ANNUAL REPORT

FOCUSED ON
CASH FLOW GENERATION

2017

GOLDEN STAR

COMPANY PROFILE

Golden Star is an established gold mining company that owns and operates the Wassa and Prestea mines in Ghana, West Africa. Golden Star is focused on delivering strong margins and free cash flow from its two high grade, low cost underground mines. Gold production guidance for 2018 is 230,000-255,000 ounces at a cash operating cost per ounce* of $650-730.

As the winner of the PDAC 2018 Environmental and Social Responsibility Award, Golden Star is committed to leaving a positive and sustainable legacy in its areas of operation.

Golden Star is listed on the Toronto Stock Exchange (GSC), the NYSE American (GSS), and the Ghana Stock Exchange (GSR).

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

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HIGHLIGHTS

Gold production of

267,565

ounces, a 38% increase compared to 2016

Cash operating cost* of $763/ounce, a

▼13%

decrease compared to 2016

Mine operation margin* of

$57.2

million, a 108% increase compared to 2016

Net income per share attributable to Golden Star shareholders – basic of

$0.10

compared to a loss of US $0.13 in 2016

Commercial production was achieved at **WASSA UNDERGROUND** on **January 1, 2017** and at **PRESTEA UNDERGROUND** on **February 1, 2018,** post-period end

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

MESSAGE FROM

THE CHAIRMAN

"In November 2017 we were named as the winner of the Prospectors and Developers Association of Canada (PDAC) 2018 Award for Environmental and Social Responsibility. I am very proud of our commitment to responsible mining and we are focused on leaving a positive and sustainable legacy in our host country."

Safety and well-being is at the heart of everything we do at Golden Star so we were all deeply saddened to report three fatalities during the year at our operations in Ghana. One of our employees was fatally injured at Wassa Underground in May and two of our employees died following inhalation of blasting gasses at Prestea Underground in December. The Board and management team are committed to ensuring that every employee goes home safely every day and in 2018 we have increased our efforts to achieve this aim. New safety measures have been implemented at both operations and we have committed to undertaking an independent safety audit in early 2018. All job-related injuries and illnesses are unacceptable and we remain focused on continuous improvement in health and safety.

Despite these sad events, Golden Star continued to make compelling progress in 2017 on its strategy to become a high grade, high margin gold producer. Wassa Underground commenced commercial production on January 1, 2017 and the blasting of the first stope took place at Prestea Underground. The Prestea Open Pits continued to outperform our expectations, delivering gold production above the top end of our upwardly revised guidance range and reporting costs below the lower end of our guidance range. At a corporate level, we continued to strengthen our financial position through a C$34.5 million bought deal and a $25 million debt facility with Ecobank.

We also achieved international recognition for our corporate social responsibility efforts. In November 2017 we were named as the winner of the Prospectors and Developers Association of Canada (PDAC) 2018 Award for Environmental and Social Responsibility. I am very proud of our commitment to responsible mining and we are focused on leaving a positive and sustainable legacy in our host country. One example of this is our environmental initiative to convert former tailings storage facilities to oil palm plantations. It is the first time in Ghana that formerly mined lands have been reused for full scale, commercial oil palm production and we are proud to be pioneers.

We also achieved recognition in Ghana as the winner of five awards at the Ghana Mining Industry Awards. I am delighted that Golden Star was honoured in its host country and particularly that our subsidiary, Golden Star (Bogoso/Prestea) Limited was named as Mining Company of the Year. I would also like to congratulate my fellow Board member, Daniel Owiredu, on being awarded Mining Personality of the Year.

With our two underground mines now in commercial production, our focus is turning towards exploration and the future growth of our company. In 2018 we are planning to invest $6.6 million with the objective of gaining a more thorough understanding of the potential of our two assets and defining additional sources of high margin ore to increase our production rate. As a geologist by background, the recent results from the B Shoot South area of Wassa Underground are particularly exciting and I believe the deposit is significantly larger than our previous estimates.

On behalf of the Board, I thank sincerely Sam, Golden Star's management team and our other employees for their hard work, enthusiasm and dedication over the past year. I would also like to thank our shareholders for their support and to thank our host communities for their continued partnership. And last but not least I would like to thank my fellow board members for their hard work and commitment to the success of the company.

Tim Baker
Chairman

MESSAGE FROM

THE CHIEF EXECUTIVE OFFICER

"In the past our story has been about execution and operational delivery but now, we will begin to focus on exploration and future growth as well. I believe strongly that there is significant untapped potential within our company and the time has come to demonstrate it."

In 2017 we advanced two underground mines and achieved our guidance on all stated metrics. Importantly, we also continued to work closely with our partners in Ghana to maintain a strong social licence to operate. In the past our story has been about execution and operational delivery but now, we will begin to focus on exploration and future growth as well. I believe strongly that there is significant untapped potential within our company and the time has come to demonstrate it.

However first, it is important to reflect on the two tragic incidents that occurred in 2017 that resulted in the loss of three of our employees. I have always been proud of our commitment to providing a safe workplace, as ensuring the safety and well-being of all of our employees is our highest priority. Our entire team was deeply saddened by these events and we have already implemented a significant number of new measures to strengthen our safety culture and prevent a recurrence. Continued improvement will be our target in 2018 and going forwards.

I would like to take this opportunity to thank all of our partners in Ghana. We remain committed to being a responsible corporate citizen and I offer my thanks to our host communities, local suppliers, the Government of Ghana and our other stakeholders for helping us to achieve this goal. We have had a presence in Ghana for 18 years and we are proud to contribute to the economic growth of the communities, region and country in which we work. We value our partnerships highly and we look forward to delivering robust returns for all of our stakeholders.

Looking now at the operations, in 2017 we again achieved our full year guidance in terms of production, cash operating costs, All-In Sustaining Costs and capital expenditures. Our gold production increased by 38% compared to 2016 as a result of the ramp up of the high grade Wassa Underground Gold Mine and the contribution to Prestea's production from the Mampon deposit. Our consolidated cash operating cost per ounce* and All-In Sustaining Cost per ounce* were below the bottom end of our guidance ranges, representing a 13% and 14% reduction compared to 2016 respectively, and underlining our transition to a lower cost structure.

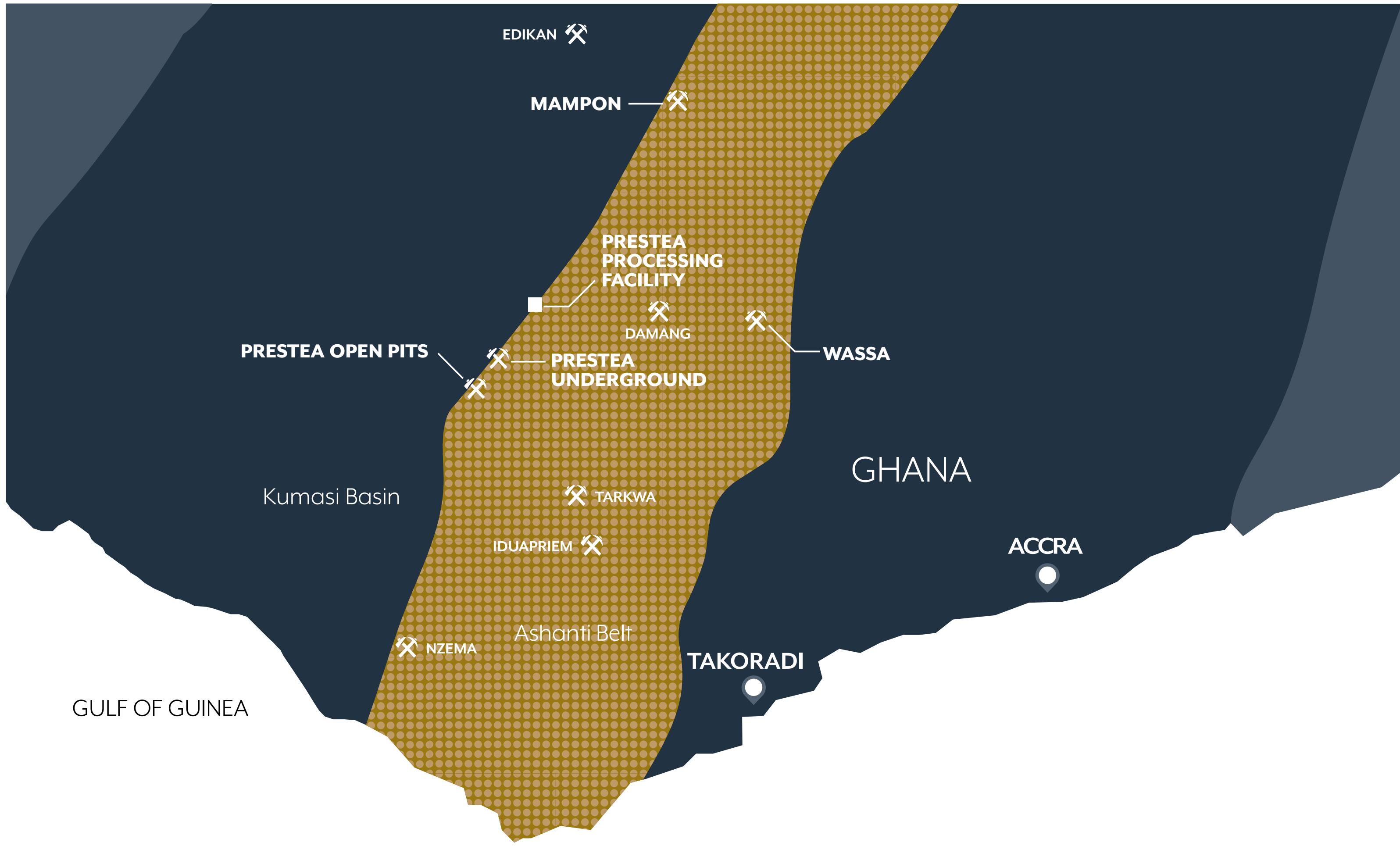
In 2018 we expect to produce 230,000-255,000 ounces of gold at an All-In Sustaining Cost per ounce* of $850-950. Although our gold production is anticipated to be lower in 2018 than in 2017, I believe our strategy to focus on high grade, high margin ore will deliver the strongest returns for shareholders. Our strategy will target cash flow generation and will strengthen our financial position, which in turn I believe will deliver share price appreciation.

As I mentioned at the start, in 2018 our focus will begin to turn to exploration and future growth. Golden Star is endowed with one of the largest land packages in Ghana. Before 2017, the last significant exploration took place at Wassa in 2014 and at Prestea in 2004, so we believe there is a compelling opportunity to increase production in the short, medium and long term from our cornerstone Wassa and Prestea assets. We also have substantial under-utilized capacity in our two processing plants so we will be looking for additional sources of high margin ore to 'fill the mills'. This represents the opportunity to further increase production without the need to incur significant capital expenditures.

Finally, I would like to thank my fellow Board members for their valuable guidance and dedication as we continued along our path to be a high grade, high margin, underground-focused gold producer. We remain confident that we can deliver on our strategy and I am excited about the great potential that exists within our team. I look forward to providing further updates on our continued progress over the course of 2018.

Samuel T. Coetzer
President and Chief Executive Officer

* See "non-GAAP Financial Measures" in the Management's Discussion and Analysis (MD&A)



GOLDEN STAR **OPERATIONS**

Prestea Complex

Prestea is located in south-western Ghana. At present, Golden Star is producing gold from both the Prestea Open Pits, a series of oxide surface deposits close to the Prestea Underground Gold Mine, and Prestea Underground. The minelife of the Prestea Open Pits has been extended several times but ore supply from the operations is now expected to complete at the end of the first half of 2018.

Prestea Underground commenced commercial production on February 1, 2018, following the blasting of the first stope in September 2017. The West Reef ore body within Prestea Underground 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. Prestea Underground was first mined in the late 1800s and it is one of the highest grade mines in West Africa. Golden Star believes there is significant potential to expand production and extend the mine's life through exploration. Full year 2018 production for the Prestea complex is anticipated to be 93,000-113,000 ounces at a cash operating cost per ounce* of $740-880.

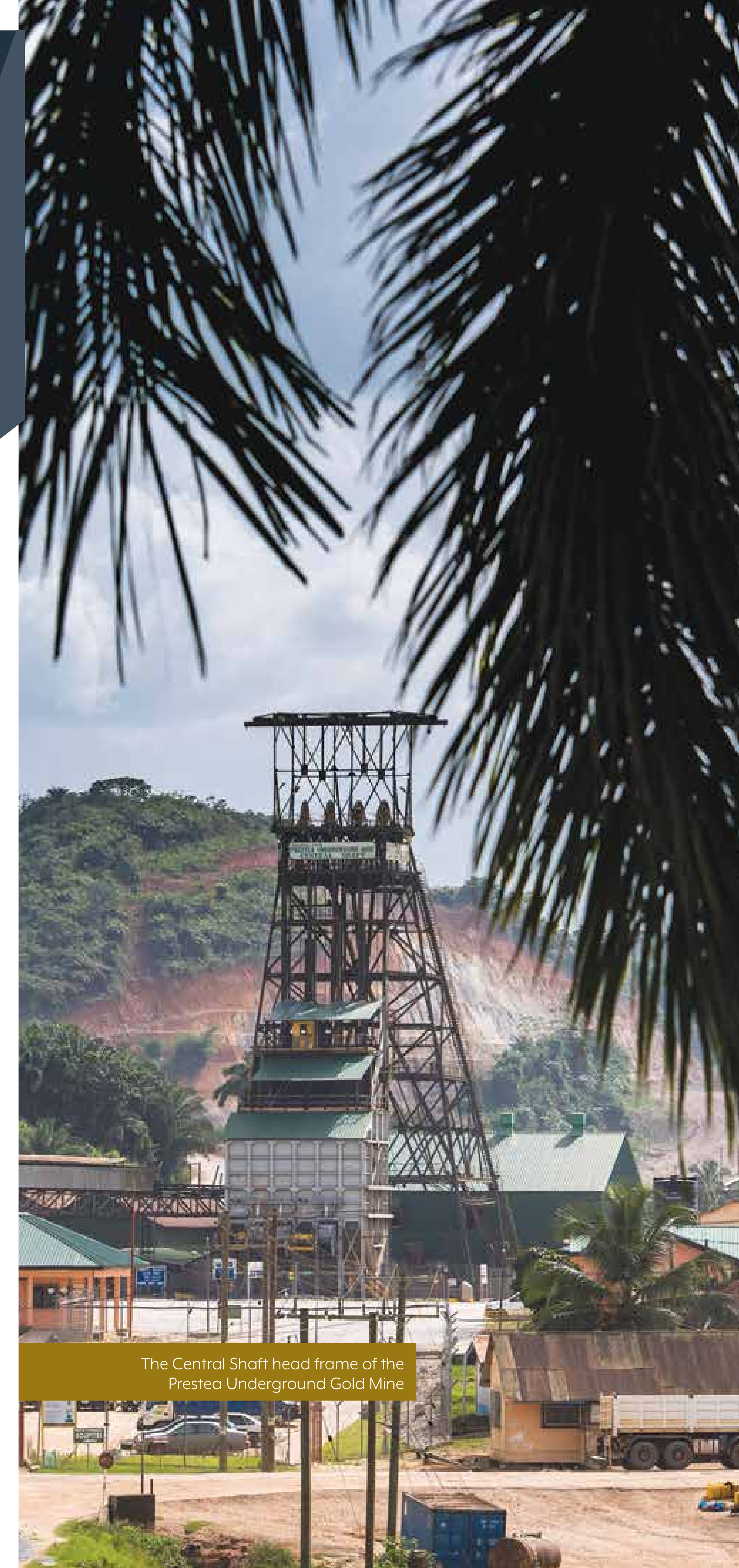
Wassa Complex

Wassa is also located in southwestern Ghana, approximately 40 kilometres from Prestea. 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.

Golden Star began production from Wassa in 2005 and mined a series of surface deposits before consolidating a number of smaller pits to form the Wassa Main Pit. In mid-2016 the Wassa Underground Gold Mine began production and commercial production was achieved on January 1, 2017. In the third quarter of 2017 Golden Star took the decision to defer the next pushback of Wassa Main Pit so the Wassa complex became an underground-only operation in January 2018. Exploration in 2017 confirmed that the Wassa deposit is open to the south and extends at least 180 metres beyond the current Inferred Mineral Resources. Full year 2018 production guidance for the Wassa complex is anticipated to be 137,000-142,000 ounces of gold at a cash operating cost per ounce* of $600-650 per ounce.

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

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



The Central Shaft head frame of the Prestea Underground Gold Mine

Key Facts on Ghana

- Ghana has **a stable constitutional democracy,** with the most recent parliamentary and Presidential elections taking place in December 2016.
- Ghana is **Africa's second largest gold producer** after South Africa.
- Ghana has **a long history of large scale gold mining,** with four prolific greenstone belts that have yielded +120Moz of gold in past production.
- Ghana is **a respected mining jurisdiction** with stable and well legislated royalty and tax laws.
- Ghana is **the second largest producer of cocoa beans in the world,** after Côte d'Ivoré.

