suppliers, the Government of Ghana, and all our stakeholders in Ghana. We are committed, as always, to being a responsible corporate citizen. For nearly two decades, we have had a presence in Ghana and we are proud of the contributions we have made – and continue to make – to the economic growth of the communities, region and country in which we work.

I also thank the people of Golden Star in Canada and Ghana and the Golden Star Board for their valuable guidance and support as we took the strategic decisions along our journey to becoming a high grade, high margin, underground gold producer. I am more confident than ever in our future, and in the tremendous potential that Golden Star represents.

Samuel T. Coetzer
President and CEO

* See "Non-GAAP Financial Measures" in the MD&A

GOLDEN STAR **OPERATIONS**

KEY FACTS ON GHANA

A **stable constitutional democracy.** Its most recent parliamentary and presidential elections were in December 2016.

The **second largest gold producer** in Africa (after South Africa).

A **respected mining jurisdiction** with stable and well legislated royalty and tax laws.

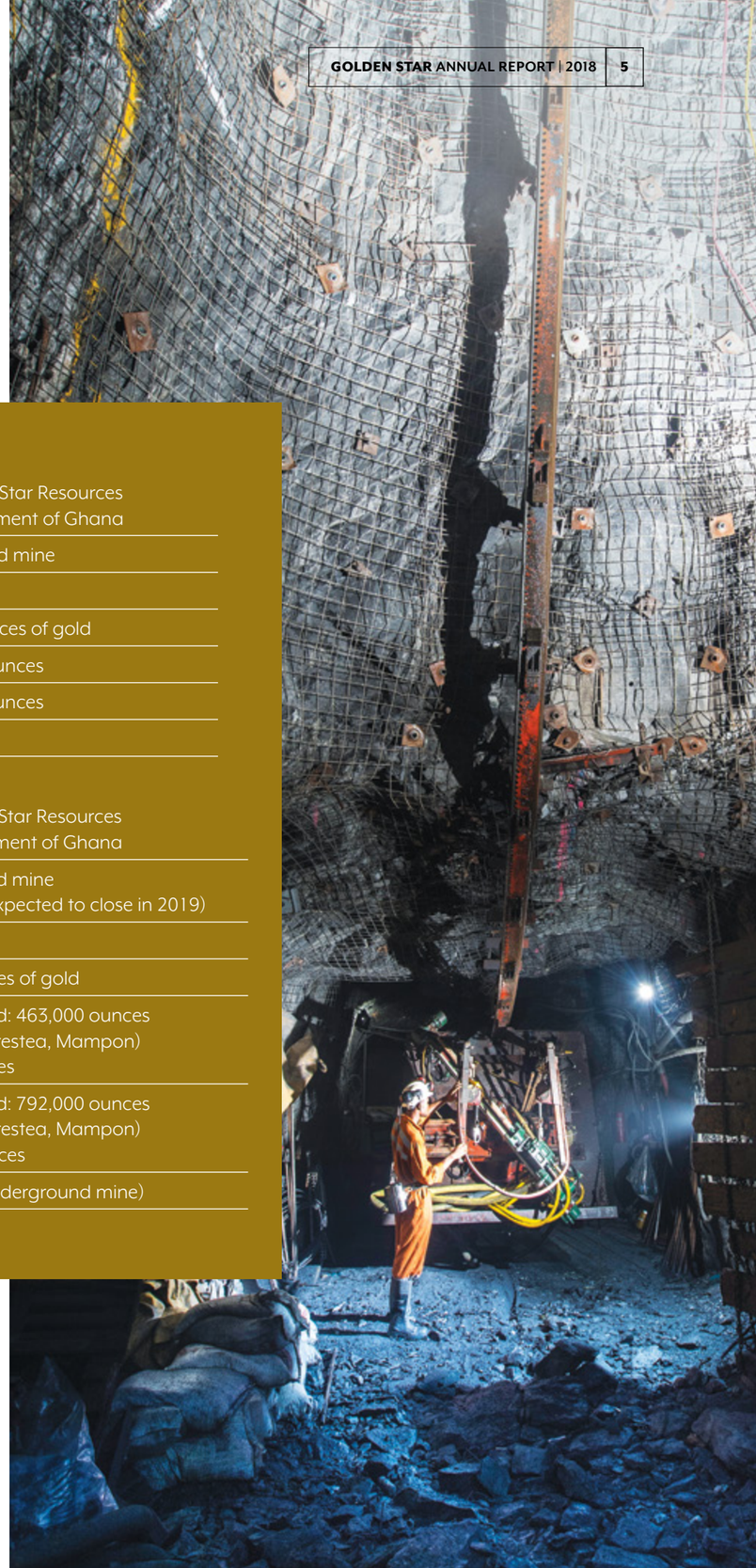
A **historical gold-mining heartland,** with four prolific greenstone belts that have historically yielded more than 120 million ounces of gold.

WASSA GOLD MINE

Ownership	90% Golden Star Resources 10% Government of Ghana
Type	Underground mine
Processing capacity	2.7 Mtpa
2018 Production	149,697 ounces of gold
P&P mineral reserves	1.2 million ounces
M&I mineral reserves	3.3 million ounces
Remaining mine life	5 years

PRESTEA GOLD MINE

Ownership	90% Golden Star Resources 10% Government of Ghana
Type	Underground mine Open pits (expected to close in 2019)
Processing capacity	1.5 Mtpa
2018 Production	75,087 ounces of gold
P&P mineral reserves	Underground: 463,000 ounces Open pits (Prestea, Mampon) 35,000 ounces
M&I mineral reserves	Underground: 792,000 ounces Open pits (Prestea, Mampon) 141,000 ounces
Remaining mine life	5.5 years (underground mine)



GOLDEN STAR OPERATIONS – continued

WASSA COMPLEX

The Wassa mining complex is located approximately 40 kilometres from Prestea. Golden Star has been producing gold there since 2005, first from a series of open pit mines, then from the Wassa Main Pit (a consolidation of smaller open pits). In January 2017, the Wassa Underground Gold Mine began commercial production, and in the third quarter of 2017, the Wassa Main Pit was put on hold. In January 2018, the Wassa complex became an underground-only operation.

The Wassa deposit is hosted by quartz carbonite veins with pyrite. It is one of the earliest gold mineralizing events in West Africa and has been affected by at least four deformational episodes. Exploration in 2017 confirmed the Wassa deposit is open to the south. Further exploration in 2018 indicated the potential for the Father Brown deposit to be a second source of high grade ore for the Wassa plant.

Full year 2019 production for the Wassa complex is expected to be 170,000-180,000 ounces of gold at cash operating costs of $560-$600 per ounce*.

PRESTEA COMPLEX

At the Prestea mining complex in south-western Ghana, we successfully transitioned from a mixed open pit and underground operation to an underground-only mine. The Prestea Underground mine began commercial production in early 2018, and by early 2019, the open pits had closed. Prestea Underground is one of the highest grade mines in West Africa. First mined in the late 1800s, the West Reef ore body is hosted within a ribbon-banded quartz vein associated with abundant free gold, pyrite and minor arsenopyrite occurring as a halo, dominantly in the hanging wall of the vein. We believe there is significant exploration potential to expand production and extend the mine's life.

Full-year 2019 production for the Prestea complex is expected to be 50,000-60,000 ounces at cash operating costs of $840-$1,000 per ounce*.

For more information on the Company, please visit **www.gsr.com**.

* See "non-GAAP Financial Measures" in the MD&A

CORPORATE **SOCIAL RESPONSIBILITY**

Golden Star is committed to being a part of the community in which we operate. Our mission is the responsible and profitable production of gold. We value respect, honesty, teamwork, accountability and open communication in all relationships and we are committed to safety, employee wellbeing and protection of the environment.

WHAT DOES CORPORATE RESPONSIBILITY MEAN TO US?

Our objective is to maintain a socially responsible business that brings economic prosperity while ensuring responsible environmental stewardship and ethical business practice.

What this means in practice is that we continue to look for ways that our activities can be leveraged or modified to enhance and retain value for our host communities:

- Mining synergies – can what we are doing help others?
- Partnerships – can we leverage partnerships to benefit our host communities?
- Strengthening systems – can we facilitate strengthening of national systems and capacity?
- Multiple and sequential land use – how can we minimize displacement and accommodate other land uses in parallel with mining? By adopting Sustainable Development Goals, our activities are further focused on areas of greatest need, for greatest impact.

Our commitment to being a responsible corporate citizen was recognized with the Prospectors and Developers Association of Canada 2018 *Award for Environmental and Social Responsibility*, and several awards at the 2018 Ghana Mining Industry Awards, including the *Best Performer in Corporate Social Investment* award.

Integrating the Sustainable Development Goals of the UN's Global Compact

Golden Star has been a signatory to the United Nations Global Compact for over a decade, and we feel its Sustainable Development Goals (SDGs) are a logical driver for our corporate responsibility strategy. The following achievements demonstrate our progress in integrating the SDGs into our business.

Goal 1: No poverty

GOLDEN STAR OIL PALM PLANTATION

At the 2018 Ghana Mining Industry Awards, Golden Star was named *Best Performer in Corporate Social Investment* for the second year in a row. This year's award recognized our success with the Golden Star Oil Palm Plantation, our multi award-winning, social enterprise initiative based on the smallholder concept. To reduce poverty through employment generation, and to promote wealth creation through sustainable agri-business, we have established 1,133 hectares of sustainable plantations, in place of former, low-yield subsistence farms. To date, we have directed over $6.6 million to the project. The Golden Star Oil Palm Plantation now employs over 700 farmers and farm workers – more direct employees than in either of our mines. In 2018, the Golden Star Oil Palm Plantation enhanced the project with a contribution-based micro-credit scheme, and began a farm succession planning program to improve the project's sustainability.

2018 PDAC AWARD FOR **ENVIRONMENTAL AND SOCIAL RESPONSIBILITY**

2018 GHANA MINING AWARDS **BEST PERFORMER IN CORPORATE SOCIAL INVESTMENT**

CORPORATE SOCIAL RESPONSIBILITY – continued

Goal 3: Good health and wellbeing

WORKPLACE HEALTH AND SAFETY

At Golden Star, we value and are committed to workplace safety and employee wellbeing, and we believe that job-related injuries and illnesses are unacceptable. In 2018, we began a major program to enhance our safety culture. More than 94% of our leaders undertook a program of leadership empowerment and development, and a further 150 employees participated in workshops to develop safety standards. In 2018 one employee suffered injuries that resulted in lost time. We are committed to ensuring that everyone goes home safely every day, and we will continue our efforts for culture transformation in coming years.

MALARIA PREVENTION

In Ghana, the single most prevalent cause of disease is malaria. For the last ten years, we have implemented a malaria prevention program, and our malaria rates are now almost 90% lower than in our host communities. At the end of 2018, malaria represented less than 6% of clinic attendance – a 36% reduction over 2017 – and lost time to malaria illness was reduced by 12%.

In 2018, we shared over 5,000 mosquito nets with our families and host communities. Golden Star has been recognized as a Malaria Safe Organization by Johns Hopkins Bloomberg School of Public Health.

COMMUNICABLE DISEASES

Many diseases that have been largely eradicated in first world countries remain prevalent in the developing world. At Golden Star, we have undertaken significant programs of sensitization that culminated in two major health initiatives in 2018. A program of testing for tuberculosis in our Prestea workforce was completed for the second year in a row. At Wassa, a program of Hepatitis B screening and vaccination benefitted almost 900 participants. These were major milestones, in the context of cultural sensitivity associated with these diseases.

Goal 5: Gender equality

Golden Star promotes women throughout our business. Females represent 13% of our employees, and 8% of senior staff positions within our mining business. Ms. Gifty Gandhi, an underground shift boss at our Prestea mine was recognized at the 2018 Ghana Mining Industry Awards in the category of *Female Miner of the Year*.

In 2017, we initiated studies of wage parity, which continued in 2018. To further advance our progress in the UN Global Compact goals, we have committed in 2019 to developing a Diversity Policy to drive further advancements in this important arena.

Goal 8: Decent work and economic growth

We are committed to developing long-term alternative economic and capacity-building projects to provide enduring social and economic benefits from our operations.

LOCAL COMPANIES IN MINING SERVICES

At this year's Ghana Mining Industry Awards, a company whose formation was facilitated by Golden Star, Local Companies in Mining Services (LOCOMS), was recognized in the category of *Best Performer in Mine Supplies and Services* provides haulage, equipment hire, catering and waste management services. Since their inception, they have earned more than US$27 million in company contracts – revenues that might otherwise have gone to national or international providers. They have been invited to bid on international contracts, and individual companies have leveraged their positions to expand into new arenas. They are now a business partner and an influential community-based advocate for Golden Star in our host communities – and a genuine model of sustainability.

LOCAL CONTENT AND PROCUREMENT PARTICIPATION

Over 2018, we continued to focus on employing locals, and on supporting local sources for services and supplies. 98% of our employees are Ghanaian, and 51% are from local communities. 74% of our contractors are local. For these reasons, we were recognized at the 2018 Ghana Mining Industry Awards in the category of *Best Performer in Local Content*.

In recent years, we have provided employment skills training for over 600 youth, including on-the-job instruction, trade tools and participation allowances. These are meaningful opportunities for enhanced social and financial inclusion. In a milestone evolution of our programs, we recently undertook a pilot youth 'learning and earning' program, in which participants successfully constructed a second-storey classroom block. We are now exploring options for further sustainability.

SUPPORT FOR SMALL AND MICRO ENTERPRISES

Following a local government study, Golden Star provided support to 432 Small and Micro Enterprises (SMEs) in sixteen associations. This was the first initiative of its type ever attempted among our host communities. More than 400 items of modern, business-related machinery and equipment were donated, resulting in increased productivity and improved incomes. Enterprises in agriculture, tailoring, hairdressing, food supply, automotive, wood and metal/aluminum industries benefitted from our support. In addition, the 31 members of the Association of Persons with Disability were supported with equipment they can rent for income-generation purposes. As part of the initiative, 60 participants received support for business capacity building and networking.

Goal 15: Life on land

Golden Star is committed to meeting or surpassing regulatory requirements in all our activities, while safeguarding the local environment for our stakeholder communities and future generations. To demonstrate a high level of compliance, we continue to maintain extensive programs of environmental monitoring.

NEXT LAND USE

Over the past year, we made major strides in converting two former tailings storage facilities to productive oil palm plantation. Over 100 hectares were planted. In the future, the planted areas will be integrated into the Golden Star Oil Palm Plantation, and plots will be allocated to small-holder farmers. Following the success of a fish farming initiative at Benso pit lake, in 2018 we began preparations for a pilot-scale fish farming project in a larger pit lake at our former Buesichem operations.

Goal 17: Partnerships for the goals

Golden Star is committed to being a part of the communities in which we operate, and to building strong relationships based on mutual trust and recognition of each other's rights.

PRESTEA RECREATIONAL PARK – PRESTEA DREAMS BIG

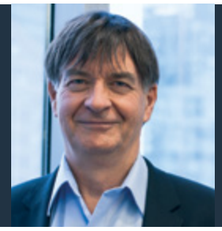
Less than three years ago, we began transforming a former unauthorized community landfill into Prestea's first multi-purpose recreational park. During 2018, the project made significant advances, with the construction of two multi-purpose courts, a training facility and change-houses. To commemorate the opening of the park, Golden Star partnered with Giants of Africa (a youth basketball program in Africa, created by the general manager of the Toronto Raptors) to host a basketball clinic with NBA scouts, for Ghanaian youth basketball players. The Giants of Africa use basketball to educate and enrich the lives of African youth, and to urge African youth to Dream Big.

MAINTENANCE SUSTAINABILITY AFRICA (MSA)

MSA is the youth-based NGO that was formed in Prestea in support of our recreational park efforts. In 2017, MSA won a silver medal for Best Project in the UNESCO Global Action Programme on Education for Sustainable Development. Now we are thrilled to announce that one of their co-founders, Mr. Godfred Turkson, was awarded an Ashoka Fellowship (www.ashoka.org).

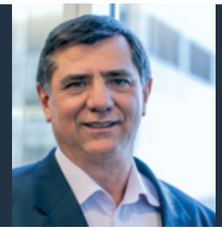
For more information on our corporate social responsibility activities, visit us on Facebook, LinkedIn and Twitter, or view our corporate social responsibility blog (www.goldenstarinthecommunity.blogspot.com).

MEMBERS OF **THE BOARD**



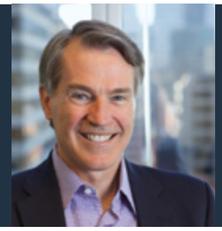
TIM BAKER
Chairman

Tim was appointed Chairman of the Board in January 2013. Tim most recently served as the COO and EVP of Kinross Gold Corporation. He is a geologist with over 30 years of global project development, operational, and geological experience, including in Chile, Tanzania, the United States, Canada, Venezuela, Kenya and Liberia. Tim is also a Director of Antofagasta PLC, Sherritt International and Alio Gold.



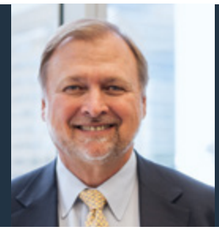
SAM COETZER
President and Chief Executive Officer, Director

Sam was appointed President and CEO of Golden Star in January 2013. He joined the Company in December 2012 and previously served as EVP and COO, as well as a Director. Sam is a mining engineer with over 26 years of international mining experience with Kinross, Xstrata, Xstrata Coal, and Placer Dome. Sam was the Senior Vice President at Kinross responsible for the South Americas in 2010 prior to joining Golden Star.



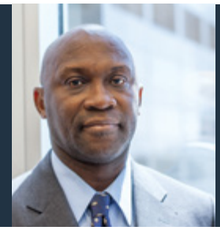
GIL CLAUSEN
Director

Mr Clausen is currently President, Chief Executive Officer and director of Copper Mountain Mining Corporation. Prior to this, Mr Clausen was President, CEO and director of Brio Gold Inc. With over 30 years of executive, financial, developmental and operational industry experience, Gil has been responsible for executing growth strategies for mining companies on a range of continents and across a variety of commodities. He is a Professional Engineer and holds a Bachelor's degree and a Master's degree, each in Mining Engineering from Queens University, Canada. He is also a graduate of a Queen's University executive business program.



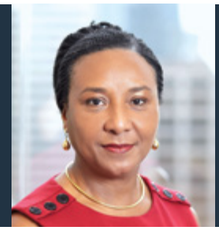
CRAIG NELSEN
Director

Craig is a geologist with over 35 years' experience in the mining industry. Craig was Founder and CEO of Avanti Mining. Formerly, he was EVP, Exploration of Gold Fields Limited; Founder, CEO and Chairman of Metallica Resources (now New Gold), and has also held a variety of strategic positions at Lac Minerals Ltd. Craig holds a M.S. from the University of New Mexico and a B.A. from the University of Montana, both in geology.



DANIEL OWIREDU
Executive Vice President and Chief Operating Officer, Director

Daniel joined Golden Star in 2006 as VP, Operations and was appointed COO in January 2013, joining the Board in November 2014. He has over 30 years' experience in Ghana and West Africa. Most recently, Daniel was Deputy COO Africa for AngloGold Ashanti, managing the construction and operation of the Bibiani mine as well as the operation of several other mines. Daniel is the Chairman of the GCB Bank and was formerly Ghana's President of the Chamber of Mines.



HON. MONA QUARTEY
Director

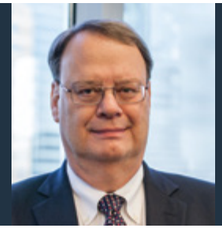
Mona has 28 years of experience in risk management, treasury and corporate finance. Based in Ghana, she is Managing Partner of BVM Advisory Services, which acts as a consultant to government and private sector bodies. From July 2014 to January 2017 she served as Deputy Finance Minister for Ghana's Ministry of Finance and prior to that she was Group Treasurer for Ashanti Goldfields Company Limited. Mona is owner and Director of Green Pastures and Still Waters Limited and Director of BVM Advisory Services Limited.

GRAHAM CREW
Director

Graham has over 25 years of operational, technical and corporate experience in the mining industry. A mining engineer by background, he is General Manager Mining for Barminco Limited, a global underground mining services provider, and he previously held the position of General Manager of the Bulyanhulu mine for Acacia Mining. Prior to that, he was the Operations Manager for La Mancha's Australian operations for five years and he has held a number of other technical positions for mining companies in various geographies. He has a strong track record of transforming operations through development of vision and strategy and disciplined implementation and he has experience of construction projects, due diligence, project evaluation and project financing.

ANU DHIR
Director

Anu Dhir is a co-founder and executive of ZinQ Mining, a private base metals and precious metals royalty company that focuses on the Latin America region. She is also the managing director of Miniqs Limited, a private group primarily interested in developing resource projects. Prior to this, Anu was Vice President, Corporate Development and Company Secretary at Katanga Mining Limited. She is a non-executive director of Taseko Mines Limited and Trillium Health Partners. Anu is a graduate of the General Management Program (GMP) at Harvard Business School, she holds a law degree (Juris Doctor) from Quinnipiac University, Connecticut, United States and a BA from the University of Toronto.



