



GOLDEN STAR RESOURCES LTD.

Annual Information Form

For the Year Ended December 31, 2015

DATED: March 30, 2016

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ABOUT INFORMATION IN THIS ANNUAL INFORMATION FORM

Unless specifically stated otherwise in this Annual Information Form:

- all dollar amounts are in United States dollars;
- information is presented as of December 31, 2015; and
- references to “Golden Star”, the “Company”, “us”, “our” and “we”, or related or similar terms, refer to Golden Star Resources Ltd., its predecessors and consolidated subsidiaries, or any one or more of them, as the context requires.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING INFORMATION

This Annual Information Form contains “forward-looking information” within the meaning of applicable Canadian securities laws and “forward-looking statements” within the meaning of the United States Private Securities Litigation Reform Act of 1995, concerning the business, operations and financial performance and condition of Golden Star that are based on expectations, estimates and projections as of the date of this Annual Information Form. 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 thereof. Forward-looking information and statements include, but are not limited to information or statements with respect to: production and cash operating cost estimates; the receipt of environmental permits, including the approval of the environmental management plan (“EMP”) at Wassa (as defined below); the impact of rain on our operations; the impact of Wassa underground mining operations on Wassa open pit mining operations and the impact of Wassa open pit mining operations on Wassa underground mining operations; mining methods and estimated recovery at the Wassa Underground (as defined below); required investments in mine infrastructure; securing financing for operations on favourable terms; anticipated commencement dates of mining and production at Wassa Underground and Prestea Underground (as defined below); estimated costs and timing of the development of new deposits and sources of funding for such development; capital expenditures; government review of gold exploration areas; the mining laws, environmental laws and tax regime of Ghana; production capacity, rates and costs; currency exchange rate fluctuations; gold sales; mining operations and gold recovery rates; ore type, delivery and processing; use of waste rock; tailings processing; completion, use and capacity of TSF2 (as defined below); potential mine life; strip ratios; permitting and approvals; rehabilitation; estimates of mineral reserves and mineral resources; geological, environmental, community and engineering studies; environmental impact of operations; exploration efforts and activities; timing for commencing or completing drilling; updates to resource models; identification of acquisition and growth opportunities; timing for completing production at the oxide pits in Prestea South; relationships with local stakeholder communities; the transformation of Golden Star into a lower cost producer and the timing thereof; and our ability to meet our cash requirements.

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.

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. The following, in addition to the factors described under “Risk Factors”, are among the factors that could cause actual results, performance or achievement to differ materially from the forward-looking statements:

- significant increases or decreases in gold prices;
- losses or gains in mineral reserves and mineral resources from changes in operating costs and/or gold prices;
- failure of exploration efforts to expand mineral reserves and mineral resources around our existing mines;

- unexpected changes in business and economic conditions;
- inaccuracies in mineral reserves and mineral resources estimates;
- changes in interest and currency exchange rates;
- timing and amount of gold production;
- unanticipated variations in ore grade, tonnes mined and crushed or milled;
- unanticipated recovery or production problems;
- effects of illegal mining on our properties;
- ability to, and costs of, dewatering our underground mines;
- changes in mining and processing costs, including changes to costs of raw materials, supplies, services and personnel;
- changes in metallurgy and processing;
- availability of skilled personnel, contractors, materials, equipment, supplies, power and water;
- changes in project parameters or mine plans;
- costs and timing of development of mineral reserves;
- weather, including drought or excessive rainfall in West Africa;
- results of current and future exploration activities;
- acquisitions and joint venture relationships;
- political or economic instability, either globally or in the countries in which we operate;
- changes in regulatory frameworks or regulations affecting our operations, particularly in Ghana, where our principal producing properties are located;
- local and community impacts and issues;
- availability and cost of replacing mineral reserves;
- timing of receipt and maintenance of government approvals and permits;
- unanticipated transportation costs including shipping incidents and losses;
- accidents, labor disputes and other operational hazards;
- environmental (including reclamation) costs and risks;
- changes in tax laws;
- title issues;
- competitive factors, including competition for property acquisitions;
- possible litigation;
- availability of capital at reasonable rates or at all;
- changes in the Ghanaian Cedi and government policies regarding payments in foreign currency; and
- changes to Golden Star's mining licenses, including revocation.

Although Golden Star has attempted to identify important factors that could cause actual results, performances or achievements to differ materially from those described in forward-looking information and statements, there may be other factors that cause results, performances or 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 and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking information and statements. Forward-looking information and statements are made as of the date hereof and accordingly are subject to change after such date. Except as otherwise indicated by Golden Star, these statements do not reflect the potential impact of any non-recurring or other special items or of any dispositions, monetizations, mergers, acquisitions, other business combinations or other transactions that may be announced or that may occur after the date hereof. Forward-looking information and statements are provided for the purpose of providing information about management's current expectations and plans and allowing investors and others to get a better understanding of our operating environment. Golden Star does not undertake to update any forward-looking information and statements that are included in this Annual Information Form, except in accordance with and as required by applicable securities laws.

CAUTIONARY NOTE REGARDING MINERAL RESERVES AND MINERAL RESOURCES

Scientific and technical information contained in this Annual Information Form was reviewed and approved by Dr. Martin Raffield, Senior Vice- President, Project Development and Technical Services and Mitch Wasel, Vice-President, Exploration for Golden Star. Each of Dr. Raffield and Mr. Wasel is a "qualified person" ("QP") as defined by National Instrument 43-101 - Standards of Disclosure for Mineral Projects ("NI 43-101"). All mineral reserves and mineral resources have been prepared in accordance with the standards of the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") and in accordance with the requirements of NI 43-101. All mineral resources are reported inclusive of mineral reserves. Mineral resources which are not mineral do not have demonstrated economic viability. Information regarding the mineral properties mentioned in this Annual Information Form that are considered to be material mineral properties to the Company are set out under the heading "Description of the Properties - Golden Star Material Properties".

CAUTIONARY NOTE TO U.S. INVESTORS

This Annual Information Form 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 have not demonstrated economic value. 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 or indicated mineral resources will ever be upgraded into mineral reserves.

CURRENCY PRESENTATION AND EXCHANGE RATE INFORMATION

We report in United States dollars. Accordingly, all references to "\$", "U.S.\$" or "United States dollars" in this Annual Information Form refer to United States dollar values. References to "Cdn.\$" or "Canadian dollars" are used to indicate Canadian dollar values.

The noon rate of exchange on December 31, 2015 as reported by the Bank of Canada for the conversion of Canadian dollars into United States dollars was Cdn.\$1.00 equals U.S.\$0.7225 and for the conversion of United States dollars into Canadian dollars was U.S.\$1.00 equals Cdn.\$1.3840.

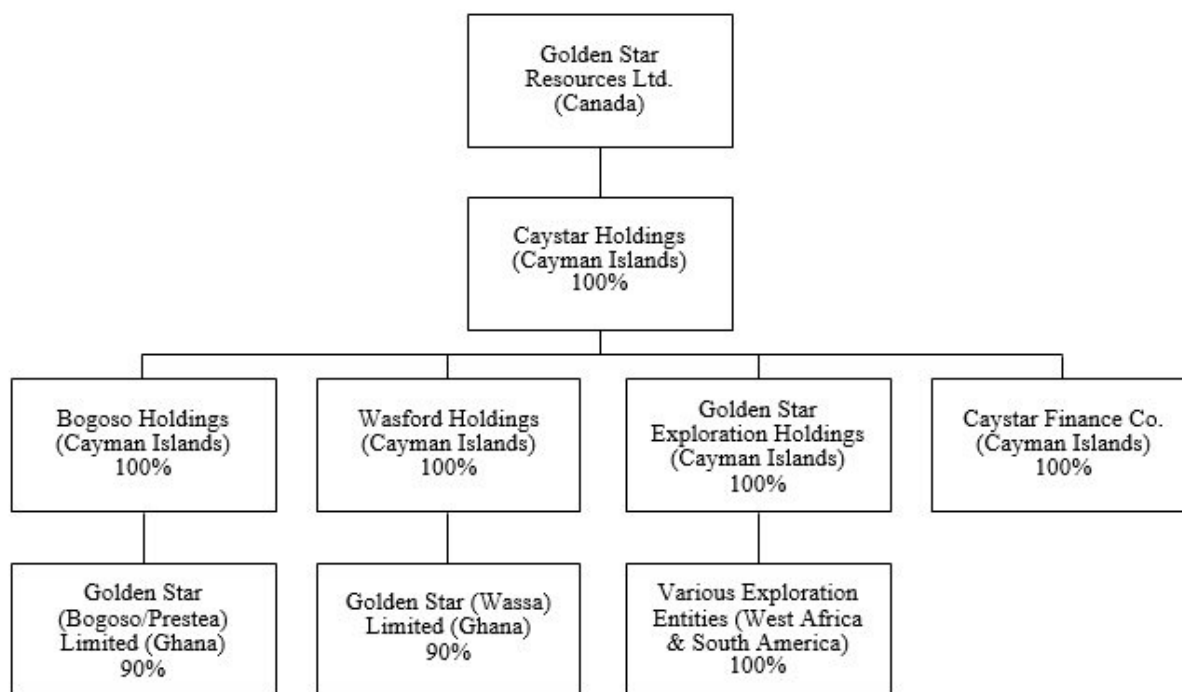
The following table sets forth, for each of the years indicated, the high, low and average noon spot rates for Cdn.\$1.00 dollars in terms of the U.S.\$1.00, as reported by the Bank of Canada.

	Year ended Dec. 31, 2015 (U.S. \$)	Year ended Dec. 31, 2014 (U.S. \$)
High.....	0.8501	0.9399
Low.....	0.7141	0.8568
Average.....	0.7793	0.9032

CORPORATE STRUCTURE

Golden Star Resources Ltd. was established under the *Canada Business Corporations Act* on May 15, 1992 as a result of the amalgamation of South American Goldfields Inc., a corporation incorporated under the federal laws of Canada, and Golden Star Resources Ltd., a corporation originally incorporated under the provisions of the *Business Corporations Act* (Alberta) on March 7, 1984 as Southern Star Resources Ltd. Concurrent with the amalgamation, the common shares of the Company were consolidated on a one-for-two basis. All references to “common shares” in this document mean the common shares of the Company after the amalgamation and the share consolidation. The fiscal year of the Company ends on December 31 of each year. Our principal and registered office is located at 150 King Street West, Suite 1200, Toronto, Ontario, M5H 1J9 Canada.

The following diagram depicts the organizational structure of Golden Star and its significant subsidiaries:



GENERAL DEVELOPMENT OF THE BUSINESS

OVERVIEW OF GOLDEN STAR

Golden Star indirectly holds a 90% equity interest in Golden Star (Bogoso/Prestea) Limited (“GSBPL”) and Golden Star (Wassa) Limited (“GSQL”) (collectively, the “Foreign Operating Entities”), which respectively own the Prestea South open pit mines (and satellite pits) (“Bogoso/Prestea”) and the Wassa open-pit and underground gold mines (and satellite pits) (“Wassa”), and related processing plants in Ghana. In addition, Golden Star has a 90% interest in the Prestea underground mine (“Prestea Underground”) in Prestea, Ghana through GSBPL. Golden Star also holds gold exploration interests elsewhere in Ghana, in other parts of West Africa and in Brazil, South America.

Golden Star maintains oversight over the operations of the Foreign Operating Entities by electing the directors and appointing the officers of the Foreign Operating Entities, as well as removing such directors and officers from time to time. Golden Star, as the parent entity, holds the majority of the funds of the consolidated corporate group in its North American bank accounts. Golden Star generally provides funds to the Foreign Operating Entities as needed through intercompany loans and receives funds from the Foreign Operating Entities as loan repayments. In addition, Golden Star provides management and other services to the Foreign Operating Entities and is reimbursed for expenses and services.

Our objective is to transform the Company into a low cost non-refractory gold mining company through the development of our projects. We are focused on reducing our operating costs and developing and placing into commercial production the Wassa underground mine (“Wassa Underground”) and Prestea Underground.

All our operations, with the exception of certain exploration projects, transact business in U.S. dollars and keep financial records in U.S. dollars. Our accounting records are kept in accordance with International Financial Reporting Standards (“IFRS”) as issued by the International Accounting Standards Board. Our fiscal year ends December 31. We are a reporting issuer or the equivalent in all provinces of Canada, in Ghana and in the United States, and file disclosure documents with securities regulatory authorities in Canada and Ghana and with the SEC.

THREE YEAR HISTORY

2013

On March 21, 2013, the Company filed a NI 43-101 compliant technical report for Wassa that culminated from the Company updating its proven and probable mineral reserves and mineral resources estimates as at December 31, 2012. The Company increased its mineral reserves at Wassa to 1.47 million ounces of contained gold at a gold price assumption of \$1,450 per ounce.

On June 11, 2013, the Company announced the results of a positive feasibility study, prepared by an independent party, SRK Consulting (UK) Ltd. (“SRK”), to develop its Prestea Underground West Reef project in Ghana (“West Reef”) using mechanized mining techniques were disclosed. The Prestea Underground feasibility study estimated the project would produce an average of 66,000 ounces of gold per annum over its six year production life, with steady-state production of approximately 80,000 ounces per annum for four of those years.

Effective as of the second quarter of 2013, the Company transitioned from preparing its financial statements in accordance with U.S. generally accepted accounting principles to preparing its financial statements in accordance with IFRS as issued by the International Accounting Standards Board.

On July 30, 2013, the Company closed a US\$50 million secured medium term loan facility (the “Ecobank I Loan”) with Ecobank Ghana Limited (“Ecobank”), who acted as sole lender and arranger to the Company.

2014

On February 10, 2014, the Company announced its proven and probable mineral reserves and mineral resources as of December 31, 2013. The Company's mineral reserves declined to 3.9 million ounces from mining depletion and a lower gold price assumption of \$1,300 per ounce ("oz"). The Company's measured and indicated mineral resources declined to 6.4 million ounces with a lower gold price assumption of \$1,400/oz.

On February 21, 2014 the Company announced the approval and adoption by the Company's board of directors (the "Board") of a new by-law relating to provision of advance notice to the Company in certain circumstances where nominations of persons for election to the Board are made by shareholders of the Company (the "Advance Notice By-law"). The purposes of the Advance Notice By-law are to (i) facilitate an orderly and efficient annual general or, where the need arises, special meeting, process, (ii) ensure that all shareholders receive adequate notice of the proposed director and sufficient information regarding all director nominees, and (iii) allow shareholders to register an informed vote on director nominees after having been afforded reasonable time for appropriate deliberation.

On July 23, 2014, the Company filed a final short form base shelf prospectus permitting it to offer and sell from time to time certain securities for up to an aggregate offering price of \$250 million in one or more transactions during the 25-month period that the short form base shelf prospectus, including any amendments thereto, remains effective.

On September 10, 2014, the Company announced that GSWL had entered into an agreement with Ecobank regarding an additional \$25 million secured medium term loan facility ("Ecobank II Loan"). The Ecobank II Loan is repayable within 60 months of the initial drawdown period, with interest payable monthly at three month LIBOR plus 11%. GSWL paid Ecobank a transaction fee of 2.5% of the Ecobank II Loan.

On September 15, 2014, the Company announced the results of the Wassa Underground preliminary economic assessment (the "Wassa Underground PEA"). Highlights of the Wassa Underground PEA, assuming a gold price of \$1,300/oz, included an internal rate of return of 129% and an estimated net present value at 5% of \$350 million. The Board decided to commence a feasibility study and construct a development decline in 2015, with production decisions dependent on obtaining the necessary permits and environmental approvals.

On November 13, 2014, the Company announced the results of its preliminary economic assessment with respect to the West Reef resources of Prestea Underground (the "Prestea West Reef PEA"). The Prestea West Reef PEA is based on the development of a non-mechanized mining operation at the West Reef. Highlights of the Prestea West Reef PEA, assuming a gold price of \$1,200/oz, include an internal rate of return of 72% and a net present value at 5% of \$121 million.

On December 4, 2014, the Company announced that in light of the power supply deficit in Ghana, the Company had agreed to support the Ghanaian Energy Commission's load shedding plan for December by reducing its net power consumption from the national grid.

2015

On March 26, 2015, the Company announced the results of its feasibility study on the development of an underground mining operation at its currently operating Wassa open pit mine in Ghana. The Wassa feasibility study estimates the project will produce an average of 163,000 ounces of gold per annum over its nine year production life with average cash operating costs of approximately \$780 per ounce.

On March 26, 2015, the Company announced its proven and probable mineral reserves and mineral resources as of December 31, 2014. The Company's mineral reserves were 1.9 million ounces at a gold price assumption of \$1,200/oz. The Company's measured and indicated mineral resources increased to 6.6 million ounces at a gold price assumption of \$1,400/oz.

On May 7, 2015, the Company announced that it secured a \$150 million in funding arrangements with Royal Gold, Inc. ("Royal Gold") and its wholly-owned subsidiary, RGLD Gold AG ("RGLD"). The \$150 million in funding arrangements consist of a \$130 million stream transaction ("Stream Transaction") and a \$20 million term loan with Royal Gold ("Term Loan"). Pursuant to the Stream Transaction, RGLD has agreed to pay Caystar Finance Co. ("Caystar Finance"), a wholly-owned subsidiary of Golden Star, a \$130 million advance payment in exchange for a gold stream on the Bogoso/Prestea, Prestea Underground and Wassa

mines. Under the Stream Transaction, Caystar Finance received an initial payment of \$40 million and the remaining \$90 million will be paid as spending on Wassa Underground and Prestea Underground progresses in line with an agreed payment schedule and the Company satisfies the conditions under the Stream Transaction.

In exchange for the advance payment, Caystar Finance agreed to sell to RGLD an initial gold stream of 8.5% of gold production from Bogoso/Prestea, Prestea Underground and Wassa at a cash purchase price of 20% of spot gold price until 185,000 ounces have been delivered; thereafter a reduced gold stream of 5% of gold production from the properties at a cash purchase price of 20% of spot gold price until a further 22,500 ounces have been delivered; and thereafter a tail gold stream of 3% of gold production from the properties at a cash purchase price of 30% of spot gold price.

After 207,500 ounces of gold have been delivered in full, Caystar Finance will have the option to repurchase 50% of the tail stream, thereby reducing the tail stream to 1.5% of gold production. If RGLD elects not to sell 50% of the tail stream back to Caystar Finance, it will be required to increase the tail stream by 50% for the same price that Caystar Finance offered.

RGLD's advance payment is secured against the Wassa, Bogoso/Prestea and Prestea Underground assets. RGLD's security interest in the Wassa, Bogoso/Prestea and Prestea Underground assets is to be discharged once the aggregate offsets under the Stream Transaction equals the advance payment made by RGLD. RGLD will subordinate its security in support of up to \$25 million in financing from the existing Ecobank II Loan.

Pursuant to the Term Loan, Royal Gold provided Caystar Finance with a \$20 million secured term loan for a four-year period at an interest rate linked to the price of gold. The interest rate is calculated as the product of the average spot gold price over the quarter and 62.50% divided by 10,000 and shall not exceed 11.5%. At a gold price of \$1,200 this equates to an interest rate of 7.5%.

The Term Loan was used to retire outstanding a portion of the indebtedness under the Ecobank I Loan. The remaining \$18 million owing under the Ecobank I Loan was repaid with a portion of the upfront proceeds from the Stream Transaction.

Interest payments on the Term Loan will be made quarterly in arrears and the remaining capital portion of the Term Loan is due on the fourth anniversary of the effective date of the Term Loan, subject to an agreed quarterly 25-50% excess cash flow sweep from the third quarter of 2017 onwards. There are no early prepayment penalties.

The Term Loan is secured against the Wassa, Bogoso/Prestea and Prestea Underground assets. Royal Gold's security interest in the Wassa, Bogoso/Prestea and Prestea Underground assets is to be discharged once the obligations under the Term Loan have been fully performed and paid in full. Royal Gold will subordinate its security in support of up to \$25 million in financing from the existing Ecobank II Loan.

As part of the consideration for the Term Loan, Golden Star issued to Royal Gold an aggregate of 5 million warrants exercisable to purchase 5 million common shares of Golden Star at \$0.27 per share for a period of four years from the date of the issuance of the warrants (which occurred at the time of funding under the Term Loan).

On June 29, 2015, the Company secured the necessary permits to develop open pit operations at its Prestea South mine. These surface operations began production in the third quarter of 2015, a year earlier than production from Prestea South was initially anticipated.

On July 3, 2015, the Company announced that due to frequent voltage fluctuations in the grid power supply over the previous three months, the ball mill at the Bogoso refractory plant sustained repeated significant damage culminating in a failure of the ball mill motor. The downtime at the plant impacted bacterial activity and gold recovery in the BIOX® circuit. The resulting impact of these throughput issues on the Company's cost structure compelled management to review its options at Bogoso/Prestea resulted in an early closure of refractory operations at the Bogoso refractory plant.

On December 31, 2015, the Company announced an amendment to the purchase and sale agreement entered into pursuant to the Stream Transaction. The amendment includes the addition of \$15 million to the stream advance payment and, at Caystar Finance's option, an additional \$5 million of stream financing, subject to certain conditions, including the procurement of a minimum of \$5 million of third party investment. The Streaming percentages were adjusted as follows to reflect the \$15 million additional advance payment: From January 1, 2016, Caystar Finance 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, Caystar Finance

will deliver 10.5% of production at a cash purchase price of 20% of spot gold until 240,000 ounces have been delivered. If Caystar Finance exercises its option on the additional \$5 million stream advance, the stream percentage from the earlier of January 1, 2018 or commercial production of the underground mines would be increased to 10.9% at a cash purchase price of 20% spot gold until 250,000 ounces have been delivered; Thereafter, 5.5% of production at a cash purchase price of 30% of spot gold will be delivered.

DESCRIPTION OF THE BUSINESS

GOLD SALES AND PRODUCTION

We produced 222,416 ounces of gold in 2015 and 260,788 ounces of gold in 2014. Currently, the majority of our gold production is shipped to a South African gold refinery which arranges for the sale of our gold. Our gold is sold in the form of doré bars that average approximately 90% gold by weight with the remaining portion being silver and other metals. The sales price for spot sales is typically based on the London P.M. fix on the day of shipment to the refinery. Until the end of 2015, the Company sold 8.5% of its total gold production to RGLD at 20% of the spot price pursuant to the Stream Transaction. During 2016, the Company will be selling 9.25% of its total gold production at 20% of the spot gold price to RGLD. (See “Three Year History” section for more information on the Streaming Transaction)

GOLD PRICE HISTORY

The price of gold is volatile and is affected by numerous factors all of which are beyond our control such as the sale or purchase of gold by various central banks and financial institutions, inflation, fluctuation in the relative values of the U.S. dollar and foreign currencies, changes in global and regional gold demand, and the political and economic conditions of major gold-producing countries throughout the world.

The following table presents the high, low and average London P.M. fixed prices for gold per ounce on the London Bullion Market over the past ten years.

Year	High	Low	Average	Average Price Received by Golden Star
2005	537	411	445	446
2006	725	525	603	607
2007	841	608	695	713
2008	1,011	713	872	870
2009	1,213	810	972	978
2010	1,421	1,058	1,225	1,219
2011	1,895	1,319	1,572	1,564
2012	1,792	1,540	1,670	1,662
2013	1,694	1,192	1,411	1,414
2014	1,385	1,142	1,266	1,261
2015	1,297	1,049	1,160	1,151

BUSINESS STRATEGY AND DEVELOPMENT

Our business and development strategy is focused primarily on the exploration, development and operation of gold properties in Ghana, including the development of the Wassa Underground and Prestea Underground projects. We also hold gold exploration properties in South America and other countries in West Africa.

We acquired the Bogoso property and began operating its mines and carbon-in-leach (“CIL”) processing plant in 1999. In 2001, we acquired the Prestea property located adjacent to the Bogoso property. In early 2002, GSBPL acquired a 45% interest in the Prestea Underground property, and since then GSBPL’s interest has increased to 90%.

In late 2002, we acquired Wassa and constructed the Wassa processing plant, which began commercial operation in April 2005. In July 2007, we completed construction and development of the Bogoso/Prestea refractory plant.

The refractory operation at Bogoso has been suspended and placed on care and maintenance in the third quarter of 2015. This is consistent with the Company's strategy of lowering its cash operating cost per ounce by focusing future mining and processing on non-refractory ore types which generally entail lower processing costs than refractory ores.

The Company's long-term objective is to continue the growth of its mining business through the appropriate development of lower operating cost projects. In the near term, the Company is focused on reducing its operating costs and developing the Wassa Underground and Prestea Underground projects.

Customers

Gold can be readily sold on numerous markets throughout the world and its market price can be readily ascertained at any time. Because there are a large number of gold purchasers, the Company is not economically dependent upon the sale of gold to any one customer.

Currently the majority of our gold production is shipped to a South African gold refinery. The refinery arranges for sale of the gold on the day it is shipped from the mine site 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 revenues.

Employees

As of December 31, 2015, Golden Star, including our majority-owned subsidiaries, had approximately 1,257 full time employees and approximately 322 contract employees, for a total of 1,579, a 16% decrease from the approximately 1,726 full time and 160 contract employees at the end of 2014.

Competition

Our competitive position depends upon our ability to successfully and economically acquire, explore, develop and operate new and existing gold properties. Factors that allow gold producers to remain competitive in the market over the long term include the quality and size of ore bodies, cost of operations, and the acquisition and retention of qualified employees. We compete with other mining companies in the acquisition, exploration, financing and development of new mineral properties. There is significant competition for a limited number of gold acquisition and exploration opportunities. We also compete with other mining companies for skilled mining engineers, mine and processing plant operators and mechanics, mining equipment, geologists, geophysicists and other experienced technical personnel.