Golden Star's Benso pit lakes have demonstrated two seasons of successful fish farming

CORPORATE **RESPONSIBILITY**

WINNER OF THE **PDAC 2018 ENVIRONMENTAL AND SOCIAL RESPONSIBILITY AWARD**

MINING COMPANY OF THE YEAR GHANA MINING AWARDS 2017

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 the 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 (PDAC) 2018 Award for Environmental and Social Responsibility. Golden Star also won five awards at the 2017 Ghana Mining Industry Awards, including Mining Company of the Year for Golden Star (Bogoso/Prestea) Limited and Mining Personality of the Year for our Chief Operating Officer, Daniel Owiredu.

Safety, Health and Wellbeing

Golden Star values and is committed to safety and employee wellbeing. We believe that job-related injuries and illnesses are unacceptable.

Two tragic incidents in 2017 led to the passing of one of our colleagues at Wassa Underground in a heavy vehicle incident and two of our colleagues from fume inhalation at Prestea Underground. These incidents highlight the need to complement strong safety systems with meaningful supervision and an improved safety culture. In the latter incident, prompt action by our leaders demonstrated the value of programs we implemented in 2017 on emergency management, ensuring all other affected members of the crew received appropriate medical attention.

We remain committed to everyone going home safely every day, and in 2018 we will continue our journey of continuous improvement in health and safety.

Precautionary Approach to the Environment

We are committed to meeting or surpassing regulatory requirements in all our activities, while safeguarding the local environment for our stakeholder communities and future generations. We continue to operate extensive programs of environmental monitoring to demonstrate a high level of conformance.

NEXT LAND USE

Golden Star is progressively converting its former tailings storage facilities to productive oil palm plantation. While the reuse of mined lands for vegetation is common, full scale commercial level oil palm production and yields is highly uncommon. Following palm maturity and achievement of closure monitoring requirements, it is anticipated that these areas will be integrated into the Golden Star Oil Palm Plantation (GSOPP) for plot allocation to small-holder farmers.

In a parallel sustainability innovation, Golden Star's Benso pit lakes have now demonstrated two seasons of successful fish farming. Having achieved all required growth and quality metrics, the program is now being assessed for scale-up into a community company.

WORKING IN PARTNERSHIP

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

Prevention is Better Than Cure

Following the success of the Golden Star Akyempim Clinic, Ghana's first ever prevention-focused community clinic, Golden Star and its partners are now planning the expansion of the approach into the Quasi-Government Hospitals services in Ghana. In 2018, the program partners have been invited to present on the project at the International Summit on Social and Behaviour Change Communication.

Advancing the Status of Women

Golden Star continues to promote women throughout the business, with females representing 12% of the Company's employees. In a 2017 study of wage parity, mean female wages at each level were within 4% of male wages, or higher at each level in the business.

The Golden Star Ladies Club in Ghana continued to provide strong leadership and empowerment for women, with a number of new initiatives in 2017, including blood donation drives and girl child education programs.

Early Detection Saves Lives

From its humble beginning in 2013, the Golden Star Breast Cancer Awareness program concluded in 2017, having achieved major milestones in sustainability and impact. Over 10,400 women and girls received free and confidential breast screening, potentially saving as many as 270 lives and outreach was made in 30 communities at 41 locations, including seven junior and senior secondary schools, covering all districts of the Golden Star catchment communities.

The scale of the impact of this project, its sustainability and partnership approach was recognized at the 2017 Ghana Mining Industry Awards, with Golden Star being named as the winner of the Corporate Social Investment Project of the Year award!

GOLDEN STAR'S COMMUNITY INITIATIVES

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

Golden Star Oil Palm Plantation (GSOPP)

In 2017 our international award-winning, social enterprise initiative, GSOPP, won the District Best Farm Based Enterprise Award for the second time. To date we have directed over $6.2 million to this important initiative, to reduce poverty through employment generation, and promote wealth creation through sustainable agri-business. GSOPP now employs over 300 small-holder farmers and 400 contract workers and covers over 1,100 hectares with plantations in ten host communities.

Golden Star Development Foundation (GSDF)

Golden Star contributes $1 per ounce of gold plus 0.1% of pre-tax profit to the GSDF for community development and support. Projects are selected by the communities through consultative committees, respecting the rights of our host communities to determine their own development needs. Since the establishment of GSDF in 2006, we have contributed over $3.6 million to the Foundation.

Golden Star Skills Training and Employability Program (GSSTEP)

GSSTEP provides employment skills to young people, expands employment opportunities in our catchment communities and provides viable employment alternatives to reduce reliance on unauthorized activities, such as artisanal mining.

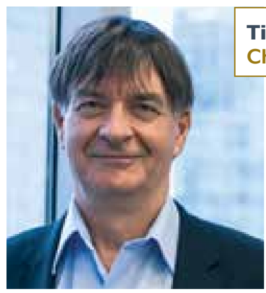
Since its inception in 2009, 14 GSSTEP programs have provided skills training to 688 trainees in masonry, commercial cookery, carpentry, and mobile phone repairs, among other areas, and Golden Star has contributed over $1.1 million.

COMMUNICATION

To complement Golden Star's traditional modes of communication, in 2016 we launched an array of social media platforms. Our Facebook, LinkedIn and Twitter accounts, as well as corporate social responsibility blog (www.goldenstarinthecommunity.blogspot.ca) have enhanced transparency with people and provided new ways to enhance mutual respect and understanding.

A Golden Star tailings storage facility being converted into a productive oil palm plantation.

MEMBERS OF
THE BOARD

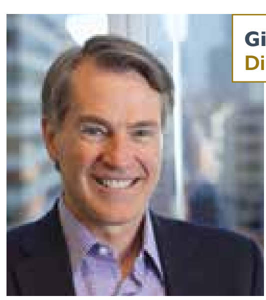


Tim Baker
Chairman

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 Rye Patch Gold Corp.

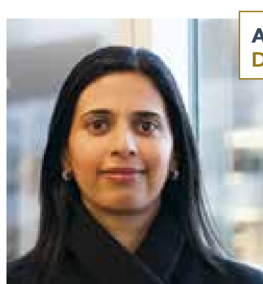
Sam Coetzer
President and Chief Executive Officer, Director

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

Gil is the President and CEO of Brio Gold Inc. and former President and CEO of Augusta Resource Corporation. He serves as an independent director of Plata Latina Minerals Corporation. With over 30 years' 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.



Anu Dhir
Director

Anu is a co-founder 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 Miniqs and ZinQ Mining, Anu was VP, Corporate Development and Company Secretary at Katanga Mining Limited. Anu is a non-executive director of Trillium Health Partners and holds a BA from the University of Toronto and a law degree from Quinnipiac University, U.S.

Robert Doyle
Director

Robert has over 30 years' mining experience. Most recently, he was Founder and CEO of Medoro Resources, now Gran Colombia Gold Corp. Prior to this, Robert served as EVP and CFO of Pacific Stratus Energy, CFO of Coalcorp Mining, and CFO of Bolivar Gold Corp. Currently, Robert serves as a Director and Chairman of the Audit Committee of Mandalay Resources Corp. and Detour Gold Corporation. Robert is a Chartered Accountant and a Chartered Director.

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 26 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.

SENIOR MANAGEMENT

André van Niekerk Executive Vice President and Chief Financial Officer

Bruce Higson-Smith Senior Vice President, Corporate Strategy

Martin Raffield Senior Vice President, Project Development and Technical Services

Karen Walsh Vice President, People and Organizational Development

Mitch Wasel Vice President, Exploration

Katharine Sutton Vice President, Investor Relations and Corporate Affairs

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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, 2017, 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 20, 2018. 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 "forwardlooking 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 for 2018, on a consolidated basis and for each of Wassa and Prestea; the sources of gold production at Wassa during 2018; the sources of gold production at Prestea during 2018 and the timing thereof; the cessation of production from the Prestea Open Pits; the weighting of gold production towards the second half of 2018; the mining rate and grade from Wassa and the timing for accessing a higher grade area of the B-Shoot zone and larger stopes at Wassa Underground; capital expenditures, including sustaining capital and development capital, for 2018, on a consolidated basis and for each of Wassa and Prestea; the nature of development capital expenditures at both Wassa and Prestea during 2018; the deferral of the pushback of the Wassa Main Pit, Cut 3; the feed of stockpiled lower grade ore from Wassa Main Pit to the processing plant during 2018; the timing for completion of mining from the Prestea Open Pits during 2018 and the processing of stockpiled ore therefrom; the review of and ability of the Company to delineate additional targets for ore supply from the Prestea Open Pits; severance charges in 2018; the Company's debt repayment obligations for 2018; the potential requirement for the Company to make excess cash flow payments under the Royal Gold loan; rehabilitation obligations of the Company and provisions therefor, as well as the expected undiscounted cash flows for rehabilitation provisions; the sufficiency of cash available to support the Company's operations and mandatory expenditures for the next twelve months; the sufficiency of the Company's existing cash balance; and working capital, debt repayments and requirements for additional capital.

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; 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, 2016. 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. Forwardlooking 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, 2016 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; (ii) Bogoso – "NI 43-101 Technical Report on Resources and Reserves Golden Star Resources Ltd., Bogoso Prestea Gold Mine, Ghana" effective date December 31, 2013; and (iii) Prestea Underground – "NI 43-101 Technical Report on a Feasibility Study of the Prestea Underground Gold Project in Ghana" effective date November 3, 2015.

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 gold producer that holds a 90% interest in the Wassa and Prestea gold mines in Ghana. The Company has two underground operations ("Wassa Underground" and "Prestea Underground") and one open pit operation (the Prestea Open Pits) as Wassa transformed into an underground-only operation in late January 2018. Wassa Underground achieved commercial production on January 1, 2017 and Prestea Underground achieved commercial production on February 1, 2018. 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, 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,	
		2017	2016	2017	2016
OPERATING SUMMARY					
Wassa Main Pit gold sold	oz	20,775	21,076	75,644	93,284
Wassa Underground gold sold	oz	20,852	7,867	61,498	11,062
Prestea Open Pits gold sold	oz	24,536	23,893	121,619	89,517
Prestea Underground gold sold	oz	5,045	–	8,574	–
Total gold sold	oz	71,208	52,836	267,335	193,863
Wassa Main Pit gold produced	oz	21,149	21,411	75,736	93,319
Wassa Underground gold produced	oz	20,852	7,865	61,498	11,062
Prestea Open Pits gold produced	oz	24,723	24,128	121,757	89,673
Prestea Underground gold produced	oz	5,045	–	8,574	–
Total gold produced	oz	71,769	53,404	267,565	194,054
Average realized gold price[1]	$/oz	1,237	1,184	1,219	1,211
Cost of sales per ounce – Consolidated[2]	$/oz	1,111	1,114	998	1,060
Cost of sales per ounce – Wassa[2]	$/oz	1,096	1,430	1,153	1,186
Cost of sales per ounce – Prestea[2]	$/oz	1,137	836	823	928
Cash operating cost per ounce – Consolidated[2]	$/oz	812	880	763	872
Cash operating cost per ounce – Wassa[2]	$/oz	775	1,090	880	941
Cash operating cost per ounce – Prestea[2]	$/oz	875	694	632	800
All-in sustaining cost per ounce – Consolidated[2]	$/oz	1,002	1,197	944	1,093

1 Average realized gold price per ounce excludes pre-commercial production ounces sold at Prestea Underground in 2017 and at Wassa Underground in 2016.

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.

SUMMARY OF OPERATING AND FINANCIAL RESULTS

		For the three months ended December 31,		For the years ended December 31,	
		2017	2016	2017	2016
FINANCIAL SUMMARY					
Gold revenues	$'000	81,845	53,255	315,497	221,290
Cost of sales excluding depreciation and amortization	$'000	66,401	43,994	226,482	172,616
Depreciation and amortization	$'000	7,095	6,117	31,792	21,160
Mine operating margin	$'000	8,349	3,144	57,223	27,514
General and administrative expense	$'000	7,881	517	25,090	25,754
Loss/(gain) on fair value of financial instruments, net	$'000	1,902	(840)	(2,057)	25,676
Loss on repurchase of 5% Convertible Debentures, net	$'000	–	–	–	11,594
Income tax recovery	$'000	(12,944)	–	(12,944)	–
Net income/(loss) attributable to Golden Star shareholders	$'000	12,601	3,446	38,771	(39,647)
Adjusted net income attributable to Golden Star shareholders[1]	$'000	15,151	64	46,092	11,183
Income/(loss) per share attributable to Golden Star shareholders – basic	$/share	0.03	0.01	0.10	(0.13)
Income/(loss) per share attributable to Golden Star shareholders – diluted	$/share	0.03	0.01	0.10	(0.13)
Adjusted income per share attributable to Golden Star shareholders – basic[1]	$/share	0.04	0.00	0.12	0.04
Cash provided by operations	$'000	10,939	25,234	55,176	53,249
Cash provided by operations before working capital changes[2]	$'000	6,760	23,896	62,624	75,457
Cash provided by operations per share – basic	$/share	0.03	0.08	0.15	0.18
Cash provided by operations before working capital changes per share – basic[2]	$/share	0.02	0.06	0.17	0.26
Capital expenditures	$'000	16,751	23,779	69,638	84,356

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

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

- **Gold revenues totaled $81.8 million in the fourth quarter of 2017, compared to $53.3 million in the same period in 2016.** The 53% increase in gold revenues was due primarily to higher gold production at the Wassa Underground Mine. Compared with the same period in 2016, gold revenues from Wassa increased by 108% during the fourth quarter of 2017 as a result of an increase in gold sold from the underground operation which achieved commercial production on January 1, 2017. Gold revenues from Prestea increased by 6% during the fourth quarter of 2017 as its gold sales attributable to the Prestea Open Pits increased by 3% compared to the same period in 2016. The consolidated average realized gold price was $1,237 per ounce in the fourth quarter of 2017, compared to $1,184 per ounce for the same period in 2016. For the year ended December 31, 2017, gold revenue totaled $315.5 million, a 43% increase compared to $221.3 million in 2016 due primarily to the increase in revenue attributable to the Wassa Underground Mine after achieving commercial production on January 1, 2017.
- **Gold sales of 71,208 ounces in the fourth quarter of 2017 were 35% higher than the 52,836 ounces sold in the same period in 2016.** Gold sales from Wassa of 41,627 ounces in the fourth quarter of 2017 was 44% higher than the same period in 2016. For the fourth quarter of 2017, 20,852 ounces (or 50%) of gold sold were attributed to the Wassa Underground Mine compared to 7,867 ounces for the same period in 2016. The proceeds from gold sold attributable to the Wassa Underground Mine in 2016 were netted against capital expenditures as Wassa Underground Mine had not achieved commercial production in 2016. In the fourth quarter of 2017, 20,775 ounces (or 50%) of gold sold were attributed to the Wassa Main Pit compared to21,076 ounces (or 73%) of gold sold attributable to the Wassa Main Pit in 2016. Wassa Main Pit production ceased in January 2018 as the Wassa mine transforms into an underground-only mine. Prestea gold sales of 29,581 ounces in the fourth quarter of 2017 were 24% higher than the same period in 2016 due primarily to higher throughput. The higher throughput at Prestea in the fourth quarter of 2017 was a result of mining the higher grade Mampon deposit that commenced in March 2017. For the year ended December 31, 2017, gold sales of 267,335 ounces were 38% higher than the 193,863 ounces sold in 2016 due to higher gold production at both operations.
- **Cost of sales excluding depreciation and amortization in the fourth quarter of 2017 totaled $66.4 million compared to $44.0 million in the same period in 2016.** The 51% increase in cost of sales excluding depreciation and amortization for the fourth quarter of 2017 was due mainly to higher mine operating costs at both Wassa and Prestea operations as well as a $8.1 million severance charge recorded. Wassa Underground was placed into commercial production on January 1, 2017, and as a result mining costs were higher in 2017 when compared to 2016 as Wassa underground mining costs were capitalized in 2016. At Prestea, the increase in cost of sales excluding depreciation and amortization was due mainly to higher haulage costs for the ore mined at the Mampon deposit. For the year ended December 31, 2017, cost of sales excluding depreciation and amortization totaled $226.5 million, 31% higher compared to $172.6 million in 2016 due mainly to a $9.2 million severance charge in 2017, an increase in inventory charge as a result of a drawdown of stockpiles at Wassa, an increase in mine operating costs at Prestea due to higher haulage costs for the material mined at the Mampon deposit and an increase in mine operating costs at Wassa as a result of the additional Wassa Underground mining costs in 2017 that were capitalized in 2016.
- **Consolidated cost of sales per ounce was $1,111 in the fourth quarter of 2017, 1% lower than $1,114 in the same period in 2016. Consolidated cash operating cost per ounce was $812 in the fourth quarter of 2017, 8% lower than $880 in the same period in 2016.** Wassa achieved a 29% improvement in cash operating cost per ounce in the fourth quarter of 2017 due mainly to higher gold production from the Wassa Underground Mine. Wassa's cost of sales per ounce in the fourth quarter of 2016 was derived entirely from the Wassa Main Pit as Wassa Underground was still in the development phase. The lower cash operating cost per ounce at Wassa were partially offset by the higher cash operating cost per ounce at Prestea due to higher haulage costs of ore mined at the Mampon deposit. The cost of sales per ounce was also affected by the $8.1 million severance charges recorded in the fourth quarter. For the year ended December 31, 2017, consolidated cost of sales per ounce was $998, 6% lower than $1,060 in 2016 due to higher production at both operations.
- **Depreciation and amortization expense totaled $7.1 million in the fourth quarter of 2017 compared to $6.1 million in the same period in 2016.** For the year ended December 31, 2017, depreciation and amortization expense totaled $31.8 million compared to $21.2 million in 2016. The increase in depreciation and amortization expense for the three and twelve months ended December 31, 2017 was due to the commencement of depreciation of the Wassa Underground assets in 2017 as a result of achieving commercial production, higher production at both operations and lower mineral reserve and resource estimates of the Prestea Open Pits compared to 2016.
- **General and administrative costs totaled $7.9 million in the fourth quarter of 2017, compared to $0.5 million in the same period in 2016.** The increase in general and administrative costs for the fourth quarter of 2017 was due primarily to an increase in

share-based compensation compared to the same period in 2016 as a result of an increase in the Company share price. For the year ended December 31, 2017, general and administrative costs totaled $25.1 million compared to $25.8 million in 2016.