ROBERT DOYLE
Director

Robert Doyle has more than 30 years of mining; from international resource exploration, development, and fundraising, to production. Robert was Founder, and Chief Executive Officer of Medoro Resources, now known as Gran Colombia Gold Corp. Prior to this, Robert served as Executive Vice President and Chief Financial Officer of Pacific Stratus Energy, Chief Financial Officer of Coalcorp Mining, and Chief Financial Officer of Bolivar Gold Corp. Robert formerly served as a director of Gran Colombia Gold Corp and as a director and member of the Audit and Technical Committees of Detour Gold Corporation. Robert is a Chartered Accountant and a Chartered Director.

ANDREW WRAY
Director

Andrew is the Chief Executive Officer of La Mancha Holding. He was most recently Chief Financial Officer of Acacia Mining and has nearly ten years of direct mining experience. Prior to that, Andrew worked with the Corporate Finance team at JP Morgan Cazenove. He has over 15 years of experience in advising companies in capital-raising activities and other strategic objectives. Prior to joining JP Morgan, Andrew worked for the Kuwait Investment Office in London, having dealt with its portfolio of investments in Spain. Andrew holds an Honours Degree from University College London.

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MANAGEMENT'S DISCUSSION AND ANALYSIS

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

The following management's discussion and analysis provides information that management believes is relevant to an assessment and understanding of the consolidated financial condition and results of operations of Golden Star Resources Ltd. and its subsidiaries ("Golden Star" or "the Company" or "we" or "our"). This Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A") should be read in conjunction with the Company's audited consolidated financial statements and related notes for the year ended December 31, 2018, which are prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB"). This MD&A includes information available to, and is dated, February 19, 2019. 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: production, cash operating costs, and all-in sustaining costs estimates and guidance for 2019 on a consolidated basis; sustaining and development capital expenditure estimates and guidance for 2019 on a consolidated basis; the Company's achievement of 2019 consolidated guidance; the range of consolidated gold production for 2019; planned exploration and drilling at Wassa and Prestea; the publication of a Preliminary Economic Assessment for Wassa Underground in the second half of 2019; improvements in raise development, long hole drilling and blasting productivities at Prestea Underground in 2019; the release of further drilling results and an updated Mineral Resource Estimate in the first quarter of 2019; the anticipation that Wassa's Inferred Mineral Resources will be increased by the results of drilling results announced December 17, 2018; the drilling focus on Father Brown and the Wassa Southern Extension in 2019 in order to accelerate organic growth; the drilling of the down plunge extension of West Reef with the objective of resource expansion of the deposit; drilling at Father Brown to test its structures at depth on 100-metre spaced sections; the objective of increasing the annual production rate at Prestea and extending the mine life; the intention to construct a paste backfill plant at Wassa, with the remainder of the capital budget at Wassa intended to include provisions for decline and ore drive development and purchasing of additional mining equipment; the objective at Father Brown of developing a standalone underground operation with a production rate of 1,500 tpd; the continued sourcing of ore from the open pits close to Prestea in the first quarter of 2019; the potential for Father Brown to be a second high grade ore supply for the Wassa processing plant; the Company's debt repayment obligations for 2019; the settlement of vested performance share units; the ability of the Company to generate operating margins; Golden Star's ability to successfully pursue organic or external growth; the sufficiency of cash available to support the Company's operations and mandatory expenditures for the next twelve months; the timing and use of proceeds of the La Mancha private placement and the ability of the Company to unlock organic growth opportunities and/or participate in the consolidation of the African gold sector.

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 and 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), currency fluctuations, the speculative nature of gold exploration, the global economic climate, 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;

MANAGEMENT'S DISCUSSION AND ANALYSIS – continued

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 favourable terms or at all; mining plant or equipment breakdowns or failures; an inability to obtain products or services for operations or mine development from vendors and suppliers on reasonable terms, including pricing, or at all; 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, 2017. Additional and/or updated risk factors, if applicable, will be included in our annual information form for the year ended December 31, 2018, which will be filed on SEDAR at www.sedar.com. 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, and 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 are provided for the purpose of providing information about management's current expectations and plans and allowing 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 Dr. Martin Raffield, Senior Vice President, Technical Services for Golden Star, who is a "qualified person" as defined by National Instrument 43-101 – Standards of Disclosure for Mineral Projects ("NI 43-101"), and by S. Mitchel Wasel, BSc Geology, who is a Qualified Person pursuant to NI 43-101. Mr. Wasel is Vice President Exploration for Golden Star and an active member of the Australasian Institute of Mining and Metallurgy. All mineral reserves and mineral resources have been calculated in accordance with the standards of the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") and in compliance with the requirements of NI 43-101. All mineral resources are reported inclusive of mineral reserves. 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 mineral properties mentioned in this MD&A that are considered to be material mineral properties of the Company are contained in Golden Star's Annual Information Form for the year ended December 31, 2017 and the following current technical reports for those properties available at www.sedar.com: (i) Wassa – "NI 43-101 Technical Report on feasibility study of the Wassa open pit mine and underground project in Ghana" effective date December 31, 2014; and (ii) Prestea Underground – "NI 43-101 Technical Report on Resources and Reserves, Golden Star Resources, Bogoso/Prestea Gold Mine, Ghana" effective date December 31, 2017.

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". In accordance with 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. You 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, you 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, you 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.

OVERVIEW OF GOLDEN STAR

Golden Star is an established, African-focused gold producer that holds a 90% interest in two producing gold mines in Ghana.

The Wassa Complex ("Wassa") transformed into an underground-only operation in January 2017. The Prestea Complex ("Prestea") comprises the Prestea Open Pits and the Prestea Underground Mine ("Prestea Underground") and is planned to transform into an underground-only operation during the first quarter of 2019. The Wassa Underground Mine ("Wassa Underground") achieved commercial production on January 1, 2017, and Prestea Underground achieved commercial production on February 1, 2018.

Golden Star's objective is to grow into a best-in-class, mid-tier gold producer. We aim to expand the Company and its production profile through the exploration and development of our existing mines, particularly Wassa, and through the acquisition of additional mines.

As the winner of the Prospectors & Developers Association of Canada ("PDAC") 2018 Environmental and Social Responsibility Award, we are committed to leaving a positive and sustainable legacy in the locations where we operate.

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.

SUMMARY OF OPERATING AND FINANCIAL RESULTS

		For the three months ended December 31,		For the years ended December 31,	
		2018	2017	2018	2017
OPERATING SUMMARY					
Wassa gold sold	oz	37,171	41,627	149,568	137,142
Prestea gold sold	oz	11,230	29,581	75,411	130,193
Total gold sold	oz	48,401	71,208	224,979	267,335
Wassa gold produced	oz	37,562	42,001	149,697	137,234
Prestea gold produced	oz	11,284	29,768	75,087	130,331
Total gold produced	oz	48,846	71,769	224,784	267,565
Average realized gold price[1]	$/oz	1,185	1,237	1,225	1,219
Cost of sales per ounce – Consolidated[2]	$/oz	1,351	1,111	1,156	998
Cost of sales per ounce – Wassa[2]	$/oz	836	1,096	898	1,153
Cost of sales per ounce – Prestea[2]	$/oz	3,054	1,137	1,681	823
Cash operating cost per ounce – Consolidated[2]	$/oz	905	812	847	763
Cash operating cost per ounce – Wassa[2]	$/oz	614	775	629	880
Cash operating cost per ounce – Prestea[2]	$/oz	1,867	875	1,292	632
All-in sustaining cost per ounce – Consolidated[2]	$/oz	1,218	1,002	1,107	944

1 Average realized gold price per ounce excludes pre-commercial production ounces sold at Prestea Underground in 2018 and 2017.

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 before depreciation and amortization.

MANAGEMENT'S DISCUSSION AND ANALYSIS – continued

SUMMARY OF OPERATING AND FINANCIAL RESULTS

		For the three months ended December 31,		For the years ended December 31,	
		2018	2017[3]	2018	2017[3]
FINANCIAL SUMMARY					
Gold revenues	$'000	57,339	81,845	273,017	315,497
Cost of sales excluding depreciation and amortization	$'000	57,565	66,401	223,729	226,482
Depreciation and amortization	$'000	7,824	7,095	33,939	31,792
Mine operating (loss)/margin	$'000	(8,050)	8,349	15,349	57,223
General and administrative expense	$'000	2,244	7,881	16,428	25,090
(Gain)/loss on fair value of financial instruments, net	$'000	(3,274)	1,902	(6,786)	(2,057)
Net (loss)/income attributable to Golden Star shareholders	$'000	(9,318)	12,601	(18,123)	38,771
Adjusted net (loss)/income attributable to Golden Star shareholders[1]	$'000	(5,211)	10,701	(1,916)	41,642
(Loss)/income per share attributable to Golden Star shareholders – basic	$/share	(0.09)	0.17	(0.21)	0.52
(Loss)/income per share attributable to Golden Star shareholders – diluted	$/share	(0.09)	0.16	(0.21)	0.48
Adjusted (loss)/income per share attributable to Golden Star shareholders – basic[1]	$/share	(0.05)	0.14	(0.02)	0.56
Cash (used)/provided by operations	$'000	(24,676)	10,939	(7,555)	55,176
Cash (used)/provided by operations before working capital changes[2]	$'000	(9,416)	6,760	9,617	62,624
Cash (used)/provided by operations per share – basic	$/share	(0.23)	0.14	(0.09)	0.74
Cash (used)/provided by operations before working capital changes per share – basic[2]	$/share	(0.09)	0.09	0.11	0.84
Capital expenditures	$'000	15,280	16,751	46,834	69,638

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

2 See "Non-GAAP Financial Measures" section for an explanation of the calculation of cash (used)/provided by operations before working capital changes and cash (used)/provided by operations before working capital changes per share – basic.

3 Per share data has been re-stated to reflect the share consolidation that was implemented on October 30, 2018.

- **Gold revenue totaled $57.3 million in the fourth quarter of 2018, compared to $81.8 million in the same period in 2017.** Gold revenue for the fourth quarter of 2018 was $24.5 million or 30% lower than the same period in 2017, as a result of a decrease in gold revenue generated from Wassa and Prestea. Compared with the same period in 2017, gold revenue generated from Prestea decreased by 56% during the fourth quarter of 2018 resulting from the planned decrease in production from the Prestea Open Pits and the slower than expected ramp up at Prestea Underground. Gold revenue generated from Wassa decreased by 15% as a result of Wassa fully transitioning into an underground-only mining operation. During the fourth quarter of 2018, gold revenue from Wassa Underground accounted for 96% of total gold revenue of Wassa compared to 50% in the same period in 2017. The consolidated average realized gold price was $1,185 per ounce in the fourth quarter of 2018, compared to $1,237 per ounce for the same period in 2017. For the year ended December 31, 2018, gold revenue was $273.0 million, a 13% decrease compared to $315.5 million in the same period in 2017 due mainly to a 14% decrease in gold sold, offset partially by a 1% increase in average realized gold price.
- **Gold sales totaled 48,401 ounces in the fourth quarter of 2018, compared to 71,208 ounces sold in the same period in 2017.** Gold sales in the fourth quarter of 2018 decreased 32% from the same period in 2017 as a result of a decrease in gold sales from Wassa and Prestea. Wassa gold sales of 37,171 ounces in the fourth quarter of 2018 were 11% lower than the same period in 2017 as a result of Wassa fully-transitioning into an underground-only mining operation, as mining at Wassa Main Pit was suspended in January 2018. Although total Wassa gold sales decreased, Wassa Underground gold sales increased 71% in the fourth quarter of 2018 compared to the same period in 2017. Prestea gold sales of 11,230 ounces in the fourth quarter of 2018 were 62% lower than the same period in 2017 due primarily to the planned decrease in production from the Prestea Open Pits and the slower than expected ramp up at Prestea Underground. For the year ended December 31, 2018, gold sales of 224,979 ounces were 16% lower than the 267,335 ounces sold in 2017 due primarily to the lower than expected production at Prestea Underground, offset partially by the increase in production at Wassa Underground.
- **Cost of sales excluding depreciation and amortization in the fourth quarter of 2018 totaled $57.6 million compared to $66.4 million in the same period in 2017.** Cost of sales excluding depreciation and amortization in the fourth quarter of 2018 decreased 13% compared to the same period in 2017 due mainly to a decrease in mine operating expense resulting from Wassa fully transitioning into an underground-only mining operation and a decrease in royalties due to lower gold sold at Wassa and Prestea. This was offset partially by an increase in severance, related to the Prestea improvement plan implemented during the fourth quarter, which included right-sizing the workforce at Prestea and optimizing the management and supervisory structure. For the year ended December 31, 2018, cost of sales excluding depreciation and amortization was $223.7 million, a 1% decrease compared to $226.5 million in 2017. The decrease was largely due to a 19% decrease in cost of sales excluding depreciation and amortization at Wassa, primarily related to a decrease in mine operating expenses resulting from fully transitioning to an underground-only mining operation at the end of January 2018. This decrease was offset by a 26% increase in cost of sales excluding depreciation and amortization at Prestea, related to the continued drawdown of ore stockpiles, an increase in mine operating expenses related to Prestea Underground costs no longer being capitalized as commercial production was achieved on February 1, 2018 and a $7.0 million increase in severance related to the Prestea improvement plan implemented in the fourth quarter of 2018.
- **Consolidated cost of sales per ounce was $1,351 in the fourth quarter of 2018, 22% higher than $1,111 in the same period in 2017. Consolidated cash operating cost per ounce was $905 in the fourth quarter of 2018, 11% higher than $812 in the same period in 2017.** Wassa achieved a 21% improvement in cash operating cost per ounce in the fourth quarter of 2018 due mainly to a reduction in mine operating expenses, as Wassa was fully transitioned into an underground-only mining operation at the beginning of the quarter, offset partially by lower gold sales in the period. The lower cash operating cost per ounce at Wassa was offset by a 113% increase in cash operating cost per ounce at Prestea resulting primarily from a decrease in gold sold in the quarter compared to the same period in 2017. For the year ended December 31, 2018, consolidated cash operating cost per ounce increased 11% to $847 from $763 in 2017 due mainly to a decrease in gold sold and an increase in inventory costs and mine operating expenses at Prestea, offset partially by an increase in gold sold and decrease in mine operating expenses at Wassa.
- **Depreciation and amortization expense totaled $7.8 million in the fourth quarter of 2018 compared to $7.1 million in the same period in 2017.** The increase in depreciation and amortization expense in the fourth quarter of 2018 was due to an increase in depreciation at both Wassa and Prestea. Wassa depreciation increased mainly due to an increase in gold production and mining interests, while Prestea depreciation increased due to the commencement of depreciation of Prestea Underground assets as commercial production was achieved on February 1, 2018. For the year ended December 31, 2018 depreciation and amortization expense totaled $33.9 million, 7% higher than $31.8 million in 2017 mainly due to an increase in gold production and mining interests at Wassa.
- **General and administrative expense totaled $2.2 million in the fourth quarter of 2018, compared to $7.9 million in the same period in 2017.** The decrease in general and administrative expense for the fourth quarter of 2018 was due primarily to a $6.5 million decrease in share-based compensation expense compared to the same period in 2017. For the year ended December 31, 2018, general and administrative expense totaled $16.4 million compared to $25.1 million in 2017. The decrease relates primarily to an $11.3 million decrease in share-based compensation expense compared to 2017. General and administrative expense, excluding share-based compensation, totaled $4.1 million and $15.6 million in the three months and year ended December 31, 2018, compared to $2.8 million and $12.5 million in the same periods in 2017. The increase in both periods relates primarily to an increase in salaries and benefits.

MANAGEMENT'S DISCUSSION AND ANALYSIS – continued

- **Finance expense totaled $3.8 million in the fourth quarter of 2018, compared to $1.1 million in the same period in 2017.** The increase in finance expense for the fourth quarter of 2018 was due primarily to a $2.5 million decrease in capitalized interest, as Prestea Underground achieved commercial production on February 1, 2018 and a $1.2 million increase in non- cash interest on the financing component of deferred revenue, partially offset by a $0.5 million increase in interest income, a $0.3 million increase in net foreign exchange gains and a $0.2 million increase in accretion of rehabilitation provision expense. For the year ended December 31, 2018 a total of $7.9 million in interest payments were made, compared to $7.3 million in 2017.
- **The Company recorded a gain of $3.3 million on fair value of financial instruments in the fourth quarter of 2018 compared to a $1.9 million loss in the same period in 2017.** The $3.3 million fair value gain in the fourth quarter of 2018 relates to a non-cash revaluation gain on the embedded derivative liability of the 7% Convertible Debentures. The $1.9 million fair value loss recognized in the fourth quarter of 2017 was related to a non-cash revaluation loss on the embedded derivative liability of the 7% Convertible Debentures. For the year ended December 31, 2018 and 2017, the Company recorded a $6.8 million and $2.1 million gain on fair value of financial instruments, respectively. The valuation techniques used for these financial instruments are disclosed in the "Financial Instruments" section of this MD&A.
- **Deferred income tax expense was $1.5 million in the fourth quarter of 2018 compared to a $12.9 million deferred income tax recovery for the same period in 2017.** For the year ended December 31, 2018, deferred income tax expense was $12.4 million, compared to a $12.9 million deferred income tax recovery in 2017. The deferred income tax expense of $1.5 million in the fourth quarter of 2018 and deferred income tax expense of $12.4 million for the year ended December 31, 2018 resulted primarily from the reversal of deferred tax assets, as tax losses and other attributes were applied to reduce Wassa's taxable income. The $12.9 million income tax recovery in the fourth quarter and year-ended December 31, 2017 was a result of recognizing tax assets on Wassa's carry forward tax losses and other deductible temporary differences.
- **Net loss attributable to Golden Star shareholders for the fourth quarter of 2018 totaled $9.3 million or $0.09 loss per share, compared to a net income of $12.6 million or $0.17 income per share (basic) in the same period in 2017.** The net loss and loss per share attributable to Golden Star shareholders in the fourth quarter of 2018 compared to the net income and income per share (basic) in the same period of 2017 was mainly due to a decrease of $16.4 million in mine operating margin, a $14.5 million decrease in income tax recovery, a $2.7 million increase in finance expense and a $2.4 million decrease in other income, partially offset by a $5.6 million decrease in general and administrative expenses and a $5.2 million increase in the gain on fair value of financial instruments. For the year ended December 31, 2018, net loss attributable to Golden Star shareholders totaled $18.1 million or $0.21 loss per share, compared to a net income of $38.8 million or $0.52 income per share (basic) in 2017. The net loss and loss per share attributable to Golden Star shareholders for the year ended December 31, 2018 compared to the net income and income per share (basic) in 2017 was mainly due to a decrease of $41.9 million in mine operating margin, $25.3 million increase in deferred income tax expense, and a $9.6 million increase in finance expense, partially offset by a $8.7 million decrease in general and administrative expenses and a $4.7 million increase in the gain on fair value of financial instruments.
- **Adjusted net loss attributable to Golden Star shareholders (see "Non-GAAP Financial Measures" section) was $5.2 million in the fourth quarter of 2018, compared to adjusted net income attributable to Golden Star shareholders of $10.7 million for the same period in 2017.** The decrease in adjusted net income attributable to Golden Star shareholders for the fourth quarter of 2018 compared to the same period in 2017 was primarily due to a lower consolidated mine operating margin related to Prestea, higher general and administrative expenses (excluding share based compensation) and higher net finance and exploration expenses. For the year ended December 31, 2018, the adjusted net loss attributable to Golden Star shareholders was $1.9 million compared to adjusted net income of $41.6 million in 2017. The decrease in adjusted net income attributable to Golden Star shareholders for the year ended December 31, 2018, was mainly due to a lower consolidated mine operating margin related to Prestea, higher general and administrative expenses (excluding share based compensation) and higher net finance and exploration expenses.
- **Cash used by operations before working capital changes (see "Non-GAAP Financial Measures" section) was $9.4 million for the fourth quarter of 2018, compared to $6.8 million of cash provided by operations before working capital changes in the same period in 2017.** The decrease in cash provided by operations before working capital changes was due primarily to a decrease in consolidated mine operating margin related to Prestea and an increase in consolidated general and administrative (excluding share based compensation), exploration, reclamation and interest payments. For the year ended December 31, 2018, cash provided by operations before working capital changes was $9.6 million compared to $62.6 million in 2017. The decrease was primarily due to a decrease in consolidated mine operating margin related to Prestea and a $10.0 million decrease in advance payments from RGLD AG ("RGLD"), as the full $145.0 million in advance payments under the Company's gold purchase and sale agreement with RGLD (the "Streaming Agreement") were received by the end of January 2017.
- **Capital expenditures for the fourth quarter of 2018 totaled $15.3 million compared to $16.8 million in the same period in 2017.** Capital expenditures at Wassa during the fourth quarter of 2018 comprised 90% of total capital expenditures and totaled $13.9 million, which included $4.5 million on exploration drilling, $4.0 million on Wassa Underground capitalized development, $3.9 million on Wassa Underground infrastructure and $1.5 million on other equipment. Capital expenditures at Prestea during the fourth quarter of 2018 comprised 10% of total capital expenditures and totaled $1.4 million, which included $0.9 million on Prestea Underground, $0.4 million on exploration drilling and $0.1 million on other equipment.