Seasonality

All of our operations are in tropical climates that experience annual rainy seasons. Ore output from our surface mining operations can be reduced during wet periods. Our mine plans anticipate periods of high rain fall each year. Exploration activities are generally timed to avoid the rainy periods to ease transportation logistics associated with wet roads and swollen rivers.

MINING IN GHANA

Ghanaian Ownership and Special Rights

Ghana is situated on the west coast of Africa, approximately 600 kilometers ("km") north of the Equator on the Gulf of Guinea. Accra, the capital city of Ghana, is located almost exactly on the Prime Meridian. The former British colony changed its name from the Gold Coast to Ghana on achieving independence on March 6, 1957. Ghana is now a republic with a population of approximately 25 million people and a democratically elected government. English remains the official and commercial language.

The total land area of the country is approximately 238,000 square km and the topography is relatively flat. Ghana has a tropical climate with two rainy seasons and two dry seasons each year. The natural vegetation in the Western Region where Golden Star has its two operations is moist tropical forest, now found only in forest reserves, with a majority of the land converted to agricultural pursuits.

The Ghanaian legal system is generally modelled after and based on the British common law. The laws of Ghana include the Constitution, national laws passed by Parliament (or under authority granted by Parliament) and the common law of Ghana. The common law of Ghana includes customary rules which apply to particular communities in Ghana and which may or may not be consistent with the Constitution or a specific national law.

During the time in which we have carried out mining operations at Wassa and Bogoso/Prestea, Ghana has generally been a politically and economically stable country. Further, in our experience, Ghanaian customs do not materially impact the Company's operations in Ghana.

The Constitution of Ghana vests title in every mineral in its natural state to the Government of Ghana. The exercise of any mineral right in the form of reconnaissance, exploration or exploitation of any mineral in Ghana requires an appropriate licence or mineral right to be issued by the Government of Ghana acting through the Minister responsible for Lands and Natural Resources. The Minister responsible for Lands and Natural Resources administers, promotes and regulates Ghana's mineral wealth through the Minerals Commission, a governmental organization designed in accordance with the Minerals Commission Act 1993 (Act 450) and the Minerals and Mining Act of 2006 ("2006 Mining Act").

Pursuant to the 2006 Mining Act, a number of regulations were passed in 2012 to clarify and implement provisions of the 2006 Mining Act. These regulations relate to matters such as licensing, local content, technical issues, mineral right holding costs, mine support services and payment of compensation to persons impacted by mining operations.

A corporate body duly registered in Ghana can apply to the Minerals Commission for a renewable exploration license granting exclusive rights to explore for a particular mineral in a selected area for an initial period not exceeding three years. When exploration has successfully delineated a mineral reserve, an application may be made to the Minerals Commission for conversion to a mining lease, granting a company the right to produce a specific product from the concession area, normally for a period of 20 to 30 years or a lesser period that may be agreed upon with the applicant.

Once a licence or mineral right is issued to an entity by the Government of Ghana, Ghanaian mining laws prevent that licence or mineral right from being transferred, assigned or mortgaged by the licensee or mineral right holder without the prior written approval of the Government of Ghana. The Ghana Minerals Commission is also required to maintain a public register of all applications, grants, variations, transfers, suspensions and cancellations of such licences or mineral rights. Official searches may be conducted in the public register to obtain information regarding any licence or mineral right granted by the Government of Ghana.

The Company has obtained from the Government of Ghana: (i) two mining leases over Bogoso dated August 21, 1987 and August 16, 1988, each for a term of 30 years, subject to renewal; and (ii) three mining leases over Wassa, with the first lease dated September 17, 1992 for a term of 30 years, subject to renewal, and the two other leases dated December 31, 2012, for a term of 6 years, subject to renewal.

With respect to Wassa and Bogoso/Prestea, in addition to mining leases, the Company requires the following permits, licences or other regulatory approvals to be able to carry out business operations in Ghana: (i) environmental permits; (ii) approved environmental management plans and environmental certificates; (iii) reclamation bonds and approved reclamation plans; (iv) water usage permits; (v) business operating permits; (vi) licences to export, sell or dispose of minerals; (vii) permits/licences to retain a specified percentage of mineral export proceeds for purposes of debt servicing, dividend payment to foreign shareholders and acquisition of plant and machinery for the mining project; (viii) permits to operate foreign exchange retention accounts with a trustee bank; and (ix) immigration quotas to employ a specified number of non-Ghanaians to work on mining projects.

In connection with prior financing transactions, the Company has obtained title opinions in respect of its material mineral properties. In addition, the Company relies on its in-house tenement officers and the services of local experts to ensure that its operating subsidiaries in Ghana comply with applicable legal and regulatory requirements relating to the ownership and operation of its material mineral properties and assets in Ghana.

The 2006 Mining Act requires that any person who intends to acquire a controlling share of the equity of any mining company that has been granted a mineral right, must first give notice of its intent to the Government of Ghana and also obtain its consent prior to acquiring a controlling share.

Under the 2006 Mining Act, the Government of Ghana holds a 10% free-carried interest in all companies that hold mining leases. The 10% free-carried interest entitles the Government to a pro-rata share of future dividends. The Government has no obligation to contribute development capital or operating expenses. GSBPL and GSWL owe \$877.0 million and \$130.3 million, respectively, to Golden Star or its subsidiaries as of December 31, 2015, for past advances and interest on these advances, and these amounts would be repaid before payment of any dividends to the Government of Ghana.

Under the 2006 Mining Act, the Government of Ghana is empowered to acquire a special or golden share in any mining company. The special share would constitute a separate class of shares with such rights as the Government and the mining company might agree. Though deemed a preference share, it could be redeemed without any consideration or for a consideration determined by the mining company and payable to the holder on behalf of the Government of Ghana.

In the absence of such agreement, the special share would have the following rights:

- it would carry no voting rights but the holder would be entitled to receive notice of, and to attend and speak at, any general meeting of the members or any separate meeting of the holders of any class of shares;
- it could only be issued to, held by, or transferred to the Government of Ghana or a person acting on behalf of the Government;
- the written consent of the holder would be required for all amendments to the organizational documents of the company, the voluntary winding-up or liquidation of the company, or the disposal of any mining lease, or the whole or any material part of the assets of the company;
- it would not confer a right to participate in the dividends, profits or assets of the company or a return of assets in a winding up or liquidation of the company; and
- the holder of a special share may require the company to redeem the special share at any time for no consideration or for a consideration determined by the company.

GSBPL and GSWL have not issued, nor to date been requested to issue, a special share to the Government of Ghana. To Golden Star's knowledge, for as long as Golden Star has been operating in Ghana, no mining company has been requested to issue a special share.

The Government of Ghana has a pre-emptive right to purchase all gold and other minerals produced by mines in Ghana. The purchase price would be agreed by the Government of Ghana and the mining company, or the price established by any gold hedging arrangement between the company and any third party approved by the Government, or the publicly quoted market price prevailing for the minerals or products as delivered at the mine or plant where the right of pre-emption was exercised. The Government of Ghana has agreed to take no pre-emptive action pursuant to its right to purchase gold or other minerals so long as mining companies sell gold in accordance with certain procedures approved by the Bank of Ghana. The Company sells its gold in compliance with these procedures.

Ghanaian Royalty

Ghanaian law sets mineral royalties at a flat rate of 5% of mineral revenues. The Company incurred royalty expense of \$12.9 million and \$16.5 million in 2015 and 2014, respectively.

Ghanaian Corporate Tax

The corporate income tax rate for 2015 has been consistent with 2014, however in 2012 the Government increased the corporate income tax rate from 25% to 35% of taxable income for mining companies. Additionally, the use of capital allowances (tax depreciation) was changed in 2012 to be deductible at a flat rate of 20% over a five year period instead of an 80% deduction in the year that the capital spending was incurred and the majority of the remaining 20% deductible over the following two years.

A new Income Tax Act (“ITA”) was passed by Ghana’s parliament and assented to by the President on September 1, 2015, on which date the ITA entered into force. The implementation of the ITA commenced on January 1, 2016. The introduction of the ITA did not impact the Company’s tax expenses for the year ended December 31, 2015. The significant change in the ITA that may affect the Company is that tax depreciation claims on plant, equipment and mining properties will be included in losses which expire after five years rather than being included in a capital allowance balance that carries forward indefinitely.

During 2012, the Government enacted new tax regulations that would disallow expenditures from one mining area as a deduction from revenues in a separate mining area belonging to the same company in determining the company’s taxable income for tax purposes.

In 2012, the Government of Ghana announced its intent to introduce a 10% windfall profit tax on mining companies in 2013. As a result of the decline in spot gold prices during 2013 the Government of Ghana suspended its implementation of the proposed windfall profit tax. However if gold prices increase, the Government of Ghana may proceed with its plan to implement the proposed 10% windfall profit tax.

In 2011, the Government established a tax stability renegotiation team to review the existing tax stability agreements of some major mining companies operating in Ghana. While our mines do not have tax stability agreements, it is not clear at this time if the tax stability renegotiation team will review our Deeds of Warranty which specify certain tax agreements for our properties.

Environmental and Other Laws and Regulations

In the various jurisdictions where we operate, all phases of our exploration, project development, and operations are subject to environmental laws and regulations. These laws and regulations may define, among other things, air and water quality standards, waste management requirements, and closure and rehabilitation obligations. In general, environmental legislation is evolving to require stricter operating standards, more detailed socio-economic and environmental impact assessments for proposed projects, and a heightened degree of accountability for companies and their officers, directors, and employees for corporate social responsibility, and health and safety. Changes in environmental regulations, and the way they are interpreted by the regulatory authorities, could affect the way we operate, resulting in higher environmental and social operating costs that may affect the viability of our operations.

Environmental matters in Ghana, including those related to mining, fall primarily under the oversight of the Environmental Protection Agency (“EPA”), as well as the Minerals Commission and their Mines Inspectorate Division. The EPA has acts and regulations that govern, among other things, environmental and socioeconomic impact assessments and statements, environmental management plans, emissions to the environment, environmental auditing and review, and mine closure and reclamation, to which our operations are subject. Additional provisions governing mine environmental management are provided in the Minerals and Mining Act, 2006, and Minerals and Mining Regulations, 2012.

We note a continuing trend toward substantially increased environmental requirements and evolving corporate social responsibility expectations in Ghana, including the requirement for more permits, analysis, data gathering, community hearings, and negotiations than have been required in the past for both routine operational needs and for new development projects. The trend to longer lead times in obtaining environmental permits has reached a point where we are no longer able to accurately estimate permitting times for our planning purposes. The increases in permitting requirements could affect our environmental management activities including, but not limited to, new projects, tailings storage facilities, water management, and rehabilitation and closure planning implementation at our mines.

Our mining, processing, development, and mineral exploration activities are also subject to various laws governing prospecting, development, production, taxes, labor standards, occupational health and safety, land rights of local people and other matters. New rules and regulations may be enacted or existing rules and regulations may be modified and applied in a manner that could have an adverse effect on our financial position and results of operations.

We use hazardous chemicals in our gold recovery activities, and thus generate environmental contaminants that may adversely affect air, land and water quality. To mitigate these effects, we have established objectives to achieve regulatory requirements in our exploration, development, operation, closure, and post-closure activities so that our employees, the local environment, and our stakeholder communities are protected and that the next land use contributes to the sustainability of the local economy. In order to meet our objectives, we:

- educate our managers so that they are committed to creating a culture that makes social and environmental matters an integral part of short-term and long-term operations and performance management systems;
- work with our employees so they understand and accept environmental and social policies and procedures as a fundamental part of the business;
- signed and publicly stated our support for the UN Global Compact and completed our commitments that are provided in our communications on progress;
- establish, and continue to improve, operating standards and procedures that aim to meet or exceed requirements in relevant laws and regulations, the commitments made in our environmental impact statements, environmental and socioeconomic management plans, rehabilitation and closure plans, and any international protocols to which we are a signatory;
- incorporated environmental and human rights performance requirements into relevant contracts;
- provide training to employees and contractors in environmental matters;
- regularly prepare, review, update, and implement site-specific environmental management and rehabilitation and closure plans;
- work to progressively rehabilitate disturbed areas in conformance with site-specific environmental plans, in the context of the life of mine plans;
- consult with local communities and regulators to inform on our environmental management policies and procedures;
- regularly review our environmental performance;
- complete our resettlement projects in accordance with the International Finance Corporation Performance Standard 5 on land acquisition and involuntary resettlement; and
- publicly report our social, health, safety and environmental performance.

Rehabilitation activities were ongoing at both Wassa and Bogoso/Prestea during 2015 aiming to reduce some of the long-term liabilities. In 2014, GSBPL officially applied to obtain certificates of final completion for 19 backfilled pits, 5 pit lakes, and 12 reclaimed waste rock dumps, covering 112 hectares of land. Following the required statutory time frames, as defined by the reclamation security agreement, on January 21, 2015, these sites were deemed as achieving final completion. Our ongoing rehabilitation includes re-profiling waste dumps, capping reactive rock with compacted oxide material, topsoil spreading, and planting for both slope stabilization and long-term rehabilitation. Our consolidated reclamation expenditures totaled \$2.9 million, \$3.6 million and \$5.7 million in 2015, 2014 and 2013, respectively.

Corporate Social Responsibility

In keeping with our health, safety and well-being, environmental, and community relations and human rights policies, we strive at all times to conduct our business as a responsible corporate citizen. We believe our ongoing success in Ghana depends on our

continuing efforts to build good relations with our local stakeholder communities, and by reviewing broader stakeholder comments and addressing stakeholder concerns in our developing projects and ongoing operational activities. We believe our success as an employer, as a neighbor, and as an important part of the local and national economy is furthered by contributing to the diversification of the local economy with initiatives such as our Golden Star Oil Palm Plantation ("GSOPP") and by our support of community-driven improvement projects through our Golden Star Development Foundation (the "Foundation"). During 2015, the Foundation worked with our local Community Mine Consultation Committees to fund and sponsor several community-driven projects including public toilets, community centres, the delivery of medical supplies to clinics, and scholarships for local students.

In addition to the works of the Foundation, in 2015 Golden Star commenced a new partnership with Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), the Ghana Health Service ("GHS") and other private/public partners entitled Prevention is Better Than Cure. Under the partnership, Golden Star, with GHS, opened a new prevention focussed community clinic at Akyempim, and commenced extensive prevention focussed health screening for 761 people, and breast cancer screening for 4,049 women (in collaboration with the Golden Star Ladies Club and other sponsors). A key component of the breast cancer awareness initiative was instruction on breast self-examination for participants, and capacity building for GHS staff. In a parallel program, in support of the Sustainable Development Goals, Golden Star and Project C.U.R.E. continued to partner with the program, Helping Babies Breathe, which provided for 31 health care professionals in the Company's local areas to receive the training and equipment for neonatal resuscitation and the structure and opportunity to act as 'train-the-trainers' for ongoing phases of the program's roll out.

GSOPP continued to advance during 2015 and production from the 973 hectares of palm oil trees continues to increase, as did the incomes of the farmers, up 46% from 2014 as palms reach maturity. Golden Star also supports a skills training program for stakeholders aimed at local economic development. The Golden Star Skills Training and Employability Program ("GSSTEP") continued in 2015. Under the umbrella of GSSTEP, a Community Youth Apprenticeship Programme ("CYAP") was piloted at Wassa with participants graduating in 2015. The program offered 44 young local people from 15 catchment communities a one-year attachment within the Company (34 male and 10 female) in disciplines ranging from welding and drill rig maintenance, to fixing plant, heavy equipment, and pump operations. As a result of CYAP, 26 of the trainees are employed by the Company or our contractors.

In 2015, the Company continued to focus on increasing local procurement participation and local content at our sites. A pilot initiative in our Prestea South operational area, with the objective of local value retention, incorporated a targeted identification of local business development opportunities, and capacity building. This program has given rise to a local contracting collaboration ("LOCMS"), where 17 local companies supply approximately 57 haulage trucks, hire equipment and provide dust suppression and sanitation services to our operations, directly employing over 200 people from the local community.

The Company's commitment to the development of our stakeholder communities demonstrates our dedication to Ghana and to sharing the success of our operations with the local communities. As we continue to expand our community development programs, more local people and communities are integrated into our economic development and outreach programs.

DESCRIPTION OF THE PROPERTIES

MAP OF OPERATIONS AND PROPERTIES

The map below shows the locations of, among other mineral concessions, Bogoso, Prestea and Wassa, Golden Star's material properties are described in further detail below.



GOLDEN STAR MATERIAL PROPERTIES

The technical and scientific information in this Annual Information Form has been prepared under the supervision of, or reviewed by, Dr. Martin Raffield and Mr. Mitch Wasel, each of which is a QP under NI 43-101, and an officer of the Company.

Technical Reports

Unless otherwise stated, the information in this section in respect of Wassa, Bogoso/Prestea and Prestea Underground is based upon the following technical reports (collectively, the "Technical Reports"):

- *Wassa* - "NI 43-101 Technical Report on a Feasibility Study of the Wassa open pit mine and underground project in Ghana" effective date December 31, 2014 and filed on May 8, 2015 and prepared by SRK under the supervision of Mike Beare, Rod Redden, Neil Marshall, Chris Bray and Paul Riley of SRK and S. Mitchel Wasel, each of whom is a "qualified person" for the purposes of NI-43-101 (the "Wassa Underground Feasibility Study"); and
- *Prestea Underground* - "NI 43-101 Technical Report on a Feasibility Study of the Prestea underground gold project in Ghana" effective date November 3, 2015 and filed on January 22, 2016 and prepared by SRK under the supervision of Yao Hua (Benny) Zhang, Ken Reipas, Dr. John Willis, Dr. Tony Rex, Neil Marshall, Jane Joughin and Kris Czajewski of SRK and Brian Prosser of MVS and Dr. Martin P. Raffield and S. Mitchel Wasel, each of whom is a "qualified person" for the purposes of NI-43-101 (the "Prestea Underground Feasibility Study"); and
- *Bogoso/Prestea* - "NI 43-101 Technical Report on Resources and Reserves Golden Star Resources Ltd., Bogoso Prestea Gold Mine, Ghana" effective date December 31, 2013 and filed on March 14, 2014 and prepared by

SRK under the supervision of Richard Oldcorn, Chris Bray, Dr. John Arthur of SRK and Yan Bourassa, each of whom is a “qualified person” for the purposes of NI 43-101 (the "Bogoso/Prestea Technical Report").

The Technical Reports have been filed with the Canadian securities regulatory authorities pursuant to NI 43-101 and are available for review electronically on the System for Electronic Document Analysis and Retrieval (“SEDAR”) website at www.sedar.com.

Wassa Gold Mine

Project Description and Location

Golden Star, through its subsidiary GSWL, owns 90% of and operates the Wassa mine (the “Wassa Mine”), and the CIL processing plant in the Western Region of Ghana. Wassa includes several open-pit mines, a 2.7 million tonne (“Mt”) per annum processing plant, a tailings storage facility, equipment repair shops and ancillary facilities, including an administration building, a warehouse, a maintenance shop, an 8 megawatt stand-by power generating facility and an employee residential complex. The Company has been mining the Wassa open pits since commissioning the processing plant in 2005. Mining is currently at Wassa Main, which is within 500 m of the Plant. Exploration and development drilling below the Wassa Main has been ongoing since late 2011.

The Wassa complex is located near the village of Akyempim in the Wassa East District in the Western Region of Ghana. It is 62 km north of the district capital, Daboe, and 40 km east of Bogoso. It is located 80 km north of Cape Coast and 150 km west of the capital Accra. The main access to the site is from the east, via the Cape Coast to Twifo-Praso road, then over the combined road-rail bridge on the Pra River. There is also an access road from Takoradi in the south via Mpohor.

In 2015, SRK prepared a Feasibility Study regarding the economic viability of an underground mine beneath the Wassa pit. The Wassa feasibility study envisions an underground mine that will operate in conjunction with the existing open pit mine for approximately eight years.

Accessibility, Climate, Local Resources, Infrastructure and Physiography

Wassa Main is currently an operating open pit mining complex yielding 1.2 Mt of total material per month, with the required services, infrastructure, and community support already in place. The following are relevant to the assessment of resources and infrastructure:

- access is via the public road network that extends on to the mine complex;
- electricity and water are available;
- surface infrastructure in the area consists of a variety of government, municipal, and other roads with good overall access;
- processing will be carried out at the Wassa processing plant;
- tailings will be stored in the current tailing storage facility and the new tailing storage facility, approved in April 2013;
- waste rock generated at the site will be placed in extensions to existing waste dumps, near the Wassa open pit, with a new expansion that was permitted in 2015; and
- the extensive history of mining in Ghana provides opportunities to obtain skilled underground mine workers.

The climate in the project area is classified as wet semi-equatorial. The area experiences a bi-modal rainfall pattern, with peaks in March to July and September to October.

Analysis of available rainfall data, obtained from the Ateiku Meteorological survey (1944 to 2009) indicates that the average annual rainfall is 1,996 [$\pm$ 293] millimetres (“mm”). The wettest month of the year is generally June, with an average rainfall of about 241 [$\pm$ 85] mm, while January is the driest month of the year with an average rainfall of about 31 [$\pm$ 35] mm.

Under such climatic conditions surface mining operations can generally continue year round with short breaks during storms, most of which are short-lived and may be experienced throughout most of the year. Underground mining operations will not be directly affected by storms because storm water management infrastructure is in place at surface to divert runoff from mine accesses. Relative humidity is fairly constant throughout the year, ranging from 88% to 90%.

The project area is characterized by gently rolling hills with elevations up to 1,000 m and 1,100 m above sea level, incised by an extensive drainage network. The natural vegetation of the Wassa project area is an ecotone of the moist, semi-deciduous forest and wet rainforest zones. It has been degraded due to anthropogenic activities, giving way to broken forest, thickets of secondary forest, forb re-growth, swamps in the bottom of valleys, and cleared areas. Extensive subsistence farming occurs throughout the area, with plantain, cassava, pineapple, maize, and cocoyam being the principal crops. Some small scale cultivation of commercial crops is also carried out, with cocoa, teak, coconuts and oil palm being the most common. Forest patches are present on the steep slopes and in areas unsuitable for agriculture.

Environmental assessments carried out in the project area over the last two decades indicate that the biodiversity of the Wassa operational area is of low ecological significance and conservation status.

History

Wassa

The Wassa area has witnessed several periods of local small scale and colonial mining activity from the beginning of the 20th century and mining of quartz veins and gold bearing structures are evident from the numerous pits and adits covering the Wassa Lease area.

From 1988, the property was operated as a small scale mining operation with a gravity gold recovery circuit by a Ghanaian company, Wassa Mineral Resources Limited (“Wassa MRL”). In 1993, Wassa MRL was looking for a capital partner to further develop the mining lease, and invited the Irish companies Glencar Exploration Limited (“Glencar”) and Moydow Ltd. (“Moydow”) to visit the concession. Following this visit, Satellite Goldfields Limited (“SGL”) was formed between Wassa MRL, Glencar and Moydow. The mining lease, which is valid for a 30 year period expiring in 2022, was assigned by Wassa MRL to SGL.

Extensive satellite imagery and geophysical interpretations were carried out, which identified a strong gold target (>1 g/t Au). Exploration drilling commenced in February 1994, and by March 1997 a total of 58,709 m of reverse circulation (“RC”) and diamond drilling (“DD”) had been completed. In September 1997, consulting engineers Pincock, Allen and Holt completed a feasibility study, which determined a proven and probable mineral reserve of 17.6 Mt at 1.7 g/t Au, for a total of 932,000 contained ounces of gold. The reporting code, and key assumptions and parameters used to report this are not known and a QP has not done sufficient work to classify this historical estimate as a current mineral resource or mineral reserve. Hence, the Company is not treating the historical estimate as a current mineral resource or mineral reserve. Construction of Wassa Main was initiated in September 1998 after Glencar secured a \$42.5 million debt-financing package from a consortium of banks and institutions.

Wassa Main was originally developed as a 3 Mt open pit heap leach operation with a forecasted life of mine (“LoM”) gold production of approximately 100,000 ounces per annum. The first material from the pit was mined in October 1998. After approximately one year of production, it became evident that the predicted heap leach gold recovery of 85% could not be achieved, mainly due to the high clay content of the resource and poor solution management. After a number of attempts to improve the recovery, including increased agglomeration and doubling the leach solution application rate, it was concluded that the achievable gold recovery by heap leach was between 55% and 60%. The combined effect of the lower than planned gold recovery and lull in the gold price at the time resulted in Glencar not being able to service debt to its creditors. In early 2001, the creditors together with Glencar decided to sell the project to recover some of the accumulated debt. Mining ceased at the end of October 2001.

When the secured senior creditors exercised security over the project in 2001, the project was put up for sale. Upon completion of the acquisition of Wassa Mine by the Company in 2002, a further exploration program was undertaken. Both of these exploration programs formed part of a feasibility study that was completed in July 2003, which demonstrated the economic viability of

reopening and expanding the existing open pits, and processing the material through a conventional CIL circuit. Wassa has been operating as a conventional CIL milling operation since late April 2005.