- **The Company recorded a loss of $1.9 million on fair value of financial instruments in the fourth quarter of 2017 compared to a $0.8 million gain in the same period in 2016.** The loss in the fourth quarter of 2017 relates to a non-cash revaluation loss on the embedded derivative liability of the 7% Convertible Debentures. The $0.8 million fair value gain recognized in the fourth quarter of 2016 was comprised of a $1.0 million gain on forward and collar contracts and a $0.5 million non-cash revaluation gain on warrants, offset by a $0.5 million non-cash revaluation loss of the derivative liability of the 7% Convertible Debentures and a $0.2 million non-cash revaluation loss on the 5% Convertible Debentures. The valuation techniques used for these financial instruments are disclosed in the "Financial Instruments" section of this MD&A. For the year ended December 31, 2017, the Company recorded a $2.1 million of fair value gain on financial instruments compared to a $25.7 million fair value loss in 2016 as the prior year loss included a fair value loss on the 5% Convertible Debentures.
- **Income tax recovery totaled $12.9 million in the fourth quarter of 2017 and for the year ended December 31, 2017, compared to $nil in the same periods in 2016.** The income tax recovery was a result of recognizing deferred tax assets on Wassa's carry forward tax loss pool and deductible temporary differences relating to provisions, offset by the recognition of Wassa's deferred tax liability arising from the timing difference on the depreciation of Wassa's mining interest.
- **Net income attributable to Golden Star shareholders for the fourth quarter of 2017 totaled $12.6 million or $0.03 income per share (basic), compared to a net income of $3.4 million or $0.01 income per share (basic) in the same period in 2016.** The higher net income attributable to Golden Star shareholders in the fourth quarter of 2017 compared to the same period in 2016 was due primarily to a higher consolidated mine operating margin and the $12.9 million deferred tax recovery recognized in the fourth quarter of 2017. This was partially offset by higher general and administrative expenses, higher finance expenses and a loss on fair value of financial instruments in the fourth quarter of 2017 compared to a gain on fair value of financial instruments in the same period in 2016. For the year ended December 31, 2017, net income attributable to Golden Star shareholders totaled $38.8 million or $0.10 income per share (basic), compared to a net loss of $39.6 million or $0.13 loss per share (basic) for the same period in 2016. The net income attributable to Golden Star shareholders in 2017 compared to a net loss attributable to Golden Star shareholders in 2016 was due primarily to a higher mine operating margin at both operations, a $12.9 million income tax recovery recognized in 2017 compared to $nil in 2016, and a gain on financial instruments in 2017 compared to a loss on financial instruments recognized in 2016. The loss on financial instruments recognized in 2016 relates to a $25.7 million loss on the fair value of financial instruments and a $11.6 million loss on repurchase of the 5% Convertible Debentures.
- **Adjusted net income attributable to Golden Star shareholders (see "Non-GAAP Financial Measures" section) was $15.2 million in the fourth quarter of 2017, compared to $0.1 million for the same period in 2016**. For the year ended December 31, 2017, adjusted net income attributable to Golden Star shareholders totaled $46.1 million compared to $11.2 million in 2016. The higher adjusted net income attributable to Golden Star shareholders for the three and twelve months ended December 31, 2017 was primarily due to a higher mine operating margin compared to same periods in 2016.
- **Cash provided by operations before working capital was $6.8 million for the fourth quarter of 2017, compared to $23.9 million in the same period in 2016.** The decrease in cash provided by operations before working capital was due primarily to the $20.0 million advance payment received during the fourth quarter of 2016 from RGLD Gold AG ("RGLD") pursuant to the gold purchase and sale agreement with RGLD (the "Streaming Agreement") compared to $nil in the same period in 2017. The final advanced payment under the Streaming Agreement was received in January 2017. For the year ended December 31, 2017, cash provided by operations before working capital changes was $62.6 million compared to $75.5 million in the same period in 2016 due mainly to a $50.0 million decrease in advance payments from RGLD, offset by a higher mine operating margin in 2017 compared to 2016.
- **Capital expenditures for the fourth quarter of 2017 totaled $16.8 million compared to $23.8 million in the same period in 2016.** Capital expenditures at Prestea during the fourth quarter of 2017 included $6.8 million on the development of the Prestea Underground Mine, $0.5 million relating to development of the Prestea Open Pit Mines, $0.2 million relating to Mampon development expenditures and $0.5 million related to exploration drilling. The major capital expenditures in the fourth quarter of 2017 at Wassa included $3.0 million of expenditures relating to the development of the Wassa Underground Mine, $1.0 million of exploration drilling, $4.1 million of equipment purchases and $0.4 million for the improvement of the tailings storage facility. For the year ended December 31, 2017, capital expenditures totaled $69.6 million compared to $84.4 million in 2016.

OUTLOOK FOR 2018

Production and cost guidance

	Gold production thousands of ounces	Cash operating costs $ per ounce	All-in sustaining costs $ per ounce
Wassa	137 – 142	600 – 650	
Prestea	93 – 113	740 – 880	
CONSOLIDATED	**230 – 255**	**650 – 730**	**850 – 950**

Expected gold production in 2018 is lower than 2017 due to the Company's transition to being a primarily underground-focused producer. Gold production from Wassa in 2018 is anticipated to be primarily from Wassa Underground, with the exception of a small contribution from Wassa Main Pit stockpiles. Gold production from Prestea is expected to comprise ounces from the Prestea Open Pits and related stockpiles and Prestea Underground during the first half of 2018, with production during the second half of 2018 relating solely to Prestea Underground.

Golden Star expects gold production to be weighted towards the second half of the year, despite the anticipated cessation in production from the Prestea Open Pits. This is due to an anticipated increase in both mining rate and grade from Wassa Underground during the second half of the year, as the mining operations progress to a deeper, higher grade area of the B-Shoot zone and begin to access larger stopes.

Consequently, Golden Star anticipates that its cash operating cost per ounce and All-in sustaining costs per ounce will be higher during the first half of 2018 due to the continuing ramp up of both underground operations.

Capital expenditures guidance

	Sustaining $ millions	Development $ millions	Total $ millions
Wassa	14.7	5.9	20.6
Prestea	3.0	6.3	9.3
Exploration	–	6.6	6.6
CONSOLIDATED	**17.7**	**18.8**	**36.5**

Capital expenditures for the combined operations in 2018 are expected to be lower than 2017. The $5.9 million of development capital expenditures at Wassa are expected to be incurred primarily on the construction of a ventilation intake/exhaust raise and a rock pass and on the purchase of additional mining equipment. The $6.3 million of development capital expenditures at Prestea are anticipated to be incurred primarily on developing ore passes and ventilation raises and on the remaining modifications to the processing plant.

CORPORATE DEVELOPMENTS

Gold prices

Spot gold prices were $1,283 per ounce at December 31, 2017, up from $1,159 per ounce at December 31, 2016. The Company realized an average gold price of $1,219 per ounce for gold sales during 2017, compared to an average realized gold price of $1,211 per ounce for 2016. The spot gold price on February 20, 2018 was $1,340 per ounce.

Revenue from spot sales during the year ended December 31, 2017 resulted in an average realized price of $1,260 per ounce whereas revenue recognized from the gold purchase and sale agreement (the "Streaming Agreement") with RGLD resulted in an average realized price of $832 per ounce.

	For the year ended December 31, 2017		
	$'000	Ounces[1]	Realized price per ounce
Revenue – Stream arrangement			
Cash proceeds	$ 6,138		
Deferred revenue recognized	14,156		
	$ 20,294	24,404	$ 832
Revenue – Spot sales	295,203	234,357	1,260
TOTAL REVENUE	**$ 315,497**	**258,761**	**$ 1,219**

1 Ounces sold used in the calculation of realized price per ounce excludes 8,574 pre-commercial ounces sold from Prestea Underground Mine during the year.

Commercial production achieved at Prestea Underground

On February 1, 2018, commercial production was achieved at the Company's Prestea Underground Mine in Ghana. Gold production is anticipated to ramp up during 2018. The West Reef ore body of Prestea Underground has proven and probable mineral reserves of 1.90 million tonnes of gold at 13.93 grams per tonne of gold. Exploration drilling is underway at the mine with the objective of increasing the annual production rate and extending the mine life.

Exploration

During 2017 Golden Star conducted an exploration program at the Wassa and Prestea complexes and at the Mampon deposit. Total exploration drilling expenditures were $5.4 million, comprised of $3.5 million for Wassa, $0.7 million for the Prestea Open Pits, $1.0 million for Prestea Underground and $0.2 million for Aboronye, which is located close to Mampon. Mineral Resource expansion and delineation drilling for 2017 totaled approximately 36,507 metres ("m") and focused on the Wassa Main Pit Cut 3 delineation, Wassa Inferred Mineral Resource expansion, Prestea Underground South Gap exploration, Prestea Underground West Reef definition/expansion and Aboronye Mineral Resource conversion.

The major focus at the Wassa complex was to increase the Inferred Mineral Resource down plunge to the south of the Wassa Underground mineral reserve. This drilling commenced in the second half of 2017 and as at December 31, 2017, nine holes had been completed, totaling 6,818 m. Drilling results to date have confirmed that the high grade B-Shoot and F-Shoot zones extend approximately 200 m to the south of the current Wassa Inferred Mineral Resource. Additional targets drilled at Wassa during the year included: B-Shoot North, 12 holes, totaling 3,321 m; 242 trend & 242 FW, 9 holes totaling 2,911 m and Wassa Main Pit Cut 3 in-fill drilling, 41 holes totaling 6,563 m. Results from this drilling are included in the press releases dated March 6, 2017, September 19, 2017 and February 14, 2018.

Exploration at Prestea Underground utilized both underground and surface drill rigs in 2017. Two underground drill rigs were used on 24 level to conduct in-fill drill spacing within the area of the first 5 stopes as well as test Inferred Mineral Resource material to the north of these stopes. Forty holes totaling 7,441 m were completed in 2017. Results from the 2017 drilling are highlighted in the press releases dated July 6, 2017 and September 21, 2017.

The exploration drilling conducted from surface concentrated on further definition drilling of the Prestea Open Pits during the first quarter of 2017, with 59 holes, totaling 2,910 m, being drilled at Bondaye and 54 holes, totaling 2,613 m being completed at Aboronye. This drilling was successful in extending the mine lives of the Prestea Open Pits. In late 2017 the Company's surface drill rig was mobilized to the South Gap area on the southern end of the historical Prestea Underground workings. The South Gap is a 2 kilometre under-explored area between two formerly producing shafts, Bondaye in the north and Tuapim in the south. 9 holes totaling 3,930 m have been completed at the South Gap and results are expected to be released in the first quarter of 2018.

Surface operations

Wassa Main Pit – The Company has made a decision to defer the next pushback of the Wassa Main Pit, Cut 3, following an internal study to assess capital expenditures and margins in light of the current gold price. Beginning in late January 2018, Wassa is now an underground-only operation although lower grade stockpiled ore from the Wassa Main Pit will continue to be fed to the processing plant during 2018.

Prestea open pits – Gold mining from Prestea open pits is expected to be completed in the first quarter of 2018 and processing of stockpiled ore is expected to continue once mining is completed. Golden Star will continue to review additional targets for ore supply and will provide updates as the year progress.

Severance charge of $8.1 million has been recognized in the fourth quarter of 2017 across both operations relating to the surface operations with approximately $10.5 million to be recognized in 2018. Payments relating to the severance charge recognized in the fourth quarter of 2017 have been made during January and February 2018.

Warrants

In September 2017, the Company issued 3,223,684 common shares to Royal Gold, Inc. ("RGI") upon a cashless exercise by RGI of all 5,000,000 warrants held. The Company recorded a $2.5 million increase in equity and $2.7 million decrease in warrant liability, resulting in a $0.2 million gain on exercise.

Repayment of 5% Convertible Debentures

In May 2017, the Company repaid the remaining $13.6 million principal amount of its 5% Convertible Debentures plus accrued interest of $0.3 million that were due June 1, 2017. All of the 5% Convertible Debentures are now settled and no longer outstanding.

Conversions of 7% Convertible Debentures

During the first quarter of 2017, $8.5 million principal outstanding of the 7% Convertible Debentures were converted into 9,445,552 shares. In total, $13.5 million principal outstanding of the 7% Convertible Debentures has been converted into 15,002,218 common shares. Total principal that remains outstanding on the 7% Convertible Debentures is $51.5 million. During the year ended December 31, 2017, the Company recognized a $0.2 million loss on conversion of the 7% Convertible Debentures.

Mining at Mampon

Mining at the Mampon deposit that commenced in March 2017 continued throughout the year. Mampon is 65 km to the north of the carbon-in-leach processing plant at Bogoso/Prestea. Trucking of the higher grade ore from Mampon began in early April 2017 and it is being blended with ore from the Prestea Open Pits. During 2017, the Company mined 613,147 tonnes of ore at average grade of 3.38 grams per tonne ("g/t") at Mampon for 64,792 ounces of gold.

$25 million Medium Term Facility from Ecobank

In March 2017, the Company through its subsidiary, Golden Star (Wassa) Limited, signed a commitment letter with Ecobank Ghana Limited regarding a $25.0 million secured Medium Term Loan facility ("Ecobank Loan III"). This $25.0 million secured facility has a term of 60 months from the date of initial drawdown and is secured by, among other things, Wassa's existing plant, machinery and equipment limited to having a forced sale value of $32.5 million. 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. Payment of principal commences six months following the initial drawdown and is thereafter payable quarterly in arrears. In late January 2018, the remaining $15 million available under the facility was drawn down by the Company. The full $25.0 million has now been drawn.

Bought deal

In February 2017, the Company completed a bought deal public offering which resulted in the issuance of 31,363,950 common shares, including 4,090,950 common shares issued upon full exercise of the over allotment option, at a price CAD$1.10 per share for net proceeds of $24.5 million.

Advance payment under Streaming Agreement

In January 2017, the Company received the final advance payment of $10.0 million pursuant to the gold purchase and sales agreement with RGLD. Since the inception of the Streaming Agreement in July 2015, the Company has received total advance payments of $145.0 million. All advance payments under the Streaming Agreement have now been received.

Wassa Underground Mine

On January 6, 2017, the Company announced that commercial production had been achieved at its Wassa Underground Mine in Ghana, effective January 1, 2017. During the year ended December 31, 2017, 61,498 ounces of gold were produced from the Wassa Underground Mine.

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). From the end of January 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, ore from both the Wassa Main Pit and Wassa Underground was processed at the Wassa processing plant, however from late 2018 it is expected to process primarily underground ore.