OUTLOOK FOR 2019

Production and cost guidance

	Gold production thousands of ounces	Cash operating costs $ per ounce	All-in sustaining costs $ per ounce
Wassa	170 – 180	560 – 600	
Prestea	50 – 60	840 – 1,000	
CONSOLIDATED	**220 – 240**	**620 – 680**	**875 – 955**

Wassa's production guidance has been increased by 17% from the 2018 achieved production of 149,697 ounces of gold. In 2019, Wassa is expected to produce at an average rate of approximately 3,500 tonnes per day ("tpd"). Deep drilling has continued to show positive results and studies are ongoing to decide on the optimal long-term development of the asset, including the appropriate mining method. A Preliminary Economic Assessment is expected in the second half of 2019.

At Prestea, with the cessation of open pit mining and the ongoing ramp-up of underground volumes, guidance for 2019 has been set at 50,000 – 60,000 ounces of gold for the year. In the final quarter of 2018, the Company concluded Prestea's rightsizing by reducing the workforce and establishing a lower direct operating cost base. During the fourth quarter of 2018, the plant at Prestea was converted to a low tonnage, high grade configuration allowing it to efficiently treat the underground production. At the end of 2018, improvements were being recorded in Prestea's lead production indicators.

Improvements in raise development, long hole drilling and blasting productivities are expected to continue to bring the production rate up to the 650 tpd target in 2019.

Capital expenditures guidance

	Sustaining $ millions	Development $ millions	Total $ millions
Wassa	20.7	18.1	38.8
Prestea	9.5	–	9.5
Exploration	–	13.4	13.4
CONSOLIDATED	**30.2**	**31.5**	**61.7**

For 2019, capital has been allocated to install infrastructure that is expected to achieve increased mining rates of 4,000 tpd in early 2020 at Wassa. This capital includes $18.1 million of development capital, which will be allocated to mobile equipment, paste backfill plant construction, electrical upgrades and improvements to the tailing facilities.

Capital has also been allocated for delineation and stope definition drilling in order to potentially increase Proven Mineral Reserves.

A budget of $13.4 million has been set for exploration activities in 2019, broken down to include $9.8 million at Wassa for both inferred resource expansion drilling and for seeking to convert inferred mineral resources to indicated mineral resources. In addition, an initial $1.5 million will be dedicated to Father Brown for infill expansion drilling. At Prestea, $1.6 million has been allocated for expansion drilling. The remaining $0.5 million is earmarked for follow-up drilling to be defined when results are delivered.

MANAGEMENT'S DISCUSSION AND ANALYSIS – continued

CORPORATE DEVELOPMENTS

Gold prices

Spot gold prices were $1,282 per ounce at December 31, 2018, consistent with $1,283 per ounce at December 31, 2017. The Company realized an average gold price of $1,225 per ounce for gold sales during 2018, compared to an average realized gold price of $1,219 per ounce in 2017. The spot gold price on February 19, 2019 was $1,325 per ounce.

Revenue from spot sales during the year ended December 31, 2018 resulted in an average realized price of $1,271 per ounce whereas revenue recognized from the Streaming Agreement with RGLD resulted in an average realized price of $835 per ounce.

	For the year ended December 31, 2018		
	$'000	Ounces	Realized price per ounce
Revenue – Stream arrangement			
Cash proceeds	$ 6,036		
Deferred revenue recognized	13,738		
	$ 19,774	23,692	$ 835
Revenue – Spot sales	253,243	199,238	1,271
TOTAL REVENUE	**$ 273,017**	**222,930**	**$ 1,225**

During the year ended December 31, 2018, the Company recognized $10.6 million in deferred revenue, $3.1 million in amortization of financing component, and $4.8 million in interest on financing component of deferred revenue. Had the Company not adopted IFRS 15, deferred revenue recognized for the year ended December 31, 2018 would have been $13.7 million, and there would have been no amortization of financing component or interest on financing component of deferred revenue.

Private placement

On October 1, 2018, the Company closed a $125.7 million strategic investment by La Mancha Holding S.à r.l. ("La Mancha"), a Luxembourg-incorporated private gold investment company, through a private placement of common shares. Following receipt of the funds, La Mancha was issued 163,210,500 Golden Star common shares (32,642,100 post-share consolidation), representing approximately 30% of the outstanding share capital (on a non-diluted basis) after giving effect to La Mancha's investment. Pursuant to the transaction, La Mancha has customary anti-dilution and demand registration rights and is subject to a two year equity lock-up, as well as to certain customary standstill provisions. In addition, two new directors were appointed to the Company's Board of Directors pursuant to La Mancha's right to appoint up to three nominees. Andrew Wray, Chief Executive Officer of La Mancha, and Graham Crew, La Mancha's second nominee, joined the Board of Directors effective October 1, 2018.

The table below provides a breakdown of the expected use of proceeds from La Mancha's $125.7 million strategic investment (net cash of $125.0 million). Golden Star has presented the use of proceeds as a series of ranges as the size of the exploration budget is dependent on the success of the exploration program at each asset and this will impact the size of the development and expansion budget and the budget for general corporate purposes. Golden Star has begun to use the proceeds from La Mancha's strategic investment on its organic projects in the fourth quarter of 2018 and expects to continue to do so until the end of 2020, however, use of any proceeds for any external growth opportunities will be assessed on a case-by-case basis as they arise.

(Stated in millions of U.S. dollars)	Range	
Exploration	$ 20.0	$ 35.0
Development and expansion	30.0	75.0
General corporate purposes	75.0	15.0
TOTAL (NET CASH)	**$ 125.0**	**$ 125.0**

EXPLORATION

Golden Star expects the majority of the $20.0 million to $35.0 million exploration budget set out in the above table to be allocated to Wassa Underground.

The second exploration focus is anticipated to be the Father Brown satellite deposit, which has the potential to be a second high grade ore supply for the Wassa processing plant as an underground operation. Golden Star mined Father Brown between 2011 and 2015 as an open pit operation. The two objectives of the planned drilling are to assess if the deposit extends beyond the current Inferred Mineral Resources beneath the Father Brown and Adoikrom pits.

The third focus of the exploration program is Prestea Underground, and the objective of this drilling is resource expansion of the West Reef deposit.

Golden Star currently has deployed fifteen diamond drill rigs across its three targets, with seven drilling Wassa from surface, four drilling from Wassa Underground, two at the Father Brown satellite deposit and two drill rigs at Prestea Underground.

DEVELOPMENT AND EXPANSION

The development and expansion budget set out in the above table has the objective of increasing the throughput of Wassa Underground and potentially developing the Father Brown satellite deposit.

At Wassa Underground, the objective is to increase Wassa Underground's average production rate from approximately 3,000 tpd in 2018 to approximately 4,000 tpd by mid-2020. Golden Star intends to construct a paste backfill plant, with the remainder of the budget to include provisions for decline and ore drive development and purchasing of additional mining equipment.

At Father Brown, the objective is to develop an underground mining operation with a production rate of potentially 1,500 tpd. The ore from Father Brown will be hauled to the Wassa plant for processing. However, the construction of the Father Brown underground operation is dependent on the success of the exploration program at the deposit.

GENERAL CORPORATE PURPOSES

The budget for general corporate purposes set out in the above table has a range of $15.0 million to $75.0 million primarily because if Golden Star chooses not to develop Father Brown into an underground operation, further funds will be available for severance expenses at Prestea and general corporate purposes. Golden Star may choose to use the funds for its external growth strategy or for organic development elsewhere within the Company.

The use of proceeds is discretionary and may be updated in accordance with Golden Star's plans to pursue organic or external growth.

Share Consolidation

On October 30, 2018, Golden Star consolidated its issued and outstanding common shares on the basis of one post-consolidation common share for every five pre-consolidation common shares (the "Consolidation"). The Consolidation was approved by the Company's shareholders at a special meeting held on September 17, 2018. Prior to the La Mancha transaction, there were 380.8 million Golden Star common shares issued and outstanding. After the completion of the transaction, there were 544.0 million common shares issued and outstanding, and post-Consolidation this number was approximately 108.8 million common shares issued and outstanding.

Exploration update

During the fourth quarter of 2018, exploration activities at Wassa continued to focus on step out and inferred to indicated mineral resource conversion drilling. At Prestea Underground in-fill drilling continued to delineate Indicated Mineral Resources along the West Reef deposit. Surface drilling of the Father Brown and Adoikrom deposits continued in the fourth quarter, testing the structures at depth, below the historic open pits and looking to expand the current inferred mineral resources.

Golden Star released the results of drilling undertaken during the second half of 2018 on December 17, 2018[1]. These results confirmed that gold mineralization continues to the south of the Inferred Mineral Resources at Wassa Underground, demonstrating the extension of the deposit, which could result in an increase in Wassa's Inferred Mineral Resources. Infill drilling south of the current Mineral Reserve has also extended the known Inferred Mineral Resource both up and down dip as well as identified new gold mineralization in the hanging and foot wall of the main B-shoot horizon. Some of the previously released significant intercepts were as follows[2]:

- 10.4 metres grading 11.9 g/t of Au from 774.5 metres, including 6.4 metres grading 16.2 g/t Au in hole BS18DD393M
- 16.2 metres grading 6.7 g/t Au from 944.0 m in hole BS18DD392D1 (drilled depth from wedge)
- 15.6 metres grading 4.0 g/t Au from 256.7 m including 5.2 metres grading 6.7 g/t Au in hole BS18DD391D2 (drilled depths from wedge)

1 See press release entitled, "Golden Star Reports Drilling Results from Wassa Underground Gold Mine", dated December 17, 2018.

2 All widths quoted are estimated true widths.

MANAGEMENT'S DISCUSSION AND ANALYSIS – continued

At the end of the fourth quarter of 2018, seven drill rigs were employed at Wassa with the objective of further testing the extensions of the Wassa Underground gold mineralization to the south as well as converting the Inferred Mineral Resources to Indicated Mineral Resources. Five holes were completed during the fourth quarter totaling approximately 4,800 metres, the results of which were released on December 17, 2018. Golden Star expects to release further drilling results and an updated Mineral Resource Estimate in the first quarter of 2019.

PRESTEA UNDERGROUND

Drilling of the West Reef from 24 Level at Prestea Underground continued during the fourth quarter of 2018, with one drill rig completing eight holes for a total of 1,744 metres. The drilling focused on continuing to in-fill the existing Indicated Mineral Resources and testing Inferred Mineral Resources between the 21 and 27 Levels. The 262 drill chamber on 24 level was completed in the fourth quarter of 2018, which will enable a second underground drill rig to be mobilized to the mine to test the down plunge extension of West Reef. This drilling commenced in February 2019.

FATHER BROWN SATELLITE DEPOSIT

On February 19, 2019, the Company announced an updated Mineral Resource estimate at Father Brown, consisting of the Father Brown Zone and Adoikrom Zone. Inferred Mineral Resources have increased 93% from 246,000 ounces at year-end 2017, to 474,743 ounces at an average grade of 6.7 grams per tonne ("g/t") of gold ("Au"). The updated Indicated and Inferred Mineral Resource estimate includes results of 18 holes totaling 8.873 metres of drilling. In 2019, a drilling budget of $1.5 million will be allocated to inferred expansion drilling of 9,000 metres. Further drilling will be assessed to expand the Inferred Mineral Resources and drill off the Inferred Mineral Resources to seek to upgrade them to the Indicated Mineral Resource category.

Ecobank IV Loan and Royal Gold Loan repayment

On June 28, 2018, Golden Star (Wassa) Limited ("GWSL"), a subsidiary of Golden Star, closed a $20.0 million secured loan facility (the "Facility") with Ecobank Ghana Limited. The Company used the Facility to repay in full its existing $20.0 million medium term loan facility with Royal Gold, Inc. that would have been due in full on May 5, 2019 and which required a cash flow sweep. There are no prepayment penalties associated with the Facility. The Facility is repayable within 60 months of initial drawdown. Interest on amounts drawn under the Facility is payable monthly in arrears at an interest rate equal to three month LIBOR plus a spread of 7.5% per annum. During the year ended December 31, 2018, the Company made principal payments totaling $2.0 million resulting in a remaining principal balance of $18.0 million ($17.7 million net of transaction fees) at December 31, 2018.

Ecobank III Loan drawdown

On January 24, 2018, the remaining $15.0 million available under the Ecobank III loan facility was drawn. The balance of the Ecobank III loan subsequent to the drawdown was $25.0 million with the full amount available under the facility now drawn. During the year ended December 31, 2018, the Company made principal payments totaling $4.7 million resulting in a remaining principal balance of $20.3 million ($19.9 million net of transaction fees) at December 31, 2018.

Commercial production achieved at Prestea Underground

On February 1, 2018, commercial production was achieved at the Company's Prestea Underground Mine in Ghana. Exploration drilling is underway at the mine with the objective of increasing the annual production rate and extending the mine life. Gold production is anticipated to ramp up during 2019 to name plate production rate of 650 tpd.

WASSA OPERATIONS

Through a 90% owned subsidiary, Golden Star (Wassa) Limited, the Company owns and operates the Wassa Complex. Wassa is located in the southwestern region of Ghana, approximately 35 kilometers northeast of the town of Tarkwa. In 2017, Golden Star operated the Wassa Main Pit (an open pit operation) and Wassa Underground (an underground operation). As of February 1, 2018, Wassa became an underground-only operation. Wassa has a non-refractory processing plant (the "Wassa processing plant") consisting of a carbon-in-leach ("CIL") system with a capacity of 2.7 million tonnes per annum. In 2017 and 2018, ore from both the Wassa Main Pit and Wassa Underground was processed at the Wassa processing plant.

		For the three months ended December 31,		For the years ended December 31,	
		2018	2017	2018	2017
WASSA FINANCIAL RESULTS					
Revenue	$'000	44,109	51,628	183,078	167,376
Mine operating expenses	$'000	22,044	31,012	86,916	115,625
Severance charges	$'000	–	5,217	4,970	6,316
Royalties	$'000	2,316	2,682	9,508	8,652
Operating costs from metals inventory	$'000	789	1,253	7,184	5,080
Inventory net realizable value adjustment and write-off	$'000	349	–	3,684	2,410
Cost of sales excluding depreciation and amortization	$'000	25,498	40,164	112,262	138,083
Depreciation and amortization	$'000	5,593	5,440	22,066	20,052
Mine operating margin	$'000	13,018	6,024	48,750	9,241
Capital expenditures	$'000	13,898	8,470	35,420	21,583
WASSA OPERATING RESULTS					
Ore mined – Main Pit	t	–	520,482	54,281	1,601,004
Ore mined – Underground	t	309,504	171,907	1,075,218	681,141
Ore mined – Total	t	309,504	692,389	1,129,499	2,282,145
Waste mined – Main Pit	t	–	1,043,854	72,538	6,037,366
Waste mined – Underground	t	89,288	60,054	309,265	199,550
Waste mined – Total	t	89,288	1,103,908	381,803	6,236,916
Ore processed – Main Pit	t	92,211	476,828	525,666	1,925,587
Ore processed – Underground	t	309,504	179,186	1,075,218	691,255
Ore processed – Total	t	401,715	656,014	1,600,884	2,616,842
Grade processed – Main Pit	g/t	0.66	1.38	0.76	1.27
Grade processed – Underground	g/t	3.80	4.04	4.18	3.03
Recovery	%	95.4	94.4	95.7	94.6
Gold produced – Main Pit	oz	1,851	21,149	12,436	75,736
Gold produced – Underground	oz	35,711	20,852	137,261	61,498
Gold produced – Total	oz	37,562	42,001	149,697	137,234
Gold sold – Main Pit	oz	1,460	20,775	12,307	75,644
Gold sold – Underground	oz	35,711	20,852	137,261	61,498
Gold sold – Total	oz	37,171	41,627	149,568	137,142
Cost of sales per ounce[1]	$/oz	836	1,096	898	1,153
Cash operating cost per ounce[1]	$/oz	614	775	629	880

1 See "Non-GAAP Financial Measures" section for a reconciliation of cost of sales per ounce and cash operating cost per ounce to cost of sales excluding depreciation and amortization.

MANAGEMENT'S DISCUSSION AND ANALYSIS – continued

For the three months ended December 31, 2018 compared to the three months ended December 31, 2017

PRODUCTION

Gold production from Wassa was 37,562 ounces for the fourth quarter of 2018, an 11% decrease from the 42,001 ounces produced during the same period in 2017. This decrease in production was primarily due to Wassa becoming an underground-only mining operation as of February 1, 2018. Wassa Main Pit gold production decreased 91% in the fourth quarter of 2018 compared to the same period of 2017, with 92,211 tonnes of stockpiled open pit ore being processed throughout the quarter. Partially offsetting this decrease was a 71% increase in Wassa Underground gold production in the fourth quarter, resulting from increased ore tonnes mined compared to the same period in 2017.

Wassa Underground

Wassa Underground produced 35,711 ounces of gold (or approximately 95% of Wassa's total production) in the fourth quarter of 2018, compared to 20,852 ounces in the same period in 2017 (or approximately 50% of Wassa's total production). This 71% increase in production related to an 80% increase in ore tonnes mined, resulting from productivity improvements, offset partially by a 6% decrease in grade. Mining rates at Wassa Underground increased to approximately 3,400 tpd on average in the fourth quarter of 2018 compared to approximately 1,900 tpd in the same period in 2017. Underground ore processed increased 73% to 309,504 in the fourth quarter of 2018 compared to 179,186 tonnes in the same period in 2017.

Wassa Main Pit

Wassa Main Pit produced 1,851 ounces in the fourth quarter of 2018, compared to 21,149 ounces in the same period in 2017. This decrease in production is a result of the planned transition into an underground-only mining operation. Mining ceased from the Wassa Main Pit in January 2018 as planned, however, stockpiled ore continued to be fed to the processing plant during the fourth quarter of 2018.

GOLD REVENUE

Gold revenue for the fourth quarter of 2018 was $44.1 million, a decrease of 15% from $51.6 million in the same period in 2017 due mainly to a decrease in gold sold. Gold sold decreased 11% to 37,171 ounces for the fourth quarter of 2018, compared to 41,627 ounces in the same period in 2017. The decrease was a result of Wassa becoming an underground-only mining operation as of February 1, 2018. The average realized gold price decreased 4% to $1,187 per ounce for the fourth quarter of 2018, compared to $1,240 per ounce in the same period in 2017.

COST OF SALES EXCLUDING DEPRECIATION AND AMORTIZATION

Cost of sales excluding depreciation and amortization was $25.5 million for the fourth quarter of 2018, compared to $40.2 million for the same period in 2017. The decrease was due primarily to a $9.0 million or 29% decrease in mine operating expenses resulting from the suspension of open pit mining and related costs, as Wassa has fully transitioned into an underground-only mining operation. In addition, severance charges related to the suspension of the Wassa surface mining operation decreased $5.2 million or 100%, as this was completed in early 2018.

DEPRECIATION AND AMORTIZATION

Depreciation and amortization expense increased to $5.6 million for the fourth quarter of 2018, compared to $5.4 million for the same period in 2017 due mainly to an increase in mining interests.

COSTS PER OUNCE

Cost of sales per ounce decreased 24% to $836 for the fourth quarter of 2018 from $1,096 in the same period in 2017. Cash operating cost per ounce decreased 21% to $614 from $775 for the same period in 2017. The lower costs per ounce in the fourth quarter of 2018 as compared to the same period in 2017 were primarily a result of a decrease in mine operating expenses.

CAPITAL EXPENDITURES

Capital expenditures for the fourth quarter of 2018 totaled $13.9 million compared with $8.5 million during the same period in 2017. The increase in capital expenditures was due primarily to an increase of $3.5 million in exploration drilling and $1.9 million in Wassa Underground capitalized development, mobile equipment and underground heavy equipment costs to facilitate increased mining rates during the period.

For the year ended December 31, 2018 compared to the year ended December 31, 2017

PRODUCTION

Gold production from Wassa was 149,697 ounces for the year ended December 31, 2018, a 9% increase from the 137,234 ounces produced in 2017. This increase in production was primarily due to increased production at Wassa Underground, as its grade, recovery and tonnes mined improved. As of February 1, 2018, Wassa became an underground-only mining operation, however, open pit stock piled ore continued to be processed throughout the year.

Wassa Underground

Wassa Underground produced 137,261 ounces of gold (or approximately 92% of Wassa's total production) for the year ended December 31, 2018, compared to 61,498 ounces in 2017 (or approximately 45% of Wassa's total production). This 123% increase in production was related to increased grade, recovery and tonnes mined, resulting from productivity improvements. The underground ore grade processed increased by 38% to 4.18 g/t Au for the year ended December 31, 2018 compared to 2017 as mining was focused solely on the B-Shoot zone where larger stopes and higher grade areas were accessed. Mining rates at Wassa Underground also increased to approximately 3,000 tpd on average for the year ended December 31, 2018 compared to approximately 1,900 tpd in 2017. Ore processed increased 56% for the year ended December 31, 2018 to 1,075,218 tonnes compared to the same period in 2017.