Geological Setting

Wassa lies in the Birimian Province of the West African Precambrian Shield, within the southern portion of the Ashanti Greenstone Belt along the eastern margin of the belt within a volcano-sedimentary assemblage located at proximity to the Tarkwaian basin contact. The eastern contact between the Tarkwaian basin and the volcano-sedimentary rocks of the Sefwi group is faulted, but the fault is discrete as opposed to the western contact of the Ashanti belt where the Ashanti fault zone can be several hundred meters wide.

The lithologies of the Wassa assemblage are predominantly comprised of mafic to intermediate volcanic flows which are interbedded with minor horizons of volcanoclastics, clastic sediments such as wackes and magnetite rich sedimentary layers, most likely banded iron formations intercalated with mudstones. The magnetic signature of the Ashanti belt is relatively high in comparison to the surrounding Birimian sedimentary basins such as the Kumasi basin to the west of the Ashanti belt and the Akyem Basin to the East.

Rock assemblages from the southern area of the Ashanti belt were formed between a period spanning from 2,080 to 2,240 million years, with the Sefwi Group being the oldest rock package and the Tarkwa sediments being the youngest. The Ashanti belt is host to numerous gold occurrences, which are believed to be related to various stages of the Eoeburnean and Eburnean deformational event. Structural evidences and relationships observed in drill core and pits at Wassa would suggest the mineralization to be of Eoeburnean timing while other known deposits in the southern portion of the Ashanti belt, such as Bogoso/Prestea is considered to be of Eburnean age.

Exploration

In addition to the drilling (as described below), extensive exploration work has been conducted on and around the Wassa Mine. Previously, several airborne and ground geophysical surveys consisting of aero-magnetics and radiometrics were conducted. The geophysical surveys targeted geochemical anomalies which had previously been identified following multiple stream and soil geochemical sampling programs, which are described below for each concession.

Modern exploration programs at Wassa began in the early 1990s with satellite imagery and geophysical surveys which identified geophysical lineaments and anomalies over small scale and colonial mining areas. Stream and soil geochemistry sampling programs were conducted over the geophysical anomalies and identified two linear gold in-soil anomalies.

Exploration drilling commenced in February 1994, and by March 1997, a total of 58,709 m of RC and DD had been completed. In September 1997, consulting engineers Pincock, Allen and Holt completed a feasibility study. Only minimal exploration work was conducted by SGL between the completion of the feasibility study in 1997 and the 2001 bankruptcy.

In March 2002, Golden Star started an exploration program consisting mainly of pit mapping and drilling below the pits to test the continuity of mineralization at depth and with the aim to increase the quoted reserves and resources for the feasibility study.

Simultaneous with the resource drilling program, which targeted resource increases in the pit areas, Golden Star also undertook grass roots exploration along two previously identified mineralized trends. The 419 area was located south of the main pits and the South-Akyempim anomaly was a soil target which had never been previously drilled and was located west of the main pits. Deep auger campaigns were also undertaken in the Subri forest reserve which is located in the southern portion of Wassa.

In March and April 2004, a high resolution helicopter geophysical survey was carried out over the area comprising Wassa and surrounding prospecting and reconnaissance licenses. Five different survey types were conducted, namely: Electromagnetic, Resistivity, Magnetic, Radiometric and Magnetic Horizontal Gradient. The surveys consisted of 9,085 km of flown lines covering a total area of 450 square km. The geophysical surveys identified several anomalies with targets being prioritized on the basis of supporting geochemical and geological evidence.

The exploration program in 2005 continued to focus on drill testing anomalies identified by the airborne geophysical survey as well as infill drilling within the pit area. Drilling was carried out by a combination of DD, RC and reverse air blast (“RAB”) techniques. The following years were subject to more infill and resource definition drilling in the pit areas at Wassa until the 2011 exploration program was undertaken, at which point a shift toward drilling deep high grade targets below the pits became the main focus of the exploration programs.

Since the discovery of higher grade gold mineralization beneath the current Wassa pits in 2011, the exploration focus has shifted to delineating the controls and geometry of these zones. Drilling from 2011 to 2014 was focused on the extent of the gold mineralization beneath the pits in addition to the extent of which the projected plunge of the structures extended down to the south. In 2015, exploration conducted at Wassa was limited to infill drilling of the first planned stopes along the F Shoot and B Shoot trends. The 2015 drilling along the F Shoot trend was successful in growing the target area of the F Shoot trend significantly.

Mineralization

The Wassa mineralization is subdivided into a number of domains, namely; F Shoot, B Shoot, 242, South East, Starter, 419, Mid East and Dead Man’s Hill. Each of these represents discontinuous segments of the main mineralized system. The South Akyempim (“SAK”) deposits are located approximately 2 km to the southwest of the Wassa Main deposit on the northern end of a well-defined mineralized trend parallel to the Wassa Main trend. The mineralization is hosted in highly altered multi-phased greenstone-hosted quartz-carbonate veins interlaced with sedimentary pelitic units.

Mineralization within Wassa Main is structurally controlled and related to vein densities and sulphide contents. The mineralization generally consists of broadly tabular zones containing dismembered and folded ribbon-like bodies of narrow quartz vein material. Three vein generations have been distinguished on the basis of structural evidence, vein mineralogy, textures and associated gold grades.

Drilling

Drilling is carried out by a combination of DD, RC and RAB techniques. In general the RAB method is used at early stages for follow up to soil geochemical sampling and during production for testing contacts and mineralization extensions around the production areas and has a maximum drilling depth of around 30 m. The RC pre-collar diamond core tail drilling is used as the main method for obtaining suitable samples for mineral resource estimation and is carried out along drill lines spaced between 25 and 50 m apart along prospective structures and anomalies defined from soil geochemistry and RAB drilling results. RC drilling is typically extended to depths in the order of 100 to 125 m. The DD method is used to provide more detailed geological data and in those areas where more structural and geotechnical information is required. Generally the deeper intersections are also drilled using DD and, as a result, most section lines contain a combination of RC and DD drilling.

RC and DD drilling were carried out in double shifts and during every shift a Golden Star geologist was on site to align the drill rig and check the drill head dip and azimuth. Downhole surveying was conducted using a Single Shot Camera (“SSC”), for RC and DD holes at the bottom of holes exceeding 30 m depths and then taken progressively every 30 m up hole. The SSC recorded the dip and azimuth for each of the surveys on a film image, this image was validated and recorded by the Company geologists or was recorded by a Reflex survey instrument and captured in the database as well as being filed in the respective drillhole file folders on site.

Drilling depths at Wassa Main have generally been less than 250 m, but with the discovery of higher grades below Wassa Main in late 2011, hole depths have increased. In the first-half of 2014, two gyro survey instruments were utilized to resurvey several of the deeper holes. In total 153 holes, drilled during 2012 to 2014, were resurveyed. The gyro survey readings were conducted every 10 m both in and out of the hole and the values were then averaged. The 153 gyro surveyed holes were updated in the database and subsequently used for the resource estimates. The gyro surveys showed that there was some deviation in the holes below 250 m drilled depth. Deviations varied from location to location depending on drill orientation with a general tendency for the hole to steepen and swing to the north.

The drilling in 2015 was designed to infill the existing drill spacing within the first planned underground mining stopes along the F and B Shoot trends. The F Shoot area was sparsely drilled on 25 meter drill fence spacing which was closed with the 2015 drilling to a nominal 12.5 meter fence spacing. Although the section spacing along the F Shoot trend was tightened up to 12.5 meter spacing, the holes along the drill fence often exceeded 12.5 meters and these gaps will be closed using DD from the underground development, once established. The Wassa Underground development commenced in the middle of 2015 and it is expected that the first drilling chambers will be ready for the drill rigs in early 2016.

Sampling and Analysis

Sample preparation on site is restricted to core logging and splitting. The facilities consist of enclosed core and coarse reject storage facilities, covered logging sheds and areas for the splitting of RC and RAB samples. Sub-sampling of RC and RAB samples is carried out using a Jones Riffle splitter.

Sampling is typically carried out along the entire drilled length. For RC drilling, samples are collected every 1 m. Where DD holes have been pre-collared using RC, the individual 1 m RC samples are combined to produce 3 m composites which are then sent for analysis. Should any 3 m composite sample return a significant gold grade assay, the individual 1 m samples are then sent separately along with those from the immediately adjacent samples.

DD samples are collected, logged and split with a diamond rock saw in maximum 1 m lengths. The core is split into two equal parts along a median to the foliation plane using a core cutter. The sampling concept is to ensure a representative sample of the core is assayed. The remaining half core is retained in the core tray, for reference and additional sampling if required.

RC sampling protocols were established in 2003. The composite length of 3 m has been established to allow a minimum of at least two composites per drillhole intersection based on experience from exploration drilling and mining. The hanging wall and footwall intersections can generally be easily recognised in core from changes in pyrite content and style of quartz mineralization.

RAB samples are collected and bagged at 1 m intervals. As the samples are generally smaller in size than the RC samples, 3 m composites are prepared before using the PVC tube to collect a portion of the three individual 1 m samples. After positive results from the 3 m composites, the individual 1 m samples are split to approximately 2 to 3 kilograms and then submitted to the laboratory for analysis.

Security of Samples

Samples are collated at the mine site after splitting and then transported to the primary laboratory for the completion of the sample preparation and chemical analysis. Exploration samples are trucked by road to the laboratories in Tarkwa.

Sample security involves two aspects, namely maintaining the chain of custody of samples to prevent inadvertent contamination or mixing of samples, and rendering active tampering of samples as difficult as possible.

The transport of samples from site to the laboratory is by road using a truck dispatched from the laboratory. As the samples are loaded they are checked and the sample numbers are validated. The sample dispatch forms are signed off by the driver and a company representative. The sample dispatch dates are recorded in the sample database as well as the date when results are received.

No specific security safeguards have been put in place by the Company to maintain the chain of custody during the transfer of core between drilling sites, the core library, and sample preparation and assaying facilities. Core and rejects from the sample preparation are archived in secure facilities at the core yard and remain available for future testing.

Metallurgical Test Work

It is anticipated that up to one-third of the plant feed from the new underground mining operation at Wassa will comprise higher grade underground material, which is observed to contain higher levels of sulphide minerals than the general current open pit feed. To evaluate the performance of future potential feed material from underground mining, the Company took a series of samples

from the available half core remaining from ore resource drilling and compared the physical characteristics and metallurgical response from these to a reference sample of the current plant feed.

A subsequent metallurgical testwork programme was aimed to determine physical and metallurgical differences between the underground feed planned to be processed over the first nine years of the underground operation (based on the current indicated resource) and the current, and to some extent, historic feeds. As the plant was already treating what was reported and observed to be a reasonably similar feed material, testwork was undertaken on a series of 6 variability samples and 4 crushability samples, which were compared to a reference sample taken from the current open pit ore feed to the process plant.

The metallurgical testwork was undertaken by SGS in Cornwall, UK and the samples were delivered and logged in December 2014 with the initial phase of testwork completed and a draft report issued in early April 2015.

Mineral Resources and Mineral Reserve Estimates

See "Consolidated Mineral Resources and Mineral Reserve Estimations" section.

Mining Operations

The Wassa Underground Feasibility Study was published in the second quarter of 2015 and considers continued mining of the Wassa open pit in combination with underground mining of economic mineralization. Wassa Main has an estimated production mine life of eight years, and a combined open pit and underground production rate of 220,000 ore tonnes per month is expected to provide 1,470 koz over the life of the mine.

The mining method used at the Wassa open pit is a conventional excavator and truck method typical for this type and style of gold mineralization. Drilling and blasting of ore and waste is conducted over bench heights of 6 m. Oxide or weathered ore is generally only required to be lightly blasted and in some areas can be excavated as 'free dig'. Hydraulic excavators are used in conjunction with conventional blasting practice, to mine a 2.5 or 3.0 m flitch height. Broken rock is loaded to 95 t capacity off-highway haul trucks to a central stockpile or to the waste dump.

The development of the underground mine will be carried out in conjunction with the existing open pit mining operation. A twin decline system will be driven from within the north east wall of the current open pit down to the high-grade zone beneath the bottom of the final pit. A longhole open stoping method will be used to mine the ore body dipping at about 65 degree to the west. In the upper areas, a longitudinal mining layout is envisioned using waste rock fill while deeper down in the main part of the ore body, a transverse primary-secondary system using cemented rockfill will be utilized.

Gold recovery is achieved at Wassa through the use of conventional CIL technology. In the LOM plan, the annual feed rate is 2.7 Mtpa on 100% fresh ore.

There are two tailings facilities that will accommodate the anticipated tailings production, with the existing tailings storage facility referred to as "TSF1" and a new tailings storage facility in the design phase referred to as "TSF2".

TSF1 is located northwest of the plant site at the head of a southerly draining valley, immediately adjacent to and then over some pre-existing leach pads. The TSF1 facility has been raised in stages with the first stage being constructed in 2004. A supernatant pond currently exists in the north of the TSF1 area as beaches slope away from the main embankment. Deposition occurs around the entire periphery to control the position of the supernatant pond.

The construction and operation of TSF2 was permitted by the EPA in 2013. The environmental permit has issued included the caveat that the facility be lined. To make way for the TSF2 construction, the resettlement of the Togbekrom and surrounding hamlets was required. This has been completed in accordance with the approved resettlement action plan.

To satisfy the requirements of the Environmental Assessment Regulations, 1999 (LI 1652), an EMP for the years covering 2015 to 2017 was submitted to the EPA in October 2013. Comments were received from the EPA in March 2014 and the revised EMP

was submitted in June 2014. GSWL was invoiced and subsequently paid the permit fee for certification in January 2015, an indication of overall acceptance of the EMP. The EPA issued further comments on the finalized EMP to align the standard of EMPs within Ghana. GSWL submitted a Final EMP addressing these standardization aspects in August 2015. A recent audit by the EPA noted that the mine was in compliance for this aspect.

Capital Costs

Capital costs have been derived principally from planned equipment requirements and estimates for major infrastructure. The mining equipment capital includes purchase of start-up and replacement fleet over the life of mine. Costs of major capital items are sourced from original equipment manufacturers (“OEM”) and for minor items both supplier quotes and SRK in-house cost database have been used.

Total capital has been estimated at \$189.4 million. Project capital for the Wassa Underground project is estimated at \$72.5 million over the life of the mine. The process plant requires \$62.8 million in project and sustaining capital for the mine life. The \$28.6 million of planned open pit capital costs include the residual disposal value of the mining fleet in 2024 and mainly comprise the cost of replacing the mining fleet. Closure costs are estimated at \$19 million.

Wassa Underground is expected to incur operating costs during the development phase of the mine which are expected to be capitalized and included in the Wassa Underground project capital.

Operating Costs

Open pit mining, processing and general and administrative (“G&A”) costs are based on current site operating actuals and forecasts. The unit costs for underground operating cost drivers are based on Ghanaian costs for consumables and labour. The periodic operating costs have been calculated by combining the unit costs with the development and production schedules.

Some unit cost drivers, like equipment maintenance costs, have been derived from SRK’s database of actual costs from operations and modified where appropriate to the conditions anticipated for Wassa Underground. Labour costs have been derived from information supplied by the Company. Fuel costs are based on diesel cost of \$1.25/litre.

The table below provides the estimated operating cost breakdown of Wassa over the life of the mine. The capitalised operating costs are included in all of the figures presented.

Operating Cost	LoM Cost (\$M)	LoM Cost
Underground		(\$/t-Underground ore tonne mined)
Direct Cost	18.97	3.49
LHD	14.36	2.64
Trucking	15.88	2.92
Jumbo drilling	6.86	1.26
Longhole Drill	10.32	1.90
Auxiliary Fleet	14.02	2.58
Infill Drilling	4.89	0.90
Power	16.79	3.09
Labour	80.03	14.72
Backfill Plant Operating (Directs)	41.15	7.57
Underground Miscellaneous	10.68	1.96
Contingency	23.40	4.30
Total Underground Cost including contingency	257.35	47.33
Open Pit		(\$/t-Open Pit ore tonne mined)
Open Pit Mining	327.17	18.35
Stockpile Re-handling	4.68	0.26
Total Open Pit Cost	331.85	18.61
Plant and General		(\$/t-processed)
Processing	423.96	17.60
General and Administration	140.75	5.84
Total Plant and General	564.71	23.44
Total	1153.91	47.90
Capitalized Operating Cost	(15.14)	(0.63)
Grand Total	1138.77	47.28

Exploration and Development

The main focus of Exploration at Wassa from 2012 to 2015 has been the delineation and expansion of the high grade mineralized zone below the Wassa pit. In the first quarter of 2015 the Company conducted infill drilling along the F Shoot trend utilizing four drill rigs. In August 2015 an updated resource model was completed which is the basis for the 2015 resource and reserve statements. An environmental and socioeconomic impact assessment for the Wassa expansion project is underway in accordance with the laws of Ghana.

Prestea Underground Project

Project Description and Location

The Prestea concession is located in the Western Region of Ghana approximately 200 km from the capital Accra and 50 km from the coast of the Gulf of Guinea. Bogoso and Prestea comprise a collection of adjoining mining concessions that together cover a 40 km section of the Ashanti gold district in the central eastern section of the Western Region of Ghana, with the processing facilities situated approximately 10 km south of the town of Bogoso.

Prestea Underground is an underground gold mine located 15km south of the Bogoso/Prestea mine and adjacent to the town of Prestea. The mine has been on care and maintenance since its acquisition by Golden Star in 2002. In September 2015, rehabilitation work commenced for the development of the West Reef Project. The mine consists of two usable access shafts and extensive underground workings and support facilities. Access to the mine site is via an unpaved road from Tarkwa.

The Prestea Underground consists of an underground mine with a production mine life of five years and a modified Bogoso/Prestea processing plant. The Prestea Underground mineral resource is developed on a steeply dipping, narrow vein structure between 17 level (“L”) and 24L, accessible through the Prestea Central Shaft.

Prestea Underground was mined from the 1870’s until 2002, when mining ceased following an extended period of low gold prices in the late 1990s and early 2000s. The Prestea mining area has produced approximately nine million ounces of gold, the second highest production of any mine in Ghana. The underground workings are extensive, reaching depths of approximately 1,450 m and extending along a strike length of nine km. Underground workings can currently be accessed via two surface shafts, one near the town of Prestea (Central Shaft) and a second approximately four km to the southwest at Bondaye.

Accessibility, Climate, Local Resources, Infrastructure and Physiography

Local population centers are located at Bogoso town in the northern half of the Bogoso concession, and Prestea town, which is about in the center of the Prestea concession. Bogoso is on the main road from Tarkwa to Kumasi and there is a paved road between Bogoso and Prestea. The town of Prestea is located adjacent to the backfilled workings of the Plant North open pit. The central shaft complex and offices for Prestea Underground are within the town limits.

Access to the property by road is a six hour drive from Accra via the port city of Takoradi. The road is paved from Accra to Tarkwa with the last hour to Prestea being unpaved road. There are airports at Kumasi and Takoradi, which provide daily services to the international airport at Accra. Kumasi is situated approximately a three and a half hour drive from Prestea Underground. Road surfaces in the area vary from poor (on the section between Bogoso and Tarkwa) to good (Accra to Takoradi).

The topography of the area within which the GSBPL assets are located generally slopes in a northern direction towards the Ankobra River. It can be described as gently rolling, punctuated by a number of low hills and rises. A series of northeast-southwest trending sub-parallel ridges, about 2 km wide, dominates the eastern part of the project area. The mineralization tends to occur on the western slopes of the ridges with the intervening valleys occupied by farming communities and seasonal streams.

The GSBPL assets are within the rainforest bioclimatic zone, but there is no primary forest left in the area of the assets as a result of logging, farming, historical mining, and unauthorized small scale mining activity. The vegetation types on the Prestea concession include: secondary forest, secondary thicket, farm re-growth, farmland, and marshes or freshwater swamp forest. Patches of secondary forest are only present in a few areas not accessible for farming. Biodiversity studies have not identified endangered or threatened species on the Prestea concession.

The Prestea Underground project is not expected to add to existing impacts on biodiversity and ecology. No secondary forest will be disturbed for the Prestea Underground project and the project infrastructure will be in brownfields areas. The river ecosystems downstream of the project area have been heavily degraded by anthropological influences, including over a century of historic mining operations, discharges of untreated sewage, and unauthorized small-scale mining operations. The climate is south western equatorial climate type with daily temperatures varying mostly between 20°C to 35°C. There are two rainy seasons, one from April to June and then a minor rainy season in October and November. This area has significant rainfall most months, with a short dry season in December and January.

Annual rainfall in the area averaged 1,641 millimetres (mm) between 2002 and 2014. The range in annual rainfall during this period was from minimum annual rainfall 1,197 mm to maximum annual rainfall 2,195 mm.

As Prestea Underground is an underground mine, the climate has no major impact on the operations. In the tropical environment, work on the surface can continue year round, with short breaks during the mostly short-lived storm events.

Prestea Underground is in an area where mining has occurred more or less continuously since the late 1800s. Therefore, a significant portion of the required services, infrastructure and community support are already in place so local skilled underground workers are available. The following services and infrastructure are relevant to the assessment of the Prestea Underground project:

- surface access to Prestea Underground is via the public road network that extends to the Prestea Underground;
- electricity and water are available - electricity from the Ghanaian national grid is currently used to power the existing underground dewatering pumps;
- surface infrastructure in the area consists of a variety of government, municipal, and other roads with good overall access;
- processing of the ore will be carried out at the existing Bogoso/Prestea non-refractory processing facility, 16 km by road from Prestea;
- tailings storage will be in the existing Bogoso/Prestea TSF1 (the “Bogoso/Prestea TSF”);
- any waste rock generated at the site will be disposed in an engineered storage facility close to the new hoisting shaft site; and
- the extensive history of mining in the local area and also in Ghana provides opportunities to obtain skilled underground workers. Any additional training requirements can be sourced within Ghana.

History

Mining in the Prestea area dates back several centuries. The first direct involvement by Europeans in the area occurred in the 1880's with the establishment of the Gio Apanto Gold Mining Company and the Essaman Gold Mining Company.

These companies became the Apanto Mines and Prestea Mines Limited in 1900. The companies merged to become Ariston Gold Mines (“Ariston”) in 1927. Companies associated with Ariston carried out exploration and some mining to the north east of Prestea at Quaw Badoo and Brumasi. Ariston also prospected concessions immediately to the south west of Prestea at Anfargah.

Recorded production for the Prestea mine began in 1912 under the British company Ariston Mining, which operated the mine until the 1950's. The Company was responsible for the majority of the underground development including shaft sinking, ventilation and level development. The mine was nationalized in the late 1950's, following the independence of Ghana, when all mining operations in the Prestea region were consolidated under the management of Prestea Gold Limited, a subsidiary of State Gold Mining Company (“SGMC”).

In the early 1990's, the mining industry reopened to foreign companies and a joint venture agreement was formed between JCI Limited (“JCI”), Prestea Gold Ltd., SGMC and the government of Ghana. In 1994, JCI took over the Prestea Underground operation and carried out exploration and feasibility studies in the area immediately north and south of the mine infrastructure. JCI withdrew from the joint venture in 1998 due to low gold price and aging infrastructure. A consortium supported by the Ghana Mine Workers Union was then founded to operate the mine under the name “PGR”. The mine operated for three years until its closure in early 2002 due to depressed gold prices and financial difficulties. Golden Star acquired an initial interest in the mine in 2002 (followed by the subsequent acquisition of an additional interest in the mine) which has remained on care and maintenance since that time to 2014 when the refurbishment started.

Geological Setting

The Prestea concession lies within the southern portion of the Ashanti Greenstone Belt along the western margin of the belt. Rock assemblages from the southern area of the Ashanti Belt were formed between a period spanning from 2,080 to 2,240 Ma, with the Sefwi Group being the oldest rock package and the Tarkwa sediments being the youngest. The Ashanti Belt is host to numerous gold occurrences, which are believed to be related to various stages of the Eoeburnean and Eburnean deformational events.

The geology of the Prestea concession is divided into three main litho-structural assemblages, which are fault bounded and steeply dipping to the west. From the eastern footwall to the western hanging wall, these packages are represented by the Tarkwaian litho-structural assemblage, the tectonic breccia assemblage, composed of sheared graphitic sediments and volcanic flows and the last

assemblage is composed of undeformed sedimentary units of the Kumasi Basin, which is located to the west of the Ashanti fault zone.

At Prestea, the principal structure is a mineralized fault-filled quartz vein known as the “Main Reef” which is relatively continuous and has been modelled and worked over a strike length of approximately 6 km and to a depth of approximately 1,450 m below surface (35 L). Several subsidiary structures such as the Prestea Underground and East Reef have developed respectively in the immediate hanging wall and footwall of the Main Reef structure. The Prestea Underground is a second order structure where dilational zones occurs some 200 m into the hanging wall of the Main Reef structure and, at present, is known to occur over a strike length of 800 m and has currently been defined by underground drilling between 550 m to 1,150 m below topography as far as the 30 L. The major thrust faults such as the Main Reef fault and the Prestea Underground fault, as well as the presence of an associated penetrative foliation, are the main syn-D3 structural features.

Exploration

Data validation and selected evaluation drilling from underground have helped to increase the confidence in the morphology and orientation of the mineralization at Prestea. Crosscut samples and Barnex JCI era drilling data (surface drilling) accounts for some 92% of the available data. The remainder is a mixture of RC and DD boreholes drilled by Golden Star and underground channels and diamond boreholes acquired by the Company as part of their purchase of the Prestea mining rights.

Sampling covers a depth extent of 1,400 m from surface. The Golden Star data is largely concentrated in the area underlying the Plant North open pit, Central shaft and the northern extent of the Beta boundary.