		For the three months ended December 31,		For the years ended December 31,	
		2017	2016	2017	2016
WASSA FINANCIAL RESULTS					
Revenue	$'000	$ 51,628	$ 24,785	$ 167,376	$ 112,341
Mine operating expenses	$'000	31,012	23,139	115,625	92,938
Severance charges	$'000	5,217	–	6,316	113
Royalties	$'000	2,682	1,770	8,652	6,483
Operating costs from/(to) metals inventory	$'000	1,253	(161)	5,080	(5,149)
Inventory net realizable value adjustment	$'000	–	1,190	2,410	1,190
Cost of sales excluding depreciation and amortization	$'000	40,164	25,938	138,083	95,575
Depreciation and amortization	$'000	5,440	4,202	20,052	15,094
Mine operating margin/(loss)	$'000	$ 6,024	$ (5,355)	$ 9,241	$ 1,672
Capital expenditures	$'000	8,470	10,155	21,583	41,805
WASSA OPERATING RESULTS					
Ore mined – Main Pit	t	520,482	513,144	1,601,004	2,311,503
Ore mined – Underground	t	171,907	118,896	681,141	185,314
Ore mined – Total	t	692,389	632,040	2,282,145	2,496,817
Waste mined – Main Pit	t	1,043,854	2,151,267	6,037,366	9,741,312
Waste mined – Underground	t	60,054	45,305	199,550	233,225
Waste mined – Total	t	1,103,908	2,196,572	6,236,916	9,974,537
Ore processed – Main Pit	t	476,828	593,286	1,925,587	2,444,339
Ore processed – Underground	t	179,186	115,602	691,255	178,255
Ore processed – Total	t	656,014	708,888	2,616,842	2,622,594
Grade processed – Main Pit	g/t	1.38	1.22	1.27	1.27
Grade processed – Underground	g/t	4.04	2.27	3.03	2.06
Recovery	%	94.4	92.9	94.6	93.6
Gold produced – Main Pit	oz	21,149	21,411	75,736	93,319
Gold produced – Underground	oz	20,852	7,865	61,498	11,062
Gold produced – Total	oz	42,001	29,276	137,234	104,381
Gold sold – Main Pit	oz	20,775	21,076	75,644	93,284
Gold sold – Underground	oz	20,852	7,867	61,498	11,062
Gold sold – Total	oz	41,627	28,943	137,142	104,346
Cost of sales per ounce[1]	$/oz	1,096	1,430	1,153	1,186
Cash operating cost per ounce[1]	$/oz	775	1,090	880	941

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, 2017 compared to the three months ended December 31, 2016

PRODUCTION

Wassa gold production was 42,001 ounces for the fourth quarter of 2017, a 43% increase from the 29,276 ounces produced during the same period in 2016 due primarily to the increase in production from the Wassa Underground Mine.

Wassa Underground

Wassa Underground contributed 179,186 ore tonnes processed at a grade of 4.04 g/t for 20,852 ounces (or approximately 50% of Wassa's total production) in the fourth quarter of 2017, compared to production of 7,865 ounces in the same period in 2016. In the fourth quarter of 2017, mining operations were focused on the higher grade B-Shoot zone.

Wassa Main Pit

Production from Wassa Main Pit was 476,828 ore tonnes processed at a grade of 1.38 g/t for 21,149 ounces (or approximately 50% of Wassa's total production) in the fourth quarter of 2017, a decrease of 1% compared to the same period in 2016.

GOLD REVENUES

Gold revenues for the fourth quarter of 2017 were $51.6 million, up 108% from $24.8 million in the same period in 2016 due mainly to an increase in gold sold from Wassa Underground. Gold sold totaled 41,627 ounces in the fourth quarter of 2017, compared to 28,943 ounces in the same period in 2016. The achievement of commercial production of Wassa Underground on January 1, 2017 was the main reason behind the increase in gold revenue as all proceeds from incidental gold sales in 2016 were accounted for as a reduction to the capital expenditures for the development of the Wassa Underground Mine.

The realized gold price averaged $1,240 per ounce in the fourth quarter of 2017, compared to $1,176 per ounce for the same period in 2016.

COST OF SALES EXCLUDING DEPRECIATION AND AMORTIZATION

Cost of sales excluding depreciation and amortization was $40.2 million for the fourth quarter of 2017, compared to $25.9 million incurred during the same period in 2016. The higher cost of sales in the fourth quarter of 2017 was due to an increase in mine operating expenses, an increase in royalty expense due to higher gold sales, an increase in inventory charge as a result of a drawdown of stockpile inventories and a severance charge of $5.2 million relating to suspension of the Wassa surface operation. The higher mine operating expenses was due to the addition of underground mining costs that were capitalized in the same period in 2016. The higher costs in the fourth quarter of 2017 were offset partially by a decrease in net realized value adjustment on inventories as $1.2 million million was recorded in the fourth quarter of 2016 compared to $nil in the same period in 2017.

DEPRECIATION AND AMORTIZATION

Depreciation and amortization increased to $5.4 million for the fourth quarter of 2017, compared to $4.2 million for the same period in 2016 due to commencement of depreciation and amortization of the Wassa Underground assets as commercial production was achieved on January 1, 2017.

COSTS PER OUNCE

Cost of sales per ounce for the fourth quarter of 2017 totaled $1,096, down 23% from $1,430 in the same period in 2016. Cash operating cost per ounce for the fourth quarter of 2017 totaled $775, down 29% from $1,090 for the same period in 2016. The lower costs per ounce in the fourth quarter of 2017 as compared to the same period in 2016 were primarily a result of a 44% increase in gold sold.

CAPITAL EXPENDITURES

Capital expenditures for the fourth quarter of 2017 totaled $8.5 million compared with $10.2 million during the same period in 2016. Sustaining capital expenditures were $4.3 million for the fourth quarter of 2017 compared to $4.0 million for the same period in 2016. Development capital expenditures were $4.2 million for the fourth quarter of 2017 compared to $6.2 million in the same period in 2016. Development capital expenditures in the fourth quarter of 2017 included $3.0 million relating to the development of the Wassa Underground Mine and $1.0 million of exploration drilling.

For the year ended December 31, 2017 compared to the year ended December 31, 2016

PRODUCTION

Wassa gold production was 137,234 ounces for the year ended December 31, 2017, a 31% increase from the 104,381 ounces produced during the same period in 2016 due primarily to the increase in production from the Wassa Underground Mine.

Wassa Underground

Wassa Underground contributed 691,255 ore tonnes processed at a grade of 3.03 g/t for 61,498 ounces (or approximately 45% of Wassa's total production) in 2017, compared to production of 11,062 ounces in 2016. Beginning in late March and throughout the rest of 2017, underground mining was mainly focused on the B-Shoot zone.

Wassa Main Pit

Production from Wassa Main Pit was 1,925,587 ore tonnes processed at a grade of 1.27 g/t for 75,736 ounces (or approximately 55% of Wassa's total production) for the year ended December 31, 2017, a decrease of 19% in production compared to 2016. This decrease is as a result of mining operations nearing the bottom of the current pushback, Cut 2, resulting in a reduced pit area and corresponding mining rates.
The increase in production from Wassa Underground also reduced the amount of ore required from the Main Pit. Wassa Main Pit production is expected to end in the first quarter of 2018 as Wassa transformed into an undergroundonly mine in late January 2018, however lower grade stockpiled ore from the Wassa Main Pit will continue to be fed to the processing plant during the first nine months of 2018.

GOLD REVENUES

Gold revenues were $167.4 million for the year ended December 31, 2017, up 49% from $112.3 million in the same period in 2016 due mainly to an increase in gold sold. Gold sold totaled 137,142 ounces for the year ended December 31, 2017, compared to 104,346 ounces in 2016. The increase was primarily due to the achievement of commercial production of Wassa Underground on January 1, 2017 partially offset by the decline in ounces resulting from the scheduled reduction of ore tonnes supplied from the Wassa Main Pit as described above.

For the year ended December 31, 2017, approximately 45% of gold revenues at Wassa were attributable to Wassa Underground. Wassa gold revenues for the year ended December 31, 2016 were entirely attributable to Wassa Main Pit. The realized gold price averaged $1,220 per ounce for the year ended December 31, 2017, compared to $1,204 per ounce in 2016.

COST OF SALES EXCLUDING DEPRECIATION AND AMORTIZATION

Cost of sales excluding depreciation and amortization was $138.1 million for the year ended December 31, 2017, compared to $95.6 million incurred during 2016. The higher cost of sales for the year ended December 31, 2017 was due to an increase in mine operating expenses, an increase in royalty expense due to higher gold sales, an increase in inventory charge as a result of drawdown of stockpile inventories, an increase in the net realizable value adjustment on inventory, and a severance charge of $6.3 million relating to suspension of the Wassa surface operation. The higher mine operating expenses were due to the addition of underground mining costs that were capitalized in 2016.

DEPRECIATION AND AMORTIZATION

Depreciation and amortization expense increased to $20.1 million for the year ended December 31, 2017, compared to $15.1 million in 2016 due to commencement of depreciation and amortization of the Wassa Underground assets as commercial production was achieved on January 1, 2017.

COSTS PER OUNCE

Cost of sales per ounce totaled $1,153 for the year ended December 31, 2017, down 3% from $1,186 in 2016. Cash operating cost per ounce totaled $880, down 6% from $941 in 2016. The lower costs per ounce for the year ended December 31, 2017 as compared to 2016 was primarily a result of an increase in gold sold.

CAPITAL EXPENDITURES

Capital expenditures for the year ended December 31, 2017 totaled $21.6 million compared with $41.8 million during the same period in 2016. Development capital expenditures were $14.1 million for the year ended December 31, 2017 compared to $33.7 million in 2016. Development capital expenditures in 2017 included $8.5 million of expenditures relating to the development of Wassa Underground, $3.7 million of exploration drilling and $1.9 million for the improvement of the tailings storage facility.

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. The Prestea Underground Mine achieved commercial production on February 1, 2018. Prestea has a CIL processing facility with capacity of up to 1.5 millions tonnes per annum, located 14km 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.

		For the three months ended December 31,		For the years ended December 31,	
		2017	2016	2017	2016
PRESTEA FINANCIAL RESULTS					
Revenue	$'000	$ 30,217	$ 28,470	$ 148,121	$ 108,949
Mine operating expenses	$'000	21,952	17,021	81,753	73,046
Severance charges	$'000	2,833	–	2,916	(184)
Royalties	$'000	1,938	1,468	8,643	5,599
Operating costs to metals inventory	$'000	(486)	(433)	(4,913)	(1,420)
Cost of sales excluding depreciation and amortization	$'000	26,237	18,056	88,399	77,041
Depreciation and amortization	$'000	1,655	1,915	11,740	6,066
Mine operating margin	$'000	$ 2,325	$ 8,499	47,982	$ 25,842
Capital expenditures	$'000	8,281	13,530	48,055	42,413
PRESTEA OPERATING RESULTS					
Ore mined – Open pits	t	300,247	341,246	1,462,607	1,499,656
Ore mined – Underground	t	19,458	–	31,740	–
Ore mined – Total	t	319,705	341,246	1,494,347	1,499,656
Waste mined – Open pits	t	912,509	614,805	3,496,148	4,039,768
Waste mined – Underground	t	6,254	–	26,303	–
Waste mined – Total	t	918,763	614,805	3,522,451	4,039,768
Ore processed	t	465,179	377,580	1,632,979	1,504,139
Grade processed – Open pits	g/t	2.39	2.51	2.85	2.21
Grade processed – Underground	g/t	8.41	–	6.96	–
Recovery	%	82.6	83.0	86.4	83.9
Gold produced – Open pits	oz	24,723	24,128	121,757	89,673
Gold produced – Underground	oz	5,045	–	8,574	–
Gold produced – Total	oz	29,768	24,128	130,331	89,673
Gold sold – Open pits	oz	24,536	23,893	121,619	89,517
Gold sold – Underground	oz	5,045	–	8,574	–
Gold sold – Total	oz	29,581	23,893	130,193	89,517
Cost of sales per ounce[1]	$/oz	1,137	836	823	928
Cash operating cost per ounce[1]	$/oz	875	694	632	800

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, 2017 compared to the three months ended December 31, 2016

PRODUCTION

Prestea gold production was 29,768 ounces for the fourth quarter of 2017, a 23% increase from the 24,128 ounces produced during the same period in 2016 due primarily to higher throughput. The higher throughput was a result of mining the higher grade Mampon 16 deposit, which began in March 2017. The Company also produced 5,045 ounces of gold from the Prestea Underground compared to nil in the same period in 2016.

GOLD REVENUES

Gold revenues for the fourth quarter of 2017 were $30.2 million, up 6% from $28.5 million in the fourth quarter of 2016 as a result of a 3% increase in gold sales attributable to the Prestea Open Pits. Gold revenue from pre-commercial production gold from the Prestea Underground Mine is accounted for as a reduction to the capital expenditures for the development of the Prestea Underground Mine as the Prestea Underground Mine had not achieved commercial production in 2017. During the fourth quarter of 2017, 24,536 ounces of gold were sold at an average realized gold price of $1,232 per ounce compared to 23,893 ounces of gold sold at an average realized price of $1,192 per ounce in the same period in 2016.

COST OF SALES EXCLUDING DEPRECIATION AND AMORTIZATION

Cost of sales excluding depreciation and amortization was $26.2 million for the fourth quarter of 2017, up 45% from $18.1 million for the same period in 2016, due to an increase in mine operating expenses, increase in royalty costs and severance charges of $2.8 million recorded in the fourth quarter of 2017. Mine operating expenses totaled $22.0 million in the fourth quarter of 2017, 29% higher than the $17.0 million incurred during the same period in 2016, mainly as a result of higher haulage costs for the material mined at the Mampon deposit and higher tonnes mined.

DEPRECIATION AND AMORTIZATION

Depreciation and amortization expense decreased to $1.7 million for the fourth quarter of 2017, compared to $1.9 million for the same period in 2016. The lower depreciation and amortization for the fourth quarter of 2017 was due to the surface mines being substantially mined out.

COSTS PER OUNCE

Cost of sales per ounce for the fourth quarter of 2017 totaled $1,137, up 36% from $836 for the same period in 2016. Cash operating cost per ounce was $875 for the fourth quarter of 2017, up 26% from $694 for the same period in 2016. The higher costs per ounce compared to the same period in 2016 were due to higher mine operating expenses as a result of higher haulage costs for material mined at the Mampon deposit during the fourth quarter of 2017. The severance charge of $2.8 million in the fourth quarter of 2017 also contributed to the higher cost of sales per ounce compared to the same period in 2016.

CAPITAL EXPENDITURES

Capital expenditures for the fourth quarter of 2017 totaled $8.3 million compared to $13.5 million incurred during the same period in 2016. Development capital expenditures in the fourth quarter of 2017 included $6.8 million related to the development of the Prestea Underground Mine and $0.5 million related to exploration drilling.

For the year ended December 31, 2017 compared to the year ended December 31, 2016

PRODUCTION

Prestea gold production was 130,331 ounces for the year ended December 31, 2017, a 45% increase from the 89,673 ounces produced in 2016 due to higher throughput, higher ore grade processed and higher recovery. The higher throughput and higher ore grade processed in 2017 were a result of mining the higher grade Mampon deposit as well as the ore processed from Prestea Underground.

GOLD REVENUES

Gold revenues were $148.1 million for the year ended December 31, 2017, up 36% from $108.9 million in the same period in 2016 as a result of a 36% increase in gold sales attributable to the Prestea Open Pits. Gold revenue from pre-commercial production gold from the Prestea Underground Mine is accounted for as a reduction to the capital expenditures for the development of the Prestea Underground Mine as the Prestea Underground Mine had not achieved commercial production in 2017. For the year ended December 31, 2017, 121,619 ounces of gold were sold at an average realized gold price of $1,218 per ounce compared to 89,517 ounces of gold sold at an average realized gold price of $1,217 per ounce in 2016.

COST OF SALES EXCLUDING DEPRECIATION AND AMORTIZATION

Cost of sales excluding depreciation and amortization was $88.4 million for the year ended December 31, 2017, compared to $77.0 million for the same period in 2016. The higher cost of sales excluding depreciation and amortization was due to higher mine operating expenses, higher royalty expense and severance charges of $2.9 million recorded in 2017, offset by a higher build up of inventories. Mine operating expenses increased compared to 2016 primarily due to higher haulage costs for the material mined at the Mampon deposit.

DEPRECIATION AND AMORTIZATION

Depreciation and amortization expense increased to $11.7 million for the year ended December 31, 2017, compared to $6.1 million in 2016. The higher depreciation and amortization for the year ended December 31, 2017 was due to higher production and lower reserve base for Prestea Open Pits compared to 2016.

COSTS PER OUNCE

Cost of sales per ounce totaled $823 for the year ended December 31, 2017, down 11% from $928 for the same period in 2016. Cash operating cost per ounce was $632 for the year ended December 31, 2017, down 21% from $800 for the same period in 2016. The lower costs per ounce were due to an increase in gold production for the year ended December 31, 2017 compared to 2016.

CAPITAL EXPENDITURES

Capital expenditures for the year ended December 31, 2017 totaled $48.1 million compared to $42.4 million incurred during the same period in 2016. The increase relates primarily to an increase in development capital expenditures, which totaled $42.4 million for the year ended December 31, 2017 compared to $36.8 million in 2016. Development capital expenditures in 2017 included $39.4 million related to the development of the Prestea Underground Mine, $1.2 million Prestea open pits development projects and $1.8 million related to exploration drilling.