Wassa Main Pit

Wassa Main Pit produced 12,436 ounces for the year ended December 31, 2018, compared to 75,736 in the same period in 2017. This decrease in production is a result of the planned transition into an underground-only mining operation, as surface mining operations reached the bottom of the Cut 2 pushback. Mining ceased from the Wassa Main Pit in January 2018 as planned, however, stockpiled ore continued to be processed during the remainder of 2018.

GOLD REVENUE

Gold revenue for the year ended December 31, 2018 was $183.1 million, an increase of 9% from $167.4 million in 2017 due mainly to an increase in gold sold. Gold sold increased 9% to 149,568 ounces for the year ended December 31, 2018 compared to 137,142 ounces in 2017. The increase was primarily a result of increased gold production from Wassa Underground. The average realized gold price remained consistent at $1,224 per ounce for the year ended December 31, 2018 compared to $1,220 per ounce in 2017.

COST OF SALES EXCLUDING DEPRECIATION AND AMORTIZATION

Cost of sales excluding depreciation and amortization was $112.3 million for the year ended December 31, 2018 compared to $138.1 million in 2017. The decrease was due primarily to a 25% decrease in mine operating expenses resulting from the suspension of open pit mining and related costs, as Wassa transitioned into an underground-only mining operation at the end of January 2018. This decrease was partially offset by increased royalty expense due to higher gold sales, an increase in inventory costs and an increase in inventory net realizable adjustment and write-offs.

DEPRECIATION AND AMORTIZATION

Depreciation and amortization expense increased to $22.1 million for the year ended December 31, 2018 compared to $20.1 million in 2017 due mainly to an increase in gold production and mining interests.

COSTS PER OUNCE

Cost of sales per ounce decreased 22% to $898 for the year ended December 31, 2018 compared to $1,153 in 2017. Cash operating cost per ounce decreased 29% to $629 for the year ended December 31, 2018 from $880 in 2017. The lower costs per ounce for the year ended December 31, 2018 as compared to 2017 was primarily a result of a decrease in mine operating expenses and an increase in gold sold related to increased production from Wassa Underground.

CAPITAL EXPENDITURES

Capital expenditures for the year ended December 31, 2018 totaled $35.4 million compared to $21.6 million during the same period in 2017. The increase in capital expenditures is due primarily to an increase of $6.8 million in Wassa Underground capitalized development and $2.8 million in mobile equipment and underground heavy equipment costs related to facilitating increased mining rates during the period. In addition, an increase of $4.6 million in exploration costs were incurred in the year ended December 31, 2018 compared to 2017 related to phase one deep drilling at Wassa Underground, intended to further assess the B-Shoot and F-Shoot down plunge extensions. These increases were offset by a $0.4 million decrease in tailings facility and other replacement equipment capital expenditures.

MANAGEMENT'S DISCUSSION AND ANALYSIS – continued

PRESTEA OPERATIONS

Through a 90% owned subsidiary, Golden Star (Bogoso/Prestea) Limited, the Company owns and operates the Prestea Complex located near the town of Prestea, Ghana. The Prestea complex consists of Prestea Underground (an underground operation), the Prestea Open Pits (neighboring open pits formed from oxide deposits) and associated support facilities. Prestea has a CIL processing facility with capacity of up to 1.5 million tonnes per annum, located 14 km away at Bogoso, which is suitable for treating non-refractory gold ore (the "non-refractory plant"). Ore from both Prestea Underground and the Prestea Open Pits is processed in the non-refractory plant. Prestea Underground achieved commercial production on February 1, 2018.

		For the three months ended December 31,		For the years ended December 31,	
		2018	2017	2018	2017
PRESTEA FINANCIAL RESULTS					
Revenue	$'000	13,230	30,217	89,939	148,121
Mine operating expenses	$'000	20,982	21,952	89,112	81,753
Severance charges	$'000	9,882	2,833	9,888	2,916
Royalties	$'000	693	1,938	4,794	8,643
Operating costs (to)/from metals inventory	$'000	(11)	(486)	5,702	(4,913)
Inventory net realizable value adjustment and write-off	$'000	521	–	1,971	–
Cost of sales excluding depreciation and amortization	$'000	32,067	26,237	111,467	88,399
Depreciation and amortization	$'000	2,231	1,655	11,873	11,740
Mine operating (loss)/margin	$'000	(21,068)	2,325	(33,401)	47,982
Capital expenditures	$'000	1,382	8,281	11,414	48,055
PRESTEA OPERATING RESULTS					
Ore mined – Open pits	t	32,275	300,247	374,218	1,462,607
Ore mined – Underground	t	29,654	19,458	128,048	31,740
Ore mined – Total	t	61,929	319,705	502,266	1,494,347
Waste mined – Open pits	t	89,638	912,509	921,054	3,496,148
Waste mined – Underground	t	3,008	6,254	7,403	26,303
Waste mined – Total	t	92,646	918,763	928,457	3,522,451
Ore processed – Open pits	t	185,014	442,333	1,179,414	1,587,482
Ore processed – Underground	t	24,168	22,846	122,562	45,497
Ore processed – Total	t	209,182	465,179	1,301,976	1,632,979
Grade processed – Open pits	g/t	1.01	2.39	1.20	2.85
Grade processed – Underground	g/t	8.56	8.41	10.12	6.96
Recovery	%	84.9	82.6	86.8	86.4
Gold produced – Open pits	oz	4,632	24,723	37,623	121,757
Gold produced – Underground	oz	6,652	5,045	37,464	8,574
Gold produced – Total	oz	11,284	29,768	75,087	130,331
Gold sold – Open pits	oz	4,578	24,536	37,947	121,619
Gold sold – Underground	oz	6,652	5,045	37,464	8,574
Gold sold – Total	oz	11,230	29,581	75,411	130,193
Cost of sales per ounce[1]	$/oz	3,054	1,137	1,681	823
Cash operating cost per ounce[1]	$/oz	1,867	875	1,292	632

1 See "Non-GAAP Financial Measures" section for a reconciliation of cost of sales per ounce and cash operating cost per ounce to cost of sales excluding depreciation and amortization.

For the three months ended December 31, 2018 compared to the three months ended December 31, 2017

PRODUCTION

Gold production from Prestea was 11,284 ounces in the fourth quarter of 2018, a 62% decrease from the 29,768 ounces produced during the same period in 2017. This decrease in production was due primarily to the planned reduction from the Prestea Open Pits and a slower than expected ramp up at Prestea Underground.

Prestea Open Pits

The Prestea Open Pits produced 4,632 ounces in the fourth quarter of 2018, compared to 24,723 ounces in the same period in 2017. This decrease in production was planned, as the Prestea Open Pits were expected to complete gold production at the end of 2017. Mining has continued into the fourth quarter of 2018 with additional ore being sourced from the pits close to Prestea.

Prestea Underground

Prestea Underground declared commercial production on February 1, 2018 and produced 6,652 ounces in the fourth quarter of 2018 compared to 5,045 ounces in the same period in 2017. Grade, recovery and production improved in the fourth quarter of 2018 compared to the same period in 2017. In the fourth quarter of 2018, the Company concluded the business right-sizing of Prestea Underground's operations by reducing the workforce and establishing a lower operating cost base. In addition, the processing plant was converted to a low tonnage, high grade configuration allowing it to efficiently treat underground ore production. At the end of 2018, improvements were being recorded in Prestea's lead production indicators. Improvements in raise development, longhole drilling and blasting productivities are expected to continue to bring the production rate up to the 650 tpd target in 2019.

GOLD REVENUE

Gold revenue for the fourth quarter of 2018 was $13.2 million, a decrease of 56% from $30.2 million in the same period of 2017 due mainly to a decrease in gold sales and average realized gold price. Gold sold decreased 62% to 11,230 ounces for the fourth quarter of 2018, compared to 29,581 ounces in the same period of 2017. The decrease was primarily a result of a decrease in gold production from the Prestea Open Pits and the slower than expected ramp up at Prestea Underground. The average realized gold price decreased 4% to $1,178 per ounce for the fourth quarter of 2018, compared to $1,232 per ounce for the same period in 2017.

COST OF SALES EXCLUDING DEPRECIATION AND AMORTIZATION

Cost of sales excluding depreciation and amortization was $32.1 million for the fourth quarter of 2018, compared to $26.2 million for the same period in 2017. The increase was due primarily to a $7.0 million increase in severance charges related to the Prestea improvement plan implemented during the quarter, which included right-sizing the workforce at Prestea and optimizing the management and supervisory structure. This increase was offset partially by a $1.2 million decrease in royalties resulting from lower gold sales in the period and lower mine operating expenses related to less production from the Prestea Open Pits.

DEPRECIATION AND AMORTIZATION

Depreciation and amortization expense increased to $2.2 million for the fourth quarter of 2018, compared to $1.7 million for the same period in 2017 due mainly to the commencement of depreciation of Prestea Underground assets as commercial production was achieved on February 1, 2018, offset partially by a decrease in gold production.

COSTS PER OUNCE

Cost of sales per ounce increased 169% to $3,054 for the fourth quarter of 2018 from $1,137 in the same period in 2017. Cash operating cost per ounce increased 113% to $1,867 from $875 for the same period in 2017. The increase in costs per ounce was primarily due to the decrease in gold sold in the quarter.

CAPITAL EXPENDITURES

Capital expenditures for the fourth quarter of 2018 totaled $1.4 million compared to $8.3 million incurred during the same period in 2017. The decrease relates primarily to a $4.7 million decrease in development expenditures and $1.5 million decrease in capitalized borrowing costs relating to Prestea Underground which achieved commercial production on February 1, 2018. In addition, there was a $0.7 million decrease in capital expenditures related to the Prestea Open Pits and Mampon, as some of these deposits ceased production by the end of 2017.

MANAGEMENT'S DISCUSSION AND ANALYSIS – continued

For the year ended December 31, 2018 compared to the year ended December 31, 2017

PRODUCTION

Gold production from Prestea was 75,087 ounces for the year ended December 31, 2018, a 42% decrease from the 130,331 ounces produced in 2017. This decrease in production was due primarily to the planned reduction from the Prestea Open Pits and the slower than expected ramp up at Prestea Underground.

Prestea Open Pits

The Prestea Open Pits produced 37,623 ounces for the year ended December 31, 2018, compared to 121,757 ounces in 2017. This decrease in production was planned, as the Prestea Open Pits were expected to complete gold production at the end of 2017. Mining continued into the fourth quarter of 2018 with additional ore being sourced from the pits close to Prestea and is expected to continue into the first quarter of 2019.

Prestea Underground

Prestea Underground declared commercial production on February 1, 2018 and produced 37,464 ounces for the year ended December 31, 2018, compared to 8,574 ounces in 2017. Grade, recovery and production improved in 2018 compared to 2017. In the fourth quarter of 2018, the Company concluded the business right-sizing of Prestea Underground's operations by reducing the workforce and establishing a lower operating cost base. In addition, the processing plant was converted to a low tonnage, high grade configuration allowing it to efficiently treat underground ore production. At the end of 2018, improvements were being recorded in Prestea's lead production indicators. Improvements in raise development, longhole drilling and blasting productivities are expected to continue to bring the production rate up to the 650 tpd target in 2019.

GOLD REVENUE

Gold revenue for the year ended December 31, 2018 was $89.9 million, a decrease of 39% from $148.1 million in 2017 due mainly to a decrease in gold sold. Gold sold decreased 42% to 75,411 ounces for the year ended December 31, 2018 compared to 130,193 ounces in 2017. The decrease was primarily a result of a decrease in gold production from the Prestea Open Pits and the slower than expected ramp up at Prestea Underground. The average realized gold price remained consistent at $1,226 per ounce for the year ended December 31, 2018, compared to $1,218 per ounce in 2017.

COST OF SALES EXCLUDING DEPRECIATION AND AMORTIZATION

Cost of sales excluding depreciation and amortization was $111.5 million for the year ended December 31, 2018, compared to $88.4 million in 2017. The increase was due primarily to a $10.6 million increase in inventory costs, as ore stockpiles were processed during the period related to the slower than expected Prestea Underground ramp up and the planned reduction from the Prestea Open Pits. Additionally, there was a $7.4 million or 9% increase in mine operating expenses due primarily to the addition of Prestea Underground mining costs that were capitalized in the same period in 2017. There was also a $7.0 million increase in severance charges related to the Prestea improvement plan implemented during the fourth quarter of 2018, which included right-sizing the workforce at Prestea and optimizing the management and supervisory structure. Offsetting these increases was a $3.8 million or 44% decrease in royalties due to lower gold sales in the year ended December 31, 2018.

DEPRECIATION AND AMORTIZATION

Depreciation and amortization expense increased to $11.9 million for the year ended December 31, 2018, compared to $11.7 million in 2017 due mainly to the commencement of depreciation of Prestea Underground assets as commercial production was achieved on February 1, 2018.

COSTS PER OUNCE

Cost of sales per ounce increased 104% to $1,681 for the year ended December 31, 2018, compared to $823 in 2017. Cash operating cost per ounce increased 104% to $1,292 for the year ended December 31, 2018 compared to $632 in 2017. The increase in cost of sales per ounce and cash operating cost per ounce was primarily due to the increase in inventory costs and mine operating expenses in the period, as well as the decrease in ounces sold for the year ended December 31, 2018 compared to 2017.

CAPITAL EXPENDITURES

Capital expenditures for the year ended December 31, 2018 totaled $11.4 million, compared to $48.1 million incurred in 2017. The decrease relates primarily to a $27.7 million decrease in development expenditures and a $4.7 million decrease in capitalized borrowing costs relating to Prestea Underground which achieved commercial production on February 1, 2018. In addition, there was a $4.6 million decrease in capital expenditure related to the Prestea Open Pits and Mampon, as some of these deposits ceased production by the end of 2017. Partially offsetting these decreases was a $0.3 million increase in exploration drilling expenditures, which has the objective of extending the West Reef and the Main Reef ore bodies.

SUMMARIZED QUARTERLY FINANCIAL RESULTS

	Three months ended,							
(Stated in thousands of U.S. dollars except per share data)	**Q4 2018**	**Q3 2018[2]**	**Q2 2018[2]**	**Q1 2018[2]**	**Q4 2017[2]**	**Q3 2017[2]**	**Q2 2017[2]**	**Q1 2017[2]**
Revenues	$ 57,339	$ 67,738	$ 77,121	$ 70,819	$ 81,845	$ 87,772	$ 77,335	$ 68,545
Cost of sales excluding depreciation and amortization	57,565	48,873	57,717	59,574	66,401	53,502	55,173	51,406
Net (loss)/income	(11,894)	(4,222)	(7,560)	(395)	13,825	13,703	13,681	(250)
Net (loss)/income attributable to shareholders of Golden Star	(9,318)	(3,178)	(6,642)	1,015	12,601	12,117	13,883	170
Adjusted net (loss)/income attributable to Golden Star shareholders[1]	(5,211)	3,011	2,408	(2,124)	10,701	19,827	7,703	3,411
Net (loss)/income per share attributable to Golden Star shareholders – basic	(0.09)	(0.04)	(0.09)	0.01	0.17	0.16	0.18	0.00
Net (loss)/income per share attributable to Golden Star shareholders – diluted	(0.09)	(0.04)	(0.09)	(0.03)	0.16	0.16	0.11	0.00
Adjusted (loss)/income per share attributable to Golden Star shareholders – basic[1]	(0.05)	0.04	0.03	(0.03)	0.14	0.26	0.09	0.05

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

2 Per share quarterly financial information has been re-stated to reflect the share consolidation that was implemented on October 30, 2018.

LIQUIDITY AND FINANCIAL CONDITION

The Company held $96.5 million in cash and cash equivalents as at December 31, 2018 compared to $27.8 million in cash and cash equivalents at December 31, 2017. During the year ended December 31, 2018, operations used $7.6 million, investing activities used $48.0 million and financing activities provided $124.2 million of cash.

Before working capital changes, operations provided $9.6 million of operating cash flow for the year ended December 31, 2018, compared to $62.6 million in 2017. Cash provided by operations before working capital changes decreased primarily due to a decrease in consolidated mine operating margin related to the underperformance of Prestea, as well as a $10.0 million decrease in advance payments from RGLD as the full $145.0 million in advance payments under the Streaming Agreement were received by January 2017.

Working capital used $17.2 million during the year ended December 31, 2018, compared to $7.4 million in 2017. The working capital changes included a $25.8 million decrease in accounts payable and accrued liabilities and a $0.7 million increase in prepaids and other, offset by a $9.2 million decrease in inventory and a $0.2 million decrease in accounts receivable. Accounts payable and accrued liabilities reduced from $94.6 million at December 31, 2017 to $78.5 million at December 31, 2018.

Investing activities used $48.0 million during the year ended December 31, 2018, which included $19.8 million on the development of Wassa Underground, $7.7 million on the development of Prestea Underground, $10.3 million on exploration drilling and $8.4 million on equipment purchases and other.

Financing activities provided $124.2 million during the year ended December 31, 2018, compared to $18.7 million in 2017. Financing activities included net proceeds of $124.8 million from the private placement of common shares to La Mancha, gross proceeds of $15.0 million from Ecobank Loan III, $20.0 million from Ecobank Loan IV which was used to repay the $20.0 million Royal Gold loan, and $15.6 million in principal debt repayments.

MANAGEMENT'S DISCUSSION AND ANALYSIS – continued

LIQUIDITY OUTLOOK

As at December 31, 2018, the Company had $96.5 million in cash and working capital of $5.9 million, compared to $27.8 million in cash and a working capital deficit of $61.6 million at December 31, 2017. The Company has completed the development of Wassa Underground and Prestea Underground and the Company now expects to generate operating margin from its operations. The ramp-up at Prestea Underground to 650 tpd will continue in 2019, during which period a lower operating margin is expected.

The Company expects to incur $61.7 million on capital expenditures during 2019 of which $22.0 million is discretionary. The Company's debt repayment and servicing obligations are expected to approximate $36.4 million for 2019. In addition, the Company expects to incur $6.4 million for the settlement of vested performance share units in 2019. The majority of the severance payments related to the suspension of the Wassa and Prestea surface mining operations were completed by December 31, 2018.

Based on the Company's cash balance together with the operating cash flow that the Company anticipates generating, the Company expects to have sufficient cash available to support its operations and mandatory expenditures for the next twelve months.

TABLE OF CONTRACTUAL OBLIGATIONS

As at December 31, 2018, 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	$ 78,484	$ –	$ –	$ –	$ 78,484
Debt[1]	28,213	71,140	9,611	–	108,964
Other liability	6,410	–	–	–	6,410
Interest on long-term debt	8,155	11,136	623	–	19,914
Purchase obligations	13,762	–	–	–	13,762
Rehabilitation provisions[2]	7,455	25,566	24,707	13,678	71,406
TOTAL	**$ 142,479**	**$ 107,842**	**$ 34,941**	**$ 13,678**	**$ 298,940**

1 Includes the outstanding repayment amounts from the 7% Convertible Debentures maturing on August 15, 2021, Ecobank Loan III, Ecobank Loan IV, finance leases and the vendor agreement.

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

RELATED PARTY TRANSACTIONS

There were no material related party transactions for the year ended December 31, 2018 and 2017 other than compensation of key management personnel which is presented in Note 21 of the audited consolidated financial statements for the year ended December 31, 2018. Key management personnel are defined as members of the Board of Directors and certain senior officers. Compensation of key management personnel are made on terms 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 "cash operating cost", "cash operating cost per ounce", "all-in sustaining costs", "all-in sustaining costs per ounce", "adjusted net (loss)/income attributable to Golden Star shareholders", "adjusted (loss)/income per share attributable to Golden Star shareholders", "cash provided by operations before working capital changes", and "cash provided by operations before working capital changes per share – basic".

"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 office 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 (excluding pre-commercial production ounces 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-off and severance charges, and "cash operating cost per ounce" is that amount divided by the number of ounces of gold sold (excluding pre-commercial production ounces 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 metals inventory net realizable value adjustments, royalties, sustaining capital expenditures, corporate general and administrative costs (excluding share-based compensation expenses), and accretion of rehabilitation provision. "All-in sustaining costs per ounce" is that amount divided by the number of ounces of gold sold (excluding pre-commercial production ounces sold) during the period. This measure seeks to represent the total costs of producing gold from current operations, and therefore it does not include capital expenditures attributable to projects or mine expansions, exploration and evaluation costs attributable to growth projects, 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 interest 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 table below reconciles 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.