The previous mineral resource estimate for the Prestea Underground orebodies was based on a combination of Golden Star underground sampling from some 278 boreholes, 115 rock saw samples and channel sampling from two crosscuts. The bulk of the drilling was conducted from 2003 and throughout 2006. The Company drilled an additional 14 underground boreholes into the Prestea Underground orebody in 2012 and 2013 for geotechnical and metallurgical testing purposes. This drilling has been carried out using fan drilling from cubbies on the most accessible levels but predominantly from the 12L, 17L and 24L.

In 2015, the 14 underground drillholes drilled in 2012 and 2013 were combined with other holes not included in the 2008 resource updates to update the resource models. The inclusion of the additional drilling enabled previously inferred classified material to be reclassified and included in reserves as indicated for inclusion in reserves. These results were included in the year end resource and reserve statements.

Subsequent exploration of the Prestea Underground target has been planned and managed by Golden Star and was initiated in 2003. The 17L Prestea Underground drive exposes the vein structure as being a distance of approximately 450 m. Along the Prestea Underground drive the backs have been sampled approximately every 5 m with a 2 x 2 inch channel sample cut using an air driven diamond blade rock saw. The channel samples were cut orthogonal to the main structure. The channel samples and the reef drive have been surveyed and tied into the mine grid at surface. A total of 81 channel samples were collected on the 17 L reef drive averaging 2.4 m width with composite grades ranging from 0.1 to 127 g/t gold.

The results from the 17 L channel sampling show that the mineralization along the reef is hosted in several higher grade pods. These high grade pods were drill tested at depth from cubbies on the 17 L and 24 L, drilled from the footwall to the hanging wall obliquely to the moderately west dipping foliation and reef.

Mineralization

The Prestea deposit can be classified as a lode gold deposit or an orogenic mesothermal gold deposit, which are the most common gold systems found within Achaean and Paleoproterozoic terrains. In the West African shield, orogenic gold deposits are typically underlain by geology considered to be of Birimian age and are generally hosted by volcano-sedimentary sequences.

The Ashanti Greenstone Belt is considered prospective for orogenic mesothermal gold deposits and hosts numerous lode gold deposits and paleoplacer deposits. Several major gold deposits are found within the Ashanti Greenstone Belt which can be classified into six different deposit types:

1. Sedimentary-hosted shear zones
2. Fault-fill quartz veins
3. Paleoplacer
4. Intrusive-hosted
5. Late thrust fault quartz veins
6. Folded veins system

At Prestea, gold mineralization exhibits a strong relationship with major shear zones, fault zones and second order structures. Two types of mineralization have been identified at Prestea, which are both characterized as mesothermal gold mineralization:

- fault-fill quartz veins along fault zones and second order structures, which typically contain non-refractory, free milling gold; and
- disseminated mineralization associated with brecciated zones of iron-rich footwall volcanic lenses, which are characterized by finely disseminated arsenopyrite rich and silicified replacement zone. This type of mineralization is generally lower grade, refractory and locally termed sulphide material.

The weathering profile at Prestea is deep and typically results in extensive surface oxidation of bedrock, to a depth of up to 100 m. Generally, the weathering profile typically consists of a lateritic surface, a saprolitic horizon, a transitional zone and a deeper primary sulphide zone.

Drilling

The samples used for the current mineral resource estimates at Prestea are based on a combination of surface DD drilling and underground core drilling. Fan drilling is carried out from drill cubbies in order to reduce the movement of the drill rigs. In addition to the drilling, rock saw channels have been cut on a number of levels to provide channel samples across the orebody and to investigate the grade distribution in the immediate contact zones adjacent to the orebody in order to better define the potential dilution. Drilling for the Main Reef orebody has been carried out at roughly 80-100 m spacing along strike from surface. The underground drilling has been largely concentrated on the Prestea Underground orebody and has consisted of fan drilling from individual cubbies with up to 21 boreholes drilled from a single collar location. Underground collar locations are spaced approximately 80 m apart along strike on the 17, 24 and 30 Levels.

Data is currently available from some 675 surface and underground boreholes in the Prestea area broken down as follows:

- DD surface = 274 boreholes; 29,700 m;
- RC surface = 137 boreholes; 14,000 m; and
- DD underground = 278 boreholes; 46,500 m.

Drilling for the Prestea Underground deposit was conducted from underground drill stations, predominantly from 17L and 24L. The drilling was conducted by Golden Star and no historical data was used in the mineral resource estimates. On 17 L, 10 drill stations were established along the Main Reef footwall access where fan drilling was conducted dominantly horizontally and down dip. The up dip portion of the Prestea Underground remains to be tested between 12L and 17L and remains one of the priority drill targets.

The underground drilling of the Prestea Underground target was conducted in several campaigns from 2004 to 2006 with a total of 128 holes and 28,790 m being completed during this time. All drilling was conducted with underground diamond drill core rigs. All borehole collars were surveyed using the underground survey control brought down from surface using the mine grid. The boreholes were also surveyed nominally every 25 to 30 m down hole using a Reflex single shot survey instrument.

Core recovery through the mineralized zone was optimized by using chrome core barrels, viscous muds and short drilling runs but in some boreholes some of the graphitic fissures (graphic rich fault gouge) were washed away. Areas of lost core were not sampled and in the database are identified as insufficient sample and were given a zero grade. Generally core recovery was good through the zone.

Sampling and Analysis

Sampling from RC drilling is carried out using a standard single cyclone with samples collected at 1 m intervals through the expected mineralized zone. In zones of waste rock the sample interval is occasionally increased to a 3 m composite. However all samples are assayed and if a 3 m sample returns a significant grade value the original 1 m samples will be assayed individually. All samples are riffled and bagged at the drill site and returned to the Bogoso/Prestea mine for reduction and sample preparation.

Core from surface DD is collected using HQ size core barrels (63.5 mm). The core is logged and sawn in half at the Bogoso/Prestea mine site and 1 m samples are prepared through the prospective mineralized zone. However, geological contacts are taken into account and samples will therefore vary slightly in length. In waste zones samples are collected at 1 m nominal intervals where alteration, sulphidation or quartz veins are observed. The orebodies dip steeply to the west and depending if the drilling is from surface or underground, it is angled to try and intersect the mineralized zone orthogonally. However, from underground drilling cubbies this is often not possible. Recoveries and solid core recovery values are recorded in the database and 80% of the diamond drill core samples have a recovery greater than 90%.

Samples used for the Prestea Underground mineral resource estimations were of two types, rock sawn channel samples on 17 L and 24 L reef drives.

Channel samples were collected using a double diamond blade Cheetah air driven rock saw. This saw produced a channel sample roughly 50 mm deep by 50 mm wide. Sample collection and dispatch to the laboratory was supervised by a geologist who ensured the samples were taken correctly, labelled and transported to the surface.

Core samples generated from the underground drilling were processed at either the core logging facilities at the Prestea Central shaft or at the main core storage facility near the Bogoso/Prestea processing plant. Core boxes with lids were delivered to the logging facilities at the end of every shift by the drillers. The core logging process involved initial cleaning of the core and checking of the metre blocks and mark ups on the individual boxes. If there were any discrepancies, they were addressed with the driller who was responsible for the core. All core was photographed prior to being logged and sampled. Two teams logged the core at surface one being responsible for recording geotechnical information and overall core recovery between drilling runs. Following the geotechnical drilling the core was logged by the geologist who paid particular attention to structure, lithology, alteration and mineralization. All of the core was orientated with a spear orientation device and this was used to take structural measurements while the core is being logged.

Sampling intervals were laid out by the geologist logging the core and were based on geological contacts with samples in mineralized zones generally not exceeding one metre. The physical sampling of the core was done with a diamond blade core cutting saw. The core was sawn in half along the line marked by the geologist to ensure a representative sample was taken. The half sawn core samples were deposited into individual plastic bags where the sample number was both written on the bag as well as on a piece of flagging tape which was inserted into the bag. The remaining half core sample was returned to the core boxes and kept for future reference. During the sampling, standards and blanks were inserted in the sample numbering sequence and these were recorded on the lab dispatch sheets. Every 20 samples were submitted to the laboratory were accompanied by a sample standard and a blank to check the precision of the analysis. Additional checks were done on samples once the results were returned.

Security of Samples

Samples were dispatched to either SGS laboratories or Transworld Laboratories (now Intertek Mineral Lab) in Tarkwa. Samples were organized in the core logging facilities where they were checked and put into numeric order. The transportation to the

laboratory in Tarkwa is provided by the lab. Sample turnaround and dispatch are recorded either in a spreadsheet (earlier samples) or with the database software acQuire.

Sample rejects and pulps were returned to the Bogoso/Prestea core logging facility where they are stored for up to a year and then disposed of. Approximately 10% of the coarse reject samples, above detection limit that were returned to the site, are renumbered and resubmitted to the laboratory for duplicate analysis and used for quality control evaluations. The processing, handling, analysis and storage of the samples for Prestea Underground are considered to be within or exceed industry standards.

Mineral Resource and Mineral Reserve Estimates

See "Consolidated Mineral Resources and Mineral Reserve Estimations" section.

Mining Operations

The Prestea Underground consists of an underground mine with a production mine life of six years. The ore will be processed in the Bogoso/Prestea Plant which will be modified to accept low tonnage, high grade feed. The nominal mill feed rate will be approximately 175,000 tonnes per annum or 500 tonnes per day.

There is an extensive infrastructure of vertical shafts, inclined shafts, horizontal development, raises and stoping developed along the 9 km of strike length of the various orebodies from Prestea in the north to Tuapim in the south.

The Prestea Underground rehabilitation and preproduction period is defined as a nineteen-month period from September 2015 to March 2017. The full production period extends for a period of five and one-half years. At full production, the planned mining rate is 500 tons per day (178 kt per year). The planned life of mine production is 1,041 kt at 14.02 g/t gold, containing 469,000 ounces of gold.

During the first year of pre-production, the infrastructure of the mine will be improved and upgraded. The principal infrastructure upgrade projects are as follows:

- Central and Bondaye shaft rehabilitation;
- Central and Bondaye hoist upgrades;
- Electrical infrastructure;
- Compressed air;
- Pumping;
- Ventilation;
- 17 L and 24 L track and ground support; and
- 25 L loading pocket

A low tonnage, high grade processing stream will be integrated into the existing Bogoso/Prestea processing plant. The modification will enable the low-tonnage stream to treat a nominal 500 tons per day of non-refractory run of mine material.

Processing tails will be deposited on the currently operated Bogoso/Prestea TSF tailings storage facility. The Bogoso/Prestea TSF is a conventional valley/paddock tailings storage facility.

The Prestea community is supportive of the effort to reopen the underground operation and the necessary permits to develop open pit operations at the Prestea mine will need to be secured from the EPA. For the Prestea Underground project, it will be necessary to undertake an environmental impact assessment and submit an Environmental Impact Statement to the Environmental Protection Agency to obtain an Environmental Permit for the operations. The EIS will contain a provisional environmental management plan and a conceptual closure plan for the project. The Company does not foresee that there will be any obstacles to the permitting of the project, as it is in a disturbed area, is unlikely to pose any residual or cumulative impacts of any significance, and has wide community support. The surface deposits to the south of the Prestea underground mine are host to 122,000 ounces of non-refractory mineral reserves at an average grade of 2.24 g/t gold. These surface operations began production at the end of 2015.

Due to the limited impact associated with the development, environmental considerations are deemed manageable and project approvals should be granted within the normal timelines. The development of the project is not expected to contribute to the water

already removed from the historic underground voids. The design of the project will ensure maintenance of the existing environmental indemnity covering the surface and underground concessions.

Capital Costs

The Prestea Underground operating cost estimate is expressed to a feasibility level accuracy of +/- 15%. The table below shows the Prestea Underground project capital costs.

Capital Costs	Pre-development Period (\$M)	Pre-production Period (\$M)	Production Period (\$M)	Total Capital (\$M)
Equipment and Projects				
Shafts and hoisting	2.96	0.72	0.00	3.69
Shaft equipment	0.48	0.00	0.26	0.74
Electrical	5.62	1.53	4.15	11.3
Dewatering system rehab	0.00	0.00	1.85	1.85
West Reef dewatering	0.60	0.28	0.45	1.34
Compressed air	1.25	0.17	0.00	1.42
Underground rehab	0.85	0.00	0.00	0.85
O/P and ventilation raisebores	0.47	1.53	0.37	2.36
Primary ventilation	0.40	0.00	0.01	0.41
Surface infrastructure	0.66	0.00	1.72	2.39
Safety	0.95	0.04	0.12	1.10
Mining equipment	1.82	0.55	0.46	2.83
Mining sustaining	0.00	0.00	2.20	2.20
Processing	18.5	2.05	0.00	20.5
Miscellaneous	1.70	0.24	1.50	3.45
Subtotal	36.20	7.11	13.10	56.40
Capitalized Operating Cost				
Mining	9.76	11.5		21.20
Processing	0.00	4.67		4.70
Prestea G&A	2.99	2.20		5.20
Bogoso G&A	0.40	0.33		0.70
Revenue	0.00	-11.76		-11.80
Subtotal	13.10	6.90		20.10
Total Capital (\$M)	49.40	14.00	13.10	76.50

Total project capital of \$76.5 million is comprised of \$63.4 million initial capital (pre-development and pre-production periods), and \$13.1 million sustaining capital.

The capital cost estimate (excluding capitalized pre-production operating costs and sustaining capital) includes an overall contingency rate of 8.6% (\$4.2 million).

Operating Costs

The Prestea Underground operating cost estimate is expressed to a feasibility level accuracy of +/- 15%. The table below shows the Prestea Underground operating cost summary.

Department	Operating Costs \$M						Production	Unit Cost
	2017	2018	2019	2020	2021	2022	Period \$M	Operating \$/tonne
Mining								
Manpower	7.1	9.5	9.3	9.4	9.2	6.1	50.6	51.5
Equipment	0.7	1.0	0.9	1.0	0.9	0.5	5.1	5.2
Supplies	4.5	5.5	5.0	4.8	4.2	2.4	26.4	26.9
Services	0.4	0.3	0.3	0.3	0.2	0.2	1.7	1.7
Power	2.9	3.7	3.6	3.6	3.6	2.4	19.7	20.1
Subtotal Mining	15.7	20.0	19.2	19.0	18.1	11.5	103.4	105.3
Processing	11.5	15.4	14.4	14.9	14.0	7.1	77.3	78.8
G&A								
Prestea	2.7	3.4	3.4	3.5	3.5	2.1	18.6	19.0
Bogoso	0.5	0.7	0.7	0.7	0.7	0.5	3.6	3.7
Subtotal G&A	3.2	4.1	4.1	4.1	4.1	2.6	22.3	22.7
Total (\$M)	30.4	39.5	37.7	38.0	36.3	21.2	203.0	206.8

The total operating cost for the project is estimated at \$207/tonne processed. This is comprised of \$105/tonne underground mining, \$79/tonne processing (including \$3.75/tonne for surface ore haulage), and \$23/tonne general and administration operating costs.

Exploration and Development

Several targets remain untested at depth below the current mine bottom, especially following the high grade down plunge trend, which could increase the project mineral resource base. Further definition drilling and sill development could convert some of the existing inferred mineral resources to the indicated category, which will be a benefit for extending the mine life, if realized. No additional drilling was conducted at Prestea Underground in 2015. Prestea Underground drilling is expected to resume in 2016 once services and sufficient ventilation has been established on 24 level, provided sufficient funds are available.

Bogoso/Prestea Gold Mine

Project Description and Location

Golden Star, through its subsidiary GSBPL, owns 90% of and operates the Bogoso/Prestea mine and two processing plants located along the Ashanti Trend in western Ghana, approximately 35 km northwest of the town of Tarkwa. Bogoso and Prestea are adjoining mining concessions that together cover approximately 40 km of strike along the southwest-trending Ashanti gold district.

The mine employs conventional excavator and truck open pit mining methods. Ore is hauled from the pits to the processing plants. Equipment and facilities include the nominal 1.5 million tonne per annum non-refractory processing plant, the nominal 3.5 million tonne per annum refractory processing plant, a fleet of haul trucks, loaders, drills and mining support equipment. In addition, there are numerous ancillary support facilities including warehouses, maintenance shops, roadways, administrative offices, an employee residential complex, a water supply system, a stand-by 12 megawatt power plant, a medical clinic, tailings storage facility and a water treatment plant. Electric power is available from the Ghana power grid.

Golden Star acquired Bogoso/Prestea and its non-refractory processing plant in 1999. The Prestea property was acquired in 2001. In July 2007, Golden Star completed construction and development of the Bogoso/Prestea refractory processing plant.

The refractory operation at Bogoso/Prestea was suspended and placed on care and maintenance when the Chujah pit was mined out in the second quarter of 2015. This is in keeping with the Company's strategy of lowering the cash operating cost per ounce by focusing future mining and processing on non-refractory ore types which require lower processing costs than refractory ores.

The non-refractory processing plant currently processes oxide feed from the Prestea South oxide pits. The Company also expect to process Prestea Underground ore using this processing plant.

Accessibility, Climate, Local Resources, Infrastructure and Physiography

The climate is tropical with mean daily temperatures varying between 25°C to 35°C. There are two rainy seasons, one from April to June and then a minor rainy season in October and November. During December to February, wind blows from the north and frequently brings dust from the Sahara. The south west of Ghana receives the highest rainfall in the region. In the concession areas, the humidity is high all year round and rainfall averages 2,030 mm annually.

Wet and moist forest types of Western Ghana are the natural vegetation types in the concession area. The natural vegetation has been degraded by earlier logging activities, and past and present farming activities, and now largely comprises broken forest, secondary-forest, farmland and abandoned farmland, with upland type re-growth with swamps in some valley areas.

Takoradi is Ghana's second port after Tema (Accra) and is capable of handling large cargo ships and provides storage, bonded warehouses and customs and excise facilities for the majority of the mining equipment shipped to the goldfields of Ghana.

Bogoso is located on the main road from Tarkwa to Kumasi and there is a paved road between Bogoso and Prestea. The property has paved road access to Accra, Tarkwa and the major port at Takoradi. There are airports at Kumasi and Takoradi, which provide daily services to the International Airport at Accra.

The topography of the area within which the GSBPL assets are located is characterized by a series of northeast-southwest trending sub-parallel ridges. The altitude in the valleys where the main population centres occur is around 100 m above sea level. The mineralization tends to occur on the western slopes of the ridges with the intervening valleys occupied by farming communities and seasonal streams.

Local population centres are Bogoso Town north of the Bogoso concession and Prestea Town in the centre of the Prestea concession. Power is supplied from the Ghana national grid with appropriate backup capacity provided by diesel generators at Bogoso.

History

Mampon, Abronye and Opon

The first recorded work in the Mampon area was in 1929 when maps of the Dunkwa area were produced as part of a soil and stream sediment sampling campaign. In the mid-1930s, the Ghanaian Geological Survey mapped the area as part of an extensive investigation of the volcanic-sedimentary boundary between Prestea and Obuasi. Gold exploration is also recorded from this time, although no production records exist.

Very little information is available for the area between 1940 and the early 1980s. In 1988, BHP Billiton Limited ("BHP") obtained the prospecting license for the Dunkwa concession and conducted regional scale geochemical and Very Low Frequency - Electromagnetic ("VLF-EM") surveys which located the deposits at Mampon, Abronye and Adiokrom. Follow up detailed geochemical and VLF-EM surveys were then conducted and six diamond drillholes explored the extent of the Abronye deposit.

BHP gave up its interest in the concession in the early 1990s and it was taken over by Sikaman Gold Resources Ltd, which subsequently sold its rights to Birim Goldfields Inc. ("BGI") in 1994. Bogoso Gold Limited ("BGL") entered into a joint venture with Hemlo Gold Mines Inc. ("HGM"). HGM gave up its joint venture rights in 1999, at which point some 4,500 m of trenching, 10,100 m of RC drilling and 8,500 m of DD had been carried out across the concession. During this period, the consultants Watts, Griffiths and McOuat completed an independent technical review of the projects and produced an indicated and inferred mineral resource estimate totaling 1.6 Mt at 3.2 g/t Au of oxide material and a further 1.4 Mt at 1.4 g/t Au of fresh material at Mampon and Abronye combined. The reporting code and key assumptions and parameters used to report this mineral resource are not known and a QP has not done sufficient work to classify this historical estimate as a current mineral resource or mineral reserve. Hence, the Company is not treating the historical estimate as a current mineral resource or mineral reserve.

In 1999, Ashanti Goldfields became a joint venture partner and exploration continued for a further three years with 84 RC holes (5,300 m) and 26 DD (5,500 m) being drilled on the Mampon deposit. In 2002, Resource Services Group completed a technical review of an Ashanti pre-feasibility study and produced an inferred mineral resource estimate of 1.5 Mt at 4.75 g/t Au for oxide, transition and fresh horizons combined at Mampon. The reporting code and key assumptions and parameters used to report this mineral resource are not known and a QP has not undertaken sufficient work to classify this historical estimate as a current mineral resource or mineral reserve and the Company is not treating the historical estimate as current mineral resources or mineral reserves.

In 2003, the properties were acquired from BGI by Golden Star.

Bogoso North and Marlu

Marlu Gold Mining Areas Limited (“MGMAL”) explored for gold and operated a medium scale open pit and underground mining operation from 1935 to 1955. Surface gold mineralization was systematically explored utilizing trenching and shallow adits driven across strike. Deeper exploration, well below the depth of oxidation, was conducted on the Marlu deposits, where underground workings extended approximately 250 m below the surface. In 1935, MGMAL commenced mining oxide ore from a series of open pits extending from Bogoso North to Buesichem. During the period 1935 to 1955, MGMAL processed between 0.36 and 0.45 Mtpa of ore yielding 35,000 to 51,000 oz per year. During the 15 year period of mining (the mine was shut down for the duration of World War II), 6.9 Mt of ore with a recoverable grade of 4.1 g/t Au was processed through the plant generating about 0.9 Moz of gold. Marlu also mined a small amount of ore from underground at Bogoso North. The Marlu mining operation terminated in 1955.

The 30 year period between the closure of the Marlu mining operations in 1955, and the acquisition of the Bogoso concession by Denison Mines Limited, a Canadian company, in early 1986 only saw sporadic exploration activities. These activities included the sampling of old adits and two separate drilling programs, one by the SGMC and the other by the United Nations Development Program.

In 1986, Canadian Bogoso Resources Limited, a Ghanaian company, commenced exploration on the Bogoso concession. Exploration between 1986 and 1988 outlined potential for development of mining operations on the concession. Included as part of this work was drilling of the Marlu tailings, dewatering and sampling of the Marlu underground workings to a depth of about 100 m, DD beneath the old open pits, adit sampling and trenching.

Golden Star acquired the Bogoso concession in 1999, and since that time has operated a nominal 1.5 Mtpa CIL processing plant to process oxide and other non-refractory ores (termed the Bogoso non-refractory plant). In 2001, Golden Star acquired the Prestea property located adjacent to the Bogoso property and mined surface deposits at Prestea from late 2001 to late 2006. In July 2007, GSBPL completed construction and development of a nominal 3.5 Mtpa processing facility at Bogoso/Prestea that uses BIOX[®] technology to treat refractory sulphide ore.

Chujah, Dumasi, Ablifa and Buesichem

Gold was first commercially mined at the Bogoso/Prestea property in the early 20th century. Notably, in 1935, MGMAL started commercial scale mining of high-grade oxide material from a series of open pits extending south from Bogoso North to Buesichem, just south of the Bogoso/Prestea property. MGMAL also mined a small amount of material from underground at Bogoso North, Marlu and Bogoso South and was still mining the Buesichem pit when it shut down its operations in 1955. According to BGL’s records, during its 20 year period of operating from 1935 to 1955, MGMAL produced over 900,000 oz of gold at an average recovered grade of 3.73 g/t Au.

Billiton Plc (“Billiton”), now known as BHP Billiton Limited, then part of the Royal Dutch Shell Group, took control of the Bogoso/Prestea property in the late 1980s and its initial feasibility study established a “mineable reserve” of 5.96 Mt with a mean grade of 4.0 g/t Au, of which 461,000 t (or less than 8%) comprised oxidised material and the remainder fresh (sulphide) material. The reporting code and key assumptions and parameters used to report this mineral resource are not known and a QP has not done sufficient work to classify this historical estimate as a current mineral resource or mineral reserve. Hence, the Company is not treating the historical estimate as current mineral resources or mineral reserves. The construction of a mining and processing

facility was completed in 1991, the latter comprising a conventional CIL circuit to treat the oxidised material at a rate of 1.36 Mtpa and a flotation, fluidized bed roasting, and CIL circuit with a design capacity of 0.9 Mtpa. However, Billiton encountered operation difficulties with the fluidized bed roaster, as a result of which the operation was then focussed solely on the oxide ore. The resulting standalone CIL plant had a capacity of approximately 2 Mtpa and on-going exploration was successful in delineating further ore thereby prolonging the mine life.

Mining and exploration at Prestea has been ongoing since 1873. During the majority of this period, the work was concentrated around the Prestea Village area with the development of the underground operation and a small open pit at Plant North in the north of the Prestea concession.

Beta Boundary, Bondaye and Tuapim

Before 2001, little, if any work was carried out in the Bondaye and Tuapim areas. Exploration sampling was carried out over the Beta Boundary deposit immediately to the north. In June 2001, Golden Star was awarded the surface rights for the Prestea concession and commenced a programme of detailed stream and outcrop geochemical sampling over the entire concession. The results from this work led to the recognition of potential exploration targets in the Bondaye and Tuapim areas and RAB drilling commenced in 2003. There are no historical (Pre-2004) mineral resource estimates for the Bondaye and Tuapim deposits.