SUMMARIZED QUARTERLY FINANCIAL RESULTS

(Stated in thousands of U.S. dollars except per share data)	Q4 2017	Q3 2017	Q2 2017	Q1 2017	Q4 2016	Q3 2016	Q2 2016	Q1 2016
	Three months ended,							
Revenues	$ 81,845	$ 87,772	$ 77,335	$ 68,545	$ 53,255	$ 55,511	$ 51,457	$ 61,067
Cost of sales excluding depreciation and amortization	66,401	53,502	55,173	51,406	43,994	44,608	42,956	41,058
Net income/(loss)	13,825	13,703	13,681	(250)	2,551	(23,792)	(22,836)	2,314
Net income/(loss) attributable to shareholders of Golden Star	12,601	12,117	13,883	170	3,446	(23,110)	(22,034)	2,051
Adjusted net income/(loss) attributable to Golden Star shareholders[1]	15,151	19,827	7,703	3,411	64	1,148	1,433	8,538
Income/(loss) per share attributable to Golden Star shareholders – basic	0.03	0.03	0.04	0.00	0.01	(0.07)	(0.08)	0.01
Income/(loss) per share attributable to Golden Star shareholders – diluted	0.03	0.03	0.02	0.00	0.01	(0.07)	(0.08)	0.01
Adjusted income per share attributable to Golden Star shareholders – basic[1]	0.04	0.05	0.02	0.01	0.00	0.00	0.01	0.03

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

SELECTED ANNUAL INFORMATION

(Stated in thousands of U.S. dollars except per share data)	2017	2016	2015
	As of December 31,		
Cash and cash equivalents	$ 27,787	$ 21,764	$ 35,108
Working capital[1]	(61,563)	(60,459)	(65,750)
Total assets	360,389	298,850	238,982
Long-term financial liabilities	79,741	89,445	91,899
Deficit	(41,754)	(120,761)	(131,234)

(Stated in thousands of U.S. dollars except per share data)	2017	2016	2015
	For the years ended December 31,		
Revenue	$ 315,497	$ 221,290	$ 255,187
Net income/(loss) attributable to Golden Star	38,771	(39,647)	(67,681)
Income/(loss) per share attributable to Golden Star shareholders – basic and diluted	0.10	(0.13)	(0.26)

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

USE OF PROCEEDS FROM FINANCING

On February 7, 2017, the Company completed a bought deal public offering which resulted in the issuance of 31,363,950 common shares, including 4,090,950 common shares issued upon full exercise of the over allotment option, at a price CAD$1.10 per share for net proceeds of $24.5 million.

The following table compares how the Company intended to use the net proceeds against the actual use of these funds:

Purpose	Intended use[1]	Actual use
Repayment of the Company's 5% Convertible Debentures	$3.8 million – $7.5 million	$13.9 million
Capital expenditures	$6.0 million – $9.8 million	$2.6 million
Exploration projects	$2.3 million – $4.5 million	$2.6 million
Working capital and general corporate purposes	$12.4 million – $2.7 million	$5.4 million

1 The intended use of proceeds was disclosed in the final prospectus filed on January 31, 2017 in Canadian dollars. These amounts were translated from Canadian dollars into US dollars using an exchange rate of 1.3265, which is the exchange rate used in the final prospectus.

LIQUIDITY AND FINANCIAL CONDITION

The Company held $27.8 million in cash and cash equivalents as of December 31, 2017, up from $21.8 million at December 31, 2016. During the year ended December 31, 2017, operations provided $55.2 million, investing activities used $67.8 million and financing activities provided $18.6 million of cash.

Before working capital changes, operations provided $62.6 million of operating cash flow during the year ended December 31, 2017, compared to $75.5 million in the same period in 2016. Cash provided by operations decreased primarily due to a $50.0 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, offset by an increase of $29.7 million in mine operating margin for 2017 compared to 2016.

Working capital used $7.4 million during the year ended December 31, 2017, compared to $22.2 million in the same period in 2016 as there was a $13.4 million payment in 2016 pursuant to a vendor agreement. The working capital changes in 2017 included a $7.7 million increase in inventory, a $1.5 million decrease in accounts payable and accrued liabilities and a $2.1 million increase in prepaid and other, offset by a $3.9 million decrease in accounts receivable.

Investing activities used $67.8 million during 2017, which included $39.4 million on the development of the Prestea Underground Mine, $8.5 million on the development of the Wassa Underground Mine, $6.9 million on equipment and drill purchases, $5.2 million on exploration drilling, $3.4 million on the development of the Mampon property, $2.5 million on the Prestea Open Pit mines and $1.9 million on the expansion of the tailings storage facility at Wassa.

Financing activities provided $18.7 million cash in 2017 compared to $19.9 million in the same period in 2016. Financing activities for the year ended December 31, 2017 included net proceeds of $24.5 million from the bought deal public offering in February 2017, $10.0 million proceeds from the Ecobank Loan III, offset by the $13.6 million repayment of the 5% Convertible Debentures and $2.2 million principal repayments of debt.

LIQUIDITY OUTLOOK

As of December 31, 2017, the Company had $27.8 million in cash and a working capital deficit of $61.6 million compared to $21.8 million in cash and a working capital deficit of $60.5 million at December 31, 2016. The Company has completed the development of the Wassa Underground Mine and the Prestea Underground Mine, from which the Company expects to generate operating margin from these operations in the future. In order to generate cash flow from operations, the Company has to incur mine operating costs, a 5% royalty to the Government of Ghana, reclamation expenditures at the properties it operates and corporate general and administration expenditures.

The Company expects to incur $36.5 million on capital expenditures during 2018. The Company's debt repayment and servicing obligations are expected to approximate $23.4 million million for 2018. Severance payments of approximately $18.6 million are expected to be paid in 2018 as a result of completion of mining from the surface operations. In addition, the Company expects to incur $13.5 million for the settlement of vested performance share units. Furthermore, an excess cash flow payment under the Royal Gold loan may be required if the Company generates cash flow after capital expenditures, debt repayments and certain corporate general and administrative expenditures.

In March 2017, the Company through its subsidiary Golden Star (Wassa) Limited signed a commitment letter with Ecobank Ghana Limited regarding a $25.0 million secured facility ("Ecobank Loan III"). The Company has twelve months from the date of the commitment letter to drawdown the facility. In late January 2018 the Company draw down the remaining $15.0 million under the facility and at February 20, 2018, the $25.0 million facility has been fully drawn.

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. However, operating cash flow may decline in certain circumstances, most of which are beyond the Company's control, such as decreases in gold prices or increases in the cost of raw materials and inputs used by the Company to produce gold.

TABLE OF CONTRACTUAL OBLIGATIONS

	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	$ 94,623	$ –	$ –	$ –	$ 94,623
Debt[1, 3]	15,864	90,977	834	–	107,675
Other liability	13,498	–	–		13,498
Interest on long term debt	7,546	13,572	56	–	21,174
Purchase obligations	12,731	–	–	–	12,731
Rehabilitation provisions[2]	6,566	30,133	25,844	15,386	77,929
TOTAL	**$ 150,828**	**$ 134,682**	**$ 26,734**	**$ 15,386**	**$ 327,630**

1 Includes the outstanding repayment amounts from the 7% Convertible Debentures maturing on August 15, 2021, the loan from Royal Gold, the finance leases, the equipment financing loans and the vendor agreement.

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

3 The excess cash flow provision of the Royal Gold loan came into effect at the end of the second quarter of 2017. The excess cash flow provision as defined in the Royal Gold loan agreement requires the Company to make mandatory repayments of 50% excess cash flow beginning 2018 until maturity. The excess cash flow calculation is dependent upon factors beyond the Company's control such as gold price. No excess cash flow repayments have been required to date.The table of contractual obligations shows the total principal amount settled at maturity. Interest payments on the Royal Gold loan are 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. The estimated interest payments are calculated based on $1,300 per ounce LBMA gold price.

RELATED PARTY TRANSACTIONS

There were no material related party transactions for the year ended December 31, 2017 and 2016 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, 2017. 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 income attributable to Golden Star shareholders", "adjusted 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.

"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 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 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, 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 net realizable value adjustment, 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 now 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. Share-based compensation expenses were previously included in the calculation of all-in sustaining costs. The Company has presented comparative figures to conform with the computation of all-in sustaining costs as currently calculated by the Company.

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 also 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.

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 costs 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)	2017	2016	2017	2016
Cost of sales excluding depreciation and amortization	$ 66,401	$ 43,994	$ 226,482	$ 172,616
Depreciation and amortization	7,095	6,117	31,792	21,160
COST OF SALES	**$ 73,496**	**$ 50,111**	**$ 258,274**	**$ 193,776**
Cost of sales excluding depreciation and amortization	$ 66,401	$ 43,994	$ 226,482	$ 172,616
Severance charges	(8,050)	–	(9,232)	71
Royalties	(4,620)	(3,238)	(17,295)	(12,082)
Metals inventory net realizable value adjustment	–	(1,190)	(2,410)	(1,190)
CASH OPERATING COSTS	**$ 53,731**	**$ 39,566**	**$ 197,545**	**$ 159,415**
Royalties	4,620	3,238	17,295	12,082
Metals inventory net realizable value adjustment	–	1,190	2,410	1,190
Accretion of rehabilitation provision	312	342	1,245	1,368
General and administrative costs, excluding share-based compensation	2,828	2,833	12,536	11,904
Sustaining capital expenditures	4,781	6,664	13,199	13,779
ALL-IN SUSTAINING COSTS	**$ 66,272**	**$ 53,833**	**$ 244,230**	**$ 199,738**
Ounces sold[1]	66,163	44,969	258,761	182,801
COST PER OUNCE MEASURES ($/OZ):				
Cost of sales per ounce	1,111	1,114	998	1,060
Cash operating cost per ounce	812	880	763	872
All-in sustaining cost per ounce	1,002	1,197	944	1,093

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 pre-commercial production ounces sold during the period.

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

	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

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 pre-commercial production ounces sold during the period.

	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

	For the three months ended December 31, 2016		
(Stated in thousands of U.S. dollars except cost per ounce data)	Wassa	Prestea	Combined
Cost of sales excluding depreciation and amortization	$ 25,938	$ 18,056	$ 43,994
Depreciation and amortization	4,202	1,915	6,117
COST OF SALES	**$ 30,140**	**$ 19,971**	**$ 50,111**
Cost of sales excluding depreciation and amortization	25,938	18,056	43,994
Royalties	(1,770)	(1,468)	(3,238)
Metals inventory net realizable value adjustment	(1,190)	–	(1,190)
CASH OPERATING COSTS	**$ 22,978**	**$ 16,588**	**$ 39,566**
Ounces sold[1]	21,076	23,893	44,969
Cost of sales per ounce	$ 1,430	$ 836	$ 1,114
Cash operating cost per ounce	$ 1,090	$ 694	$ 880

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 pre-commercial production ounces sold during the period.

(Stated in thousands of U.S. dollars except cost per ounce data)	For the year ended December 31, 2016 Wassa	Prestea	Combined
Cost of sales excluding depreciation and amortization	$ 95,575	$ 77,041	$ 172,616
Depreciation and amortization	15,094	6,066	21,160
COST OF SALES	**$ 110,669**	**$ 83,107**	**$ 193,776**
Cost of sales excluding depreciation and amortization	$ 95,575	$ 77,041	$ 172,616
Severance charges	(113)	184	71
Royalties	(6,483)	(5,599)	(12,082)
Metals inventory net realizable value adjustment	(1,190)	–	(1,190)
CASH OPERATING COSTS	**$ 87,789**	**$ 71,626**	**$ 159,415**
Ounces sold[1]	93,284	89,517	182,801
Cost of sales per ounce	$ 1,186	$ 928	$ 1,060
Cash operating cost per ounce	$ 941	$ 800	$ 872

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 pre-commercial production ounces sold during the period.

"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 as 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 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 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, mining rates, milling rates, ore grade, gold recovery, costs of labor, consumables and mine site general and administrative activities can cause these measures to increase or decrease. We believe that these measures are similar to the measures of other gold mining companies, but may not be comparable to similarly titled measures in every instance.

Adjusted net income attributable to Golden Star shareholders

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

(Stated in thousands of U.S. dollars except per share data)	For the three months ended December 31, 2017	2016	For the years ended December 31, 2017	2016
Net income/(loss) attributable to Golden Star shareholders	$ 12,601	$ 3,446	$ 38,771	$ (39,647)
Add back/(deduct):				
Share-based compensation expenses/(recovery)	5,053	(2,316)	12,554	13,850
Loss/(gain) on fair value of financial instruments	1,902	(888)	(2,057)	25,676
Loss on conversion of 7% Convertible Debentures	–	–	165	(48)
Loss on repurchase of 5% Convertible Debentures	–	–	–	11,594
Severance charges	8,050	–	9,232	(71)
Gain on reduction of asset retirement obligations	–	(198)	–	(198)
Income tax recovery on previously unrecognized deferred tax asset	(12,944)	–	(12,944)	–
	14,662	**44**	**45,721**	**11,156**
Adjustments attributable to non-controlling interest	489	20	371	27
Adjusted net income attributable to Golden Star shareholders	**$ 15,151**	**$ 64**	**$ 46,092**	**$ 11,183**
Adjusted income per share attributable to Golden Star shareholders – basic	$ 0.04	$ 0.00	$ 0.12	$ 0.04
Weighted average shares outstanding – basic (millions)	380.6	331.0	373.5	294.1

The Company uses "Adjusted net 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 income attributable to Golden Star shareholders" is calculated by adjusting Net income/(loss) attributable to Golden Star shareholders for (gain)/loss on fair value of financial instruments, share-based compensation expenses, loss on conversion of 7% Convertible Debentures, severance charges and income tax recovery on previously unrecognized deferred tax assets. "Adjusted income per share attributable to Golden Star shareholders" for the period is "Adjusted net 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 income attributable to Golden Star shareholders and adjusted income per share attributable to Golden Star shareholders should be considered as 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 20, 2018, there were 380,990,856 common shares of the Company issued and outstanding, 16,629,462 stock options outstanding, 4,842,130 deferred share units outstanding, 1,694,491 share units of 2017 PSUs outstanding and 7% Convertible Debentures which are convertible into an aggregate of 57,220,000 common shares.

CRITICAL ACCOUNTING JUDGMENTS, ESTIMATES AND ASSUMPTIONS

The critical accounting judgments, estimates and assumptions are disclosed in Note 4 of the audited consolidated financial statements for the year ended December 31, 2017.

CHANGES IN ACCOUNTING POLICIES

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 year ended December 31, 2017.

FINANCIAL INSTRUMENTS

(Stated in thousands of U.S. dollars)	Fair value at December 31, 2017	Basis of measurement	Associated risks
Cash and cash equivalents	$ 27,787	Loans and receivables	Interest/Credit/Foreign exchange
Accounts receivable	3,428	Loans and receivables	Foreign exchange/Credit
Trade and other payables	84,213	Amortized cost	Foreign exchange/Interest
Equipment financing facility	147	Amortized cost	Interest
Finance leases	1,498	Amortized cost	Interest
Ecobank Loan III	9,559	Amortized cost	Interest
7% Convertible Debentures	42,515	Amortized cost	Interest
Royal Gold loan, net of fees	18,817	Amortized cost	Interest
Vendor agreement	23,069	Amortized cost	Interest/Foreign exchange
Long term derivative liability	10,963	Fair value through profit and loss	Market price

Loans and receivables – Cash and cash equivalents and accounts receivables mature in the short term and approximate their fair values.

Amortized costs – Trade and other payables, the 7% Convertible Debentures, the Ecobank Loan III, the Royal Gold loan, the vendor agreement, the equipment financing facility 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 three months ended December 31, 2017, a revaluation loss of $1.9 million was recorded. For the year ended December 31, 2017, total gain of $2.1 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 regarding the Company, refer to the discussion in Notes 25 and 26 of the audited consolidated financial statements for the year ended December 31, 2017.

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, 2017, 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 at December 31, 2017, the Company's internal control over financial reporting is effective based on those criteria.

The Company's internal control over financial reporting as at December 31, 2017 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, 2017. PwC as stated in their report that immediately precedes the Company's audited consolidated financial statements for the year ended December 31, 2017, 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, 2017 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, 2016. Additional and/or updated risk factors, if applicable, will be included in our annual information form for the year ended December 31, 2017, which will be filed on SEDAR at www.sedar.com.

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 20, 2018

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, 2017 and 2016, and the related consolidated statements of operations and comprehensive income/loss, changes in shareholders' equity and cash flows 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, 2017, 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, 2017 and 2016, and the results of their operations and their cash flows for the years then ended in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board. Also in our opinion, the company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control - Integrated Framework (2013) issued by the COSO.