MANAGEMENT'S DISCUSSION AND ANALYSIS – continued

The table below reconciles consolidated cost of sales excluding depreciation and amortization to cost of sales per ounce, cash operating cost per ounce and all-in sustaining cost per ounce:

	For the three months ended December 31,		For the years ended December 31,	
(Stated in thousands of U.S. dollars except cost per ounce data)	**2018**	**2017**	**2018**	**2017**
Cost of sales excluding depreciation and amortization	$ 57,565	$ 66,401	$ 223,729	$ 226,482
Depreciation and amortization	7,824	7,095	33,939	31,792
COST OF SALES	**$ 65,389**	**$ 73,496**	**$ 257,668**	**$ 258,274**
Cost of sales excluding depreciation and amortization	$ 57,565	$ 66,401	$ 223,729	$ 226,482
Severance charges	(9,882)	(8,050)	(14,858)	(9,232)
Royalties	(3,009)	(4,620)	(14,302)	(17,295)
Inventory net realizable value adjustment and write-off	(870)	–	(5,655)	(2,410)
CASH OPERATING COSTS	**$ 43,804**	**$ 53,731**	**$ 188,914**	**$ 197,545**
Royalties	3,009	4,620	14,302	17,295
Inventory net realizable value adjustment and write-off	870	–	5,655	2,410
Accretion of rehabilitation provision	173	312	691	1,245
General and administrative costs, excluding share-based compensation	3,712	2,828	15,150	12,536
Sustaining capital expenditures	7,397	4,781	22,159	13,199
ALL-IN SUSTAINING COSTS	**$ 58,965**	**$ 66,272**	**$ 246,871**	**$ 244,230**
Ounces sold[1]	48,401	66,163	222,930	258,761
Cost of sales per ounce	$ 1,351	$ 1,111	$ 1,156	$ 998
Cash operating cost per ounce	$ 905	$ 812	$ 847	$ 763
All-in sustaining cost per ounce	$ 1,218	$ 1,002	$ 1,107	$ 944

1 Ounces sold used in the calculation of cost of sales per ounce, cash operating cost per ounce and all-in sustaining cost per ounce excludes 2,049 and 8,574 pre-commercial production ounces sold at Prestea Underground during 2018 and 2017, respectively.

The tables below reconcile cost of sales excluding depreciation and amortization to cash operating cost per ounce for each of the operating mines:

	For the three months ended December 31, 2018		
(Stated in thousands of U.S. dollars except cost per ounce data)	**Wassa**	**Prestea**	**Combined**
Cost of sales excluding depreciation and amortization	$ 25,498	$ 32,067	$ 57,565
Depreciation and amortization	5,593	2,231	7,824
COST OF SALES	**$ 31,091**	**$ 34,298**	**$ 65,389**
Cost of sales excluding depreciation and amortization	$ 25,498	$ 32,067	$ 57,565
Severance charges	–	(9,882)	(9,882)
Royalties	(2,316)	(693)	(3,009)
Inventory net realizable value adjustment and write-off	(349)	(521)	(870)
CASH OPERATING COSTS	**$ 22,833**	**$ 20,971**	**$ 43,804**
Ounces sold	37,171	11,230	48,401
Cost of sales per ounce	$ 836	$ 3,054	$ 1,351
Cash operating cost per ounce	$ 614	$ 1,867	$ 905

	For the year ended December 31, 2018		
(Stated in thousands of U.S. dollars except cost per ounce data)	**Wassa**	**Prestea**	**Combined**
Cost of sales excluding depreciation and amortization	$ 112,262	$ 111,467	$ 223,729
Depreciation and amortization	22,066	11,873	33,939
COST OF SALES	**$ 134,328**	**$ 123,340**	**$ 257,668**
Cost of sales excluding depreciation and amortization	$ 112,262	$ 111,467	$ 223,729
Severance charges	(4,970)	(9,888)	(14,858)
Royalties	(9,508)	(4,794)	(14,302)
Inventory net realizable value adjustment and write-off	(3,684)	(1,971)	(5,655)
CASH OPERATING COSTS	**$ 94,100**	**$ 94,814**	**$ 188,914**
Ounces sold[1]	149,568	73,362	222,930
Cost of sales per ounce	$ 898	$ 1,681	$ 1,156
Cash operating cost per ounce	$ 629	$ 1,292	$ 847

1 Ounces sold used in the calculation of cost of sales per ounce and cash operating cost per ounce excludes 2,049 pre-commercial production ounces sold at Prestea Underground in January 2018.

	For the three months ended December 31, 2017		
(Stated in thousands of U.S. dollars except cost per ounce data)	**Wassa**	**Prestea**	**Combined**
Cost of sales excluding depreciation and amortization	$ 40,164	$ 26,237	$ 66,401
Depreciation and amortization	5,440	1,655	7,095
COST OF SALES	**$ 45,604**	**$ 27,892**	**$ 73,496**
Cost of sales excluding depreciation and amortization	$ 40,164	$ 26,237	$ 66,401
Severance charges	(5,217)	(2,833)	(8,050)
Royalties	(2,682)	(1,938)	(4,620)
Metals inventory net realizable value adjustment	–	–	–
CASH OPERATING COSTS	**$ 32,265**	**$ 21,466**	**$ 53,731**
Ounces sold[1]	41,627	24,536	66,163
Cost of sales per ounce	$ 1,096	$ 1,137	$ 1,111
Cash operating cost per ounce	$ 775	$ 875	$ 812

	For the year ended December 31, 2017		
(Stated in thousands of U.S. dollars except cost per ounce data)	**Wassa**	**Prestea**	**Combined**
Cost of sales excluding depreciation and amortization	$ 138,083	$ 88,399	$ 226,482
Depreciation and amortization	20,052	11,740	31,792
COST OF SALES	$ 158,135	$ 100,139	$ 258,274
Cost of sales excluding depreciation and amortization	$ 138,083	$ 88,399	$ 226,482
Severance charges	(6,316)	(2,916)	(9,232)
Royalties	(8,652)	(8,643)	(17,295)
Metals inventory net realizable value adjustment	(2,410)	–	(2,410)
CASH OPERATING COSTS	$ 120,705	$ 76,840	$ 197,545
Ounces sold[1]	137,142	121,619	258,761
Cost of sales per ounce	$ 1,153	$ 823	$ 998
Cash operating cost per ounce	$ 880	$ 632	$ 763

1 Ounces sold used in the calculation of cost of sales per ounce and cash operating cost per ounce excludes pre-commercial production ounces sold at Prestea Underground during the period.

MANAGEMENT'S DISCUSSION AND ANALYSIS – continued

"Cash provided by operations before working capital changes" is calculated by subtracting the "changes in working capital" from "net cash provided by operating activities" as found in the statements of cash flows. "Cash provided by 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.

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 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 (loss)/income attributable to Golden Star shareholders

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

	For the three months ended December 31,		For the years ended december 31,	
(Stated in thousands of U.S. dollars except per share data)	**2018**	**2017[1]**	**2018**	**2017[1]**
Net (loss)/income attributable to Golden Star shareholders	$ (9,318)	$ 12,601	$ (18,123)	$ 38,771
Add back/(deduct):				
Share-based compensation (recovery)/expense	(1,468)	5,053	1,278	12,554
Loss/(gain) on fair value of financial instruments	(3,274)	1,902	(6,786)	(2,057)
Loss on conversion of 7% Convertible Debentures	–	–	–	165
Severance charges	9,882	8,050	14,858	9,232
Gain on reduction of asset retirement obligations	(1,575)	(4,945)	(3,080)	(4,945)
Income tax expense (recovery) on previously unrecognized deferred tax asset	1,525	(12,944)	12,350	(12,944)
	(4,228)	**9,717**	**497**	**40,776**
Adjustments attributable to non-controlling interest	(983)	984	(2,413)	866
Adjusted net (loss)/income attributable to Golden Star shareholders	**$ (5,211)**	**$ 10,701**	**$ (1,916)**	**$ 41,642**
Adjusted (loss)/income per share attributable to Golden Star shareholders – basic	$ (0.05)	$ 0.14	$ (0.02)	$ 0.56
Weighted average shares outstanding – basic (millions)	108.5	76.1	84.3	74.7

1 Weighted average shares outstanding – basic has been re-stated to reflect the share consolidation that was implemented on October 30, 2018.

The Company uses "Adjusted net (loss)/income 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 attributable to Golden Star shareholders. Consequently, the presentation of adjusted net income 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 (loss)/ income attributable to Golden Star shareholders" is calculated by adjusting net (loss)/income attributable to Golden Star shareholders for share-based compensation expenses, gain on fair value of financial instruments, loss on conversion of 7% Convertible Debentures, severance charges, gain on reduction of asset retirement obligations and income tax expense on previously unrecognized deferred tax assets. "Adjusted (loss)/income per share attributable to Golden Star shareholders" for the period is "Adjusted net (loss)/income attributable to Golden Star shareholders" divided by the weighted average number of shares outstanding using the basic method of earnings per share.

Adjusted net (loss)/income attributable to Golden Star shareholders and adjusted (loss)/income 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.

OUTSTANDING SHARE DATA

As of February 19, 2019, there were 108,819,009 common shares of the Company issued and outstanding, 3,498,143 stock options outstanding, 1,149,215 deferred share units outstanding, 790,517 share units of 2017 PRSUs outstanding and 7% Convertible Debentures which are convertible into an aggregate of 11,444,000 common shares.

CRITICAL ACCOUNTING JUDGMENTS, ESTIMATES AND ASSUMPTIONS

On July 28, 2015, the Company through its subsidiary Caystar Finance Co. completed a $130.0 million gold purchase and sale agreement ("Streaming Agreement") with RGLD, a wholly-owned subsidiary of Royal Gold, Inc. The Streaming Agreement was subsequently amended on December 30, 2015 to provide an additional $15.0 million of streaming advance payment. As discussed in Note 3 of the year ended December 31, 2018 audited consolidated financial statements of the Company, there is a variable component involved in accounting for the deferred revenue associated with the Streaming Agreement. This variability is subject to retroactive adjustment when there is a significant change in the timing and quantity of ounces to be delivered over the term of the Streaming Agreement. Significant judgment is required in determining the expected delivery of ounces over the term of the Streaming Agreement and their associated cash flows. In undertaking this review, management of the Company is required to make significant estimates of, amongst other things, discount rates, future production volumes, metal prices and reserve and resource quantities. These estimates are subject to various risks and uncertainties which may ultimately have an effect on the deferred revenue recorded related to the Streaming Agreement. There were no retroactive adjustments recorded in the three and twelve months ended December 31, 2018, with the exception of the initial adjustment to adopt IFRS 15 recorded in the first quarter of 2018 as discussed in Note 3 of the year ended December 31, 2018 audited consolidated financial statements of the Company.

For a full list of judgments, estimates and assumptions please, refer to Note 4 of the 2018 annual financial statements.

CHANGES IN ACCOUNTING POLICIES

The Company has adopted the following new and revised standards, effective January 1, 2018. These changes were made in accordance with the applicable transitional provisions.

IFRS 2 Share-based payments was amended to address (i) certain issues related to the accounting for cash settled awards, and (ii) the accounting for equity settled awards that include a "net settlement" feature in respect of employee withholding taxes effective for years beginning on or after January 1, 2018. There was no impact to the financial statements on adoption of this standard.

IFRS 9 Financial Instruments was issued in July 2014 and includes (i) a third measurement category for financial assets – fair value through other comprehensive income; (ii) a single, forward-looking "expected loss" impairment model; and (iii) a mandatory effective date of annual periods beginning on or after January 1, 2018. On adoption of this standard, there was no accounting impact to the financial statements and there were no changes in the carrying values of any of the Company's financial assets.

IFRS 15 Revenue from Contracts with Customers was amended to clarify how to (i) identify a performance obligation in a contract; (ii) determine whether a company is a principal or an agent; and (iii) determine whether the revenue from granting a license should be recognized at a point in time or over time. In addition to the clarifications, the amendments include two reliefs to reduce cost and complexity for a company when it first applies the new standard. The amendments have the same effective date as the standard, which is January 1, 2018.

On January 1, 2018, the Company adopted the requirements of IFRS 15 Revenue from Contracts with Customers. As a result, the Company updated its accounting policy for deferred revenue to align with the requirements of IFRS 15. The Company elected to use the modified retroactive approach to initially adopt IFRS 15, which resulted in recognizing the cumulative effect of prior period amounts as an adjustment to the opening balance sheet through opening deficit on January 1, 2018.

Under IFRS 15, deferred revenue consists of: 1) 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 10, Deferred Revenue, and 2) 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.

MANAGEMENT'S DISCUSSION AND ANALYSIS – continued

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 stream. 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 a continuous 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 retroactive 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.

The impact of the initial adoption of IFRS 15 was $19.0 million. The adjustment was recorded as an increase to deferred revenue with a corresponding increase to opening deficit.

IFRS 16 Leases specifies how an IFRS reporter will recognize, measure, present and disclose leases. The standard provides a single lessee accounting model, requiring lessees to recognize assets and liabilities for all leases unless the lease term is 12 months or less or the underlying asset has a low value. Lessors continue to classify leases as operating or finance, with IFRS 16's approach to lessor accounting substantially unchanged from its predecessor, IAS 17. IFRS 16 was issued in January 2016 and applies to annual reporting periods beginning on or after January 1, 2019. The Company has completed an evaluation of the population of its contracts to ensure compliance with the new lease standard. The assessment has identified some contracts that will likely be capitalized under the new lease standard however the Company does not expect there to be a material impact on the financial statements upon adoption of IFRS 16 on January 1, 2019.

The changes in accounting policies and standards, interpretations and amendments not yet effective are disclosed in Note 3 of the audited consolidated financial statements for the year ended December 31, 2018.

FINANCIAL INSTRUMENTS

(Stated in thousands of U.S. dollars)	Fair value at December 31, 2018	Basis of measurement	Associated risks
Cash and cash equivalents	$ 96,507	Amortized cost	Interest/Credit/Foreign exchange
Accounts receivable	3,213	Amortized cost	Foreign exchange/Credit
Trade and other payables	68,469	Amortized cost	Foreign exchange/Interest
Finance leases	1,683	Amortized cost	Interest
Ecobank Loan III	19,935	Amortized cost	Interest
Ecobank Loan IV	17,700	Amortized cost	Interest
7% Convertible Debentures	44,612	Amortized cost	Interest
Vendor agreement	16,776	Amortized cost	Interest/Foreign exchange
Long-term derivative liability	4,177	Fair value through profit and loss	Market price

Amortized cost – Cash and cash equivalents, accounts receivable, trade and other payables, the 7% Convertible Debentures, the Ecobank Loan III, the Ecobank Loan IV, the vendor agreement and the finance leases approximate their carrying values as the interest rates are comparable to current market rates. Carrying value of the vendor agreement has been discounted to reflect its fair value.

Fair value through profit or loss – The fair value of the long-term derivative liability relating to the 7% Convertible Debentures is estimated using a convertible note valuation model. For the year ended December 31, 2018, a total gain of $6.8 million was recorded to the statement of operations.

DISCLOSURES ABOUT RISKS

The Company's exposure to significant risks include, but are not limited to, the following risks: change in interest rates on our debt, change in foreign currency exchange rates, commodity price fluctuations, liquidity risk and credit risk. 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. For a complete discussion of the risks, refer to the Company's Annual Information Form for the year ended December 31, 2017 available on the SEDAR website at www.sedar.com. Additional and/or updated risk factors, if applicable, will be included in our annual information form for the year ended December 31, 2018, 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, 2018, 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 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.

The Company's management, under the supervision of the President and Chief Executive Officer and the Executive Vice President and Chief Financial Officer, assessed the effectiveness of the Company's internal control over financial reporting. In making this assessment, it used the criteria set forth in the Internal Control – integrated framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013). Based on our assessment, management has concluded that, as of December 31, 2018, the Company's internal control over financial reporting is effective based on those criteria.

The Company's internal control over financial reporting as of December 31, 2018 has been audited by PricewaterhouseCoopers LLP ("PwC") Chartered Professional Accountants, Licensed Public Accountants, who also audited the Company's Consolidated Financial Statements for the year ended December 31, 2018. PwC, in its report that immediately precedes the Company's audited consolidated financial statements for the year ended December 31, 2018, expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

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, 2018 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 our annual information form for the year ended December 31, 2017. Additional and/or updated risk factors, if applicable, will be included in our annual information form for the year ended December 31, 2018, which will be filed on SEDAR at www.sedar.com.

FINANCIAL STATEMENTS

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 management. The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards 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, 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 professional opinion. PricewaterhouseCoopers LLP has full and free access to the Audit Committee.

"Samuel T. Coetzer"
Samuel T. Coetzer
President and Chief Executive Officer

"André van Niekerk"
André van Niekerk
Executive Vice President and Chief Financial Officer

Toronto, Canada
February 19, 2019

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

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, 2018 and 2017, and the related consolidated statements of operations and comprehensive (loss)/income, cash flows and 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, 2018, 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, 2018 and 2017, and their financial performance and their cash flows for the years then ended in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board (IFRS). Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control – Integrated Framework* (2013) issued by the COSO.

Change in Accounting Principle

As discussed in notes 2 and 11 to the consolidated financial statements, the Company changed the manner in which it accounts for revenue from contracts with customers in 2018.

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 Management's Report on Internal Control Over Financial Reporting on page 28 of the 2018 Management's Discussion and Analysis. 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.

PricewaterhouseCoopers LLP
PwC Tower, 18 York Street, Suite 2600, Toronto, Ontario, Canada M5J 0B2
T: +1 416 863 1133, F: +1 416 365 8215

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM – continued

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.

(Signed) "PricewaterhouseCoopers LLP"

Chartered Professional Accountants, Licensed Public Accountants

Toronto, Canada
February 19, 2019

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.

CONTENTS

GOLDEN STAR RESOURCES LTD

CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE (LOSS)/INCOME (Stated in thousands of U.S. dollars except shares and per share data)

		For the years ended December 31,	
	NOTES	2018	2017
REVENUE	17	$ 273,017	$ 315,497
Cost of sales excluding depreciation and amortization	18	223,729	226,482
Depreciation and amortization		33,939	31,792
MINE OPERATING MARGIN		15,349	57,223
OTHER EXPENSES/(INCOME)			
Exploration expense		2,959	1,871
General and administrative		16,428	25,090
Finance expense, net	19	18,072	8,485
Other income	20	(3,603)	(4,346)
Gain on fair value of financial instruments, net	5	(6,786)	(2,057)
Loss on conversion of 7% Convertible Debentures, net		–	165
(LOSS)/INCOME BEFORE TAX		(11,721)	28,015
Deferred income tax expense/(recovery)	8	12,350	(12,944)
Net (loss)/income and comprehensive (loss)/income		$ (24,071)	$ 40,959
Net (loss)/income attributable to non-controlling interest		(5,948)	2,188
NET (LOSS)/INCOME ATTRIBUTABLE TO GOLDEN STAR SHAREHOLDERS		**$ (18,123)**	**$ 38,771**
NET (LOSS)/INCOME PER SHARE ATTRIBUTABLE TO GOLDEN STAR SHAREHOLDERS			
Basic	16	$ (0.21)	$ 0.52
Diluted	16	$ (0.21)	$ 0.48
Weighted average shares outstanding-basic (millions)		84.3	74.7
Weighted average shares outstanding-diluted (millions)		84.3	88.2

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)

		As of December 31,	
	NOTES	2018	2017
ASSETS			
CURRENT ASSETS			
Cash and cash equivalents		$ 96,507	$ 27,787
Accounts receivable		3,213	3,428
Inventories	6	35,196	50,653
Prepaids and other		5,291	5,014
TOTAL CURRENT ASSETS		**140,207**	**86,882**
RESTRICTED CASH		6,545	6,505
MINING INTERESTS	7	270,640	254,058
DEFERRED TAX ASSETS		595	12,944
TOTAL ASSETS		**$ 417,987**	**$ 360,389**
LIABILITIES			
CURRENT LIABILITIES			
Accounts payable and accrued liabilities	9	$ 78,484	$ 94,623
Current portion of rehabilitation provisions	10	7,665	6,566
Current portion of deferred revenue	11	14,316	17,894
Current portion of long term debt	12	27,482	15,864
Current portion of other liability	15	6,410	13,498
TOTAL CURRENT LIABILITIES		**134,357**	**148,445**
REHABILITATION PROVISIONS	10	58,560	64,146
DEFERRED REVENUE	11	105,632	92,062
LONG TERM DEBT	12	73,224	79,741
DERIVATIVE LIABILITY	5	4,177	10,963
OTHER LIABILITY	15	–	6,786
TOTAL LIABILITIES		**375,950**	**402,143**
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	13	908,035	783,167
CONTRIBUTED SURPLUS		37,258	35,284
DEFICIT		(831,283)	(794,180)
SHAREHOLDERS' EQUITY ATTRIBUTABLE TO GOLDEN STAR SHAREHOLDERS		**114,010**	**24,271**
NON-CONTROLLING INTEREST		(71,973)	(66,025)
TOTAL EQUITY/(DEFICIT)		42,037	(41,754)
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY		**$ 417,987**	**$ 360,389**

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

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, 2018	2017
OPERATING ACTIVITIES:			
Net (loss)/income		$ (24,071)	$ 40,959
RECONCILIATION OF NET (LOSS)/INCOME TO NET CASH (USED IN)/ PROVIDED BY OPERATING ACTIVITIES:			
Depreciation and amortization		33,975	31,823
Share-based compensation	15	1,278	12,554
Deferred income tax expense/(recovery)	8	12,350	(12,944)
Gain on fair value of 7% Convertible Debentures embedded derivative	5	(6,786)	(2,095)
Recognition of deferred revenue	11	(13,738)	(14,156)
Proceeds from Royal Gold stream	11	–	10,000
Reclamation expenditures	10	(5,316)	(5,992)
Other	24	11,925	2,475
Changes in working capital	24	(17,172)	(7,448)
NET CASH (USED IN)/PROVIDED BY OPERATING ACTIVITIES		**(7,555)**	**55,176**
INVESTING ACTIVITIES:			
Additions to mining properties		(677)	(632)
Additions to plant and equipment		(95)	(649)
Additions to construction in progress		(44,163)	(67,591)
Proceeds from asset disposal		38	–
Change in accounts payable and deposits on mine equipment and material		(3,014)	1,103
Increase in restricted cash		(40)	(41)
NET CASH USED IN INVESTING ACTIVITIES		**(47,951)**	**(67,810)**
FINANCING ACTIVITIES:			
Principal payments on debt	12	(15,607)	(2,198)
Proceeds from debt agreements	12	35,000	10,000
5% Convertible Debentures repayment		–	(13,611)
Royal Gold loan repayment	12	(20,000)	–
Shares issued, net		124,772	24,456
Exercise of options		61	10
NET CASH PROVIDED BY FINANCING ACTIVITIES		**124,226**	**18,657**
Increase in cash and cash equivalents		68,720	6,023
Cash and cash equivalents, beginning of period		27,787	21,764
CASH AND CASH EQUIVALENTS, END OF PERIOD		**$ 96,507**	**$ 27,787**