Geological Setting

The Bogoso-Prestea properties lie within the southern portion of the Ashanti Greenstone Belt along the western margin of the belt. Rock assemblages from the southern area of the Ashanti belt were formed between a period spanning from 2,080 to 2,240 Ma with the Sefwi Group being the oldest rock package and the Tarkwa sediments being the youngest. The Ashanti belt is host to numerous gold occurrences, which are believed to be related to various stages of the Eoeburnean and Eburnean deformational events.

The geology of the Bogoso-Prestea mine site is divided into three main litho-structural assemblages, which are fault bounded and steeply dipping to the west, which suggests that the contacts are structurally controlled and that the litho structural assemblages are unconformable. These packages are from the eastern footwall to the western hanging wall, the Tarkwaian litho-structural assemblage, the tectonic breccia assemblage composed of sheared graphitic sediments and volcanic flows which is commonly referred to as the Main Crush Zone ("MCZ"), and the last assemblage is composed of sedimentary units of the Kumasi basin which is located to the west of the Ashanti fault zone.

The Asikuma and Mansiso licenses host the Opon, Mampon and Aboronye deposits; structural setting controlling the style of mineralization is similar for all three deposits. Both concessions are underlain by north-northeast trending metasedimentary rocks of the Kumasi basin, including coarse-grained wackes, mudstones and argillites, interpreted to represent turbiditic sedimentary sequences. Mineralization at Mampon and Aboronye is associated with pyrite and arsenopyrite dissemination within the wallrock surrounding the quartz veins and within the quartz veins themselves. Veins range from narrow stringers to robust quartz bodies up to 4 m in width. The veining is also suggested to be associated with north-northwest striking splays or oblique shears close to their intersection with a major north south trending shear zone. Mampon is modeled over a 1 km strike length while the Aboronye deposit is modeled over 700 m along strike.

Gold mineralization between Marlu and Bogoso North is restricted to a narrow graphitic fault zone characterised by low gold tenors. The Bogoso North deposit consists of two splays of the MCZ; a quartz vein dominated hanging wall splay, and a highly graphitic footwall structure. The two splays of the MCZ at Bogoso North extend for approximately 500 m along strike and range in true width from 5 to 15 m. Gold mineralization at Bogoso North dips moderately to the northwest at 40 to 50°. The mineralization is modelled over a 2 km strike at Bogoso North and an additional 2.7 km to a depth of some 300 m. Bogoso North gold mineralization is associated with either quartz veins or graphitic cataclasites.

The Chujah/Dumasi area comprises both Birimian and Tarkwaian lithologies, separated by a deformation corridor referred to as the central structural corridor or tectonic breccia. The tectonic breccia is characterized by an anastomosing network of faults and

imbricated fault slices. The thickness of the main shear zone ranges from a few m to over 50 m in true width. The combined length of Chujah and Dumasi is some 3 km along strike and the deposit has been modelled to a vertical depth of 500 m.

The Ablifa deposits are situated on the Ashanti Trend. Mineralization occurs within a narrow north-east striking corridor, in which mineralization dips predominantly to the northeast at angles ranging between 50° and 70°. The deposit is modelled over a strike length of 4.3 km and to a maximum vertical depth of 250 m.

In the vicinity of the Buesichem deposit the MCZ appears to encroach on the Birimian - Tarkwaian contact. In the Buesichem pit the eastern high wall is composed of a phyllite unit which, has been interpreted as Tarkwaian. The deposit is modelled over a 1.3 km strike length and to a maximum depth of 500 m.

Locally, mineralization at Beta Boundary, Bondaye and Tuapim is characterised by lode gold mineralization, which typically contains non-refractory, free milling gold associated with arsenopyrite. Oxidation of the upper layers of the deposits is extensive and in places can reach tens of m in depth. Beta Boundary is modelled over a 4 km strike length and to a depth of 450 m, whilst Bondaye is modelled over a 1.3 km strike and Tuapim over 2 km. Bondaye and Tuapim are modelled to a maximum vertical depth of 150 m.

Exploration

Bogoso-Prestea

In 2007, Golden Star contracted Geotech Airborne Geophysical Surveys (“GEOTECH”) to run a VTEM survey which they flew over the entire project area. The total drill production up to the end of 2013 stands at 89,216 m of RAB, 141,115 m of RC and 195,133 m of DD drilling. A number of targets were generated from the VTEM survey and a drilling program was embarked upon in 2009 ending in 2011 resulting in some 22,475 m of RC and 93,425 m of DD drilled over a total of 230 RC and 364 diamond holes over the various deposits.

In 2015 all relevant permits were obtained for the Prestea South deposits which gave Golden Star the rights to commence mining in the area. Ahead of the mining two multipurpose drill rigs were utilized to infill the existing drilling along the Bondaye mineralized trend. The majority of drilling conducted at Bondaye was RC drilling with 142 holes being drilled totaling 12,228 meters. In addition to the RC drilling, nine diamond drill holes which totaled 507 meters were collared to collect metallurgical samples in the fresh and transitional material.

The results from the drilling at Bondaye were used to update a resource model for the area, which in turn was used for the 2015 year end resource and reserve statements, as well as life of mine planning.

Mampon-Abronye

Golden Star entered into an agreement with BGI in 2003 to acquire the Asikuma and Mansiso concessions. Golden Star took over ownership of the concession following the agreement and undertook exploration activities which included auger sampling, regolith mapping, RAB, RC and DD.

In 2006, a baseline environmental monitoring study as part of the environmental impact assessment for the Mampon project was conducted. Community consultations for the Mampon project were conducted throughout the various exploration programs. Agreements have been reached with the land-owners, including an effective moratorium over the project site.

In 2007, Golden Star contracted GEOTECH to run a VTEM survey over both concessions. A total of 17 RC holes, 30 DD holes and 4 geotechnical holes were drilled at Mampon over the years by BGI and Golden Star for a total of 7,454 m of drilling.

In 2013 Golden Star completed 35 holes totaling 3,551 m. This drilling consisted of sterilization drilling of proposed waste dump foot prints as well as additional infill metallurgical sampling holes. The results of the drilling were used to update the Mampon

feasibility study. In early 2015, Golden Star paid the Minerals Commission for the conversion of the Asikuma PL to a Mining Lease.

Mineralization

The deposits are located on the 250 km long northeast southwest trending Ashanti Belt, a Paleoproterozoic granitoid-greenstone assemblage of southwest Ghana. These greenstone belts and dividing sedimentary basins were formed and deformed during the Eoeburnean and Eburnean orogeny. The Prestea-Bogoso area occurs at the southern termination of the Ashanti Belt, where the gold deposits, mined or under exploration, are localised principally along a steep to subvertical major crustal structures referred to as the Ashanti trend. The principal structures are graphitic shear zones and mineralized fault filled quartz veins which occur only at Prestea.

The Bogoso-Prestea section of the Ashanti Trend shows a range of mineralization styles associated with graphitic shear zones, which represent the principal displacement zone of a regional-scale shear zone that defines the mineral belt. These styles include laminated quartz vein deposits containing free gold, highly deformed graphitic shear zones containing disseminations of arsenopyrite as the principal gold bearing phase (e.g. Buesichem, Chujah-Dumasi and Bogoso North) and disseminations of sulphides in mafic/intermediate volcanic rocks generally found in the footwall of the main shear zone.

The Bogoso-Prestea deposits can be classified as a lode gold deposits or orogenic mesothermal gold deposits, which are the most common gold systems found within Archean and Paleoproterozoic terrains. In the West African shield, orogenic gold deposits are typically underlain by geology considered to be of Eburnean age and are generally hosted by volcano-sedimentary sequences. The Ashanti belt is considered prospective for orogenic mesothermal gold deposits and hosts numerous other lode gold deposits such as the Obuasi mine.

At Bogoso-Prestea, gold mineralization exhibits a strong relationship with major shear zones, fault zones and second order structures. Three types of mineralization have been identified at Prestea, which are both characterised as mesothermal gold mineralization:

- Arsenopyrite-pyrite rich graphitic shear zones;
- Fault-fill quartz veins along fault zones and second order structures, which typically contains non-refractory, free milling gold; and
- Disseminated mineralization associated with brecciated zones of iron-rich footwall volcanic lenses, which are characterized by finely disseminated arsenopyrite-pyrite rich and silicified replacement zone.

The graphite rich shear-hosted and volcanic hosted mineralization types are refractory and generally lower grade in comparison to fault-filled quartz vein hosted mineralization type.

The weathering profile at Bogoso-Prestea is deep and typically results in extensive surface oxidation of bedrock, to a depth of up to one hundred m. Generally, the weathering profile typically consists of a lateritic surface, a saprolitic horizon, a transitional zone and a deeper primary sulphide zone.

Drilling

Drilling is carried out by a combination of DD, RC and RAB techniques at the GSBPL operations. With over 5,000 holes drilled and over 400,000 m of drilling conducted on the various deposits, the continued production and grade control drilling is providing appropriate reconciliation with the original drilling. The interpretation of the relevant results is directly related to the wireframe modelling used for the purpose of defining the volume of material used for the mineral resource volume.

All drillhole data is verified by GSBPL staff and independently by consultants and there are no recovery or survey factors which are considered to materially impact the accuracy and reliability of the results.

Sampling and Analysis

For all drilling programs in Ghana, Golden Star follows a standardised approach to drilling and sampling. Sampling is typically carried out along the entire drilled length. For RC drilling, samples are collected every 1 m. Where DD holes have been pre-collared using RC, the individual 1 m RC samples are combined to produce 3 m composites which are then sent for analysis. Should any 3 m composite sample return a significant gold grade assay, the individual 1 m samples are then sent separately along with those from the immediately adjacent samples.

DD samples are collected, logged and split with a diamond rock saw in maximum 1 m lengths. Detailed logging of the core is done by an appropriate qualified geologist at the core shed, recording colour, lithology, alteration, weathering, structure and mineralization. The sampling concept is to ensure a representative sample of the core is assayed. The remaining half core is retained in the core tray, for reference and additional sampling if required.

Sample assays are performed at either SGS in Tarkwa or TWL which is also based in Tarkwa. Golden Star has used both laboratories and regularly submits quality control samples to each for testing purposes. Both laboratories are independent of Golden Star and are currently in the process of accreditation for international certification for testing and analysis.

Quality control measures are typically set in place to ensure the reliability and trustworthiness of exploration data, and to ensure that it is of sufficient quality for inclusion in the subsequent mineral resource estimates. Quality control measures include written field procedures and independent verifications of aspects such as drilling, surveying, sampling and assaying, data management and database integrity. Appropriate documentation of quality control measures and analysis of quality control data are an integral component of a comprehensive quality assurance program and an important safeguard of project data.

The field procedures implemented by Golden Star are comprehensive and cover all aspects of the data collection process such as surveying, drilling, core and RC cuttings handling, description, sampling and database creation and management. At GSBPL, each task is conducted by appropriately qualified personnel under the direct supervision of a qualified geologist. The measures implemented by Golden Star are considered to be consistent with industry best practice.

Security of Samples

Sample preparation on site is restricted to core logging and splitting, which is carried out by Golden Star. The facilities consist of enclosed core and coarse reject storage facilities, covered logging sheds and areas for the splitting of RC and RAB samples. Core samples are logged geologically and geotechnically on-site prior to being split. Core is halved using a diamond saw and bagged by Golden Star for collection by representatives of the analytical laboratory. Sub-sampling of RC and RAB samples is carried out using a Jones Riffle splitter.

Samples are collated at the mine site after splitting and then transported to the primary laboratory for the completion of the sample preparation and chemical analysis. Exploration samples are trucked by road to the laboratories in Tarkwa.

Sample security involves two aspects, namely maintaining the chain of custody of samples to prevent inadvertent contamination or mixing of samples, and rendering active tampering of samples as difficult as possible.

No specific security safeguards have been put in place by Golden Star to maintain the chain of custody during the transfer of core between drilling sites, the core library, and sample preparation and assaying facilities. Core and rejects from the sample preparation are archived in secure facilities at the core yard and remain available for future testing.

Independent consulting group, SRK, considers the security measures to be adequate and appropriate given the location of the sample preparation and storage facilities within the main mining complex and the additional security surrounding the storage compound.

Metallurgical Test Work

During 2015 limited metallurgical test work was conducted on oxide, transition and fresh material from the Bondaye deposits of Prestea South. A total of nine diamond drill holes were used to compile three oxide, four transition and six fresh metallurgical samples.

The results of the oxide metallurgical samples confirmed historical recoveries through the existing CIL circuit at the Bogoso/Prestea Processing facility, generally in the mid to high 80's. Processing of this material in 2015 has yielded recoveries in the mid 80's, which confirms the results of the earlier test work. Metallurgical results for the transition and fresh material indicates that this material may be amenable to processing through the existing Bogoso/Prestea CIL plant.

The transition metallurgical test results yielded diagnostic leach recoveries between 50% and 80% where fresh test results were between 43% to 94% recoveries. These initial results show that the transition and fresh material at Bondaye is only semi refractory and could possibly be processed through the existing Bogoso/Prestea CIL processing facility. The results from the initial metallurgical testing warrants further test work which will be conducted when financing is available.

Mineral Resource and Mineral Reserve Estimates

See "Consolidated Mineral Resources and Mineral Reserve Estimations" section.

Mining Operations

The mining methods used at the Bogoso/Prestea pits are conventional excavator and truck methods typical for this style of gold mineralization. Drilling and blasting of ore and waste is conducted over bench heights of 6 m or 9 m and explosives are delivered to the hole by the manufacturer.

The refractory plant was put on care and maintenance in the third quarter of 2015 and production is only from oxide mining of the Prestea South pits.

The non-refractory plant is currently being fed at a rate of 1.2 Mtpa with oxide ore from the Prestea South pits.

The mine currently utilizes a tailings storage facility, Bogoso/Prestea TSF. Initially designed in 2004, the Bogoso/Prestea TSF comprises of a dual-cell paddock-type facility, located in a valley approximately 1.5 km north east of the processing plants.

Water management at Bogoso/Prestea incorporates water re-use and recycling, with water chemistry forming an integral element in the overall concept of water use at the mine.

To satisfy the requirements of the Environmental Assessment Regulations, 1999 (LI 1652), an EMP for years covering 2016 to 2018 was submitted to the EPA in December 2015. The document is now pending review with the EPA. Following feedback from the EPA, GSBPL will be expected to submit a final EMP to the EPA for certification. The Regulations require submission of an updated EMP every three years.

Exploration and Development

In 2015, exploration drilling was concentrated on delineating the existing oxide material along the Bondaye trend at Prestea South. Two rigs were utilized to drill 142 holes totaling 12, 228 m along four distinct mineralized trends at Bondaye and were successful in expanding this resource. Following the drilling four oxide pits were developed at Bondaye and provided oxide material for processing through the Bogoso/Prestea CIL processing facility in 2015 and will continue to provide material into 2016.

Exploration activities in 2016 will concentrate on the confirmation and delineation RC drilling along the Beta Boundary and Tuapim trends also located in the south of the Prestea mining lease. Approximately 10,000 m of RC drilling has been budgeted for 2016 and will commence early in the year. Should the drilling be successful, the Company expects that further drilling will be budgeted.

CONSOLIDATED MINERAL RESERVE AND MINERAL RESOURCES ESTIMATIONS

Consolidated Mineral Reserves

The table below presents Golden Star's consolidated proven and probable mineral reserves for the year ended December 31, 2015.

	December 31, 2015 Proven Mineral Reserve			December 31, 2015 Probable Mineral Reserve			December 31, 2015 Proven and Probable Mineral Reserve		
	tonnes (000)	grade g/t Au	ounces (000)	tonnes (000)	grade g/t Au	ounces (000)	tonnes (000)	grade g/t Au	ounces (000)
Wassa Open Pit	257	1.56	13	13,922	1.46	654	14,179	1.46	667
Wassa Underground	-	-	-	5,397	4.59	796	5,397	4.59	796
Stockpiles	789	0.93	24	-	-	-	789	0.93	24
Total Wassa	1,046	1.09	37	19,319	2.33	1,450	20,365	2.27	1,486
Bogoso / Prestea (refractory)	-	-	-	-	-	-	-	-	-
Mampon	-	-	-	304	4.60	45	304	4.60	45
Prestea South	-	-	-	1,892	2.30	140	1,697	2.24	122
Prestea Underground	-	-	-	1,041	14.02	469	1,041	14.02	469
Stockpiles	25	2.69	2	-	-	-	25	2.69	2
Total Bogoso / Prestea	25	2.69	2	3,237	6.29	654	3,261	6.26	656
TOTAL	1,071	1.12	39	22,556	2.90	2,104	23,626	2.82	2,143
TOTAL (excluding refractory)	1,071	1.12	39	22,556	2.90	2,104	23,626	2.82	2,143

Notes to the proven and probable mineral reserve statement:

- (1) The stated Mineral Reserves have been prepared in accordance with the requirements of NI 43-101 and are classified in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum's "CIM Definition Standards – For Mineral Resources and Mineral Reserves". Mineral Reserve estimates reflect the Company's reasonable expectation that all necessary permits and approvals will be obtained and maintained. Mining dilution and mining recovery vary by deposit and have been applied in estimating the Mineral Reserves.
- (2) Mineral reserves are the economic portion of the measured and indicated mineral resources. Mineral reserve estimates include mining dilution at grades assumed to be zero.
- (3) The 2015 Mineral Reserves were prepared under the supervision of Dr. Martin Raffield, Senior Vice President Project Development and Technical Services for the Company. Dr. Raffield is a "Qualified Person" as defined by Canada's NI 43-101.
- (4) The Mineral Reserves at December 31, 2015 were estimated using a gold price assumption of \$1,100 per ounce.
- (5) The slope angles of all pit designs are based on geotechnical criteria as established by external consultants. The size and shape of the pit designs are guided by consideration of the results from a pit optimization program.
- (6) Cut-off grades have been estimated based on operating cost projections, mining dilution and recovery, government royalty payment requirements and applicable metallurgical recovery. Marginal cut-off grade estimates for the open pits are as follows: Wassa 0.70 g/t; Mampon 1.52 g/t; and Prestea South 1.23 g/t. Break-even cut-off grade estimates for the underground mines are as follows: Wassa Underground 2.39 g/t; and Prestea Underground 7.50 g/t;
- (7) Numbers may not add due to rounding.

Consolidated Mineral Resources

The table below presents Golden Star's consolidated measured and indicated mineral resources for the year ended December 31, 2015.

	December 31, 2015 Measured Mineral Resources			December 31, 2015 Indicated Mineral Resources			December 31, 2015 Measured and Indicated Mineral Resources		
	tonnes (000)	grade g/t Au	ounces (000)	tonnes (000)	grade g/t Au	ounces (000)	tonnes (000)	grade g/t Au	ounces (000)
Wassa Open Pit	243	1.72	13	37,731	1.23	1,488	37,974	1.37	1,458
Wassa Underground	-	-	-	13,090	3.85	1,621	13,090	3.85	1,621
Wassa Other	-	-	-	3,583	3.76	434	3,583	3.76	434
Subtotal Wassa	243	1.72	13	54,404	2.03	3,543	54,647	2.02	3,556
Bogoso / Prestea (refractory)	-	-	-	14,740	3.00	1,420	14,740	3.00	1,420
Mampon	-	-	-	396	4.25	54	396	4.25	54
Prestea South	-	-	-	2,568	2.12	175	2,568	2.12	175
Prestea Underground	-	-	-	1,597	15.52	797	1,597	15.52	797
Bogoso / Prestea Other	-	-	-	2,151	1.70	118	2,151	1.70	118
Subtotal Bogoso / Prestea	-	-	-	21,452	3.72	2,564	21,452	3.72	2,564
TOTAL	243	1.72	13	75,856	2.50	6,107	76,100	2.50	6,120
TOTAL (excluding refractory)	243	1.72	13	61,116	2.39	4,687	61,360	2.38	4,700

Consolidated Inferred Mineral Resources

The table below presents Golden Star's consolidated inferred mineral resources for the year ended December 31, 2015.

	December 31, 2015 Inferred Mineral Resources		
	tonnes (000)	grade g/t Au	ounces (000)
Wassa Open Pit	286	1.37	13
Wassa Underground	14,442	4.16	1,930
Wassa Other	1,764	4.53	257
Subtotal Wassa	16,492	4.15	2,200
Bogoso / Prestea (refractory)	1,184	4.22	161
Mampon	103	2.08	7
Prestea South	72	2.34	5
Prestea Underground	3,294	8.74	913
Bogoso / Prestea Other	389	1.54	19
Subtotal Bogoso / Prestea	4,997	6.88	1,105
TOTAL	21,486	4.78	3,305
TOTAL (excluding refractory)	20,305	4.82	3,144

Notes to the measured and indicated mineral resources and the inferred mineral resources:

- (1) The mineral resources were estimated in compliance with the requirements of NI 43-101.
- (2) The mineral resources for Wassa Other include Father Brown, Benso and Chichiwilli.
- (3) The mineral resources for Bogoso / Prestea Other include Chujah, Dumasi, Bogoso North, Buesichem, Opon and Ablifa.
- (4) The Wassa Underground mineral resource has been estimated below the \$1,300 per ounce of gold pit shell using an economic gold grade cut-off of 1.81 g/t Au, which the Company believes would be the lower cut-off for underground.
- (5) The Father Brown Underground mineral resource has been estimated below the \$1,300 per ounce of gold pit shell using an economic gold grade cut-off of 3.17 g/t Au, which the Company believes would be the lower cut-off for underground.
- (6) Prestea Underground mineral resource has been estimated below the \$1,300 per ounce of gold pit shell of Prestea South down to 3,800 m elevation using a gold cut-off at 5.43 g/t Au.
- (7) Mineral resources were estimated using optimized pit shells at a gold price of \$1,300 per ounce. Other than gold price, the same optimized pit shell parameters and modifying factors used to determine the mineral reserves were used to determine the mineral resources.
- (8) The identified mineral resources in the block model are classified according to the CIM definitions for the measured, indicated, and inferred categories and are constrained by a block cut-off grade calculated using a gold price of US\$ 1,300/ounce and below the 2015 year-end topographic surface. The mineral resources are reported in situ without modifying factors applied.

- (9) The stated mineral resources were prepared under the supervision of S. Mitchel Wasel, Vice President of Exploration for the Company. Mr. Wasel is a Qualified Person as defined in NI 43-101.
- (10) Numbers may not add due to rounding.
- (11) Mineral resources are not mineral reserves and do not necessarily demonstrate economic viability.

RISK FACTORS

The following sets forth certain risks and uncertainties that could have a material adverse effect on our business, financial condition and/or results of operations and the trading price of our common shares, which may decline, and investors may lose all or part of their investment. Additional risks and uncertainties that we do not presently know or that we currently deem immaterial also may impair our business operations. We cannot assure you that we will successfully address these risks. In addition, other currently unknown risks exist that may affect our business.

GENERAL RISKS

Working Capital may not be sufficient to meet future obligations

At December 31, 2015 the Company had current assets of \$82.7 million and current liabilities of \$148.4 million. Removing the non-cash deferred revenue current liability of \$11.5 million, this results in negative working capital of \$54.2 million as at December 31, 2015. The Company's ability to reduce the working capital deficit will depend on whether gold prices increase in 2016 to levels significantly beyond the average realized gold price for 2015.

The Company's current liabilities include an outstanding amount of \$44.8 million due to the electricity provider in Ghana. During 2015, the Company reached an agreement with the electricity provider in Ghana to repay \$30.4 million of payables. The repayment plan includes a deferral of approximately \$22 million to 2016 and 2017. If the Company's electricity provider demands repayment of the outstanding balance and the Company is unable to repay the amount, the service provider could cease to provide power to the Company which would impact the Company's ability to operate the Bogoso/Prestea operation and which also could result in the Company being in default of certain of its contractual obligations with third parties. Unless alternative sources of power are available to Bogoso/Prestea on terms acceptable to the Company, this could have a material adverse effect on the Company's results of operations and financial condition.

In addition to cash operating costs, the Company's obligations also include a 5% royalty to the Government of Ghana, reclamation expenditures, corporate general and administration expenditures, interest and principal payments on long term debt and capital expenditures.

The Company's 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. There is no guarantee that the Company will have positive working capital in the future, or that the working capital generated from operations or the Stream Transaction will be sufficient to cover our expansion plans or for future operations.

Funding from Royal Gold may not be received

At December 31, 2015, the Company had received proceeds of \$75 million pursuant to the Stream Transaction and a further \$20 million pursuant to the Term Loan for total proceeds of \$95 million. RGLD's obligations under the Stream Transaction is for a total of \$145 million. The remaining \$70 million in proceeds is scheduled to be advanced to the Company in four installments between April 1, 2016 and January 1, 2017.

The expected proceeds under the Stream Transaction are not guaranteed and are conditional upon the Company meeting certain conditions including maintaining an agreed upon funding ratio as defined in the Stream Transaction agreements and RGLD accepting an engineering report relating to the Prestea Underground project among others.

Should any of the proceeds expected from the Stream Transaction not be received, this could cause a delay in, or cancellation of the development of one or both of the Wassa Underground or Prestea Underground and have a material effect on the Company's cash flow, earnings and share price unless adequate funding can be secured from another source.