Basis for opinions
The company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control over Financial Reporting on page 26 of the 2017 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, www.pwc.com/ca

pwc

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 consolidated 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 consolidated 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 consolidated 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

February 20, 2018

Toronto, Canada

We have served as the company's auditor since at least 1992. We have not determined the specific year we began serving as auditor of the company.

CONTENTS

GOLDEN STAR RESOURCES LTD

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

		For the years ended December 31,	
	NOTES	2017	2016
REVENUE	17	$ 315,497	$ 221,290
Cost of sales excluding depreciation and amortization	18	226,482	172,616
Depreciation and amortization		31,792	21,160
MINE OPERATING MARGIN		57,223	27,514
OTHER EXPENSES/(INCOME)			
Exploration expense		1,871	1,818
General and administrative		25,090	25,754
Finance expense, net	19	8,485	7,832
Other income	20	(4,346)	(3,349)
(Gain)/loss on fair value of financial instruments, net	5	(2,057)	25,676
Loss on repurchase of 5% Convertible Debentures, net	5	—	11,594
Loss/(gain) on conversion of 7% Convertible Debentures, net	12	165	(48)
INCOME/(LOSS) BEFORE TAX		28,015	(41,763)
Deferred income tax recovery	8	(12,944)	—
Net income/(loss) and comprehensive income/(loss)		$ 40,959	$ (41,763)
Net income/(loss) attributable to non-controlling interest		2,188	(2,116)
NET INCOME/(LOSS) ATTRIBUTABLE TO GOLDEN STAR SHAREHOLDERS		**$ 38,771**	**$ (39,647)**
NET INCOME/(LOSS) PER SHARE ATTRIBUTABLE TO GOLDEN STAR SHAREHOLDERS			
Basic	16	$ 0.10	$ (0.13)
Diluted	16	$ 0.10	$ (0.13)
Weighted average shares outstanding-basic (millions)		373.5	294.1
Weighted average shares outstanding-diluted (millions)		441.0	294.1

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	2017	2016
ASSETS			
CURRENT ASSETS			
Cash and cash equivalents		$ 27,787	$ 21,764
Accounts receivable		3,428	7,299
Inventories	6	50,653	44,381
Prepaids and other		5,014	3,926
TOTAL CURRENT ASSETS		**86,882**	**77,370**
RESTRICTED CASH		6,505	6,463
MINING INTERESTS	7	254,058	215,017
DEFERRED TAX ASSETS	8	12,944	—
TOTAL ASSETS		**$ 360,389**	**$ 298,850**
LIABILITIES			
CURRENT LIABILITIES			
Accounts payable and accrued liabilities	9	$ 94,623	$ 92,900
Derivative liabilities	5	—	2,729
Current portion of rehabilitation provisions	10	6,566	5,515
Current portion of deferred revenue	11	17,894	19,234
Current portion of long term debt	12	15,864	15,378
Current portion of other liability	15	13,498	2,073
TOTAL CURRENT LIABILITIES		**148,445**	**137,829**
REHABILITATION PROVISIONS	10	64,146	71,867
DEFERRED REVENUE	11	92,062	94,878
LONG TERM DEBT	12	79,741	89,445
LONG TERM DERIVATIVE LIABILITY	5	10,963	15,127
LONG TERM OTHER LIABILITY	15	6,786	10,465
TOTAL LIABILITIES		**402,143**	**419,611**
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	783,167	746,542
CONTRIBUTED SURPLUS		35,284	33,861
DEFICIT		(794,180)	(832,951)
SHAREHOLDERS' EQUITY/(DEFICIT) ATTRIBUTABLE TO GOLDEN STAR SHAREHOLDERS		**24,271**	**(52,548)**
NON-CONTROLLING INTEREST		(66,025)	(68,213)
TOTAL DEFICIT		(41,754)	(120,761)
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY		**$ 360,389**	**$ 298,850**

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, 2017	2016
OPERATING ACTIVITIES:			
Net income/(loss)		$ 40,959	$ (41,763)
RECONCILIATION OF NET INCOME/(LOSS) TO NET CASH PROVIDED BY OPERATING ACTIVITIES:			
Depreciation and amortization		31,823	21,173
Share-based compensation	15	12,554	13,850
Deferred income tax recovery	8	(12,944)	—
(Gain)/loss on fair value of 7% Convertible Debentures embedded derivative	5	(2,095)	3,812
Loss on fair value of 5% Convertible Debentures	5	317	17,235
Loss on repurchase of 5% Convertible Debentures, net	5	—	11,594
Recognition of deferred revenue	11	(14,156)	(11,267)
Proceeds from Royal Gold stream	11	10,000	60,000
Reclamation expenditures	10	(5,992)	(5,527)
Other	24	2,158	6,350
Changes in working capital	24	(7,448)	(22,208)
NET CASH PROVIDED BY OPERATING ACTIVITIES		**55,176**	**53,249**
INVESTING ACTIVITIES:			
Additions to mining properties		(632)	(2,108)
Additions to plant and equipment		(649)	(613)
Additions to construction in progress		(67,591)	(81,635)
Change in accounts payable and deposits on mine equipment and material		1,103	(2,794)
Increase in restricted cash		(41)	—
Proceeds from sale of assets		—	657
NET CASH USED IN INVESTING ACTIVITIES		**(67,810)**	**(86,493)**
FINANCING ACTIVITIES:			
Principal payments on debt	12	(2,198)	(29,345)
Proceeds from debt agreements	12	10,000	3,000
Proceeds from 7% Convertible Debentures, net	12	—	20,714
5% Convertible Debentures repayment	12	(13,611)	(19,941)
Shares issued, net	13	24,456	45,450
Exercise of options		10	22
NET CASH PROVIDED BY FINANCING ACTIVITIES		**18,657**	**19,900**
Increase/(decrease) in cash and cash equivalents		6,023	(13,344)
Cash and cash equivalents, beginning of period		21,764	35,108
CASH AND CASH EQUIVALENTS, END OF PERIOD		**$ 27,787**	**$ 21,764**

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 Share	Share Capital	Contributed Surplus	Deficit	Non-Controlling Interest	Total Shareholders' Equity
BALANCE AT DECEMBER 31, 2015	**259,897,095**	**$ 695,555**	**$ 32,612**	**$ (793,304)**	**$ (66,097)**	**$ (131,234)**
Shares issued	75,360,692	55,180	—	—	—	55,180
Shares issued under DSUs	39,744	9	(9)	—	—	—
Shares issued under options	58,919	39	(17)	—	—	22
Options granted net of forfeitures	—	—	751	—	—	751
Deferred share units granted	—	—	524	—	—	524
Share issue costs	—	(4,241)	—	—	—	(4,241)
Net loss	—	—	—	(39,647)	(2,116)	(41,763)
BALANCE AT DECEMBER 31, 2016	**335,356,450**	**$ 746,542**	**$ 33,861**	**$ (832,951)**	**$ (68,213)**	**$ (120,761)**
Shares issued (see Note 13)	40,809,502	35,682	—	—	—	35,682
Shares issued under DSUs	1,167,689	521	(521)	—	—	—
Shares issued under options	23,750	16	(6)	—	—	10
Shares issued under warrants (see Note 13)	3,223,684	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	**380,581,075**	**$ 783,167**	**$ 35,284**	**$ (794,180)**	**$ (66,025)**	**$ (41,754)**

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

(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, Sun Life Financial Tower, Suite 1200, Toronto, Ontario, M5H 1J9, Canada.

Through a 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 ("Bogoso"), the Prestea open-pit mining operations and the Prestea underground development project 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 1 of the CPA Canada Handbook – Accounting.

These consolidated financial statements were approved by the Board of Directors of the Company on February 20, 2018.

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. 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.

The 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 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.

(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

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 are made, the Company will record 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 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 is 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.

The Streaming Agreement has been recorded as a contract for the future delivery of gold ounces at the contracted price. The upfront payments are accounted for as prepayments of yet-to-be delivered ounces under the contract and are recorded as deferred revenue.
The initial term of the contract is 40 years and the deposit bears no interest.

IFRS 15 *Revenue from Contracts with Customers* was amended with the changes having an effective date of January 1, 2018. While these amendments do not impact these financial statements, they will impact the Company's accounting for its streaming arrangement with RGLD Gold AG ("RGLD") as a result of a significant financing component in the contract as defined by IFRS 15. The impact will be recognized in the Company's 2018 financial statements.

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 available-for-sale investments that are recorded in other comprehensive income. Non-monetary assets and liabilities denominated in foreign currencies that are measured at historical cost are translated at the exchange rate in effect at the transaction date.

Income taxes

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

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

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

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

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

Revenue from the sale of metal is recognized when the significant risks and rewards of ownership have passed to the purchaser. This occurs when the amount of revenue can be measured reliably, the metal has been delivered, title has passed to the buyer and it is probable that the economic benefits associated with the transaction will flow to the entity. 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. Title and risk of ownership pass to the buyer on the day doré is shipped from the mine sites. Revenue recognition for our stream arrangement 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, 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 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 liability is 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 is required to settle these awards in common shares or common shares plus cash subject to the consent of the Company, 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.

Financial instruments

The Company recognizes 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 has not classified any of its financial assets as held to maturity.

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.

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. Our 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, 2017.

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.

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

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, 2017. These changes were made in accordance with the applicable transitional provisions.

IAS 7 *Statement of cash flows – Disclosures related to financing activities* was amended to require disclosures about changes in liabilities arising from financing activities, including both changes arising from cash flows and non-cash changes. As a result of the adoption of IAS 7, the Company has included additional disclosure on non-cash changes of debt amounts in Note 24.

IAS 12 *Income taxes – Deferred tax* was amended to clarify (i) the requirements for recognizing deferred tax assets on unrealized losses; (ii) deferred tax where an asset is measured at a fair value below the asset's tax base, and (iii) certain other aspects of accounting for deferred tax assets. The adoption of this amendment did not result in any impact to the Company's financial statements.

Standards, interpretations and amendments not yet effective

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. There will be no material impact to the financial statements on adoption of this standard.

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 Company has reviewed its contracts with customers with respect to the applications to IFRS 15. The Company does not expect that the timing or amounts of revenue currently recognized on our bullion spot sales will be affected by IFRS 15. It is anticipated that the accounting for the Company's streaming arrangement with RGLD, will be impacted by the adoption of IFRS 15 as a result of a significant financing component in the contract as defined by IFRS 15. It is expected that the finance costs and revenue will increase on adoption of this standard. The Company will use the modified retrospective approach of adoption.

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 will be no impact to the financial statements on adoption of this standard.

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 is still assessing the impact of this standard.

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. The Company is still assessing the impact 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

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

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

Units of production depreciation

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

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

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, 2017 and December 31, 2016:

		December 31, 2017		December 31, 2016	
	Level	Carrying value	Fair value	Carrying value	Fair value
FINANCIAL LIABILITIES					
Fair value through profit or loss					
5% Convertible Debentures	3	$ —	$ —	$ 13,294	$ 13,294
Warrants	2	—	—	2,729	2,729
7% Convertible Debentures embedded derivative	3	10,963	10,963	15,127	15,127

There were no non-recurring fair value measurements of financial instruments as at December 31, 2017.

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, 2017, there were no transfers between the levels of the fair value hierarchy.

(Gain)/loss on fair value of financial instruments in the Statement of Operations includes the following components:

	For the years ended December 31,	
	2017	2016
Loss on fair value of 5% Convertible Debentures	$ 317	$ 17,235
(Gain)/loss on fair value of warrants	(86)	2,322
Gain on warrant exercise	(193)	—
(Gain)/loss on fair value of 7% Convertible Debentures embedded derivative	(2,095)	3,812
Unrealized loss on non-hedge derivative contracts	—	2,307
	$ (2,057)	**$ 25,676**

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

5% CONVERTIBLE DEBENTURES

On May 26, 2017, $13.6 million principal and $0.3 million interest was paid in full settlement of the 5% Convertible Debentures.

The debt component of the 5% Convertible Debentures was valued based on discounted cash flows and the conversion feature was valued based on a Black-Scholes model. The risk free interest rate used in the fair value computation was the interest rate on US treasury bills with maturity similar to the remaining life of the 5% Convertible Debentures. The discount rate used was determined by adding our risk premium to the risk free interest rate. A market-based volatility rate was applied to the fair value computation.

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

The following table presents the changes in the 5% Convertible Debentures for the year ended December 31, 2017:

	Fair value
BALANCE, DECEMBER 31, 2016	$ 13,294
Repayment	(13,611)
Loss on fair value in the period included in earnings	317
BALANCE, DECEMBER 31, 2017	**$ —**

WARRANTS

As part of the term loan transaction with Royal Gold, Inc. ("RGI"), 5,000,000 warrants to purchase Golden Star shares were issued to RGI. The warrants had a $0.27 exercise price and an expiry date of July 28, 2019, being the fourth year anniversary of the date of issuance. These instruments were fair valued based on a Black-Scholes model.

On August 30, 2017, the Company issued 3,223,684 common shares upon a cashless exercise of all 5,000,000 warrants held by RGI. The Company recorded a $2.5 million increase in equity, $2.7 million decrease in warrant liability and a $0.2 million gain on exercise.

The following table presents the changes in the warrants for the year ended December 31, 2017:

	Fair value
BALANCE, DECEMBER 31, 2016	$ 2,729
Exercise	(2,643)
Gain on fair value of warrants	(86)
BALANCE, DECEMBER 31, 2017	**$ —**

7% CONVERTIBLE DEBENTURES EMBEDDED DERIVATIVE

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

The embedded derivative was valued at December 31, 2017 and December 31, 2016 using a convertible note valuation model. The significant inputs used in the convertible note valuation are as follows:

	December 31,	
	2017	**2016**
EMBEDDED DERIVATIVE		
Risk premium	7.9%	12.9%
Borrowing costs	15.0%	10.0%
Expected volatility	45.0%	45.0%
Remaining life (years)	3.6	4.6

The following table presents the changes in the 7% Convertible Debentures embedded derivative for the year ended December 31, 2017:

	Fair value
BALANCE, DECEMBER 31, 2016	$ 15,127
Gain on conversions	(2,069)
Gain on fair value of 7% Convertible Debentures embedded derivative	(2,095)
BALANCE, DECEMBER 31, 2017	**$ 10,963**

If the risk premium increases by 5%, the fair value of the 7% Convertible Debentures embedded derivative would decrease and the related gain in the Statement of Operations would increase by $0.03 million at December 31, 2017.

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 decrease by $0.4 million at December 31, 2017.

If the expected volatility 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 $0.9 million at December 31, 2017.

6. INVENTORIES

Inventories include the following components:

	As of December 31,	
	2017	**2016**
Stockpiled ore	$ 22,998	$ 23,833
In-process ore	4,014	5,008
Materials and supplies	22,677	14,824
Finished goods	964	716
TOTAL	**$ 50,653**	**$ 44,381**

The cost of inventories expensed for the year ended December 31, 2017 and 2016 was $209.2 million and $160.5 million, respectively.

During the year ended December 31, 2017, $3.5 million of net realizable value adjustments were recorded for stockpiled ore (year ended December 31, 2016 – $1.2 million).

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

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, 2015	$ 452,645	$ 729,746	$ 71,902	$ 1,254,293
Additions	613	2,108	75,375	78,096
Transfers	9,379	12,749	(22,128)	—
Capitalized interest	—	—	6,260	6,260
Change in rehabilitation provision estimate	—	2,054	—	2,054
Disposals and other	(1,199)	—	—	(1,199)
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)
AS OF DECEMBER 31, 2017	$ 479,214	$ 798,433	$ 126,923	$ 1,404,570
ACCUMULATED DEPRECIATION				
AS OF DECEMBER 31, 2015	$ 423,665	$ 680,779	$ —	$ 1,104,444
Depreciation and amortization	8,673	12,010	—	20,683
Disposals and other	(640)	—	—	(640)
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)
AS OF DECEMBER 31, 2017	$ 437,292	$ 713,220	$ —	$1,150,512
CARRYING AMOUNT				
As of December 31, 2015	$ 28,980	$ 48,967	$ 71,902	$ 149,849
As of December 31, 2016	$ 29,740	$ 53,868	$ 131,409	$ 215,017
AS OF DECEMBER 31, 2017	$ 41,922	$ 85,213	$ 126,923	$ 254,058

As at December 31, 2017, equipment under finance leases had net carrying amounts of $1.6 million (December 31, 2016 – $1.1 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, 2017, the general capitalization rate for borrowing costs was 7%.