See Note 24 for 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 shares and per share data)

	Number of Common Shares[1]	Share Capital	Contributed Surplus	Deficit	Non-Controlling Interest	Total Shareholders' Equity
BALANCE AT DECEMBER 31, 2016	**67,071,290**	**$ 746,542**	**$ 33,861**	**$ (832,951)**	**$ (68,213)**	**$ (120,761)**
Shares issued	8,161,900	35,682	–	–	–	35,682
Shares issued under DSUs	233,539	521	(521)	–	–	–
Shares issued under options	4,750	16	(6)	–	–	10
Shares issued under warrants	644,736	2,450	–	–	–	2,450
Options granted net of forfeitures	–	–	1,229	–	–	1,229
Deferred share units granted	–	–	387	–	–	387
Performance and restricted share units granted	–	–	334	–	–	334
Share issue costs	–	(2,044)	–	–	–	(2,044)
Net income	–	–	–	38,771	2,188	40,959
BALANCE AT DECEMBER 31, 2017	**76,116,215**	**$ 783,167**	**$ 35,284**	**$ (794,180)**	**$ (66,025)**	**$ 41,754)**
Impact of adopting IFRS 15 on January 1, 2018 (see Note 3)	–	–	–	(18,980)	–	(18,980)
BALANCE AT JANUARY 1, 2018 (RESTATED)	76,116,215	$ 783,167	$ 35,284	$ (813,160)	$ (66,025)	$ (60,734)
Shares issued (see Note 13)	32,642,100	125,672	–	–	–	125,672
Shares issued under DSUs	36,194	20	(165)	–	–	(145)
Shares issued under options	24,500	77	(16)	–	–	61
Options granted net of forfeitures	–	–	1,248	–	–	1,248
Deferred share units granted	–	–	565	–	–	565
Performance and restricted share units granted	–	–	342	–	–	342
Share issue costs	–	(901)	–	–	–	(901)
Net loss	–	–	–	(18,123)	(5,948)	(24,071)
BALANCE AT DECEMBER 31, 2018	**108,819,009**	**$ 908,035**	**$ 37,258**	**$ (831,283)**	**$ (71,973)**	**$ 42,037**

1 See Note 13 for share consolidation details.

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

GOLDEN STAR RESOURCES LTD

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017

(All currency amounts in tables are in thousands of U.S. dollars unless noted otherwise)

1. NATURE OF OPERATIONS

Golden Star Resources Ltd. ("Golden Star" or "the Company" or "we" or "our") is a Canadian federally-incorporated, international gold mining and exploration company headquartered in Toronto, Canada. The Company's shares are listed on the Toronto Stock Exchange (the "TSX") under the symbol GSC, the NYSE American (formerly NYSE MKT) under the symbol GSS and the Ghana Stock Exchange under the symbol GSR. The Company's registered office is located at 150 King Street West, Suite 1200, Toronto, Ontario, M5H 1J9, Canada.

Through our 90% owned subsidiary, Golden Star (Wassa) Limited, we own and operate the Wassa open-pit gold mine, the Wassa underground mine and a carbon-in-leach ("CIL") processing plant (collectively, "Wassa"), located northeast of the town of Tarkwa, Ghana. Through our 90% owned subsidiary Golden Star (Bogoso/Prestea) Limited, the Company owns and operates the Bogoso gold mining and processing operations, the Prestea open-pit mining operations and the Prestea underground mine ("Prestea") located near the town of Prestea, Ghana. We hold and manage interests in several gold exploration projects in Ghana and in Brazil.

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 I of the CPA Canada Handbook – Accounting.

These consolidated financial statements were approved by the Board of Directors of the Company on February 19, 2019.

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 below. 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.

These consolidated financial statements have been prepared on a going concern basis, which contemplates the realization of assets and discharge of all liabilities in the normal course of business.

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

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.

Inventories

Inventory classifications include "stockpiled ore," "in-process inventory," "finished goods inventory" and "materials and supplies". The stated value of all production inventories include 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 (via truck counts or 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 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.

GOLDEN STAR RESOURCES LTD

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS – continued

FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017

(All currency amounts in tables are in thousands of U.S. dollars unless noted otherwise)

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 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 and comprehensive loss. 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

Until December 31, 2017, deferred revenue consists of payments received by the Company for future delivery of payable gold under the terms of the Company's Streaming Agreement. As deliveries were made, the Company recorded a portion of the deferred revenue as sales, on a unit of production basis over the volume of gold expected to be delivered during the term of the streaming arrangement. The amount by which the deferred revenue balance was reduced and recognized into revenue was based on a rate per ounce of gold delivered under the stream. This rate per ounce of gold delivered was based on the remaining deferred revenue balance divided by the ounces that are expected to be delivered under the Stream Arrangement over the life of the arrangement. This estimate is re-evaluated at each reporting period with any resulting changes in estimate reflected prospectively.

Prior to the adoption of IFRS 15 *Revenue from Contracts with Customers*, the Streaming Agreement was recorded as a contract for the future delivery of gold ounces at the contracted price. The upfront payments were accounted for as prepayments of yet-to-be delivered ounces under the contract and were recorded as deferred revenue. The initial term of the contract is 40 years and the deposit bears no interest.

On January 1, 2018, the Company adopted the requirements of IFRS 15. The Company elected to use the modified retrospective approach to initially adopt IFRS 15 which resulted in recognizing the cumulative effect of prior period amounts as an adjustment to the opening balance sheet through opening deficit on January 1, 2018.

From January 1, 2018, deferred revenue consists of: 1) 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 11, Deferred Revenue, and 2) 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 stream. 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 retroactive 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.

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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 is 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, warrants, convertible debentures and other potentially dilutive instruments. In periods of loss, diluted net loss per share is equal to basic income per share.

Revenue recognition

Until December 31, 2017, revenue from the sale of metal was recognized when the significant risks and rewards of ownership have passed to the purchaser. This occurs when the amount of revenue could be measured reliably, the metal had been delivered, title has passed to the buyer and it was probable that the economic benefits associated with the transaction will flow to the entity. Title and risk of ownership pass to the buyer on the day doré was shipped from the mine sites. On January 1, 2018, the Company adopted the requirements of IFRS 15, where revenue from the sale of metal is recognized when the Company transfers control over to a customer. There was no impact to the accounting of revenue from the sale of doré on adoption of IFRS 15. All of our spot sales of gold are transported to a South African gold refiner who locates a buyer and arranges for sale of our gold on the same day that the gold is shipped from the mine site. The sales price is based on the London P.M. fix on the day of shipment.

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 and comprehensive (loss)/income, 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 operations and comprehensive (loss)/income 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.

Under 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 is required to settle these awards in cash, they are accounted for as liability awards with corresponding compensation expense recognized. Long term PSU liabilities are recognized on the balance sheet as Long Term Other Liability and the current portion is recorded as Other Liability.

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.

Leases

Leases that transfer substantially all of the benefits and risks of ownership to the Company are recorded as finance leases and classified as property, plant and equipment with a corresponding amount recorded with current and long-term debt. All other leases are classified as operating leases under which leasing costs are expensed in the period incurred. The Company will adopt IFRS 16, which was issued in January 2016 and applies to annual reporting periods beginning on or after January 1, 2019. See Changes in accounting policies below.

Financial instruments

Until December 31, 2017, the Company recognized all financial assets initially at fair value and classifies them into one of the following three categories: fair value through profit or loss ("FVTPL"), available-for-sale ("AFS") or loans and receivables, as appropriate. The Company had not classified any of its financial assets as held to maturity.

From January 1, 2018, 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. On adoption of IFRS 9 *Financial Instruments*, there was no accounting impact to the financial statements and there were no changes in the carrying values of any of the Company's financial assets.

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.

5% CONVERTIBLE DEBENTURES

The Company's 5% Convertible Debentures were considered financial instruments at FVTPL. The convertible debentures contained embedded derivatives that significantly modified the cash flows that otherwise would be required by the contract. The convertible debentures were recorded at fair value based on unadjusted quoted prices in active markets when available, otherwise by valuing the embedded derivative conversion feature and the debt component separately. The conversion feature was valued using a Black-Scholes model and the value of the debt was determined based on the present value of the future cash flows. Changes in fair value were recorded in the consolidated statement of operations. Upfront costs and fees related to the convertible debentures were recognized in the statement of operations as incurred and not deferred. The Company's 5% Convertible Debentures were fully settled during the year ended December 31, 2017.

WARRANTS

The Company's warrants were considered financial instruments at FVTPL. Prior to the holder exercising the warrants in full in 2017, the holder of the warrants had an option to request a cashless exercise. As a result, the warrants were classified as financial liability instruments and were recorded at fair value at each reporting period end using a Black-Scholes model. Warrant pricing models required the input of certain assumptions including price volatility and expected life. All warrants were exercised during the year ended December 31, 2017.

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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 statement of operations. The Company did not have any foreign exchange derivatives outstanding at December 31, 2018.

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 statement 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.

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.

Changes in accounting policies

The Company has adopted the following new and revised standards, effective January 1, 2018. These changes were made in accordance with the applicable transitional provisions.

IFRS 2 *Share-based payments* was amended to address (i) certain issues related to the accounting for cash settled awards, and (ii) the accounting for equity settled awards that include a "net settlement" feature in respect of employee withholding taxes effective for years beginning on or after January 1, 2018. There was no impact to the financial statements on adoption of this standard.

IFRS 9 *Financial Instruments* was issued in July 2014 and includes (i) a third measurement category for financial assets – fair value through other comprehensive income; (ii) a single, forward-looking "expected loss" impairment model; and (iii) a mandatory effective date of annual periods beginning on or after January 1, 2018. On adoption of this standard, there was no accounting impact to the financial statements and there were no changes in the carrying values of any of the Company's financial assets.

IFRS 15 *Revenue from Contracts* with Customers was amended to clarify how to (i) identify a performance obligation in a contract; (ii) determine whether a company is a principal or an agent; and (iii) determine whether the revenue from granting a license should be recognized at a point in time or over time. In addition to the clarifications, the amendments include two additional reliefs to reduce cost and complexity for a company when it first applies the new standard. The amendments have the same effective date as the standard, which is January 1, 2018. The impact of the initial adoption of IFRS 15 was $19.0 million. The adjustment was recorded as an increase to deferred revenue with a corresponding increase to opening deficit.

Standards, interpretations and amendments not yet effective

IFRS 16 *Leases* specifies how an IFRS reporter will recognize, measure, present and disclose leases. The standard provides a single lessee accounting model, requiring lessees to recognize assets and liabilities for all leases unless the lease term is 12 months or less or the underlying asset has a low value. Lessors continue to classify leases as operating or finance, with IFRS 16's approach to lessor accounting substantially unchanged from its predecessor, IAS 17. IFRS 16 was issued in January 2016 and applies to annual reporting periods beginning on or after January 1, 2019. The Company has completed an evaluation of the population of its contracts to ensure compliance with the new lease standard. The assessment has identified some contracts that will likely be capitalized under the new lease standard however the Company does not expect there to be a material impact on the financial statements upon adoption of IFRS 16 on January 1, 2019, which will be applied on a modified retrospective basis.

IFRIC 23 *Uncertainty over income tax treatments* clarifies how the recognition and measurement requirements of IAS 12, Income Taxes, are applied where there is uncertainty over income tax treatments effective for years beginning on or after January 1, 2019. There is not expected to be any accounting impact to the financial statements on adoption of this standard.

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.

Inventory valuation

Inventories are recorded at the lower of average cost or net realizable value ("NRV"). The allocation of costs to ore in stockpiles and the determination of NRV involve the use of estimates. Stockpiled ore represents coarse ore that has been extracted from the mine and is stored for future processing. Stockpiled ore is measured using estimates such as the number of tonnes (via truck counts or by physical surveys) added to, or removed from the stockpile, the number of contained ounces (based on assay data) and estimated gold recovery percentage. Timing and recovery of stockpiled ore can vary significantly from the estimates.

The net realizable value of materials and supplies is recorded based on the expected usage of the inventory items, salvage value and condition of the inventory items, all of which are based on management estimates and judgments.

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 and resources 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 of the Company 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.

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 of the various 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.

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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 light 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 that 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.

Deferred revenue

Significant judgment is required in determining the appropriate accounting for the Streaming Agreement that has been entered into. Management has determined that based on the agreements reached that it assumes significant business risk associated with the timing and amount of ounces of gold being delivered. As such, the deposits received have been recorded as deferred revenue liabilities in the consolidated balance sheet. Deferred revenue is recognized as revenue based on the percentage of ounces delivered in the period over the total estimated ounces to be delivered over the life of the Streaming Agreement.

Commencement of commercial production

Prior to the period when a mine has reached management's intended operating levels, costs incurred as part of the development of the related mining property are capitalized and any gold sales during the development period are offset against the cost capitalized. The Company defines the commencement of commercial production as the date that a mine has achieved a consistent level of production. Depreciation/amortization of capitalized costs for mining properties begins when operating levels intended by management has been reached.

There are a number of factors the Company considers when determining if conditions exist for the commencement of commercial production of an operating mine. Management examines the following factors when making that judgement:

- All major capital expenditures to bring the mine to the condition necessary for it to be capable of operating in the manner intended by management have been completed;
- The completion of a reasonable period of testing of the mine properties;
- The mine and/or mill has reached a pre-determined percentage of design capacity; and
- The ability to sustain ongoing production of ore.

5. FINANCIAL INSTRUMENTS

The following tables illustrate the classification of the Company's recurring fair value measurements for financial instruments within the fair value hierarchy and their carrying values and fair values as at December 31, 2018 and December 31, 2017:

		December 31, 2018		December 31, 2017	
	Level	Carrying value	Fair value	Carrying value	Fair value
FINANCIAL LIABILITIES					
Fair value through profit or loss					
7% Convertible Debentures embedded derivative	3	4,177	4,177	10,963	10,963

There were no non-recurring fair value measurements of financial instruments as at December 31, 2018.

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 Company's policy is to recognize transfers into and transfers out of the fair value hierarchy levels as of the date of the event or change in circumstances that caused the transfer. During the year ended December 31, 2018, there were no transfers between the levels of the fair value hierarchy.

Gain on fair value of financial instruments in the Statements of Operations and Comprehensive (Loss)/Income includes the following components:

	For the years ended December 31,	
	2018	2017
Loss on fair value of 5% Convertible Debentures	$ –	$ 317
Gain on fair value of warrants	–	(86)
Gain on warrant exercise	–	(193)
Gain on fair value of 7% Convertible Debentures embedded derivative	(6,786)	(2,095)
	$ (6,786)	**$ (2,057)**

The valuation technique that is used to measure fair value is 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.

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The embedded derivative was valued at December 31, 2018 and December 31, 2017 using a convertible note valuation model. The significant inputs used in the convertible note valuation are as follows:

	December 31,	
	2018	**2017**
EMBEDDED DERIVATIVE		
Risk premium	5.0%	7.9%
Borrowing costs	10.0%	15.0%
Expected volatility	45.0%	45.0%
Remaining life (years)	2.6	3.6

The following table presents the changes in the 7% Convertible Debentures embedded derivative for the year ended December 31, 2018:

		Fair value
BALANCE AT DECEMBER 31, 2017	$	10,963
Gain on fair value of 7% Convertible Debentures embedded derivative		(6,786)
BALANCE AT DECEMBER 31, 2018	**$**	**4,177**

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 Statement of Operations would increase by $0.2 million for the year ended December 31, 2018.

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 Statement of Operations would increase by $0.2 million for the year ended December 31, 2018.

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 Statement of Operations would decrease by $0.7 million for the year ended December 31, 2018.

6. INVENTORIES

Inventories include the following components:

	As of December 31,			
		2018		**2017**
Stockpiled ore	$	6,613	$	22,998
In-process ore		4,188		4,014
Materials and supplies		23,659		22,677
Finished goods		736		964
TOTAL	**$**	**35,196**	**$**	**50,653**

The cost of inventories expensed for the year ended December 31, 2018 and 2017 was $209.4 million and $209.2 million, respectively.

Net realizable value adjustments of $2.8 million was recorded for stockpiled ore during the year ended December 31, 2018 (year ended December 31, 2017 – $3.5 million).

During the year ended December 31, 2018, a total of $2.8 million materials and supplies inventories were written off at Wassa. These are primarily related to open-pit mining equipment, materials and supplies as open-pit mining at Wassa was terminated in the first quarter of 2018. There were no write offs in the prior period.

7. 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, 2016		**461,438**		**746,657**		**131,409**		**1,339,504**
Additions		649		632		63,072		64,353
Transfers		24,269		48,122		(72,391)		–
Capitalized interest		–		–		5,285		5,285
Change in rehabilitation provision estimate		–		3,022		–		3,022
Disposals and other		(7,142)		–		(452)		(7,594)
BALANCE AT DECEMBER 31, 2017	**$**	**479,214**	**$**	**798,433**	**$**	**126,923**	**$**	**1,404,570**
Additions		95		677		45,485		46,257
Transfers		16,516		127,902		(144,418)		–
Capitalized interest		–		–		579		579
Change in rehabilitation provision estimate		–		3,218		–		3,218
Disposals and other		(17,065)		–		–		(17,065)
BALANCE AT DECEMBER 31, 2018	**$**	**478,760**	**$**	**930,230**	**$**	**28,569**	**$**	**1,437,559**
ACCUMULATED DEPRECIATION								
AS OF DECEMBER 31, 2016		**431,698**		**692,789**		**–**		**1,124,487**
Depreciation and amortization		12,385		20,431		–		32,816
Disposals and other		(6,791)		–		–		(6,791)
BALANCE AT DECEMBER 31, 2017	**$**	**437,292**	**$**	**713,220**	**$**	**–**	**$**	**1,150,512**
Depreciation and amortization		12,349		20,900		–		33,249
Disposals and other		(16,842)		–		–		(16,842)
BALANCE AT DECEMBER 31, 2018	**$**	**432,799**	**$**	**734,120**	**$**	**–**	**$**	**1,166,919**
CARRYING AMOUNT								
BALANCE AT DECEMBER 31, 2017	**$**	**41,922**	**$**	**85,213**	**$**	**126,923**	**$**	**254,058**
BALANCE AT DECEMBER 31, 2018	**$**	**45,961**	**$**	**196,110**	**$**	**28,569**	**$**	**270,640**

As at December 31, 2018, equipment under finance leases had net carrying amounts of $3.0 million (December 31, 2017 – $1.6 million). The total minimum lease payments are disclosed in Note 12 – Debt.

No depreciation is charged to construction in progress assets. For the year ended December 31, 2018, the general capitalization rate for borrowing costs was 7%. Commercial production was achieved February 1, 2018, therefore no capitalized interest was recorded since.

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8. 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 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, forecasted 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 assets at December 31, 2018 and 2017 include the following components:

	As of December 31,	
	2018	**2017**
DEFERRED TAX ASSETS		
Tax losses carried forward	$ 10,322	$ 17,773
Deductible temporary differences relating to provisions	5,995	4,821
DEFERRED TAX LIABILITIES		
Mine property costs	15,723	9,650
NET DEFERRED TAX ASSETS	**$ 594**	**$ 12,944**

The Company has recognized $0.6 million of net deferred tax assets as at December 31, 2018 following an assessment in the prior year of future profitability of the Company's subsidiary Golden Star (Wassa) Limited and concluded the realization of the net deferred tax assets is probable.