The Company has pledged substantially all of its assets as security and may not be able to raise additional debt as a result

As part of the funding agreements with Royal Gold and RGLD, the Company has pledged substantially all assets as security to Royal Gold and RGLD. Should the Company require funds in addition to the funding expected from the Stream Transaction to complete Wassa Underground and Prestea Underground or to service debt or general and administrative costs, the Company may be unable to raise additional debt financing without available collateral.

The Company may have to repay the Term Loan early under the provision for excess cash flow limiting cash flow available for certain other activities

The Term Loan has an excess cash flow provision which requires the Company to repay the Term Loan in advance of the term date should the Company produce excess cash flow as defined in the Term Loan. Should early repayment of the Term Loan be required, this could impact the Company's cash flow relating to exploration activities on concessions other than those currently held by Wassa and Bogoso/Prestea.

A substantial or prolonged decline in gold prices would have a material adverse effect on us.

The price of our common shares, our financial results and financial condition, and our exploration, development and mining activities have previously been, and would in the future be significantly adversely affected by a substantial or prolonged decline in the price of gold. The price of gold is volatile and is affected by numerous factors beyond our control such as the sale or purchase of gold by various central banks and financial institutions, inflation or deflation, fluctuation in the value of the United States dollar and foreign currencies, global and regional demand, and the political and economic conditions of major gold-producing countries throughout the world. Any drop in the price of gold would adversely impact our revenues, profits and cash flows. In particular, a sustained low gold price could:

- cause suspension of our mining operations at Wassa and Bogoso/Prestea if these operations become uneconomic at the then-prevailing gold price, thus further reducing revenues;
- cause us to be unable to fulfill our obligations under agreements with our partners or under our permits and licenses which could cause us to lose our interests in, or be forced to sell, some of our properties;
- cause us to be unable to fulfill our debt repayment obligations;
- halt or delay the development of new projects such as Prestea Underground and Wassa Underground; and
- reduce funds available for exploration and/or development activities, with the result that depleted mineral reserves may not be replaced by new exploration activities.

Furthermore, the need to reassess the feasibility of any of our development projects because of declining gold prices could cause substantial delays or could interrupt development until a reassessment could be completed. LoM plans incorporating significantly lower gold prices could result in reduced estimates of mineral reserves and mineral resources and in material write-downs of our investment in mining properties and increased amortization, reclamation and closure charges.

We have incurred and may in the future incur substantial losses that could make financing our operations and business strategy more difficult and that may affect our ability to service our debts as they become due.

The Company's net loss attributable to Golden Star shareholders was \$67.7 million in 2015, with a net loss of \$73.1 million attributable to the Company's shareholders in 2014 and a net loss of \$265.9 million attributable to Golden Star shareholders in 2013. In recent years, lower ore grades from our mines, lower gold recovery rates and impairment write-offs of mine property and/or exploration property costs have been the primary factors contributing to such losses. In the future, these factors, as well as declining gold prices, could cause us to continue to be unprofitable. Future operating losses could adversely affect our ability to

raise additional capital if needed, and could materially and adversely affect our operating results and financial condition. In addition, continuing operating losses could affect our ability to meet our debt repayment obligations.

Our obligations could strain our financial position and impede our business strategy.

We had total consolidated debt and liabilities (excluding deferred revenue) as of December 31, 2015, of \$304.8 million, including \$4.4 million in equipment financing loans; \$3.0 million in finance leases; \$21.4 million pursuant to the Ecobank II Loan net of loan fees; \$18.2 million pursuant to the Term Loan net of fees; \$46.4 million (\$77.5 million face value) pursuant to our outstanding 5.00% convertible senior unsecured debentures due June 1, 2017 (“Convertible Debentures”); \$110.8 million of current trade payables and accrued liabilities; \$20.5 million other long term liabilities; \$79.7 million accrual for environmental rehabilitation liabilities and a \$0.4 million warrants liabilities. Our indebtedness and other liabilities may increase as a result of general corporate activities. These liabilities could have important consequences, including the following:

- increasing our vulnerability to depressed gold prices, and general adverse economic and industry conditions;
- limiting our ability to obtain additional financing to fund future working capital, capital expenditures, exploration and development projects and other general corporate requirements;
- requiring us to dedicate a significant portion of our cash flow from operations to make debt service payments, which would reduce our ability to fund working capital, capital expenditures, exploration and development projects and other general corporate requirements;
- limiting our flexibility in planning for, or reacting to, changes in our business and the industry; and
- placing us at a disadvantage when compared to our competitors that have less debt relative to their market capitalization.

Convertible Debenture repayment could result in significant shareholder dilution

The Company’s Convertible Debentures are due on June 1, 2017. On maturity, the Company may, at its option, satisfy the repayment obligation by paying the principal amount of the Convertible Debentures in cash or, subject to certain limitations, by issuing that number of the Company’s Common Shares obtained by dividing the principal amount of the Convertible Debentures outstanding by 95% of the weighted average trading price of the Company’s common shares on the NYSE MKT for the 20 consecutive trading days ending five trading days preceding the maturity date, provided the aggregate maximum number of common shares to be issued may not exceed 19.99% of the issued and outstanding common shares as of the closing date.

If the Company does not have the option to fully repay the Convertible Debentures by issuing common shares by virtue of its market capitalization on June 1, 2017 being too small, the Company will have to settle the Convertible Debentures in cash. The Company’s ability to repay the Convertible Debentures in cash will depend on a number of factors, some of which are beyond our control such as gold price. If the Company does not have sufficient liquidity to repay the Convertible Debentures in cash on June 1, 2017, and cannot secure additional financing to do so, there is a risk that the Company may default in repaying the Convertible Debentures and/or that settling the obligation in shares will lead to significant dilution of the common shares of existing and prospective shareholders.

Estimates of our mineral reserves and mineral resources could be inaccurate, which could cause actual production and costs to differ from estimates.

There are numerous uncertainties inherent in estimating proven and probable mineral reserves and measured, indicated and inferred mineral resources, including many factors beyond our control. The accuracy of estimates of mineral reserves and mineral resources is a function of the quantity and quality of available data and of the assumptions made and judgments used in engineering and geological interpretation, which could prove to be unreliable. These estimates of mineral reserves and mineral resources may not be accurate, and mineral reserves and mineral resources may not be able to be mined or processed profitably.

Fluctuations in gold prices, results of drilling, metallurgical testing, changes in operating costs, production, and the evaluation of mine plans subsequent to the date of any mineral reserve or mineral resource estimate could require revision of the estimates. The

volume and grade of mineral reserves mined and processed and recovery rates might not be the same as currently anticipated. Any material reductions in estimates of our mineral reserves and mineral resources, or of our ability to extract these mineral reserves and mineral resources, could have a material adverse effect on our results of operations and financial condition.

We currently have only two sources of operational cash flows, which could be insufficient by themselves to fund our continuing exploration and development activities.

Our only current significant internal sources of funds are operational cash flows from Bogoso/Prestea and Wassa. The anticipated continuing exploration and development of our properties are expected to require significant expenditures over the next several years. If cash on hand, free cash flows generated by Bogoso/Prestea and Wassa, and our Term Loan and any other available facilities, as well as funding pursuant to the Stream Transaction, are insufficient to cover all of our capital investment needs, we may require additional financing or we may consider rescheduling capital spending. Furthermore, the Company is obligated under the Stream Transaction to sell a certain percentage of gold production at a reduced rate, which could limit the Company's future cash flows. Our ability to raise significant new capital will be a function of macroeconomic conditions, future gold price, our operational performance and our then current cash flow and debt position, among other factors. Continued uncertainty in the global economy may affect lending practices and our ability to access capital. In addition, the Company has granted RGLD and Royal Gold a security interest over the assets of Bogoso/Prestea, Prestea Underground and Wassa in connection with the Stream Transaction and the Term Loan, which could make debt financing on favorable terms more difficult to arrange. Furthermore, there is no certainty that the Company will be able to meet its gold delivery obligation under the Stream Transaction or meet its obligations under the Term Loan. As a result, we may not be able to obtain adequate financing on acceptable terms or at all, which could cause us to delay or indefinitely postpone further exploration and development of our properties. Consequently, we could lose our interest in, or could be forced to sell, some or all of our properties. If the Company raises additional funds through the sale of equity securities or securities convertible into equity securities, shareholders may have their equity interest in the Company diluted.

We are subject to fluctuations in currency exchange rates and policies on foreign currencies, which could materially adversely affect our financial position.

Our revenues are in United States dollars, and we maintain most of our cash and cash equivalents in United States dollars or United States dollar-denominated securities. We convert our United States funds to foreign currencies as certain payment obligations become due. Accordingly, we are subject to fluctuations in the rates of currency exchange between the United States dollar and these foreign currencies, and these fluctuations could materially affect our financial position and results of operations. A portion of the operating costs at Bogoso/Prestea and Wassa is based on the Ghanaian currency, the Cedi. We are required by the Government of Ghana to convert into Cedis 20% of the foreign exchange proceeds that we receive from selling gold, but the Government could require us to convert a higher percentage of gold sales proceeds into Cedis in the future. We obtain construction and other services and materials and supplies from providers in Australia, South Africa and other countries. The costs of goods and services could increase or decrease due to changes in the value of the United States dollar or the Cedi, the Euro, the Australian dollar, the British Pound, the South African Rand or other currencies. Consequently, operation and development of our properties could be more costly than anticipated.

Any hedging activities might be unsuccessful and incur losses.

While we held no significant hedging instruments during 2015, we entered into certain hedging instruments in early 2016 and we may enter into additional hedging arrangements in the future. Our current and future hedging activities might not protect adequately against declines in the price of gold. In addition, although a hedging program could protect us from a decline in the price of gold, it might also prevent us from benefiting fully from gold price increases. For example, as part of a hedging program, we could be obligated to sell gold at a price lower than the then-current market price.

Risks inherent in acquisitions that we might undertake could adversely affect our current business and financial condition and our growth.

We plan to continue to pursue the acquisition of producing, development and advanced stage exploration properties and companies. The search for attractive acquisition opportunities and the completion of suitable transactions are time consuming and expensive, divert management attention from our existing business and may be unsuccessful. Success in our acquisition activities depends on our ability to complete acquisitions on acceptable terms and integrate the acquired operations successfully with our operations. Any acquisition would be accompanied by risks. For example, there may be a significant change in commodity prices after we have committed to complete a transaction and established the purchase price or exchange ratio, a material mineral deposit may prove to be below expectations or the acquired business or assets may have unknown liabilities which may be significant. We may lose the services of our key employees or the key employees of any business we acquire or have difficulty integrating operations and personnel. The integration of an acquired business or assets may disrupt our ongoing business and our relationships with employees, suppliers and contractors. Any one or more of these factors or other risks could cause us to not realize the anticipated benefits of an acquisition of properties or companies, and could have a material adverse effect on our current business, financial condition, results of operations and on our ability to grow.

We are subject to litigation risks.

All industries, including the mining industry, are subject to legal claims, with and without merit. As such, we are involved in various routine legal proceedings incidental to our business. Defense and settlement costs can be substantial, even with respect to claims that have no merit. Due to the inherent uncertainty of the litigation process, the resolution of any particular legal proceeding could have a material effect on our future financial position and results of operations.

We are subject to operational risks.

We are subject to a number of operational hazards that can delay production or result in liability to us. For example, in December 2014 and continuing into 2015 the Company reduced its net power consumption from the Ghana national grid by 25% in support of the Ghanaian Energy Commission's load shedding plan to address a power supply deficit. In addition to power shortages, our activities are subject to a number of risks and hazards including:

- mechanical and electrical equipment failures;
- parts availability;
- unexpected changes in mineralization grades;
- unexpected changes in mineralization chemistry and gold recoverability;
- environmental hazards;
- discharge of pollutants or hazardous chemicals;
- industrial accidents;
- labor disputes and shortages;
- supply and shipping problems and delays;
- shortage of equipment and contractor availability;
- unusual or unexpected geological or operating conditions;
- cave-ins of underground workings;
- failure of pit walls or dams;
- fire;

- marine and transit damage and/or loss;
- changes in the regulatory environment, including in the area of climate change;
- delayed or restricted access to mineral deposits and/or properties due to community interventions; and
- natural phenomena such as inclement weather conditions, floods, droughts and earthquakes.

These or other occurrences could result in damage to, or destruction of, mineral properties or production facilities, personal injury or death, environmental damage, delays in mining, delayed production, monetary losses and possible legal liability. Satisfying such liabilities could be very costly and could have a material adverse effect on our financial position and results of operations.

Our mining operations are subject to numerous environmental laws, regulations and permitting requirements and bonding requirements that can delay production and adversely affect operating and development costs.

Compliance with existing regulations governing the discharge of materials into the environment, or otherwise relating to environmental protection, in the jurisdictions where we have projects may have a material adverse effect on our exploration activities, results of operations and competitive position. New or expanded regulations, if adopted, could affect the exploration, development, or operation of our projects or otherwise have a material adverse effect on our operations.

Portions of our Wassa and Asikuma mining concessions are located within certain Forest Reserve areas. At Wassa, the haul road to Hwini Butre is permitted to pass through the Subri River Forest Reserve and Asikuma, the Mampon pit, which is presently subject to permitting, is located within the Opon Mansi Forest Reserve. Although Asikuma and the associated sections of the Opon Mansi Forest Reserve have been approved by the Government of Ghana as eligible for mining permits, permits for projects in forest reserve areas may not be issued in a timely fashion, or at all, and such permits may contain special requirements that may be burdensome or uneconomic to comply.

Mining and processing gold from our future development projects in Ghana will require mining, environmental, and other permits and approvals from the Government of Ghana. The trend to longer lead times and at a higher cost in obtaining environmental permits has reached a point where we are no longer able to accurately estimate permitting times for our planning purposes. The increases in permitting requirements could affect our environmental management activities including, but not limited to, tailings disposal facilities and water management projects at our mines.

Due to an increased level of non-governmental organization activity targeting the mining industry in Ghana, the potential for the Government of Ghana to delay the issuance of permits or impose new requirements or conditions upon mining operations in Ghana may increase. Any changes in the Government of Ghana's policies, or their application, may be costly to comply with and may delay mining operations. The exact nature of other environmental control problems, if any, which we may encounter in the future, cannot be predicted primarily because of the changing character of environmental requirements that may be enacted within the various jurisdictions where we operate.

As a result of the foregoing risks, project expenditures, production quantities and rates, estimates of rehabilitation expenditures and cash operating costs, among other things, could be materially and adversely affected and could differ materially from anticipated expenditures, production quantities and rates, and costs. In addition, estimated production dates could be delayed materially. Any such events could have a materially adverse effect on our business, financial condition, results of operations and cash flows.

The development and operation of our mining projects (including Wassa Underground and Prestea Underground) involve numerous uncertainties that could affect the feasibility, profitability or timing of such projects.

Mine development projects typically require a number of years and significant expenditures during the development phase before production is possible.

Development projects are subject to the completion of successful feasibility studies and environmental and socioeconomic assessments, the issuance of necessary governmental permits and receipt of adequate financing. The economic feasibility of development projects is based on many factors such as:

- estimation of mineral reserves and mineral resources;
- mining rate, dilution and recovery;
- anticipated metallurgical characteristics of the ore and gold recovery rates;
- environmental and community considerations including resettlement, permitting and approvals;
- future gold prices; and
- anticipated capital and operating costs.

Estimates of proven and probable mineral reserves and operating costs developed in feasibility studies are based on reasonable assumptions including geologic and engineering analyses and may not prove to be accurate.

The management of mine development projects (including Wassa Underground and Prestea Underground) and the start-up of new operations are complex. Completion of development and the commencement of production may be subject to delays and cost overruns. Any of the following events, among others, could affect the profitability or economic feasibility of a project:

- unanticipated changes in grade and tonnage of ore to be mined and processed;
- unanticipated adverse geotechnical conditions;
- incorrect data on which engineering assumptions are made;
- costs of constructing and operating a mine in a specific environment;
- delays on delivery of equipment required for the development and startup of the projects;
- unexpected breakdowns of equipment critical to the development process;
- unexpected increases in the cost of equipment and services related to the mine development projects;
- cost of processing and refining;
- availability of economic sources of power and fuel;
- availability of qualified staff and/or contractors;
- adequacy of water supply;
- adequate access to the site including competing land uses (such as agriculture and illegal mining);
- unanticipated transportation costs and shipping incidents and losses;
- significant increases in the cost of diesel fuel, cyanide or other major components of operating costs;
- government regulations and changes to existing regulations (including regulations relating to prices, royalties, duties, taxes, permitting, restrictions on production, quotas on exportation of minerals, protection of the environment and agricultural lands, including bonding requirements);
- fluctuations in gold prices; and
- accidents, labor actions and force majeure events.

Adverse effects on the operations or the further development of the Wassa Underground and Prestea Underground projects could also adversely affect our business (including our ability to achieve our production estimates), financial condition, results of operations and cash flow.

We need to continually discover, develop or acquire additional mineral reserves for gold production and a failure to do so would adversely affect our business and financial position in the future.

Because mines have limited lives based on proven and probable mineral reserves, we must continually replace and expand mineral reserves as our mines produce gold. We are required to estimate mine life in connection with our estimation of mineral reserves, but our estimates may not be correct. In addition, mine life would be shortened if we expand production or if we lose mineral reserves due to changes in gold price or operating costs. Our ability to maintain or increase our annual production of gold will be dependent in part on our ability to bring new mines into production and to expand or extend the life of existing mines.

Gold exploration is highly speculative, involves substantial expenditures, and is frequently non-productive.

Gold exploration, involves a high degree of risk. Exploration projects are frequently unsuccessful. Few prospects that are explored are ultimately developed into producing mines. We cannot assure you that our gold exploration efforts will be successful. The success of gold exploration is dependent in part on the following factors:

- the identification of potential gold mineralization based on surface analysis;
- availability of prospective land;
- availability of government-granted exploration and exploitation permits;
- the quality of our management and our geological and technical expertise; and
- the funding available for exploration and development.

Substantial expenditures are required to determine if a project has economically mineable mineralization. It could take several years to establish proven and probable mineral reserves and to develop and construct mining and processing facilities. Because of these uncertainties, we cannot assure you that current and future exploration programs will result in the discovery of mineral reserves, the expansion of our existing mineral reserves or the development of mines.

We face competition from other mining companies in connection with the acquisition of properties.

We face strong competition from other mining companies in connection with the acquisition of producing properties or properties capable of producing gold. Many of these companies have greater financial resources, operational experience and technical capabilities. As a result of this competition, we might be unable to maintain or acquire attractive mining properties on terms we consider acceptable or at all. Consequently, our future revenues, operations and financial condition could be materially adversely affected.

Title to our mineral properties could be challenged.

We seek to confirm the validity of our rights to title to, or contract rights with respect to, each mineral property in which we have a material interest. We have mining leases with respect to our Bogoso/Prestea, Wassa and Prestea Underground properties. Title insurance generally is not available, and our ability to ensure that we have obtained a secure claim to individual mineral properties or mining concessions is limited. We generally do not conduct surveys of our properties until they have reached the development stage, and therefore, the precise area and location of such properties could be in doubt. Accordingly, our mineral properties could be subject to prior unregistered agreements, transfers or claims, and title could be affected by, among other things, undetected defects. In addition, we might be unable to operate our properties as permitted or to enforce our rights with respect to our properties.

We depend on the services of key executives.

We are dependent on the services of key executives including our President and Chief Executive Officer, Chief Operating Officer and Chief Financial Officer, and a number of other highly skilled and experienced executive personnel. Due to the relatively small

size of our management team, the loss of one or more of these persons or our inability to attract and retain additional highly skilled employees could have an adverse effect on our business and future operations.

Our use of contractors may expose us to a number of risks and increase our mining costs.

We use mining contractors in connection with our mining operations. The use of contractors subjects us to certain risks, some of which are outside our control, including:

- our ability to negotiate agreements with contractors on acceptable terms;
- reduced control over those aspects of operations which are the responsibility of the contractor;
- failure of a contractor to perform under its agreement;
- interruption of operations or increased costs in the event that a contractor ceases to do business due to insolvency or other unforeseen events;
- failure of a contractor to comply with applicable legal and regulatory requirements;
- labor relation issues from a contractors' workforce; and
- the potential to incur liability to third parties as a result of the actions of our contractors.

The occurrence of one or more of these risks could adversely affect our financial position and results of operations.

Our insurance coverage could be insufficient.

Our business is subject to a number of risks and hazards generally, including:

- adverse environmental conditions;
- industrial accidents;
- labor disputes;
- unusual or unexpected geological conditions;
- ground or slope failures;
- cave-ins;
- fire damage;
- changes in the regulatory environment;
- marine transit and shipping damage and/or losses;
- natural phenomena such as inclement weather conditions, floods and earthquakes; and
- political risks including expropriation and civil war.

Such occurrences could result in:

- damage to mineral properties or production facilities and equipment;
- personal injury or death;
- loss of legitimate title to properties;
- environmental damage to our properties or the properties of others;
- delays in mining, processing and development;
- monetary losses; and

- possible legal liability.

Although we maintain insurance in amounts that we believe to be reasonable, our insurance might not cover all the potential risks associated with our business. We might also be unable to maintain insurance to cover these risks at economically feasible premiums or at all. Insurance coverage might not continue to be available or might not be adequate to cover any resulting liability. Moreover, insurance against risks such as environmental pollution or other hazards as a result of exploration and production is not generally available to us or to other companies in the mining industry on acceptable terms. We might also become subject to liability for pollution or other hazards which we cannot insure against or which we might elect not to insure against because of premium costs or other reasons. Losses from these events might cause us to incur significant costs that could have a material adverse effect upon our business, results of operations or financial condition.

We are dependent on information technology systems, which are subject to certain risks, including cybersecurity risks and data leakage risks.

We are dependent upon information technology systems in the conduct of our operations. Any significant breakdown, invasion, virus, cyber-attack, security breach, destruction or interruption of these systems by employees, others with authorized access to our systems, or unauthorized persons could negatively impact our operations. To the extent any invasion, cyber-attack or security breach results in disruption to our operations, loss or disclosure of, or damage to, our data or confidential information, our reputation, business, results of operations and financial condition could be materially adversely affected. Our systems and insurance coverage for protecting against cyber security risks may not be sufficient. Although to date we have not experienced any material losses relating to cyber-attacks, we may suffer such losses in the future. We may be required to expend significant additional resources to continue to modify or enhance our protective measures or to investigate and remediate any information security vulnerabilities.

GOVERNMENTAL AND REGULATORY RISKS

As a holding company, limitations on the ability of our operating subsidiaries to make distributions to us could adversely affect the funding of our operations.

We are a holding company organized under the federal laws of Canada that conducts operations primarily through foreign (principally Ghanaian) subsidiaries, and substantially all of our assets consist of equity in these entities. Accordingly, any limitation on the transfer of cash or other assets between the parent corporation and these entities, or among these entities, could restrict our ability to fund our operations efficiently, or to repay the Convertible Debentures, the Term Loan, the Ecobank II Loan or other debt, or on our ability to fulfill our obligations under the Stream Transaction. Any such limitations, or the perception that such limitations might exist now or in the future, could have an adverse impact on available credit and our valuation and stock price.

The Government of Ghana may make or propose changes to the mining fiscal regime that will have a significant impact on our overall costs.

In 2012, the Government of Ghana announced its intent to introduce a 10% windfall profit tax on mining companies. In 2013, as a result of the decline in spot gold prices, the Government of Ghana suspended its implementation of the proposed windfall profit tax. However if gold prices increase the Government of Ghana may proceed with its plan to implement the proposed 10% windfall profit tax.

A new Income Tax Act (“ITA”) was passed by Ghana’s parliament and assented to by the President on September 1, 2015, on which date the ITA entered into force. The implementation of the ITA commenced on January 1, 2016. The introduction of the ITA did not impact the Company’s tax expenses for the year ended December 31, 2015. The significant change in the ITA that may affect the Company is that tax depreciation claims on plant, equipment and mining properties will be included in losses which expire after five years rather than being included in a capital allowance balance that carries forward indefinitely.

The Government of Ghana could review the existing tax stability agreements of mining companies operating in Ghana. While our mines do not have tax stability agreements, the Government of Ghana could decide to review our Deeds of Warranty which specify certain tax agreements for our properties. Such a review could result in some of our financial concessions being revoked or changes which could have a significant impact on our business, results of operations or financial condition.

We are subject to changes in the regulatory environment where we operate which may increase our costs of compliance.

Our mining operations and exploration activities are subject to extensive regulation governing various matters, including:

- licensing;
- production;
- taxes;
- disposal of process water or waste rock;
- toxic substances;
- development and permitting;
- exports and imports;
- labour standards;
- mine and occupational health and safety;
- environmental protection and corporate responsibility, and
- mine reclamation and closure plans.

Compliance with these regulations increases the costs of the following:

- planning;
- designing;
- drilling;
- operating;
- developing;
- constructing; and
- closure, reclamation and rehabilitation and post-closure.

We believe that we are in substantial compliance with current laws and regulations in Ghana and elsewhere. However, these laws and regulations are subject to frequent change and reinterpretation. Amendments to current laws and regulations governing operations and activities of mining companies or more stringent implementation or interpretation of these laws and regulations could have a material adverse impact on us. These factors could cause a reduction in levels of production and delay or prevent the development or expansion of our properties in Ghana.

The implementation of changes in regulations that limit the amount of proceeds from gold sales that could be withdrawn from Ghana could also have a material adverse impact on us, as Wassa and Prestea South currently are our only sources of internally generated operating cash flows.

Environmental bonding requirements are under review in Ghana and bonding requirements may be increased.