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, 2017 and December 31, 2016 include the following components:

	As of December 31, 2017	2016
DEFERRED TAX ASSETS		
Tax losses carried forward	$ 17,773	$ 9,349
Deductible temporary differences relating to provisions	4,821	—
DEFERRED TAX LIABILITIES		
Mine property costs	9,650	9,349
NET DEFERRED TAX ASSETS	$ 12,944	$ —

The Company has recognized $12.9 million of net deferred tax assets for the year ended December 31, 2017 following an assessment of future profitability of the Company's subsidiary Golden Star (Wassa) Limited and concluded the realization of the net deferred tax assets is probable. Developments at Wassa during 2017 included (i) achievement of commercial production of the Wassa Underground Mine, (ii) winding down the open pit operation and (iii) increase in profitability of the Wassa Underground Mine. The net deferred tax assets recognized include $17.8 million which relates to carried forward tax losses of Wassa. The Company has concluded that the deferred tax assets will be recoverable using estimated future taxable income based on the winding down of the open pit mining operation and operating Wassa as an underground-only operation. Wassa is expected to generate taxable income from 2018 onwards. The Company expects the deferred tax assets from Wassa's non-capital loss carryovers to be realized within the next two years.

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

	As of December 31, 2017	2016
DEDUCTIBLE TEMPORARY DIFFERENCES		
Canada	$ 12,755	$ 12,421
U.S.	—	—
Ghana	44,232	49,777
	$ 56,987	$ 62,198
TAX LOSSES		
Canada	$ 48,411	$ 41,731
U.S.	311	309
Ghana	257,771	262,719
	$ 306,493	$ 304,759
TOTAL UNRECOGNIZED DEFERRED TAX ASSETS		
Canada	$ 61,166	$ 54,152
U.S.	311	309
Ghana	302,003	312,496
	$ 363,480	$ 366,957

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

The income tax recovery includes the following components:

	For the years ended December 31, 2017	2016
CURRENT TAX RECOVERY		
Current tax on net earnings	$ —	$ —
DEFERRED TAX RECOVERY		
Recovery of previously unrecognized deferred tax assets	(12,944)	—
INCOME TAX RECOVERY	**$ (12,944)**	**$ —**

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

	For the years ended December 31, 2017	2016
Net income/(loss) before tax	$ 28,015	$ (41,763)
Statutory tax rate	26.5%	26.5%
Tax benefit at statutory rate	$ 7,424	$ (11,067)
Foreign tax rates	(10,629)	(12,555)
Expired loss carryovers	—	3,052
Other	74	(30)
Non taxable/deductible items	(20)	641
Change in unrecognized deferred tax assets due to exchange rates	(1,180)	(894)
Change in unrecognized deferred tax assets	(8,613)	20,853
DEFERRED INCOME TAX RECOVERY	**$ (12,944)**	**$ —**

At December 31, 2017, the Company had a tax pool and loss carryovers expiring as follows:

	Canada	Ghana	Other
2018	$ —	$ 46,540	$ —
2019	—	33,488	—
2020	—	109,841	—
2021	—	12,822	—
2026	9,563	—	—
2027	13,339	—	—
2028	12,039	—	—
2029	18,255	—	2
2030	16,317	—	—
2031	30,612	—	—
2032	14,818	—	—
2033	6,378	—	402
2034	—	—	364
2035	8,725	—	1
2036	14,225	—	120
2037	17,777	—	—
Indefinite	37,510	584,577	—
TOTAL	**$ 199,558**	**$ 787,268**	**$ 889**

$736.5 million of the Ghana tax pool is usable against taxable income generated at Bogoso/Prestea, with the remaining amount totaling $50.8 million usable against taxable income generated at Wassa.

9. ACCOUNTS PAYABLE AND ACCRUED LIABILITIES

Accounts payable and accrued liabilities include the following components:

	As of December 31, 2017	2016
Trade and other payables	$ 44,048	$ 48,591
Accrued liabilities	40,165	35,998
Payroll related liabilities	10,410	8,311
TOTAL	**$ 94,623**	**$ 92,900**

10. REHABILITATION PROVISIONS

At December 31, 2017, the total undiscounted amount of future cash needs for rehabilitation was estimated to be $77.9 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, 2017	2016
BEGINNING BALANCE	**$ 77,382**	**$ 79,685**
Accretion of rehabilitation provisions	1,245	1,368
Changes in estimates	(1,923)	1,856
Cost of reclamation work performed	(5,992)	(5,527)
BALANCE AT THE END OF THE PERIOD	**$ 70,712**	**$ 77,382**
Current portion	$ 6,566	$ 5,515
Long term portion	64,146	71,867
TOTAL	**$ 70,712**	**$ 77,382**

For the year ended December 31, 2017, the Company has recorded a change of estimate of $1.9 million on its rehabilitation provisions of the mine sites. The impact of the changes of estimates were a decrease of $0.7 million to the reclamation provisions for Wassa and a decrease of $1.2 million to the reclamation provisions for Bogoso/Prestea. The rehabilitation provision for Wassa was $17.4 million (2016 – $19.3 million). The Company expects the payments for reclamation to be incurred between 2018 to 2026. A decrease in estimate for Wassa of $0.7 million was recorded due to a revision in the timing of payments. The rehabilitation provision for Bogoso/Prestea was $53.3 million (2016 – $58.1 million). The Company expects the payments for reclamation to be incurred between 2018 to 2027. The decrease in estimate for Bogoso/Prestea of $1.2 million relates to a $4.9 million reduction in expected reclamation costs relating to the refractory liability and a $3.8 million increase in the expected reclamation costs relating to the non-refractory operation. The reduction of $4.9 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.

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

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 RGI. This Streaming Agreement was subsequently amended on December 30, 2015 to provide an additional $15 million of streaming advance payment with an option, subject to Golden Star satisfying certain conditions, to access a further $5 million (this option was not exercised and has expired). 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 the Mines' production to RGLD at a cash purchase price of 20% of spot gold. From the earlier of January 1, 2018 or commercial production of the underground mines, Golden Star will deliver 10.5% of production at a cash purchase price of 20% of spot gold until 240,000 ounces have been delivered. Thereafter, 5.5% of production at a cash purchase price of 30% of spot gold will be delivered.

The upfront payments are accounted for as prepayments of yet-to-be delivered ounces under the contract and are recorded as deferred revenue. The initial term of the contract is 40 years and the deposit bears no interest.

During the year ended December 31, 2017, the Company sold 24,404 ounces of gold to RGLD. Revenue recognized on the ounces sold to RGLD during the year ended December 31, 2017 consisted of $6.1 million of cash payment proceeds and $14.2 million of deferred revenue recognized in the period (see Note 17). The Company has delivered a total of 54,769 ounces of gold to RGLD since the inception of the Streaming Agreement.

	For the years ended December 31,	
	2017	2016
BEGINNING BALANCE	**$ 114,112**	**$ 65,379**
Deposits received	10,000	60,000
Deferred revenue recognized	(14,156)	(11,267)
BALANCE AT THE END OF THE PERIOD	**$ 109,956**	**$ 114,112**
Current portion	$ 17,894	$ 19,234
Long term portion	92,062	94,878
TOTAL	**$ 109,956**	**$ 114,112**

12. DEBT

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

	As of December 31,	
	2017	2016
CURRENT DEBT:		
Equipment financing credit facility	$ 147	$ 931
Finance leases	1,229	1,153
Ecobank Loan III	2,222	—
5% Convertible Debentures at fair value (see Note 5)	—	13,294
Vendor agreement	12,266	—
TOTAL CURRENT DEBT	**$ 15,864**	**$ 15,378**
LONG TERM DEBT:		
Equipment financing credit facility	$ —	$ 188
Finance leases	269	806
Ecobank Loan III	7,337	—
7% Convertible Debentures	42,515	47,617
Royal Gold loan	18,817	18,496
Vendor agreement	10,803	22,338
TOTAL LONG TERM DEBT	**$ 79,741**	**$ 89,445**
Current portion	$ 15,864	$ 15,378
Long term portion	79,741	89,445
TOTAL	**$ 95,605**	**$ 104,823**

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 are repayable over a period of two to five years. Each outstanding equipment loan is secured by the title of the specific equipment purchased with the loan until the loan has been 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, 2017, the Company entered into a $0.8 million financing lease agreement 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 has twelve months to drawdown the loan.

During the year ended December 31, 2017, the Company drew down $10.0 million on Ecobank Loan III. In January 2018, the Company drew down the remaining $15.0 million on Ecobank Loan III.

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

5% Convertible Debentures

On May 26, 2017, $13.6 million principal and $0.3 million interest was paid in full settlement of the remaining balance of the 5% Convertible Debentures.

The 5% Convertible Debentures were issued on May 31, 2012, in the amount of $77.5 million, in exchange for $74.5 million of our 4% convertible senior unsecured debentures (the "4% Convertible Debentures") in privately negotiated transactions with certain holders of the 4% Convertible Debentures.

During the year ended December 31, 2016, the Company entered into exchange and purchase agreements with two holders of its 5% Convertible Debentures to exchange $42.0 million principal amount of the outstanding convertible debentures for an equal principal amount of newly issued 7% Convertible Debentures. As at December 31, 2016, the fair value of the 5% Convertible Debentures was valued at $13.3 million with a loss on fair value of $17.2 million and a loss on repurchase of $11.6 million recorded in the year ended December 31, 2016.

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 1,111 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 $0.90 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)).

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, 2017, the fair value of the embedded derivative was $11.0 million (December 31, 2016 – $15.1 million). The revaluation gain of $2.1 million (year ended December 31, 2016 – revaluation loss of $3.8 million) and gain on conversions of $2.1 million (year ended December 31, 2016 – $0.9 million) is recorded in the Statement of Operations.

During the year ended December 31, 2016, $5.0 million principal amount of the 7% Convertible Debentures was converted for 5,556,667 common shares. The Company recorded a net gain on conversions of $0.05 million for the year ended December 31, 2016. As at December 31, 2016, $60.0 million principal amount of 7% Convertible Debentures remained outstanding.

During the first quarter of 2017, a total of 9,445,552 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 remains outstanding.

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

	For the years ended December 31,	
	2017	2016
BEGINNING BALANCE	$ 47,617	$ —
Principal value of debt issued	—	65,000
Embedded derivative fair value at debt issuance	—	(12,259)
Transaction costs	—	(2,271)
Conversions	(6,947)	(3,708)
Accretion of 7% Convertible Debentures discount	1,845	855
BALANCE AT THE END OF THE PERIOD	$ 42,515	$ 47,617

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. For the year ended December 31, 2017, the interest rate was approximately 8% with a total of $1.6 million paid during the year. 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 have been required to date.

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.

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

Schedule of payments on outstanding debt as of December 31, 2017:

	Year ending December 31,					
	2018	2019	2020	2021	2022	Maturity
EQUIPMENT FINANCING LOANS						
Principal	$ 147	$ —	$ —	$ —	$ —	2018
Interest	4	—	—	—	—	
FINANCE LEASES						
Principal	1,229	269	—	—	—	2019
Interest	63	8	—	—	—	
ECOBANK LOAN III						
Principal	2,222	2,222	2,222	2,500	834	2022
Interest	831	629	429	245	56	
7% CONVERTIBLE DEBENTURES						
Principal	—	—	—	51,498	—	August 15, 2021
Interest	3,605	3,605	3,605	3,605	—	
ROYAL GOLD LOAN						
Principal 1	—	20,000	—	—	—	2019
Interest 2	1,625	948	—	—	—	
VENDOR AGREEMENT						
Principal	12,266	12,266	—	—	—	2019
Interest	1,418	498	—	—	—	
TOTAL PRINCIPAL	$ 15,864	$ 34,757	$ 2,222	$ 53,998	$ 834	
TOTAL INTEREST	7,546	5,688	4,034	3,850	56	
	$ 23,410	**$ 40,445**	**$ 6,256**	**$ 57,848**	**$ 890**	

1 Beginning with the three months ending June 30, 2017, the excess cash flow provision of the Royal Gold loan came into effect. The excess cash flow provision as defined in the Royal Gold loan agreement requires the Company to make mandatory repayments of 25% of excess cash flow for the remainder of 2017 and mandatory repayments of 50% excess cash flow beginning 2018 until maturity. The excess cash flow calculation is dependent upon factors some of which are beyond the Company's control such as gold price. No excess cash flow repayments have been required to date. The schedule of payments shows the total principal amount outstanding settled at maturity.

2 Interest payments on the Royal Gold loan are based on the average daily LBMA gold price multiplied by 62.5% divided by 10,000 to a maximum interest rate of 11.5% per annum. The estimated interest payments are calculated based on $1,300 per ounce LBMA gold price.

13. SHARE CAPITAL

		Number of common shares	Share capital
BALANCE AT DECEMBER 31, 2015		**259,897,095**	**$ 695,555**
Bought deal		22,750,000	15,015
Equity offering		46,000,000	34,500
Conversion of 7% Convertible Debentures		6,610,692	5,665
Shares issued under DSUs		39,744	9
Shares issued under options		58,919	39
Share issue costs		—	(4,241)
BALANCE AT DECEMBER 31, 2016		**335,356,450**	**$ 746,542**
Bought deal	a	31,363,950	26,203
Conversion of 7% Convertible Debentures	b	9,445,552	9,479
Shares issued under DSUs		1,167,689	521
Shares issued under options		23,750	16
Shares issued under warrants	c	3,223,684	2,450
Share issue costs		—	(2,044)
BALANCE AT DECEMBER 31, 2017		**380,581,075**	**$ 783,167**

a. On February 7, 2017, the Company closed a bought deal offering of 31,363,950 common shares, which includes shares issued upon full exercise of the over-allotment option, at a price of C$1.10 per share, for net proceeds to the Company of $24.5 million.

b. During the year ended December 31, 2017, a total of 9,445,552 common shares were issued on conversion of $8.5 million principal amount of 7% Convertible Debentures. The Company recorded a $9.5 million increase in equity offset by capitalized share issue costs of $0.3 million, resulting in a net equity increase of $9.2 million. The Company recorded a net loss on conversions of $0.2 million.

c. On August 30, 2017, the Company issued 3,223,684 common shares upon a cashless exercise of all 5,000,000 warrants held by RGI. The Company recorded a $2.5 million increase in equity, $2.7 million decrease in warrant liability and a $0.2 million gain on exercise.

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 us to redeem the special share at any time for no consideration or for consideration determined by us. To date, the Government of Ghana has not sought to exercise any of these rights at our properties.

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

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, 2017 are as follows:

Less than 1 year	$	3,541
Between 1 and 5 years		602
More than 5 years		—
TOTAL	**$**	**4,143**

15. SHARE-BASED COMPENSATION

Non-cash employee compensation expenses, recognized in general and administrative expense in the Statements of Operations and Comprehensive Income, are as follows:

	For the years ended December 31,			
		2017		**2016**
Share options	$	1,229	$	751
Deferred share units		387		524
Share appreciation rights		482		616
Performance share units		10,456		11,959
	$	**12,554**	**$**	**13,850**

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 10,000,000 common shares for the Stock Option Plan, thereby increasing the total number of common shares issuable from 25,000,000 Common Shares to 35,000,000 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 35,000,000 shares, of which 10,572,586 are available for grant as of December 31, 2017 (December 31, 2016 – 11,107,216). 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.

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, 2017 and 2016 were based on the weighted average assumptions noted in the following table:

	For the years ended December 31,	
	2017	**2016**
Expected volatility	73.70%	72.40%
Risk-free interest rate	1.86%	1.28%
Expected lives	5.99 years	4.86 years

Expected volatilities are based on the mean reversion tendency of the volatility of Golden Star's shares. Golden Star uses historical data to estimate share option exercise and employee departure behavior and this data is used in determining input data for the Black-Scholes model. Groups of employees that have dissimilar historical behavior are considered separately for valuation purposes. The expected term of the options granted represents the period of time that the options granted are expected to be outstanding. The risk-free rate for periods within the contractual term of the option is based on the Bank of Canada administered interest rates in effect at the time of the grant.

The weighted average fair value per option granted during the year ended December 31, 2017 was $0.84 (year ended December 31, 2016 – $0.35). As at December 31, 2017, there was $0.5 million of share-based compensation expense (December 31, 2016 – $0.3 million) relating to the Company's share options to be recorded in future periods. For the year ended December 31, 2017, the Company recognized an expense of $1.2 million (year ended December 31, 2016 – $0.8 million).