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

	As of December 31,	
	2018	**2017**
DEDUCTIBLE TEMPORARY DIFFERENCES		
Canada	$ 8,844	$ 12,755
Ghana	31,509	44,232
	$ 40,353	**$ 56,987**
TAX LOSSES		
Canada	$ 50,718	$ 48,411
U.S.	175	311
Ghana	287,545	257,771
	$ 338,438	**$ 306,493**
TOTAL UNRECOGNIZED DEFERRED TAX ASSETS		
Canada	$ 59,562	$ 61,166
U.S.	175	311
Ghana	319,054	302,003
	$ 378,791	**$ 363,480**

The income tax expense/(recovery) includes the following components:

	For the years ended December 31,	
	2018	**2017**
CURRENT TAX RECOVERY		
Current tax on net earnings	$ 12,350	$ –
DEFERRED TAX RECOVERY		
Recovery of previously unrecognized deferred tax assets	–	(12,944)
INCOME TAX EXPENSE/(RECOVERY)	**$ 12,350**	**$ (12,944)**

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

	For the years ended December 31,	
	2018	**2017**
Net (loss)/income before tax	$ (11,721)	$ 28,015
Statutory tax rate	26.5%	26.5%
Tax benefit at statutory rate	$ (3,106)	$ 7,424
Foreign tax rates	(15,562)	(10,629)
Other	132	74
Non taxable/deductible items	(676)	(20)
Change in unrecognized deferred tax assets due to exchange rates	3,427	(1,180)
Change in unrecognized deferred tax assets	28,135	(8,613)
DEFERRED INCOME TAX EXPENSE/(RECOVERY)	**$ 12,350**	**$ (12,944)**

At December 31, 2018, the Company had a tax pool and loss carryovers expiring as follows:

	Canada	**Ghana**	**Other**
2019	$ –	$ 33,488	$ –
2020	–	109,841	–
2021	–	12,822	
2026	8,115	–	
2027	12,306	117,889	–
2028	11,106	–	–
2029	16,841	–	–
2030	15,052	–	–
2031	28,240	–	–
2032	13,670	–	–
2033	5,884	–	347
2034	–	–	364
2035	8,049	–	1
2036	13,123	–	120
2037	14,827	–	–
Indefinite	37,867	577,012	–
TOTAL	**$ 185,080**	**$ 851,052**	**$ 832**

$821.6 million of the Ghana tax pool is usable against taxable income generated at Prestea, with the remaining amount totaling $29.5 million usable against taxable income generated at Wassa.

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9. ACCOUNTS PAYABLE AND ACCRUED LIABILITIES

Accounts payable and accrued liabilities include the following components:

	As of December 31,	
	2018	**2017**
Trade and other payables	$ 42,947	$ 44,048
Accrued liabilities	25,522	40,165
Payroll related liabilities	10,015	10,410
TOTAL	**$ 78,484**	**$ 94,623**

10. REHABILITATION PROVISIONS

At December 31, 2018, the total undiscounted amount of future cash needs for rehabilitation was estimated to be $73.5 million. A discount rate assumption of 2% and an inflation rate assumption of 2% were used to value the rehabilitation provisions. The changes in the carrying amount of the rehabilitation provisions are as follows:

	For the years ended December 31,	
	2018	**2017**
BEGINNING BALANCE	**$ 70,712**	**$ 77,382**
Accretion of rehabilitation provisions	691	1,245
Changes in estimates	138	(1,923)
Cost of reclamation work performed	(5,316)	(5,992)
BALANCE AT THE END OF THE PERIOD	**$ 66,225**	**$ 70,712**
Current portion	$ 7,665	$ 6,566
Long term portion	58,560	64,146
TOTAL	**$ 66,225**	**$ 70,712**

During the year ended December 31, 2018, the Company recorded an increase in estimate for Wassa of $1.0 million due to a revision in the timing of payments. At December 31, 2018, the rehabilitation provision for Wassa was $17.2 million (2017 – $17.4 million). The Company expects the payments for reclamation to be incurred between 2019 and 2027.

During the year ended December 31, 2018, the Company recorded a decrease in estimate for Prestea of $0.8 million. The decrease is due to a $3.1 million reduction in expected reclamation costs relating to the refractory liability and a $2.3 million increase in the expected reclamation costs relating to the non-refractory operation. The reduction of $3.1 million was primarily a result of a reduction in water treatment liability from ongoing treatment and a negative water balance. The reduction was recorded as other income since the carrying value of the underlying refractory assets were $nil after suspension of its operation in 2015. At December 31, 2018, the rehabilitation provision for Prestea was $49.0 million (2017 – $53.3 million). The Company expects the payments for reclamation to be incurred between 2019 and 2028.

11. DEFERRED REVENUE

On July 28, 2015, the Company through its subsidiary Caystar Finance Co. completed a $130 million gold purchase and sale agreement ("Streaming Agreement") with RGLD, a wholly-owned subsidiary of Royal Gold, Inc. ("RGI"). This Streaming Agreement was subsequently amended on December 30, 2015 to provide an additional $15 million of streaming advance payment. The Streaming percentages were adjusted as follows to reflect the $15 million additional advance payment: From January 1, 2016, the Company will deliver 9.25% of gold production from Wassa and Prestea to RGLD at a cash purchase price of 20% of spot gold. From January 1, 2018, 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 from Wassa and Prestea at a cash purchase price of 30% of spot gold price will be delivered.

During the year ended December 31, 2018, the Company sold 23,692 ounces of gold to RGLD. Revenue recognized on the ounces sold to RGLD during the year ended December 31, 2018 consisted of $6.0 million of cash payment proceeds and $13.7 million of deferred revenue recognized in the period (see Note 17). The Company has delivered a total of 78,461 ounces of gold to RGLD since the inception of the Streaming Agreement.

	For the years ended December 31,	
	2018	**2017**
BEGINNING BALANCE	**$ 109,956**	**$ 114,112**
Impact of adopting IFRS 15 on January 1, 2018 (see Note 3)	18,980	–
Deposits received	–	10,000
Deferred revenue recognized	(13,738)	(14,156)
Interest on financing component of deferred revenue	4,750	–
BALANCE AT THE END OF THE PERIOD	**$ 119,948**	**$ 109,956**
Current portion	$ 14,316	$ 17,894
Long term portion	105,632	92,062
TOTAL	**$ 119,948**	**$ 109,956**

During the year ended December 31, 2018, the Company recognized $10.6 million deferred revenue, $3.1 million amortization of financing component, and $4.8 million interest on financing component of deferred revenue. Had the Company not adopted IFRS 15, deferred revenue recognized for the year ended December 31, 2018 would have been $13.7 million and there would have been no amortization of financing component or interest on financing component of deferred revenue.

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12. DEBT

The following table displays the components of our current and long term debt instruments:

	As of December 31,	
	2018	**2017**
CURRENT DEBT:		
Equipment financing credit facility	$ –	$ 147
Finance leases	1,151	1,229
Ecobank Loan III	5,555	2,222
Ecobank Loan IV	4,000	–
Vendor agreement	16,776	12,266
TOTAL CURRENT DEBT	**$ 27,482**	**$ 15,864**
LONG TERM DEBT:		
Finance leases	$ 532	$ 269
Ecobank Loan III	14,380	7,337
Ecobank Loan IV	13,700	–
7% Convertible Debentures	44,612	42,515
Royal Gold loan	–	18,817
Vendor agreement	–	10,803
TOTAL LONG TERM DEBT	**$ 73,224**	**$ 79,741**
Current portion	$ 27,482	$ 15,864
Long term portion	73,224	79,741
TOTAL	**$ 100,706**	**$ 95,605**

Equipment financing credit facility

Bogoso/Prestea and Wassa maintained an equipment financing facility with Caterpillar Financial Services Corporation, with Golden Star as the guarantor of all amounts borrowed. The facility provided credit financing for mining equipment at a fixed interest rate of 6.5%. Amounts drawn under this facility were repayable over a period of two to five years. Each outstanding equipment loan was secured by the title of the specific equipment purchased with the loan until the loan was repaid in full.

Finance leases

The Company financed mining equipment at Wassa and Bogoso/Prestea through equipment financing leases. These finance leases are payable in equal installments over a period of 60 months and have implicit interest rates of 6.9%. Each outstanding finance lease is secured by the title of the specific equipment purchased with the lease until the lease has been repaid in full.

During the year ended December 31, 2018, the Company entered into two financing lease agreements totaling $1.9 million for a period of 24 months.

Ecobank Loan III

On February 22, 2017, the Company through its subsidiary Golden Star (Wassa) Limited closed a $25 million secured Medium Term Loan Facility ("Ecobank Loan III") with Ecobank Ghana Limited. Ecobank Loan III has a term of 60 months from the date of initial drawdown and is secured by, among other things, Wassa's existing plant, and certain machinery and equipment having a specified value. The interest rate on the loan is three month LIBOR plus 8%, per annum, payable monthly in arrears beginning a month following the initial drawdown. Repayment of principal commences six months following the initial drawdown and is thereafter payable quarterly in arrears. The Company had twelve months to drawdown the loan.

On January 24, 2018, the Company drew down $15.0 million of the Ecobank Loan III. The full $25.0 million has been drawn as at December 31, 2018.

Ecobank Loan IV

On June 28, 2018, the Company through its subsidiary Golden Star (Wassa) Limited closed a $20.0 million secured loan facility ("Ecobank Loan IV") with Ecobank Ghana Limited and used the facility to repay in full the $20.0 million Royal Gold loan. The loan is secured by, among other things, Wassa's existing plant, and certain machinery and equipment having a specified value. There are no prepayment penalties associated with Ecobank Loan IV and the loan is repayable within 60 months of initial drawdown. Repayment of principal commenced September 2018 and is thereafter payable quarterly in arrears. Interest is payable monthly in arrears at an interest rate equal to three month LIBOR plus a spread of 7.5% per annum.

Royal Gold loan

In July 2015, the Company through its subsidiary Caystar Finance Co. closed a $20.0 million term loan with RGI and subsequently drew down $20.0 million of the facility. The loan has a term of 4 years and is secured by, among other things, assets of Wassa and Bogoso/Prestea. Interest is payable based on the average daily London Bullion Market Association ("LBMA") gold price multiplied by 62.5% divided by 10,000 to a maximum interest rate of 11.5% per annum. Interest payments are to be made on the last business day of each fiscal quarter, commencing in the quarter which the funding occurred. The fair value of the loan is determined net of initial valuation of the warrants issued to RGI and financing fees incurred. Commencing June 30, 2017, the excess cash flow provision came into effect. No excess cash flow repayments were made.

For the year ended December 31, 2018, the interest rate was approximately 8% with a total of $0.8 million paid during the year. On June 28, 2018, the Company used Ecobank Loan IV to repay in full the $20.0 million Royal Gold loan.

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. If the 7% Convertible Debentures are converted before August 1, 2019, the Company will, in addition to the consideration payable with the conversion, be required to make a conversion make-whole payment 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 converted had such debentures remained outstanding from the conversion date to August 1, 2019, subject to certain restrictions. The present value of the remaining scheduled interest payments will be computed using a discount rate equal to 2.0%.

Prior to August 15, 2019, the Company may 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 (1) 100% of the principal amount of the 7% Convertible Debentures to be redeemed, (2) any accrued and unpaid interest to, but excluding, the redemption date, and (3) 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 (2)).

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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 August 3, 2016, the date of the debt issuance, the fair value of the embedded derivative was $12.3 million. At December 31, 2018, the fair value of the embedded derivative was $4.2 million (December 31, 2017 – $11.0 million). The revaluation gain of $6.8 million is recorded in the Statement of Operations (year ended December 31, 2017 – revaluation gain of $2.1 million). There were no conversions during the year (December 31, 2017 – gain on conversions of $2.1 million).

During the first quarter of 2017, a total of 1,889,110 shares were issued on conversion of $8.5 million principal amount of 7% Convertible Debentures. The Company recorded a net loss on conversions of $0.2 million. The Company also made make-whole interest payments of $1.4 million as a result of the conversions. There were no conversions during the rest of 2017. As at December 31, 2017, $51.5 million principal amount of 7% Convertible Debentures remained outstanding.

There were no conversions of the 7% Convertible Debentures during 2018, therefore, as at December 31, 2018, $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 years ended December 31,	
	2018	**2017**
BEGINNING BALANCE	**$ 42,515**	**$ 47,617**
Conversions	–	(6,947)
Accretion of 7% Convertible Debentures discount	2,097	1,845
BALANCE AT THE END OF THE PERIOD	**$ 44,612**	**$ 42,515**

Vendor agreement

On May 4, 2016, the Company entered into an agreement with a significant account creditor to settle $36.5 million of current liabilities. Under this agreement, the Company paid $12.0 million and deferred the payment of the remaining $24.5 million until January 2018, after which the outstanding balance will be repaid in equal installments over 24 months commencing on January 31, 2018. Interest of 7.5% will accrue and be payable beginning in January 2017. A $2.7 million gain was recognized in Other Income on remeasurement of the deferral during the second quarter of 2016.

Schedule of payments on outstanding debt as of December 31, 2018:

	Year ending December 31,					
	2019	**2020**	**2021**	**2022**	**2023**	**Maturity**
FINANCE LEASES						
Principal	$ 1,151	$ 532	$ –	$ –	$ –	2020
Interest	94	8	–	–	–	
ECOBANK LOAN III						
Principal	5,555	5,555	5,555	3,611	–	2022
Interest	1,739	1,189	632	101	–	
ECOBANK LOAN IV						
Principal	4,000	4,000	4,000	4,000	2,000	2023
Interest	1,645	1,250	847	448	74	
7% CONVERTIBLE DEBENTURES						
Principal	–	–	51,498	–	–	August 15, 2021
Interest	3,605	3,605	3,605	–	–	
VENDOR AGREEMENT						
Principal	17,507	–	–	–	–	2019
Interest	1,072	–	–	–	–	
TOTAL PRINCIPAL	$ 28,213	$ 10,087	$ 61,053	$ 7,611	$ 2,000	
TOTAL INTEREST	8,155	6,052	5,084	549	74	
	$ 36,368	**$ 16,139**	**$ 66,137**	**$ 8,160**	**$ 2,074**	

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13. SHARE CAPITAL

During the year ended December 31, 2018, the Company consolidated the common shares of the Company on the basis of one post-consolidation common share for every five pre-consolidation common shares. The common shares of the Company began trading on a consolidation-adjusted basis on the TSX and the NYSE American when the markets opened on October 30, 2018.

All share data and equity-based compensation plans have been retroactively adjusted to give effect to the consolidation.

	Note	Number of common shares		Share capital
BALANCE AT DECEMBER 31, 2016		**67,071,290**	**$**	**746,542**
Bought deal		6,272,790		26,203
Conversion of 7% Convertible Debentures		1,889,110		9,479
Shares issued under DSUs		233,539		521
Shares issued under options		4,750		16
Shares issued under warrants		644,736		2,450
Share issue costs		–		(2,044)
BALANCE AT DECEMBER 31, 2017		**76,116,215**	**$**	**783,167**
Private placement	a	32,642,100		125,672
Shares issued under DSUs		36,194		20
Shares issued under options		24,500		77
Share issue costs		–		(901)
BALANCE AT DECEMBER 31, 2018		**108,819,009**	**$**	**908,035**

a. On October 1, 2018, the Company completed a $125.7 million strategic investment with La Mancha Holding S.à r.l. ("La Mancha"), a Luxembourg-incorporated private gold investment company through a private placement. La Mancha was issued 32,642,100 Golden Star common shares, representing approximately 30% of the outstanding share capital (on a non-diluted basis) after giving effect to La Mancha's investment.

14. COMMITMENTS AND CONTINGENCIES

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 Bogoso/Prestea and Wassa mining operations. To meet this requirement the Company has environmental bonds totaling $9.6 million and $8.1 million for Wassa and Bogoso/Prestea respectively, with a commercial bank in Ghana. These bonds are guaranteed by Golden Star Resources Ltd. There is also a cross guarantee between Wassa and Bogoso/Prestea. The Company also held cash deposits of $3.5 million and $3.0 million for each operation, which are 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 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 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 Bogoso/Prestea and Wassa.

DUNKWA PROPERTIES

As part of the acquisition of the Dunkwa properties in 2003, the Company agreed to pay the seller a net smelter return royalty on future gold production from the Mansiso and Asikuma properties. As per the acquisition agreement, there will be no royalty due on the first 200,000 ounces produced from Mampon which is located on the Asikuma property. The amount of the royalty is based on a sliding scale which ranges from 2% of net smelter return at gold prices at or below $300 per ounce and progressively increases to 3.5% for gold prices in excess of $400 per ounce. Since the ounces mined at Mampon were below the 200,000 ounces threshold, we are not required to pay a royalty on this property.

Operating leases and capital commitments

The Company is a party to certain contracts relating to operating leases, office rent and capital commitments. Future minimum payments under these agreements as at December 31, 2018 are as follows:

Less than 1 year	$	1,383
Between 1 and 5 years		183
More than 5 years		–
TOTAL	**$**	**1,566**

15. SHARE-BASED COMPENSATION

Share-based compensation expenses recognized in general and administrative expense in the Statements of Operations and Comprehensive (Loss)/Income, are as follows:

	For the years ended December 31,			
		2018		**2017**
Share options	$	1,248	$	1,229
Deferred share units		565		387
Share appreciation rights		(502)		482
Performance share units		(33)		10,456
	$	**1,278**	**$**	**12,554**

Share options

On May 5, 2016, the Fourth Amended and Restated 1997 Stock Option Plan (the "Stock Option Plan") was approved by shareholders to (i) reserve an additional 2,000,000 common shares for the Stock Option Plan, thereby increasing the total number of common shares issuable from 5,000,000 common shares to 7,000,000 common shares under the Stock Option Plan; (ii) provide for the grant of "incentive stock options" (being stock options designated as "incentive stock options" in an option agreement and that are granted in accordance with the requirements of, and that conforms to the applicable provisions of, Section 422 of the Internal Revenue Code); and (iii) to make such other changes to update the provisions of the Stock Option Plan in light of current best practices. Options granted are non-assignable and are exercisable for a period of ten years or such other period as is stipulated in a stock option agreement between Golden Star and the optionee. Under the Plan, we may grant options to employees, consultants and directors of the Company or its subsidiaries for up to 7,000,000 shares, of which 1,917,767 are available for grant as of December 31, 2018 (December 31, 2017 – 2,114,517). 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. 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.

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The fair value of option grants is estimated at the grant dates using the Black-Scholes option-pricing model. Fair values of options granted during the year ended December 31, 2018 and 2017 were based on the weighted average assumptions noted in the following table:

	For the years ended December 31,	
	2018	**2017**
Expected volatility	70.06%	73.70%
Risk-free interest rate	2.39%	1.86%
Expected lives	5.68 years	5.99 years

The weighted average fair value per option granted during the year ended December 31, 2018 was $2.82 CAD (year ended December 31, 2017 – $4.20 CAD). As at December 31, 2018, there was $0.6 million of share-based compensation expense (December 31, 2017 – $0.5 million) relating to the Company's share options to be recorded in future periods. For the year ended December 31, 2018, the Company recognized an expense of $1.2 million (year ended December 31, 2017 – $1.2 million).

A summary of option activity under the Company's Stock Option Plan during the years ended December 31, 2018 and 2017 is as follows:

	Options ('000)	Weighted average exercise price (Cdn$)	Weighted-average remaining contractual term (years)
OUTSTANDING AS OF DECEMBER 31, 2016	**3,223**	**6.45**	**5.7**
Granted	470	6.40	9.7
Exercised	(5)	2.75	7.3
Forfeited	(128)	11.35	1.8
Expired	(234)	10.95	–
OUTSTANDING AS OF DECEMBER 31, 2017	**3,326**	**5.93**	**5.9**
Granted	642	4.61	9.2
Exercised	(25)	3.24	1.6
Forfeited	(116)	8.96	3.6
Expired	(329)	9.35	–
OUTSTANDING AS OF DECEMBER 31, 2018	**3,498**	**5.28**	**6.3**
Exercisable as of December 31, 2017	2,536	6.30	5.1
Exercisable as of December 31, 2018	2,664	5.42	5.5

The number of options outstanding by strike price as of December 31, 2018 is shown in the following table:

	Options outstanding			Options exercisable	
Range of exercise price (Cdn$)	**Number outstanding at December 31, 2018 ('000)**	**Weighted-average remaining contractual life (years)**	**Weighted-average exercise price (Cdn$)**	**Number outstanding at December 31, 2018 ('000)**	**Weighted-average exercise price (Cdn$)**
1.50 to 2.50	604	6.1	1.90	604	1.90
2.51 to 3.50	534	7.1	2.81	405	2.82
3.51 to 4.50	581	4.9	4.35	581	4.35
4.51 to 5.50	689	9.1	4.63	205	4.68
5.51 to 7.50	487	7.7	6.48	266	6.46
7.51 to 10.50	378	2.9	9.50	378	9.50
10.51 to 17.65	225	1.9	14.92	225	14.92
	3,498	**6.3**	**5.28**	**2,664**	**5.42**

The number of options outstanding by strike price as of December 31, 2017 is shown in the following table:

	Options outstanding			Options exercisable	
Range of exercise price (Cdn$)	**Number outstanding at December 31, 2017 ('000)**	**Weighted-average remaining contractual life (years)**	**Weighted-average exercise price (Cdn$)**	**Number outstanding at December 31, 2017 ('000)**	**Weighted-average exercise price (Cdn$)**
1.50 to 2.50	617	7.0	1.90	500	1.90
2.51 to 3.50	536	8.0	2.80	277	2.80
3.51 to 4.50	616	5.8	4.30	589	4.30
4.51 to 5.50	52	8.8	4.80	26	4.90
5.51 to 7.50	513	8.5	6.40	177	6.40
7.51 to 10.50	691	2.3	8.90	666	9.00
10.51 to 17.65	302	2.5	15.10	302	15.10
	3,326	**5.9**	**5.93**	**2,536**	**6.30**

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"). The DSU Plan has been implemented for directors and executive officers of the Company in order to (i) encourage the directors and executive officers of the Company to own Common Shares of the Company and to facilitate such Common Share ownership; and (ii) provide directors and executive officers of the Company with incentives in the form of deferred share units ("DSUs") in order to allow the Company to reduce its reliance on stock options and other long-term incentive plans for the same purposes, so as to conform with current best practices regarding directors' and executive officers' compensation. The DSU Plan is administered by the Compensation Committee. Pursuant to the DSU Plan, directors may elect to receive all or part of their retainer 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.