As part of its periodic assessment of mine reclamation and closure costs, the EPA reviews the adequacy of reclamation bonds and guarantees. In certain cases, it has requested higher levels of bonding based on its findings. If the EPA were to require additional

bonding at our properties, it may be difficult, if not impossible, to provide sufficient bonding. If we are unable to meet any such increased bonding requirements or negotiate an acceptable solution with the Government of Ghana, our operations and exploration and development activities in Ghana may be materially adversely affected.

The Government of Ghana has the right to increase its interest in certain subsidiaries.

The Government of Ghana has a 10% carried interest in the mineral operations of Ghanaian mining companies. The carried interest comes into existence at the time the government issues a mining license. As such, the Government of Ghana currently has a 10% carried interest in our subsidiaries that own the Bogoso/Prestea properties and the Wassa properties.

The Government of Ghana has the right to acquire a special share or “golden share” in such 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 “golden share” carries no voting rights and does not participate in dividends, profits or assets. While the Government of Ghana has not sought to exercise any of these rights at our properties, any such attempts to do so in the future could adversely affect our business, results of operations or financial condition.

We are subject to risks relating to exploration, development and operations in foreign countries.

Our business assets and operations are affected by various political and economic uncertainties in the countries where we operate, including:

- war, civil unrest, terrorism, coups or other violent or unexpected changes in government;
- political instability and violence;
- expropriation and nationalization;
- renegotiation or nullification of existing concessions, licenses, permits, and contracts;
- illegal mining;
- increases in fees, levies or other indirect taxes;
- changes in taxation policies;
- unilaterally imposed increases in royalty rates, such as the increase in royalty rates imposed by the Government of Ghana, effective March 2011, which changed the method of calculating the royalties from not less than 3% and not more than 6% of a mine’s total mineral revenues to a flat rate of 5% of mineral revenues;
- restrictions on foreign exchange and repatriation; and
- changing political conditions, currency controls, and governmental regulations that favor or require the awarding of contracts to local contractors or require foreign contractors to employ citizens of, or purchase supplies from, a particular jurisdiction.

Illegal mining has occurred on our properties, which is difficult to control, can disrupt our business and can expose us to liability.

We continue to experience illegal mining activity on our mining and exploration properties. Most of this activity is on our Prestea South properties. While we are proactively working with local, regional and national governmental authorities to obtain protection of our property rights, any action on the part of such authorities may not occur, may not fully address our problems or may be delayed.

In addition to the impact on our mineral reserves and mineral resources, the presence of illegal miners can lead to project delays and disputes and delays regarding the development or operation of commercial gold deposits. Illegal miners could cause environmental damage or other damage to our properties, or personal injury or death, for which we could potentially be held

responsible. Illegal miners may work on other of our properties from time to time, and they may in the future increase their presence and have increased negative impacts such as those described above on such other properties.

Our activities are subject to complex laws, regulations and accounting standards that can adversely affect operating and development costs, the timing of operations, the ability to operate our mines and our financial results.

Our business, mining operations and exploration and development activities are subject to extensive Canadian, United States, Ghanaian and other foreign, federal, state, provincial, territorial and local laws and regulations governing exploration, development, production, exports, taxes, labor standards, waste disposal, protection of the environment, reclamation, historic and cultural resource preservation, mine safety and occupational health, toxic substances, reporting and other matters, as well as accounting standards. Compliance with these laws, regulations and standards or the imposition of new requirements could adversely affect exploration, operating and development costs, the timing of operations and the ability to operate, as well as our financial results.

Failure to maintain effective internal controls could have a material adverse effect on our business and share price.

Annually, we are required to test our internal controls over financial reporting to satisfy the requirements of applicable securities laws, which requires annual management assessments of the effectiveness of our internal controls over financial reporting. Failure to maintain effective internal controls could have a material adverse effect on our business and share price.

MARKET RISKS

The market price of our common shares has experienced volatility and could continue to do so in the future.

Our common shares are listed on the NYSE MKT, the Toronto Stock Exchange (“TSX”) and the Ghana Stock Exchange. Companies with market capitalizations similar to ours have experienced substantial volatility in the past, often based on factors unrelated to the financial performance or prospects of the companies involved. These factors include macroeconomic developments in North America and globally and market perceptions of the attractiveness of particular industries. Our share price is also likely to be significantly affected by short-term changes in gold prices or in our financial condition or results of operations as reflected in our quarterly earnings reports. Other factors unrelated to our performance that could have an effect on the price of our securities, include the following:

- the extent of analytical coverage available to investors concerning our business could be limited if investment banks with research capabilities do not continue to follow our securities;
- the trading volume and general market interest in our securities could affect an investor’s ability to trade significant numbers of our securities;
- the size of the public float in our securities may limit the ability of some institutions to invest in our securities; and
- a substantial decline in our stock price that persists for a significant period of time could cause our securities to be delisted from NYSE MKT, the TSX and/or the Ghana Stock Exchange, further reducing market liquidity.

As a result of any of these factors, the market price of our securities at any given point in time might not accurately reflect our long-term value. Stock markets in general have recently experienced higher levels of volatility. Securities class action litigation often has been brought against companies following periods of market price volatility that affects the market price of particular securities without regard to the performance of the company whose stock price is affected. We could in the future be the target of similar litigation. Securities litigation could result in substantial costs and damages and divert management’s attention and resources.

Investors could have difficulty or be unable to enforce certain civil liabilities on us.

A majority of our assets are located outside of Canada. Accordingly, it might not be possible for investors to collect judgments obtained in Canadian courts predicated on the civil liability provisions of Canadian securities legislation or to realize upon our assets in connection with such judgments.

There are certain U.S. federal income tax risks associated with ownership of Golden Star common shares.

To ensure compliance with requirements imposed by the Internal Revenue Service, any U.S. federal tax advice contained in this communication (including any attachments) is not intended or written to be used, and cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code. This communication is used to promote the marketing of the securities described herein, and each potential investor should seek advice based on the investor's particular circumstances from an independent tax advisor.

Holders of our common shares who are U.S. taxpayers should consider that we may or could become a “passive foreign investment company” (“PFIC”) for U.S. federal income tax purposes. The tests for determining PFIC status depend upon a number of factors, some of which are beyond our control, and can be subject to uncertainties, and we cannot assure you that we will not be a PFIC for the year ending December 31, 2016, or any future year. We undertake no obligation to advise holders of our common shares as to our PFIC status for the year ending December 31, 2016, or any future year.

If we are a PFIC for any year, any person who holds our common shares who is a U.S. person for U.S. income tax purposes (a “U.S. Holder”) and whose holding period for those common shares includes any portion of a year in which we are a PFIC generally would be subject to a special adverse tax regime in respect of “excess distributions.” Excess distributions include certain distributions received with respect to PFIC shares in a taxable year. Gain recognized by a U.S. Holder on a sale or other transfer of our common shares (including certain transfers that would otherwise be tax free) also would be treated as excess distributions. Such excess distributions and gains would be allocated ratably to the U.S. Holder's holding period. For these purposes, the holding period of shares acquired either through an exercise of options or the conversion of convertible debentures includes the holder's holding period in the option or convertible debt.

The portion of any excess distribution (including gains treated as excess distributions) allocated to the current year or to a year prior to the first year in which the Company was a PFIC would be includible as ordinary income in the current year. The portion of any excess distribution allocated to the first year in the U.S. Holder's holding period in which the Company was a PFIC and any subsequent year or years (excluding the current year) would be taxed at the highest marginal rate applicable to ordinary income for each such year (regardless of the taxpayer's actual marginal rate for that year and without reduction by any losses or loss carryforwards) and would be subject to interest charges to reflect the value of the U.S. income tax deferral.

Elections may be available to mitigate the adverse tax rules that apply to PFICs (the so-called “QEF” and “mark-to-market” elections), but these elections may cause the recognition of taxable income or gain. The QEF and mark-to-market elections are not available to U.S. Holders with respect to options or convertible securities. We have not decided whether we would provide to U.S. holders of our common shares the annual information that would be necessary to make the QEF election.

Additional special adverse rules also apply to U.S. Holders who own our common shares if we are a PFIC and have a non-U.S. subsidiary that is also a PFIC. Special adverse rules that impact certain estate planning goals could apply to our common shares if we are a PFIC.

The conversion feature of the Convertible Debentures could limit increases in the trading price of our common shares.

The conversion price of our outstanding Convertible Debentures is \$1.65 per share. During periods when our share price is greater than the conversion price, this conversion feature may limit the increase in the price of our common shares, since any increase in the stock price above the conversion price will make it more likely that the Convertible Debentures will be converted, thereby exerting a downward pressure on the market price of the common shares.

The existence of outstanding rights to purchase or acquire common shares could impair our ability to raise capital.

As of March 29, 2016, there were options outstanding to purchase up to 16,164,008 common shares at exercise prices ranging from Cdn.\$0.38 to Cdn.\$7.00 per share. In addition, 1,112,377 common shares are available for future issuance under our stock option plans. Furthermore, approximately 46,963,636 common shares are currently issuable upon the full conversion of our

outstanding Convertible Debentures (additional shares may be issuable to debenture holders in certain circumstances). Finally, there are 5 million warrants issued to Royal Gold at an exercise price of \$0.27 per common share as part of the consideration for the Term Loan. During the life of the options, Convertible Debentures and warrants and other rights, the holders are given an opportunity to profit from a rise in the market price of common shares, with a resulting dilution in the interest of the other shareholders. Our ability to obtain additional financing during the period such rights are outstanding could be adversely affected, and the existence of the rights could have an adverse effect on the price of our common shares. The holders of the options, Convertible Debentures, warrants and other rights can be expected to exercise or convert them at a time when we would, in all likelihood, be able to obtain any needed capital by a new offering of securities on terms more favorable than those provided by the outstanding rights.

Current global financial conditions may affect our ability to obtain financing and may negatively affect our asset values and results of operations.

Global financial conditions during recent years have been characterized by heightened volatility and uncertainty. As a result, access to financing has been negatively impacted, which may affect our ability to obtain equity or debt financing in the future on favorable terms or at all. Additionally, these factors, as well as other related factors, may cause decreases in asset values that are deemed to be other than temporary, which may result in impairment losses. If such increased levels of volatility and market turmoil continue or worsen, our operations could be adversely impacted and the trading price of our common shares may be adversely affected.

DIVIDEND POLICY AND PAYMENT

We have not declared or paid cash dividends on our common shares since our inception and we expect for the foreseeable future to retain all of our earnings from operations for use in expanding and developing our business. Future dividend decisions will consider then current business results, cash requirements and our financial condition.

LEGAL PROCEEDINGS AND REGULATORY ACTIONS

There are currently no material pending legal proceedings or regulatory actions to which the Company or any of its subsidiaries is a party or to which any of its properties or those of any of its subsidiaries is subject. The Company and its subsidiaries are, however, engaged in routine litigation incidental to their business. No material legal proceedings or regulatory actions involving the Company are pending, or, to the knowledge of the Company, contemplated, by any governmental authority. The Company is not aware of any material events of non-compliance with environmental laws and regulations. The exact nature of environmental control problems, if any, which the Company may encounter in the future cannot be predicted, primarily because of the changing character of environmental requirements that may be enacted within foreign jurisdictions.

CAPITAL STRUCTURE

The Company is authorized to issue an unlimited number of common shares. As at December 31, 2015, there were 259,897,095 common shares issued and outstanding. As of March 29, 2016, 259,897,095 common shares were issued and outstanding.

The Company is also authorized to issue an unlimited number of first preferred shares. As at December 31, 2015, there were no first preferred shares issued and outstanding. As of March 29, 2016, there were no first preferred shares issued and outstanding.

Description of Common Shares

All common shares are of the same class and, once issued, rank equally as to dividends, voting powers, and participation in assets.

Dividend Rights

Holders of common shares are entitled to receive such dividends as may be declared from time to time by the Board of Golden Star, in its discretion, subject to the preferential dividend rights of any other classes or series of shares of the Company. In no event may a dividend be declared or paid on the common shares if payment of the dividend would cause the realizable value of Golden

Star's assets to be less than the aggregate of its liabilities and the amount required to redeem all of the shares having redemption or retraction rights, which are then outstanding.

Voting Rights

Holders of common shares are entitled to one vote for each share held of record on all matters to be acted upon by the shareholders.

Liquidation

In the event of any liquidation, dissolution or winding up of Golden Star, holders of common shares have the right to a ratable portion of the assets remaining after payment of liabilities and liquidation preferences of any preferred shares or other securities that may then be outstanding.

Redemption

No shares have been issued subject to call or assessment. There are no pre-emptive or conversion rights and no provisions for redemption or purchase for cancellation, surrender, or sinking or purchase funds.

Rights Agreement

Rights to purchase common shares have been issued to holders of common shares under an amended and restated shareholder rights plan agreement (the "Rights Agreement") dated May 9, 2013 between Golden Star and Canadian Stock Transfer Company Inc. (now CST Trust Company). One right is attached to each common share. Prior to the occurrence of certain triggering events, each right will entitle the holder, within certain limitations, to purchase one common share at an exercise price equal to three times the market price of the common share, as determined under the terms of the agreement. In certain events (including when a person or group becomes the beneficial owner of 20% or more of any class of our voting shares without complying with the "permitted bid" provisions of the Rights Agreement or without the approval of the Board), any exercise of the rights would entitle the holders of the rights (other than the acquiring person or group) to acquire that number of common shares having an aggregate market price on the date of the event equal to twice the exercise price of the rights for an amount in cash equal to the exercise price. Accordingly, any exercise of the rights may cause substantial dilution to a person who attempts to acquire Golden Star. The rights, which expire at the close of business on the date of our 2016 annual shareholders' meeting (unless extended as provided in the Rights Agreement), may be redeemed at a price of C\$0.00001 per right at any time until a person or group has acquired 20% of our common shares, except as otherwise provided in the Rights Agreement. The Rights Agreement may have certain anti-takeover effects.

Other Provisions

All outstanding common shares are fully paid and non-assessable.

This section is a summary and may not describe every aspect of our common shares or preferred shares that may be important to you. We urge you to read the *Canada Business Corporations Act* and our articles of arrangement, because they, and not this description, define the rights of a holder of Golden Star's common shares or preferred shares.

Description of Preferred Shares

We are authorized to issue an unlimited number of preferred shares. Preferred shares are issuable in such classes or series as are determined by the Board, who have the authority to determine the relative rights and preferences of each such class or series. The Board has not designated any class or series of preferred shares.

Description of Convertible Debentures

The Convertible Debentures were issued on May 31, 2012, in the amount of \$77.5 million, in exchange for \$74.5 million of our 4.00% convertible senior unsecured debentures due November 30, 2012 ("Original Debentures") in privately negotiated transactions with certain holders of the Original Debentures exempt from the registration requirements of the U.S. Securities Act of 1933, as amended.

The Convertible Debentures are governed by the terms of an indenture dated May 31, 2012, by and between the Company and The Bank of New York Mellon, as Indenture Trustee.

Interest on the Convertible Debentures is payable semi-annually in arrears on May 31 and November 30 of each year until maturity on June 1, 2017. The Convertible Debentures are, subject to certain limitations, convertible into common shares at a conversion rate of 606.0606 common shares per \$1,000 principal amount of the Convertible Debentures (equal to an initial conversion price of \$1.65 per share). The Convertible Debentures are not redeemable at the Company's option, except in the event of certain change in control transactions where 90% or more of the outstanding Convertible Debentures have accepted a mandatory offer from us to purchase them.

On maturity, the Company may, at its option, satisfy the repayment obligation by paying the principal amount of the Convertible Debentures in cash or, subject to certain limitations, by issuing that number of the Company's common shares obtained by dividing the principal amount of the Convertible Debentures outstanding by 95% of the weighted average trading price of the Company's common shares on the NYSE MKT for the 20 consecutive trading days ending five trading days preceding the maturity date (the "Current Market Price"). If the Company elects to repay the principal amount of the Convertible Debentures at maturity by issuing common shares, and the Company is limited under the terms of the indenture from issuing a number of common shares sufficient to fully repay the Convertible Debentures outstanding at maturity, the Company is required to pay the balance owing in cash, based on the difference between the principal amount of the Convertible Debentures outstanding and the value of the common shares (based on the Current Market Price) delivered in repayment of the Convertible Debentures.

The Convertible Debentures are direct senior unsecured indebtedness of the Company, ranking equally and ratably with all other senior unsecured indebtedness, and senior to all subordinated indebtedness of the Company. None of the Company's subsidiaries has guaranteed the Convertible Debentures, and the Convertible Debentures do not limit the amount of debt that the Company or our subsidiaries may incur.

Description of Stock Option Plan

The Company has a stock option plan in place which is administered pursuant to the Third Amended and Restated 1997 Stock Option Plan (the "Stock Option Plan"). The Stock Option Plan provides for discretionary grants of stock options to certain key employees, consultants and directors (including non-employee directors) of the Company and its subsidiaries. Subject to certain other limitations, the maximum number of common shares authorized for issuance under the Stock Option Plan is 25,000,000 common shares (or approximately 9.6% of the issued and outstanding common shares of the Company). The Company proposes to amend and restate the Stock Option Plan at its upcoming annual and general meeting to: (i) increase the number of common shares issuable under the Stock Option Plan by 10,000,000, (ii) change the manner in which the exercise price is determined, and (iii) update certain provisions relating to the limits of insider participation. The amendments to the Stock Option Plan remain subject to shareholder approval.

The Stock Option Plan provides that it will terminate, unless earlier terminated in accordance with its terms, on the tenth anniversary of its approval. The Stock Option Plan was approved on May 6, 2010 at the annual general and special meeting of the Company's shareholders.

Description of Performance Share Unit Plan

In 2014, the Company introduced a performance share unit plan that provides for performance share units (“PSUs”) and restricted share units (“RSUs”). Each PSU represents one notional common share of the Company that is redeemed for cash based on the value of a common share of the Company at the end of a three year performance period, to the extent performance and vesting criteria have been met. Each RSU represents one notional common share of the Company that is redeemed for cash based on the value of a common share of the Company at the end of a vesting period. The PSU plan is designed to align management’s interests with those of shareholders through grants of PSUs and RSUs and will comprise at least fifty percent of our long term incentive plan for our executives.

Description of Deferred Share Unit Plan

The Company’s deferred share unit plan (the “DSU Plan”) was adopted on March 9, 2011 and was amended and restated as of March 14, 2016 (the “Restatement Effective Date”). The DSU Plan has been implemented for directors and executive officers of the Company to: (i) encourage the directors and executive officers of the Company to own common shares of the Company and to facilitate such common share ownership; and (ii) provide directors and executive officers of the Company with incentives in the form of deferred share units (“DSUs”) in order to allow the Company to reduce its reliance on stock options and other long-term incentive plans for the same purposes, so as to conform with current best practices regarding directors’ and executive officers’ compensation. The DSU Plan was amended to provide that DSUs issued on or after the Restatement Effective Date will no longer be redeemed for Common Shares issued by the Corporation from treasury. As of the Restatement Effective Date, 5,252,577 common shares (or approximately 2.02% of the issued and outstanding common shares) are available to be issued by the Company from treasury in respect of DSUs granted prior to the Restatement Effective Date and 820,135 common shares (or approximately 0.32% of the issued and outstanding common shares) have been issued by the Company from treasury pursuant to redeemed DSUs. Accordingly, the aggregate maximum number of common shares that may be issued under the DSU Plan is 6,072,712, representing approximately 2.3% of the outstanding common shares as of March 29, 2016. Pursuant to the DSU Plan, directors may elect to receive all or part of their retainer in DSUs having a market value equal to the portion of the retainer to be received in that form.

Description of Share Appreciation Rights Plan

In February 2012, the Company adopted a Share Appreciation Rights Plan (the “SARs Plan”) to provide incentive compensation based on the appreciation in value of the common shares over a specified period of time. Under the SARs Plan, the Company may from time to time grant awards of share appreciation rights (“SARs”) to current and future directors, executive officers, employees and consultants of the Company and/or its subsidiaries. The maximum number of SARs that may be granted to any participant in any one calendar year under the SARs Plan is 800,000. No SARs will be settled in shares; rather, all SAR exercises will be settled solely in cash.

Description of Warrants

In May 2015, the Company, as part of the consideration for the Term Loan, issued to Royal Gold 5 million warrants exercisable to purchase 5,000,000 common shares of Golden Star at \$0.27 per share for a period of four years from the date of the issuance of the warrants (which occurred on July 29, 2015).

MARKET FOR GOLDEN STAR SECURITIES

Our common shares trade on the TSX under the trading symbol GSC, on the NYSE MKT under the symbol GSS and on the Ghana Stock Exchange under the symbol GSR. As of March 29, 2016, 259,897,095 common shares were outstanding. On March 29, 2016, the closing price per share for our common shares as reported by the TSX was Cdn\$0.60 and as reported by the NYSE MKT exchange was \$0.46.

The following table sets forth the high, low and market closing prices per common share on a monthly basis as reported by the TSX and the NYSE MKT during the year ending December 31, 2015.

TSX: GSC	Cdn\$ High	Cdn\$ Low	Cdn\$ Close	Volume
January	0.45	0.25	0.40	3,241,060
February	0.43	0.37	0.40	951,135
March	0.42	0.31	0.31	950,128
April	0.32	0.24	0.26	1,152,857
May	0.51	0.24	0.44	4,124,602
June	0.45	0.37	0.40	432,367
July	0.40	0.29	0.30	685,631
August	0.31	0.24	0.24	1,083,035
September	0.31	0.24	0.26	339,648
October	0.36	0.26	0.28	950,622
November	0.30	0.25	0.26	814,359
December	0.26	0.20	0.24	731,216

NYSE MKT: GSS	US\$ High	US\$ Low	US\$ Close	Volume
January	0.36	0.21	0.32	57,569,427
February	0.34	0.30	0.32	14,473,686
March	0.34	0.24	0.24	13,577,037
April	0.26	0.20	0.22	18,424,979
May	0.42	0.20	0.35	38,383,179
June	0.36	0.30	0.34	7,296,239
July	0.34	0.22	0.23	13,374,020
August	0.25	0.18	0.19	16,676,293
September	0.24	0.18	0.20	8,301,999
October	0.28	0.20	0.22	12,813,245
November	0.24	0.19	0.19	12,098,377
December	0.20	0.14	0.17	13,129,137

DIRECTORS AND OFFICERS

As of March 29, 2016, executive officers and directors of the Company beneficially owned, or controlled or directed, directly or indirectly, 715,906 common shares of the Company, representing approximately 0.3% of the issued and outstanding common shares of the Company.

DIRECTORS

The Company's board of directors and senior management team have considerable experience conducting business in Ghana and elsewhere in Africa and certain members of our senior management team reside in Ghana.

Set forth below is information regarding the directors of Golden Star as the date of this annual information form.

Name and place of residence	Director since
TIM BAKER, Ontario, Canada ³	January 1, 2013
SAMUEL T. COETZER, Ontario, Canada	December 13, 2012
ANU DHIR, Ontario, Canada ^{1,2,3,4}	February 21, 2014
ROBERT E. DOYLE, Ontario, Canada ^{2,3,4}	February 2, 2010
TONY JENSEN, Colorado, USA	June 13, 2012
DANIEL OWIREDU, Greater Accra Region, Ghana	November 4, 2014
CRAIG J. NELSEN, Colorado, USA ^{1,4}	May 11, 2011
WILLIAM L. YEATES, Colorado, USA ^{1,2}	October 4, 2011

Notes:

1. Member of the Compensation Committee
2. Member of the Audit Committee
3. Member of the Nominating and Corporate Governance Committee
4. Member of the Corporate Responsibility Committee

The terms of office of each director of the Company will expire at the next annual meeting of shareholders of the Company or when their successors are duly elected or appointed.

Below is a biography of each of the directors of Golden Star:

Tim Baker

Mr. Baker was appointed Executive Chairman of the Company effective January 1, 2013. Mr. Baker's title was amended to non-Executive Chairman on November 1, 2013. Mr. Baker served as the Chief Operating Officer and Executive Vice President of Kinross Gold Corporation from June 2006 to November 2010. Mr. Baker, who earned his BSc in Geology from Edinburgh University in 1974, has substantial experience in operating mines and projects, including projects in Chile, the United States, Africa and the Dominican Republic. Prior to working with Kinross Gold Corporation, Mr. Baker served as an Executive General Manager of Placer Dome Chile, where he was responsible for the Placer Dome operations, including at the Zaldivar mine and Kinross-Placer joint venture at La Coipa as well as the Pueblo Viejo project in the Dominican Republic. Mr. Baker was an independent director of Eldorado Gold Corporation from May 2011 until December 2012; Pacific Rim Mining Corp. from March 2012 until November 2013, and Augusta Resources Corporation from September 2008 until September 2014. Mr. Baker has also been a Director of Antofagasta plc since March 2011 and Sherritt International since May 2014. Mr. Baker's extensive and ongoing experience as a director of a wide spectrum of companies, including as an executive of various mining companies, along with his ICD.D certification obtained from the Institute of Corporate Directors make him a vital part of the Board of Directors.