A summary of option activity under the Company's Stock Option Plan during the year ended December 31, 2017 are as follows:

	Options ('000)	Weighted-average exercise price ($cad)	Weighted-average remaining contractual term (years)
OUTSTANDING AS OF DECEMBER 31, 2015	**13,911**	**1.48**	**5.9**
Granted	3,245	0.62	8.7
Exercised	(59)	0.48	8.7
Forfeited	(610)	1.09	5.4
Expired	(368)	3.25	0.0
OUTSTANDING AS OF DECEMBER 31, 2016	**16,119**	**1.29**	**5.7**
Granted	2,352	1.28	9.7
Exercised	(24)	0.55	7.3
Forfeited	(648)	2.27	1.8
Expired	(1,170)	2.19	0.0
OUTSTANDING AS OF DECEMBER 31, 2017	**16,629**	**1.19**	**5.9**
Exercisable as of December 31, 2016	11,738	1.55	4.8
Exercisable as of December 31, 2017	12,803	1.28	5.1

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

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$)
0.30 to 0.50	3,084	7.0	0.38	2,501	0.38
0.51 to 1.00	5,921	7.0	0.73	4,393	0.77
1.01 to 1.50	2,664	8.6	1.28	949	1.26
1.51 to 2.50	3,452	2.3	1.80	3,452	1.80
2.51 to 3.50	1,278	2.6	2.94	1,278	2.94
3.51 to 5.00	230	2.2	3.53	230	3.53
	16,629	**5.9**	**1.19**	**12,803**	**1.28**

The number of options outstanding by strike price as of December 31, 2016 is shown in the following table:

	Options outstanding			Options exercisable	
Range of exercise price (Cdn$)	Number outstanding at December 31, 2016 ('000)	Weighted-average remaining contractual life (years)	Weighted-average exercise price (Cdn$)	Number outstanding at December 31, 2016 ('000)	Weighted-average exercise price (Cdn$)
0.30 to 0.50	3,096	8.0	0.38	1,690	0.38
0.51 to 1.00	5,837	7.9	0.73	2,929	0.80
1.01 to 1.50	547	5.5	1.24	480	1.27
1.51 to 2.50	4,780	2.6	1.84	4,780	1.84
2.51 to 3.50	1,434	3.5	2.97	1,434	2.97
3.51 to 5.00	425	2.4	3.69	425	3.69
	16,119	**5.7**	**1.29**	**11,738**	**1.55**

Deferred share units ("DSUs")

On March 9, 2011 the Board adopted a Deferred Share Unit Plan ("DSU Plan") which was subsequently approved by shareholders at the May 2011 annual meeting of shareholders. The DSU Plan provides for the issuance of Deferred Share Units ("DSUs"), each representing the right to receive one Golden Star common share upon redemption. DSUs may be redeemed only upon termination of the holder's services to the Company, and may be subject to vesting provisions. DSU awards are granted at the sole discretion of the Company's Compensation Committee. The DSU Plan allows directors, at their option, to receive all or any portion of their director retainer by accepting DSUs in lieu of cash.

The Compensation Committee may also award DSUs to executive officers and/or directors in lieu of cash as a component of their long term performance compensation, the amount of such awards being in proportion to the officer's or director's achievement of pre-determined performance goals. As with DSU awards for directors' retainers, DSUs received as performance compensation are redeemable only upon termination of the holder's services to the Company. The Company may, at its option, provide cash in lieu of common shares upon a holder's redemption, the cash value being established by the share price on the DSU redemption date, less all applicable tax withholding.

For the year ended December 31, 2017, the DSUs that were granted vested immediately and a compensation expense of $0.4 million was recognized for these grants (year ended December 31, 2016 – $0.5 million). As of December 31, 2017, 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, 2017 and 2016:

	For the years ended December 31,	
	2017	**2016**
Number of DSUs, beginning of period ('000)	5,733	4,496
Granted	527	1,277
Exercised	(1,168)	(40)
NUMBER OF DSUS, END OF PERIOD ('000)	**5,092**	**5,733**

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, 2017, there was approximately $0.4 million of total unrecognized compensation cost related to unvested SARs (December 31, 2016 – $0.3 million). For the year ended December 31, 2017, the Company recognized an expense of $0.5 million related to these cash settled awards (year ended December 31, 2016 – $0.6 million).

A summary of the SARs activity during the year ended December 31, 2017 and 2016:

	For the years ended December 31,	
	2017	**2016**
Number of SARs, beginning of period ('000)	2,687	2,934
Granted	1,460	1,850
Exercised	(792)	(10)
Forfeited	(690)	(678)
Expired	—	(1,409)
NUMBER OF SARS, END OF PERIOD ('000)	**2,665**	**2,687**

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, 2017, the Company recognized an expense of $10.1 million related to PSU's (year ended December 31, 2016 – $12.0 million). As at December 31, 2017, the long term PSU liability is $6.8 million, recognized on the Balance Sheet as Long Term Other Liability and the current portion of $13.5 million is recognized on the Balance Sheet as Other Liability.

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

A summary of the PSU activity during the year ended December 31, 2017 and 2016:

	For the years ended December 31, 2017	2016
Number of PSUs, beginning of period ('000)	15,480	9,618
Granted	—	6,058
Settled	(1,876)	—
Forfeited	—	(196)
NUMBER OF PSUS, END OF PERIOD ('000)	**13,604**	**15,480**

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). On March 21, 2017, the Company issued 1,694,491 Share Units.

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 is required to settle these awards in common shares or common shares plus cash subject to the consent of the Company, they are accounted for as equity awards with corresponding compensation expense recognized. For the year ended December 31, 2017, the Company recognized an expense of $0.3 million.

16. INCOME/(LOSS) PER COMMON SHARE

The following table provides reconciliation between basic and diluted income/(loss) per common share:

	For the years ended December 31, 2017	2016
NET INCOME/(LOSS) ATTRIBUTABLE TO GOLDEN STAR SHAREHOLDERS	**$ 38,771**	**$ (39,647)**
Adjustments:		
Interest expense on 7% Convertible Debentures	3,657	—
Amortization of 7% Convertible Debentures discount	1,845	—
Gain on fair value of 7% Convertible Debentures embedded derivative	(2,095)	—
DILUTED INCOME/(LOSS)	**$ 42,178**	**$ (39,647)**
WEIGHTED AVERAGE NUMBER OF BASIC SHARES (MILLIONS)	**373.5**	**294.1**
Dilutive securities:		
Options	2.5	—
Deferred stock units	5.5	—
Performance and restricted share units	1.3	—
Convertible Debentures	58.2	—
WEIGHTED AVERAGE NUMBER OF DILUTED SHARES (MILLIONS)	**441.0**	**294.1**
INCOME/(LOSS) PER SHARE ATTRIBUTABLE TO GOLDEN STAR SHAREHOLDERS:		
Basic	$ 0.10	$ (0.13)
Diluted	$ 0.10	$ (0.13)

17. REVENUE

Revenue includes the following components:

	For the years ended December 31, 2017	2016
Revenue – Streaming Agreement		
Cash payment proceeds	$ 6,138	$ 4,385
Deferred revenue recognized	14,156	11,267
	20,294	15,652
Revenue – Spot sales	295,203	205,638
TOTAL REVENUE	**$ 315,497**	**$ 221,290**

During the year ended December 31, 2017, the Company capitalized $10.9 million of pre-commercial production revenue to construction in progress. These proceeds were capitalized as they relate to ounces sold from Prestea Underground which was in the development phase at December 31, 2017.

During the year ended December 31, 2016, the Company capitalized $13.6 million of pre-commercial production revenue to construction in progress. These proceeds were capitalized as they relate to ounces sold from Wassa Underground which was in the development phase at December 31, 2016.

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, 2017	2016
Contractors	$ 41,297	$ 32,869
Electricity	20,558	18,378
Fuel	11,137	12,647
Raw materials and consumables	51,996	44,016
Salaries and benefits	53,582	43,404
Transportation costs	2,116	1,949
General and administrative	7,695	6,216
Other	8,997	6,505
Mine operating expenses	$ 197,378	$ 165,984
Severance charges	9,232	(71)
Operating costs to metal inventory	167	(6,569)
Inventory net realizable value adjustment	2,410	1,190
Royalties	17,295	12,082
	$ 226,482	**$ 172,616**

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

19. FINANCE EXPENSE, NET

Finance income and expense includes the following components:

	For the years ended December 31,	
	2017	2016
Interest income	$ (72)	$ (26)
Interest expense, net of capitalized interest (see Note 7)	6,039	6,167
Net foreign exchange gain	(172)	(749)
Accretion of rehabilitation provision	1,245	1,368
Conversion make-whole payment	1,445	1,072
	$ 8,485	**$ 7,832**

20. OTHER INCOME

Other income includes the following components:

	For the years ended December 31,	
	2017	2016
Loss/(gain) on disposal of assets	672	(180)
Gain on reduction of asset retirement obligations	(4,945)	(198)
Gain on deferral of payables (see Note 12)	—	(2,682)
Other income	(73)	(289)
	$ (4,346)	**$ (3,349)**

21. RELATED PARTY TRANSACTIONS

There were no material related party transactions for the year ended December 31, 2017 and 2016 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,	
	2017	2016
Salaries, wages, and other benefits	$ 2,800	$ 2,337
Bonuses	787	1,311
Share-based compensation	7,487	9,736
	$ 11,074	**$ 13,384**

22. PRINCIPAL SUBSIDIARIES

The consolidated financial statements include the accounts of the Company and all of its subsidiaries at December 31, 2017. The principal operating subsidiaries are Wassa and Bogoso/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		Bogoso/Prestea	
	As of December 31,		As of December 31,	
	2017	2016	2017	2016
Non-controlling interest percentage	10%	10%	10%	10%
Current assets	$ 94,760	$ 90,627	$ 25,023	$ 13,957
Current liabilities	160,725	166,230	1,058,732	1,011,786
	(65,965)	(75,603)	(1,033,709)	(997,829)
Non-current assets	138,416	125,628	131,245	95,527
Non-current liabilities	25,016	19,513	76,373	81,155
	113,400	106,115	54,872	14,372
Net assets/(liabilities)	47,435	30,512	(978,837)	(983,457)
NON-CONTROLLING INTEREST	**$ (12,562)**	**$ (10,870)**	**$ 78,587**	**$ 79,083**

Summarized income statement

	Wassa		Bogoso/Prestea	
	For the years ended December 31,		For the years ended December 31,	
	2017	2016	2017	2016
Revenue	$ 156,908	$ 103,991	$ 138,295	$ 101,648
Net income/(loss) and comprehensive income/(loss)	16,924	(5,870)	4,619	(15,289)

Summarized cash flows

	Wassa		Bogoso/Prestea	
	For the years ended December 31,		For the years ended December 31,	
	2017	2016	2017	2016
Cash flows provided by/(used in) operating activities	27,486	16,757	3,505	(43,190)
Cash flows used in investing activities	(21,744)	(42,189)	(43,616)	(43,244)
Cash flows provided by financing activities	7,468	18,376	42,078	88,330

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

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
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	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
Income tax recovery	(12,944)	—	—	—	(12,944)
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
2016					
Revenue	$ 112,341	$ 108,949	$ —	$ —	$ 221,290
Mine operating expenses	92,938	73,046	—	—	165,984
Severance charges	113	(184)	—	—	(71)
Operating costs to metal inventory	(5,149)	(1,420)	—	—	(6,569)
Inventory net realizable value adjustment	1,190	—	—	—	1,190
Royalties	6,483	5,599	—	—	12,082
Cost of sales excluding depreciation and amortization	95,575	77,041	—	—	172,616
Depreciation and amortization	15,094	6,066	—	—	21,160
Mine operating margin	1,672	25,842	—	—	27,514
Net loss attributable to non-controlling interest	(587)	(1,529)	—	—	(2,116)
Net income/(loss) attributable to Golden Star	$ 603	$ 28,687	$ (6,096)	$ (62,841)	$ (39,647)
Capital expenditures	$ 41,805	$ 42,413	$ 88	$ 50	$ 84,356

Segmented assets

The following table presents the segmented assets:

	Wassa	Prestea	Other	Corporate	Total
December 31, 2017					
Total assets	$ 195,180	$ 158,715	$ 4,257	$ 2,237	$ 360,389
December 31, 2016					
Total assets	$ 175,738	$ 109,691	$ 8,786	$ 4,635	$ 298,850

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. Refer to Note 25 for further discussion on the Company's exposure to credit risk.

24. SUPPLEMENTAL CASH FLOW INFORMATION

During the year ended December 31, 2017 and 2016, there was no payment of income taxes. The Company paid $7.7 million of interest during the year ended December 31, 2017 (year ended December 31, 2016 – $7.2 million).

Changes in working capital for the year ended December 31, 2017 and 2016 are as follows:

	For the years ended December 31,	
	2017	2016
Decrease/(increase) in accounts receivable	$ 3,871	$ (2,185)
Increase in inventories	(7,684)	(9,369)
(Increase)/decrease in prepaids and other	(2,132)	1,059
(Decrease)/increase in accounts payable and accrued liabilities	(1,503)	1,656
Decrease in current portion of vendor agreement	—	(13,369)
TOTAL CHANGES IN WORKING CAPITAL	**$ (7,448)**	**$ (22,208)**

Other includes the following components:

	For the years ended December 31,	
	2017	2016
Loss/(gain) on disposal of assets	$ 672	$ (180)
Net realizable value adjustment on inventory	2,410	1,190
(Gain)/loss on fair value of warrants (see Note 5)	(86)	2,322
Gain on fair value of marketable securities	(64)	(69)
Gain on deferral of payables	—	(2,682)
Accretion of vendor agreement	731	2,008
Accretion of rehabilitation provisions (see Note 10)	1,245	1,368
Amortization of financing fees	378	884
Accretion of 7% Convertible Debentures discount	1,845	870
Gain on reduction of rehabilitation provisions	(4,945)	(198)
Conversion make-whole payment in common shares (see Note 13)	—	885
Loss/(gain) on conversion of 7% Convertible Debentures, net	165	(48)
Gain on warrant exercise	(193)	—
	$ 2,158	**$ 6,350**

NON-CASH CHANGES OF LIABILITIES ARISING FROM FINANCING ACTIVITIES

During the year ended December 31, 2017, the non-cash changes relating to the changes in liabilities arising from financing activities were $6.9 million relating to the conversion of the 7% Convertible Debentures, $2.2 million accretion of debt and $0.3 million fair value loss on the 5% Convertible Debentures.

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

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 we 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, 2017:

	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]	$ 108,121	$ —	$ —	$ —	$ 108,121
Debt[2]	15,864	90,977	834	—	107,675
Interest on long term debt	7,546	13,572	56	—	21,174
Purchase obligations	12,731	—	—	—	12,731
Rehabilitation provisions[3]	6,566	30,133	25,844	15,386	77,929
TOTAL	**$ 150,828**	**$ 134,682**	**$ 26,734**	**$ 15,386**	**$ 327,630**

1 Includes the current portion of the PSU liabilities of $13.5 million. The long term portion of the PSU liability is not included in this table as those PSU's have not yet vested. The long term PSU liability is recognized on the balance at $6.8 million.
2 Includes the 7% Convertible Debentures maturing in August 2021, the loan from RGI, 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, 2017, the Company has current assets of $86.9 million compared to current liabilities of $148.4 million. As at December 31, 2017, the Company had a cash balance of $27.8 million and in late January 2018, the Company drew down the remaining $15.0 million of Ecobank Loan III.

The Company expects to meet its short-term financial needs through its cash on hand, cash flow from operations, and further long term financing as required. These alternatives should provide the Company with the flexibility to fund any potential cash flow shortfall. There can be no assurance however that if additional financing is required it will be available at all or on terms acceptable to the Company.

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 Royal Gold loan has interest calculated 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. Based on our current $20.0 million outstanding balance on the Royal Gold loan, a $100 increase in the LBMA gold price would increase interest charges by $0.1 million on an annual basis. The Ecobank Loan III interest rate is three month LIBOR plus 8%, per annum. Based on our current $10.0 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. 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.

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 2017 and 2016, we had no currency related derivatives. At December 31, 2017 and December 31, 2016, we held $3.8 million and $1.8 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 $24.7 million and $23.5 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, 2017, 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,	
	2017	**2016**
Equity	$ (41,754)	$ (120,761)
Long-term debt	79,741	89,445
	$ 37,987	$ (31,316)
Cash and cash equivalents	27,787	21,764
	$ 65,774	$ (9,552)

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

GOLDEN STAR RESOURCES LTD.
150 KING STREET WEST
SUITE 1200
TORONTO, ONTARIO
CANADA M5H 1J9
T: +1 416 583 3800

GHANA REGIONAL OFFICE

PLOT NO. 16 HOUSE NO. A
NORTEY ABABIO STREET
ROMAN RIDGE, ACCRA
GHANA
P.O. BOX 16075, KIA
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:
CST TRUST COMPANY
ATTENTION: SHAREHOLDER SERVICES
P.O. BOX 700, STATION B
MONTREAL, QUEBEC
CANADA H3B 3K3

ONLINE INQUIRY

WWW.CANSTOCKTA.COM/EN/INVESTORSERVICES/INVESTORINQUIRYFORM

ONLINE ACCESS TO SHAREHOLDER DATA

WWW.CANSTOCKTA.COM/EN/INVESTORSERVICES

INQUIRIES@CANSTOCKTA.COM
TF +1 800 387 0825 (CANADA AND U.S. ONLY)
T +1 416 682 3860

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.

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