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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 have 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, 2018 , the DSUs that were granted vested immediately and a compensation expense of $0.6 million was recognized for these grants (year ended December 31, 2017 – $0.4 million). As of December 31, 2018, there was no unrecognized compensation expense related to DSUs granted under the Company's DSU Plan.

A summary of DSU activity during the year ended December 31, 2018 and 2017:

	For the years ended December 31,	
	2018	**2017**
Number of DSUs, beginning of period ('000)	1,018	1,146
Granted	150	105
Exercised	(82)	(233)
NUMBER OF DSUs, END OF PERIOD ('000)	**1,086**	**1,018**

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, 2018, there was approximately $0.3 million of total unrecognized compensation cost related to unvested SARs (December 31, 2017 – $0.4 million). For the year ended December 31, 2018, the Company recognized a recovery of $0.5 million related to these cash settled awards (year ended December 31, 2017 – $0.5 million expense).

A summary of the SARs activity during the year ended December 31, 2018 and 2017:

	For the years ended December 31,	
	2018	**2017**
Number of SARs, beginning of period ('000)	533	537
Granted	304	292
Exercised	(36)	(158)
Forfeited	(127)	(138)
NUMBER OF SARs, END OF PERIOD ('000)	**674**	**533**

Performance share units ("PSUs")

On January 1, 2014, the Company adopted a Performance Share Unit ("PSU") Plan. 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 period. The cash award is determined by multiplying the number of 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 PSU Plan. As the Company is required to settle these awards in cash, they are accounted for as liability awards with corresponding compensation expense recognized.

For the year ended December 31, 2018, the Company recognized $0.4 million recovery related to PSU's (year ended December 31, 2017 – $10.1 million). As at December 31, 2018, the PSU liability of $6.4 million is recognized on the Balance Sheet as current portion of other liability.

A summary of the PSU activity during the year ended December 31, 2018 and 2017:

	For the years ended December 31,	
	2018	**2017**
Number of PSUs, beginning of period ('000)	2,721	3,096
Settled	(1,548)	(375)
NUMBER OF PSUs, END OF PERIOD ('000)	**1,172**	**2,721**

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).

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.

PRSUs are accounted for as equity awards with a corresponding compensation expense recognized. For the year ended December 31, 2018, the Company recognized $0.3 million expense (year ended December 31, 2017 – $0.3 million).

A summary of the PRSU activity during the year ended December 31, 2018 and 2017:

	For the years ended December 31,	
	2018	**2017**
Number of PRSUs, beginning of period ('000)	339	–
Granted	480	339
Forfeited	(28)	–
NUMBER OF PRSUs, END OF PERIOD ('000)	**791**	**339**

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16. (LOSS)/INCOME PER COMMON SHARE

During the year ended December 31, 2018, the Company incurred a net loss therefore the shares for the period are not dilutive. The following table provides a reconciliation between basic and diluted (loss)/income per common share:

	For the years ended December 31,	
	2018	**2017**
NET (LOSS)/INCOME ATTRIBUTABLE TO GOLDEN STAR SHAREHOLDERS	**$ (18,123)**	**$ 38,771**
Adjustments:		
Interest expense on 7% Convertible Debentures	–	3,657
Accretion of 7% Convertible Debentures discount	–	1,845
Gain on fair value of 7% Convertible Debentures embedded derivative	–	(2,095)
DILUTED (LOSS)/INCOME	**$ (18,123)**	**$ 42,178**
WEIGHTED AVERAGE NUMBER OF BASIC SHARES (MILLIONS)[1]	**84.3**	**74.7**
Dilutive securities:		
Options	–	0.5
Deferred share units	–	1.1
Performance and restricted share units	–	0.3
7% Convertible Debentures	–	11.6
WEIGHTED AVERAGE NUMBER OF DILUTED SHARES (MILLIONS)	**84.3**	**88.2**
(LOSS)/INCOME PER SHARE ATTRIBUTABLE TO GOLDEN STAR SHAREHOLDERS:		
Basic	$ (0.21)	$ 0.52
Diluted	$ (0.21)	$ 0.48

1 See Note 13 for share consolidation details.

17. REVENUE

Revenue includes the following components:

	For the years ended December 31,	
	2018	**2017**
Revenue – Streaming Agreement		
Cash payment proceeds	$ 6,036	$ 6,138
Deferred revenue recognized	13,738	14,156
	19,774	20,294
Revenue – Spot sales	253,243	295,203
TOTAL REVENUE	**$ 273,017**	**$ 315,497**

18. COST OF SALES EXCLUDING DEPRECIATION AND AMORTIZATION

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

	For the years ended December 31,	
	2018	**2017**
Contractors	$ 32,536	$ 41,297
Electricity	17,663	20,558
Fuel	7,347	11,137
Raw materials and consumables	41,910	51,996
Salaries and benefits	58,501	53,582
Transportation costs	1,751	2,116
General and administrative	9,490	7,695
Other	6,830	8,997
Mine operating expenses	$ 176,028	$ 197,378
Severance charges	14,858	9,232
Operating costs from metal inventory	12,886	167
Inventory net realizable value adjustment and write-off	5,655	2,410
Royalties	14,302	17,295
	$ 223,729	**$ 226,482**

19. FINANCE EXPENSE, NET

Finance income and expense includes the following components:

	For the years ended December 31,	
	2018	**2017**
Interest income	$ (559)	$ (72)
Interest expense, net of capitalized interest (see Note 7)	13,281	6,039
Interest on financing component of deferred revenue (see Note 11)	4,750	–
Net foreign exchange gain	(91)	(172)
Accretion of rehabilitation provision	691	1,245
Conversion make-whole payment	–	1,445
	$ 18,072	**$ 8,485**

On February 1, 2018, Prestea Underground mine achieved commercial production, therefore no capitalized interest was recorded since.

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20. OTHER INCOME

Other income includes the following components:

	For the years ended December 31,	
	2018	**2017**
(Gain)/loss on disposal of assets	(305)	672
Gain on reduction of asset retirement obligations	(3,080)	(4,945)
Other income	(218)	(73)
	$ (3,603)	**$ (4,346)**

21. RELATED PARTY TRANSACTIONS

There were no material related party transactions for the years ended December 31, 2018 and 2017 other than the items disclosed below.

Key management personnel

Key management personnel is defined as members of the Board of Directors and certain senior officers. Compensation of key management personnel are as follows, with such compensation made on terms equivalent to those prevailing in an arm's length transaction:

	For the years ended December 31,	
	2018	**2017**
Salaries, wages, and other benefits	$ 3,753	$ 2,800
Bonuses	1,052	787
Share-based compensation	1,965	7,487
	$ 6,770	**$ 11,074**

22. PRINCIPAL SUBSIDIARIES

The consolidated financial statements include the accounts of the Company and all of its subsidiaries at December 31, 2018. The principal operating subsidiaries are Wassa and Prestea, in which the Company has a 90% ownership interest in each.

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		Prestea	
	As of December 31,		As of December 31,	
	2018	**2017**	**2018**	**2017**
Non-controlling interest percentage	10%	10%	10%	10%
Current assets	$ 129,656	$ 94,760	$ 13,633	$ 25,023
Current liabilities	150,404	160,725	1,152,156	1,058,732
	(20,748)	(65,965)	(1,138,523)	(1,033,709)
Non-current assets	141,262	138,416	134,090	131,245
Non-current liabilities	42,588	25,016	62,737	76,373
	98,674	113,400	71,353	54,872
Net assets/(liabilities)	77,926	47,435	(1,067,170)	(978,837)
NON-CONTROLLING INTEREST	**$ 15,605**	**$ 12,562**	**$ (87,578)**	**$ (78,587)**

Summarized income statement

	Wassa		Prestea	
	For the years ended December 31,		For the years ended December 31,	
	2018	**2017**	**2018**	**2017**
Revenue	$ 190,016	$ 156,908	$ 93,134	$ 138,295
Net income/(loss) and comprehensive income/(loss)	30,491	16,924	(88,332)	4,619

Summarized cash flows

	Wassa		Prestea	
	For the years ended December 31,		For the years ended December 31,	
	2018	**2017**	**2018**	**2017**
Cash flows provided by/(used in) operating activities	57,897	27,486	(77,115)	3,505
Cash flows used in investing activities	(34,984)	(21,744)	(11,956)	(43,616)
Cash flows (used in)/provided by financing activities	(31,112)	7,468	85,581	42,078

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23. SEGMENTED INFORMATION

Segmented revenue and results

The Company has reportable segments as identified by the individual mining operations. Segments are operations reviewed by the executive management. Each segment is identified based on quantitative and qualitative factors.

For the years ended December 31,	Wassa	Prestea	Other	Corporate	Total
2018					
Revenue	$ 183,078	$ 89,939	$ –	$ –	$ 273,017
Mine operating expenses	86,916	89,112	–	–	176,028
Severance charges	4,970	9,888	–	–	14,858
Operating costs from metal inventory	7,184	5,702	–	–	12,886
Inventory net realizable value adjustment and write-off	3,684	1,971	–	–	5,655
Royalties	9,508	4,794	–	–	14,302
Cost of sales excluding depreciation and amortization	112,262	111,467	–	–	223,729
Depreciation and amortization	22,066	11,873	–	–	33,939
Mine operating margin/(loss)	48,750	(33,401)	–	–	15,349
Income tax expense	12,350	–	–	–	12,350
Net income/(loss) attributable to non-controlling interest	3,043	(8,991)	–	–	(5,948)
Net income/(loss) attributable to Golden Star	$ 27,994	$ (25,351)	$ (8,543)	$ (12,223)	$ (18,123)
Capital expenditures	$ 35,420	$ 11,414	$ –	$ –	$ 46,834
2017					
Revenue	$ 167,376	$ 148,121	$ –	$ –	$ 315,497
Mine operating expenses	115,625	81,753	–	–	197,378
Severance charges	6,316	2,916	–	–	9,232
Operating costs from/(to) metal inventory	5,080	(4,913)	–	–	167
Inventory net realizable value adjustment and write-off	2,410	–	–	–	2,410
Royalties	8,652	8,643	–	–	17,295
Cost of sales excluding depreciation and amortization	138,083	88,399	–	–	226,482
Depreciation and amortization	20,052	11,740	–	–	31,792
Mine operating margin	9,241	47,982	–	–	57,223
Net income attributable to non-controlling interest	1,693	495	–	–	2,188
Net income/(loss) attributable to Golden Star	$ 17,644	$ 50,050	$ (3,701)	$ (25,222)	$ 38,771
Capital expenditures	$ 21,583	$ 48,055	$ –	$ –	$ 69,638

Segmented assets

The following table presents the segmented assets:

	Wassa	Prestea	Other	Corporate	Total
December 31, 2018					
Total assets	$ 181,446	$ 147,815	$ 898	$ 87,828	$ 417,987
December 31, 2017					
Total assets	$ 195,180	$ 158,715	$ 4,257	$ 2,237	$ 360,389

Information about major customers

Currently, approximately 90% of our gold production is sold through a South African gold refinery. Except for the sales to RGLD as part of the Streaming Agreement, the refinery arranges for the sale of gold on the day it is shipped from the mine sites and we receive payment for gold sold two working days after the gold leaves the mine site. The global gold market is competitive with numerous banks and refineries willing to buy gold on short notice. Therefore, we believe that the loss of our current customer would not materially delay or disrupt revenue.

24. SUPPLEMENTAL CASH FLOW INFORMATION

During the year ended December 31, 2018 and 2017, there was no payment of income taxes. The Company paid $7.9 million of interest during the year ended December 31, 2018 (the year ended December 31, 2017 – $7.3 million).

Changes in working capital for the year ended December 31, 2018 and 2017 are as follows:

	For the years ended December 31, 2018	2017
Decrease in accounts receivable	$ 215	$ 3,871
Decrease/(increase) in inventories	9,187	(7,684)
Increase in prepaids and other	(737)	(2,132)
Decrease in accounts payable and accrued liabilities	(25,837)	(1,503)
TOTAL CHANGES IN WORKING CAPITAL	**$ (17,172)**	**$ (7,448)**

Other includes the following components:

	For the years ended December 31, 2018	2017
(Gain)/loss on disposal of assets	$ (305)	$ 672
Inventory net realizable value adjustment and write-off	5,544	2,410
Loss on fair value of 5% Convertible Debentures	–	317
Gain on fair value of warrants	–	(86)
Loss/(gain) on fair value of marketable securities	175	(64)
Accretion of vendor agreement	731	731
Accretion of rehabilitation provisions (see Note 10)	691	1,245
Amortization of financing fees	1,322	378
Accretion of 7% Convertible Debentures discount	2,097	1,845
Gain on reduction of rehabilitation provisions	(3,080)	(4,945)
Loss on conversion of 7% Convertible Debentures, net	–	165
Gain on warrant exercise	–	(193)
Interest on financing component of deferred revenue (see Note 11)	4,750	–
	$ 11,925	**$ 2,475**

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Reconciliation of debt arising from financing activities during the year ended December 31, 2018 and 2017:

	Equipment financing credit facility	Finance leases	Ecobank Loan III	Ecobank Loan IV	Vendor agreement	5% Convertible Debentures	7% Convertible Debentures	Royal Gold loan	Total
DECEMBER 31, 2016	**$ 1,119**	**$ 1,959**	**$ –**	**$ –**	**$ 22,338**	**$ 13,294**	**$ 47,617**	**$ 18,496**	**$104,823**
CASH FLOWS									
Proceeds from debt agreements	–	–	10,000	–	–	–	–	–	10,000
Principal payments on debt	(972)	(1,226)	–	–	–	–	–	–	(2,198)
Fair value loss on the 5% Convertible Debentures	–	–	–	–	–	317	–	–	317
5% Convertible Debentures repayment	–	–	–	–	–	(13,611)	–	–	(13,611)
NON-CASH CHANGES									
Capitalized loan fee	–	–	(499)	–	–	–	–	–	(499)
New lease	–	765	–	–	–	–	–	–	765
Conversion of 7% Convertible Debentures	–	–	–	–	–	–	(6,947)	–	(6,947)
Accretion of debt	–	–	58	–	731	–	1,845	321	2,955
DECEMBER 31, 2017	**$ 147**	**$ 1,498**	**$ 9,559**	**$ –**	**$ 23,069**	**$ –**	**$ 42,515**	**$ 18,817**	**$ 95,605**
CASH FLOWS									
Proceeds from debt agreements	–	–	15,000	20,000	–	–	–	–	35,000
Principal payments on debt	(147)	(1,714)	(4,723)	(1,999)	(7,024)	–	–	–	(15,607)
Royal Gold loan repayment	–	–	–	–	–	–	–	(20,000)	(20,000)
NON-CASH CHANGES									
Capitalized loan fee	–	–	–	(340)	–	–	–	–	(340)
New lease	–	1,899	–	–	–	–	–	–	1,899
Accretion of debt	–	–	99	39	731	–	2,097	1,183	4,149
DECEMBER 31, 2018	**$ –**	**$ 1,683**	**$ 19,935**	**$ 17,700**	**$ 16,776**	**$ –**	**$ 44,612**	**$ –**	**$ 100,706**

25. FINANCIAL RISK MANAGEMENT

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.

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, 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 following table shows our contractual obligations as at December 31, 2018:

	Payment due (in thousands) by period				
(Stated in thousands of U.S. dollars)	**Less than 1 year**	**1 to 3 years**	**3 to 5 years**	**More than 5 years**	**Total**
Accounts payable and accrued liabilities[1]	$ 84,894	$ –	$ –	$ –	$ 84,894
Debt[2]	28,213	78,751	2,000	–	108,964
Interest on long term debt	8,155	11,685	74	–	19,914
Purchase obligations	13,762	–	–	–	13,762
Rehabilitation provisions[3]	7,665	27,908	26,283	11,613	73,469
TOTAL	**$ 142,689**	**$ 118,344**	**$ 28,357**	**$ 11,613**	**$ 301,003**

1 Includes the current portion of the PSU liabilities of $6.4 million.

2 Includes the 7% Convertible Debentures maturing in August 2021, the finance leases and the vendor agreement. Golden Star may not redeem the 7% Convertible Debentures prior to August 15, 2019, 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 presentation shown above assumes payment is made in cash and also assumes no conversions of the 7% Convertible Debentures into common shares by the holders prior to the maturity date.

3 Rehabilitation provisions indicates the expected undiscounted cash flows for each period.

As at December 31, 2018, the Company has current assets of $140.2 million compared to current liabilities of $134.4 million. As at December 31, 2018, the Company had a cash balance of $96.5 million.

The Company expects to meet its short-term financial needs through its cash on hand, cash flow from operations.

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. Our 7% Convertible Debentures, vendor agreement and the outstanding loans under our equipment financing facility bear interest at a fixed rate and are not subject to changes in interest payments. The Ecobank Loan III interest rate is three month LIBOR plus 8%, per annum. Based on our current $20.3 million outstanding balance on Ecobank Loan III, a 100 basis points change in the three month LIBOR rate would result in a nominal change in interest expense. The Ecobank Loan IV interest rate is three month LIBOR plus a spread of 7.5% per annum. Based on our current $18.0 million outstanding balance on Ecobank Loan IV, a 100 basis points change in the three month LIBOR rate would result in a nominal change in interest expense. We have not entered into any agreements to hedge against unfavorable changes in interest rates, but may in the future actively manage our exposure to interest rate risk.

(All currency amounts in tables are in thousands of U.S. dollars unless noted otherwise)

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 units transact much of their 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. In the past, we have entered into forward purchase contracts for South African rand, euros and other currencies to hedge expected purchase costs of capital assets. During 2018 and 2017, we had no currency related derivatives. At December 31, 2018 and December 31, 2017, we held $1.9 million and $3.8 million, respectively, of foreign currency.

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 change in gold price would result in approximately a $20.6 million and $19.6 million change in our sales revenues and operating cash flows, respectively. To reduce gold price volatility, we have at various times entered into gold price hedges. As at December 31, 2018, the Company did not have any outstanding gold price derivative 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 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. 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. CAPITAL RISK MANAGEMENT

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, and investments.

	As of December 31,	
	2018	2017
Equity	$ 42,037	$ (41,754)
Long-term debt	73,224	79,741
	$ 115,261	$ 37,987
Cash and cash equivalents	96,507	27,787
	$ 211,768	$ 65,774

The Company manages its capital structure and makes adjustments to 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.

In order to facilitate the management of its capital requirements, the Company prepares annual budgets that are updated as necessary depending on various factors, including successful capital deployment and general industry conditions. The Company's treasury policy specifies that cash is to be held in banks with a rating of A or higher by Moody's or Standard & Poor's. 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.

CONTACT DETAILS

CORPORATE AND REGISTERED OFFICE

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ACCRA, GHANA

REGISTRAR AND TRANSFER AGENT

QUESTIONS REGARDING THE CHANGE OF STOCK OWNERSHIP, CONSOLIDATION OF ACCOUNTS, LOST CERTIFICATES, CHANGE OF ADDRESS AND OTHER SUCH MATTERS SHOULD BE DIRECTED TO:
AST TRUST COMPANY (CANADA)
ATTENTION: SHAREHOLDER SERVICES
P.O. BOX 700, STATION B
MONTREAL, QUEBEC
CANADA H3B 3K3

ONLINE INQUIRY

https://ca.astfinancial.com/InvestorServices/Inquiry-Form

ONLINE ACCESS TO SHAREHOLDER DATA

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STOCK EXCHANGE LISTINGS

TORONTO STOCK EXCHANGE SYMBOL: GSC
NYSE AMERICAN STOCK EXCHANGE SYMBOL: GSS
GHANA STOCK EXCHANGE SYMBOL: GSR

GHANA COMMERCIAL BANK SHARE REGISTRY

GCB BANK LIMITED
THORPE ROAD
P.O. BOX 134
HEAD OFFICE
ACCRA, GHANA

AUDITORS

PRICEWATERHOUSECOOPERS LLP

Cautionary Note regarding Forward-Looking Information
Some statements contained in this Annual Report are "forward-looking statements" and "forward looking information" within the meaning of applicable securities laws. Readers are cautioned that forward-looking statements and information are inherently uncertain and involve risks, assumptions and uncertainties that could cause actual performance, results and achievements to differ materially. There can be no assurance that future developments affecting Golden Star will be those anticipated by management. Please refer to the discussion in the MD&A under the heading "Cautionary note regarding forward-looking information". The forecasts contained in this Annual Report constitute management's current estimates as of the date hereof with respect to the matters covered thereby. Golden Star expects that these estimates will change as new information is received. While Golden Star may elect to update these estimates at any time, Golden Star does not undertake to update any estimate at any particular time or in response to any particular event.

All costs are in U.S. dollars unless otherwise stated.

GOLDEN STAR