Samuel T. Coetzer

Mr. Coetzer was appointed President and Chief Executive Officer of the Company, effective January 1, 2013 and a director of the Company in December 2012. Prior to this appointment, he served the Company as Executive Vice President and Chief Operating Officer from March 2011 to December 2012. Mr. Coetzer is a mining engineer graduate from the University of Pretoria, a member of the World Gold Council and has over 25 years of international mining experience, having held increasing levels of responsibility in various mining companies including Xstrata Nickel, Xstrata Coal South Africa, and Placer Dome Inc. From September 2010 until joining the Company, he was the Senior Vice President of Red Back Integration at Kinross. Mr. Coetzer consulted to Kinross from February 2009 and was appointed in May 2009 as Senior Vice President, South American Operations for Kinross, serving in this role until September 2010. In this role, Mr. Coetzer was responsible for overseeing the Kinross assets in Brazil, Chile and Ecuador. From June 2007 to October 2008, Mr. Coetzer was the Chief Operating Officer of Xstrata Nickel, and from March 2006 to June 2007, he was the Chief Operating Officer of Xstrata Coal South Africa. Mr. Coetzer also has significant experience in Africa, having been with Placer Dome Inc.'s South African and Tanzanian operations, where he was Managing Director - South

Africa and the Executive General Manager – Tanzania, from 2003 to February 2006. Mr. Coetzer’s experience and expertise in managing mining operations of various mining companies positions him well to serve as the Chief Executive Officer and member of the Board. As Chief Executive Officer and formerly Chief Operating Officer of the Company, Mr. Coetzer has demonstrated strong leadership skills and extensive knowledge of operational issues facing the Company.

Anu Dhir

Ms. Dhir is a founder and Managing Director of Miniqs Limited (“Miniqs”), a private group primarily interested in resource projects capable of growth into major producing operations. Miniqs’ experience extends from early stage exploration projects, through to the successful development of a number of major mining projects throughout the world. Miniqs’ capabilities include the establishment of technical and project development teams; establishment of corporate structures and management teams; and major financing access through the global debt and equity markets. Prior to Miniqs, Ms. Dhir served as Vice President, Corporate Development and Company Secretary at Katanga Mining Limited a publicly listed mining company. Her portfolio of responsibilities at Katanga covered corporate development, investor relations, legal advisory, governance, and communications.

Ms. Dhir has a unique combination of business, operations and legal experience in the mining, oil and gas and technology sectors on several continents and a history of successfully developing and negotiating business development deals including joint ventures, mergers and acquisitions, and key partnerships. Ms. Dhir has also helped finance and lead private companies to the public markets and has helped companies heighten their profile and increase overall shareholder value.

Ms. Dhir was a director of Frontier Rare Earths, South Africa until January 2016 and served as its Chair of the Audit Committee and Lead Independent Director. Ms. Dhir was a director of Energulf Resources from August 2013 until September 2015. Ms. Dhir was the Lead Non-Executive Director and Chair of the Remuneration, Chair of the Investment Committee, member of the Audit and member of the Health, Safety and Sustainability Committees of Atlasta Resources Corporation, South Africa (TSX, NYSE, JSE) until 2014. She was also a Non-Executive Director of Great Basin Gold Limited, South Africa (TSX, NYSE, JSE) until 2013, and served as its Chair of the Corporate Governance Committee and member of its Remuneration Committee and Audit & Risk Committee until 2013. Ms. Dhir also served as a Non-Executive Director of Kazakh Compass Asset Fund Ltd, Kazakhstan until December 2012.

Robert E. Doyle

Mr. Doyle was Chief Executive Officer of Medoro Resources Ltd. from January 2008 to October 2009 (pursuant to a merger in June 2011, Medoro is now known as Gran Colombia Gold Corp.), a Canadian gold exploration and development company with activities in Africa and South America. Mr. Doyle was with Pacific Stratus Energy as Executive Vice President from 2005 through 2006, Chief Financial Officer from October 2006 to May 2007 and Vice President from March 2006 to May 2007. He also was Chief Financial Officer of Coalcorp Mining Inc. from November 2005 to May 2007 and Chief Financial Officer of Bolivar Gold Corp. from January 2003 to February 2006. Mr. Doyle served as a director of Gran Columbia Gold Corp. from April 2008 to July 2013, and as a director of NXA Inc. from June 2009 to February 2014. Mr. Doyle is also a Director of Detour Gold Corp. and Mandalay Resource Corp. Mr. Doyle, a chartered accountant and a chartered director, has over 30 years’ experience in all facets of international resource exploration, development and production. Mr. Doyle has a BA Honours from the Ivey Business School, University of Western Ontario. Mr. Doyle brings a broad skill set to the Board, including a thorough understanding of operations, accounting and financial strategy of international mining companies.

Tony Jensen

Mr. Jensen has over thirty years of progressive mining industry experience, including over twelve years with Royal Gold, Inc. and eighteen years with the Placer Dome Inc. group of companies. His background is anchored in operational experience gained in the United States and Chile where he served in senior mine management positions. This operational background is balanced by corporate administrative, finance and business development experience in various roles with Royal Gold and Placer Dome in San Francisco, California, Santiago, Chile and Denver, Colorado. Mr. Jensen has been serving as President and Chief Executive

Officer of Royal Gold Inc., a mining royalty company, since 2006. Previously, Mr. Jensen had served as the President and Chief Operating Officer of Royal Gold Inc. from 2003 to 2006. Mr. Jensen was elected to the board of directors of Royal Gold Inc. in 2004. He is a mining engineering graduate of the South Dakota School of Mines and Technology and holds a Certificate of Finance from Golden Gate University in San Francisco. In addition, Mr. Jensen is a member of the World Gold Council Board and Remuneration Committee, the National Mining Association Board and Finance Committee, and the Advisory Board of the South Dakota School of Mines and Technology. Mr. Jensen brings to the Board extensive operating knowledge and ongoing experience as an executive of companies involved in the global mining and mineral processing industries.

Craig J. Nelsen

Mr. Nelsen was a founder, and served as President, Chief Executive Officer and a member of the Board of Directors, of Avanti Mining Inc. (“Avanti”) from May 2007 to October 2013 and was Executive Chairman of Avanti until May 2014. From April 1999 to June 2007, Mr. Nelsen served as the Executive Vice-President, Exploration, for Gold Fields Limited. Mr. Nelsen was the founder, and served as Chairman of the board of directors, of Metallica Resources Inc. from 1994 to 2008, and was Metallica’s Chief Executive Officer from 1994 to 1999. In June 2008, a three company merger between Metallica, Peak Gold, and New Gold Inc. was finalized, forming a larger gold producer known as New Gold Inc., which is listed on both the Toronto Stock Exchange and NYSE MKT. From June 2008 until May 2012, Mr. Nelsen served as a member of the board of directors of New Gold Inc. Mr. Nelsen holds a M.S. degree in geology from the University of New Mexico and a B.A. degree in geology from the University of Montana. Mr. Nelsen’s experience includes, among other things, his knowledge in mineral property evaluation, including resource and reserve assessment; international mining; mergers and acquisitions; exploration and mine operations; health, safety, environment and community relations; company formation and strategic planning.

Daniel Owiredu

Mr. Owiredu joined Golden Star in September 2006 as Vice President, Operations and was appointed Executive Vice President, Operations and Chief Operating Officer in January 2013. He was subsequently appointed to the Board in November 2014. Mr. Owiredu has over 30 years of experience in the mining sector in Ghana and West Africa, and holds a BSc degree in Mechanical Engineering from the Kwame Nkrumah University of Science & Technology, Kumasi and an MBA degree from Strathclyde Business School in Scotland, UK. Prior to joining Golden Star, Mr. Owiredu was Deputy Chief Operating Officer, Africa for AngloGold Ashanti where he successfully managed the construction and operation of the Bibiani mine as well as the operation of the Siguiri, Obuasi and Fred Rebecca mines. Mr. Owiredu has made a significant contribution to mining in Ghana as the country’s former President of the Chamber of Mines and more recently in his appointment as Chairman of the board of directors of the Ghana Commercial Bank.

William L. Yeates

Mr. Yeates was one of the founding partners of Hein & Associates LLP (“Hein”). He previously served on Hein’s Executive Committee and was their National Director of Auditing and Accounting for many years. He retired from Hein in 2013. He has over 40 years of auditing experience working with public companies specializing in extractive industries. From 2005 to 2009, Mr. Yeates served on the Financial Accounting Standards Advisory Council. He also has served on: the Professional Practice Executive Committee of the Center for Audit Quality; the Executive Committee of the Center for Public Company Audit Firms of the American Institute of Certified Public Accountants (“AICPA”); the SEC Practice Section Executive Committee and the SEC Regulations Committee of the AICPA. In addition to being a Certified Public Accountant, Mr. Yeates holds an MBA in accounting and a B.S. in finance and marketing from the University of Colorado. Mr. Yeates’ extensive experience as an auditor for companies in extractive industries and involvement in numerous accounting committees enables him to provide the Board with valuable insight in the areas of financial reporting and strategic planning.

OFFICERS

The following table sets forth the names of each of the executive officers of Golden Star and all offices held by each of them as of the date of this annual information form.

Name	Office Held
SAMUEL T. COETZER, Ontario, Canada	President and Chief Executive Officer
ANDRÉ VAN NIEKERK, Ontario, Canada	Executive Vice President and Chief Financial Officer
DANIEL OWIREDU, Greater Accra Region, Ghana	Executive Vice President and Chief Operating Officer
MARTIN RAFFIELD, Colorado, USA	Senior Vice President, Technical Services
S. MITCHEL WASEL Western Region, Ghana	Vice President, Exploration
BRUCE HIGSON-SMITH, Colorado, USA	Senior Vice President, Corporate Strategy
KAREN WALSH, Wisconsin, USA	Vice President, People and Organizational Development

The following sets forth biographical information for each of the above executive officers of Golden Star who is not also a director of Golden Star:

André van Niekerk

Mr. van Niekerk joined Golden Star in 2006. André spent almost five years in Ghana as the head of finance and business operations, after which he was transferred back to the corporate office to take the role of Vice-President & Controller. André was appointed to the role of EVP & CFO in April 2014. While based in Ghana, André was Vice Chairman of the Ghanaian Chamber of Mines Energy Committee and a member of the Chamber of Mines Finance Committee. Prior to joining Golden Star, André spent six years with KPMG serving clients in the mining and oil and gas industries.

Dr. Martin Raffield

Dr. Raffield was hired by Golden Star Resources in August 2011 as Senior Vice President, Technical Services. From June 2008 until the time Dr. Raffield joined Golden Star, he worked as Principal Consultant and Practice Leader for SRK Consulting (US) Ltd in Denver. Dr. Raffield started his career in 1992 in South Africa working in geotechnical engineering at a number of deep level gold mines for Johannesburg Consolidated Investments. In 2000, he relocated to Canada with Placer Dome and held the positions of Chief Engineer and Mine Superintendent at their Campbell Mine. Dr. Raffield moved to Breakwater Resources, Myra Falls Operation in 2006 and held the position of Manager of Mining until moving to SRK in 2007. Dr. Raffield has a Ph.D. in geotechnical engineering from the University of Wales and is a Professional Engineer registered in Ontario, Canada.

S. Mitchel Wasel

Mr. Wasel has served as Vice President Exploration since September 2007, prior to which he served the Company as Regional Exploration Manager for West Africa from March 2004. Mr. Wasel served as the Company's Exploration Manager - Ghana from 2000 to March 2004. Mr. Wasel has acted in various other roles with the Company since 1993 when he commenced his service with the Company as an exploration geologist, where he worked in the Company's regional exploration program in Suriname and later with the Gross Rosebel project, ultimately as Project Manager. Prior to joining the Company, he worked with several companies in northern Canada in both exploration and mine geology.

Bruce Higson-Smith

Mr. Higson-Smith has served as Senior Vice President, Corporate Strategy since January 2013. Prior to that, he served the Company as Senior Vice President Finance and Corporate Development from January 2012 to January 2013 and Vice President, Corporate Development from September 2003 to January 2012. Mr. Higson-Smith is a qualified mining engineer with over 25 years of experience in the mining business. Following several years in underground mining operations in Africa and after earning an MBA in finance, Mr. Higson-Smith spent 10 years reviewing projects, conducting due diligence, negotiating and structuring mining transactions around the world, initially with the Castle Group, a mining investment management company, and then with Resource

Capital Funds. Since joining the Company in 2003, he has been responsible for evaluating and executing M&A opportunities for the Company and also spent a year in Ghana as General Manager of Bogoso.

Karen Walsh

Ms. Walsh has served as Vice President People and Organizational Development since July 2012. Prior to joining the Company, Ms. Walsh did consulting work for six years in the mining industry from September 2007 to July 2012. Prior to that, Ms. Walsh was Vice President, Human Resources for Placer Dome Inc. from 2005 to August 2006. Ms. Walsh has over 25 years of experience in the mining industry with a broad range of human resources expertise including recruiting, succession planning, cultural change initiatives, HR process optimization, project development feasibility studies, global leadership development and performance management.

CEASE TRADE ORDERS, BANKRUPTCIES, PENALTIES OR SANCTIONS

Except as described below, the best of Golden Star's knowledge, no director or executive officer of Golden Star or a shareholder holding a sufficient number of securities to affect materially the control of Golden Star is, or within the ten years prior to the date hereof has been, a director or executive officer of any company (including Golden Star) that, while that person was acting in that capacity: (i) was the subject of a cease trade or similar order or an order that denied the relevant company access to any exemption under securities legislation, for a period of more than 30 consecutive days; (ii) was subject to an event that resulted, after the director or executive officer ceased to be a director or executive officer, in the company being the subject of a cease trade or similar order or an order that denied the relevant company access to any exemption under securities legislation for a period of more than 30 consecutive days; or (iii) within a year of that person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets.

Ms. Dhir, a director of the Company, served as a director of Great Basin Gold Ltd. ("Great Basin") in 2011, a public listed mining company. Prior to Ms. Dhir becoming a director of Great Basin, Great Basin had issued certain loans and debentures which ultimately caused its insolvency in 2012 (disclosed under Great Basin's profile at www.sedar.com). Ms. Dhir resigned in mid-2013 after Great Basin and certain affiliates had sought creditor protection in connection with these loans and debentures.

CONFLICT OF INTEREST

To the best of Golden Star's knowledge, and other than as disclosed in this Annual Information Form, in the notes to Golden Star's financial statements and in management's discussion and analysis of financial condition and results of operations ("MD&A"), there are no known existing or potential conflicts of interest between Golden Star and any director or officer of Golden Star. Certain of the directors and officers of Golden Star serve as directors and officers of other public companies and therefore it is possible that a conflict may arise between their duties as a director or officer of Golden Star and their duties as a director or officer of such other companies.

The directors and officers of Golden Star are aware of the existence of laws governing accountability of directors and officers for corporate opportunity and requiring disclosure by directors of conflicts of interest and Golden Star will rely upon such laws in respect of any directors' and officers' conflicts of interest or in respect of any breaches of duty by any of its directors or officers. All such conflicts will be disclosed by such directors or officers in accordance with the *Canada Business Corporations Act* and they will govern themselves in respect thereof to the best of their ability in accordance with the obligations imposed upon them by law.

INTERNAL CONTROLS

As a reporting issuer in the United States, the Company must comply with the controls and reporting provisions set out in the *Sarbanes-Oxley Act of 2002*. As such, the Company has established a control matrix for each mining site (and controls at each corporate level). The Company's internal controls include 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 and that are intended to 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.

AUDIT COMMITTEE

AUDIT COMMITTEE CHARTER

The written charter of the Audit Committee is disclosed as Schedule "A" to this Annual Information Form.

COMPOSITION OF THE AUDIT COMMITTEE

The Audit Committee has three members: Anu Dhir, Robert E. Doyle and William L. Yeates, all of whom are independent. All members of the Audit Committee are financially literate for the purposes of National Instrument 52-110 - *Audit Committee* ("NI-52-110").

RELEVANT EDUCATION AND EXPERIENCE

See "*Directors and Officers - Directors*" for the biography of each Audit Committee member, including the education and experience of each Audit Committee member that is relevant to the performance of responsibilities as an Audit Committee member. Each committee member maintains an understanding of the detailed responsibilities of committee membership and the Company's business, operations and risks.

RELIANCE ON CERTAIN EXEMPTIONS

At no time since the commencement of the Company's most recently completed financial year has the Company relied on an exemption in Section 2.4 of NI 52-110 (De Minimis Non-audit Services), Section 3.2 of NI 52-110 (Initial Public Offerings), Section 3.3(2) of NI 52-110 (Controlled Companies), Section 3.4 of NI 52-110 (Events Outside Control of Member), Section 3.5 of NI 52-110 (Death, Disability or Resignation of Audit Committee Member) or Section 3.6 of NI 52-110 (Temporary Exemption for Limited and Exceptional Circumstances), or an exemption from NI 52-110, in whole or in part, granted under Part 8 of NI 52-110 (Exemptions) or on Section 3.8 of NI 52-110 (Acquisition of Financial Literacy).

AUDIT COMMITTEE OVERSIGHT

At no time since the commencement of the Company's most recently completed financial year was a recommendation of the Audit Committee to nominate or compensate an external auditor not adopted by the Board.

PRE-APPROVAL POLICIES AND PROCEDURES

The Audit Committee has established a policy requiring pre-approval of all permissible non-audit services performed by the independent auditors. Such services may be approved at a meeting or by unanimous written consent of the Audit Committee, or the Audit Committee may delegate to one or more of its members the pre-approval of audit services and permissible non-audit services provided that any pre-approval by such member or members shall be presented to the Audit Committee at each of its scheduled meetings.

EXTERNAL AUDITOR SERVICE FEES

The aggregate fees billed by the Company's external auditor in the last two fiscal years ended December 31, 2015 and 2014 are as follows:

Financial Year Ended	Audit Fees⁽¹⁾	Audit-Related Fees⁽²⁾	Tax-Related Fees⁽³⁾	All Other Fees⁽⁴⁾	Total
December 31, 2015	CAD\$709,131	-	-	CAD\$10,508	CAD\$719,639
December 31, 2014	CAD\$779,737	-	CAD\$53,277	CAD\$32,540	CAD\$865,554

Notes:

- (1) The aggregate audit fees billed for the audit of the financial statements for the financial year indicated, including with respect to the Company's internal control over financial reporting, quarterly review of financial statements and fees related to review of prospectus and other registration statements.
- (2) Includes fees related to the services provided by the Company's external auditor that are reasonably related to the performance of the audit or review of financial statements.
- (3) Includes fees related to assistance in filing annual tax returns and tax planning and any other fees billed for professional services rendered by external auditor for tax compliance, tax advice, and tax planning.
- (4) Includes other fees, any other products and services provided by external auditor, other than services reported above. The fees for 2015 and 2014 related to services rendered with respect to enterprise risk management.

INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS

Except as described below, there are no material interests, direct or indirect, of any executive officer, or any shareholder who beneficially owns, directly or indirectly, more than 10% of the outstanding common shares or any known associate or affiliate of such persons, in any transaction during the three most recently completed financial years or during the current financial year which has materially affected or would materially affect the Company or a subsidiary of the Company.

In May 2015, the Company's wholly-owned subsidiary, Caystar Finance, entered into the Stream Transaction and Term Loan with RGLD, a subsidiary of Royal Gold, and Royal Gold, respectively. One of the Company's directors, Tony Jensen, serves as President and Chief Executive Officer of Royal Gold and Chairman of RGLD. Mr. Jensen did not participate in the meetings to approve, and abstained from voting on, the Stream Transaction and Term Loan during the Company's meeting of the directors to approve the transactions. See "General Development of the Business - Three Year History".

TRANSFER AGENT AND REGISTRAR

The transfer agent and registrar for Golden Star's common shares is CST Trust Company at its principal offices at 1066 West Hastings Street, Suite 1600, Vancouver, British Columbia, Canada V6E 3X1 and 320 Bay Street, Toronto, Ontario, Canada M5H 4A6, telephone 1-800-387-0825.

MATERIAL CONTRACTS

The only material contracts entered into by the Company within the financial year ended December 31, 2015 or before such time that are still in effect, other than in the ordinary course of business, are as follows:

- The Convertible Debentures. See "Risk Factors - General Risks".
- The Ecobank II Loan. See "General Development of the Business -Three Year History".
- The Stream Transaction. See "General Development of the Business -Three Year History".
- The Term Loan. See "General Development of the Business -Three Year History".

INTEREST OF EXPERTS

The Company's independent auditor for fiscal 2015, PricewaterhouseCoopers LLP, Chartered Professional Accountants, Licensed Public Accountants ("PwC"), have audited the consolidated financial statements of Golden Star for the two years ended December 31, 2015. In connection with their audits, PwC has confirmed that they are independent within the meaning of the Rules of

Professional Conduct of the Chartered Professional Accountants of Ontario and with Public Company Accounting Oversight Board's Rule 3520, Auditor Independence.

Dr. Martin Raffield and Mr. Mitch Wasel are the QPs who supervised the preparation of the property descriptions contained herein and the Company's mineral reserve and mineral resource estimates as at December 31, 2015. Dr. Raffield and Mr. Wasel are officers of the Company and beneficially owned, directly or indirectly, less than 1% of any class of shares of the Company's outstanding shares at the time of the preparation of the mineral reserve and resource estimates and the Technical Reports.

The Company's Wassa Underground Feasibility Study and Prestea Underground Feasibility Study were prepared by the independent consulting firm, SRK under the supervision of Mike Beare, Rod Redden, Neil Marshall, Chris Bray, Paul Riley, Dr. John Willis, Yao Hua (Benny) Zhang, Ken Reipas, Dr. Tony Rex, Jane Joughin and Kris Czajewski (the "SRK QP's") and Brian Prosser of MVS and S. Mitchel Wasel and Dr. Martin P. Raffield, officers of the Company, each of whom is a "qualified person" for the purposes of NI 43-101. The SRK QP's, Brian Prosser, Dr. Martin P. Raffield and S. Mitchell Wasel beneficially owned, directly or indirectly, less than 1% of any class of shares of the Company's outstanding shares at the time of the preparation of Wassa Underground and Prestea Underground Feasibility Study.

ADDITIONAL INFORMATION

Additional information relating to the Company can be found on SEDAR at www.sedar.com. Additional information, including directors' and officers' remuneration and indebtedness, principal holders of the Company's securities and securities authorized for issuance under equity compensation plans is contained in the management information circular of the Company filed for its most recent annual meeting of shareholders. Additional financial information is provided in the Company's audited consolidated financial statements and the MD&A for the financial year ended December 31, 2015.

SCHEDULE “A”

GOLDEN STAR RESOURCES LTD.

Audit Committee Charter

There shall be a committee of the Board of Directors (the “Board”) of Golden Star Resources Ltd., a Canadian corporation (“Golden Star”), to be known as the Audit Committee (the “Committee”) whose membership, authority and responsibilities shall be as set out in this Charter.

PRIMARY FUNCTION

The primary function of the Committee is to assist the Board in fulfilling its oversight responsibilities, primarily through (a) overseeing the integrity of Golden Star’s financial statements and financial reporting process and Golden Star’s systems of internal accounting and financial controls; (b) overseeing the performance of the internal auditors; (c) recommending the selection of, retaining and monitoring the independence and performance of Golden Star’s outside auditors, including overseeing the audits of Golden Star’s financial statements, and approving any non-audit services; and (d) facilitating communication among the outside auditors, management, internal auditors and the Board.

MEMBERSHIP

Following each annual meeting of the shareholders of Golden Star, the Board shall elect no fewer than three directors (the “Members”) to the Committee and shall appoint one of the Members to chair the Committee. Each Member shall meet the independence requirements imposed by applicable law and stock exchange requirements (the “Listing Rules”).

The Committee may form and delegate authority to subcommittees when and where appropriate.

Any Member may be removed from office or replaced at any time by the Board and shall cease to be a Member upon ceasing to be a director. Each Member shall hold office until the close of the next annual meeting of shareholders of Golden Star or until the Member ceases to be a director, resigns or is removed or replaced, whichever first occurs.

A Member shall be considered independent if (a) he or she is not currently and has not been during the past three years, an employee or executive officer of Golden Star or its subsidiaries, other than as allowed by law and the Listing Rules; (b) he or she has not accepted, directly or indirectly, any consulting, advisory or other compensatory fee from Golden Star or its subsidiaries other than in connection with serving on the Committee, any other Board committee or as a Board member; (c) he or she is not an “affiliated person” of Golden Star or any Corporation subsidiary as defined by rules of the Securities and Exchange Commission (“SEC”), including Rule 10A-3 under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and the Listing Rules; (d) he or she does not have a “material relationship” with Golden Star as defined by National Instrument 52-110 - *Audit Committees* (“NI 52-110”); and (e) he or she meets all other requirements for independence imposed by law and the Listing Rules from time to time and any requirements imposed by any applicable body having jurisdiction over Golden Star.

No Member shall have participated in the preparation of the financial statements of Golden Star or its subsidiaries at any time during the past three years.

All Members shall from and after the time of their respective appointments to the Committee have a practical knowledge of finance and accounting and be able to read and understand financial statements that present a breadth and level of complexity of accounting issues that are generally comparable to the breadth and complexity that can reasonably be expected to be raised by Golden Star’s financial statements. In addition, Members may be required to participate in continuing education if required by applicable law or the Listing Rules.

At least one of the Members shall be a “financial expert” as defined in the applicable SEC and NYSE rules and regulations, and at least one of the Members shall meet the financial sophistication standards under the Listing Rules.

MEETINGS

The Committee shall meet as frequently as is necessary to carry out its responsibilities, but at least quarterly, at such times and location determined by the Committee chairman. The Committee is governed by the rules regarding meetings (including meetings by conference telephone or similar communications equipment), action without meetings, notice, waiver of notice, and quorum and voting requirements as are applicable to the Board.

The Committee is authorized and empowered to adopt its own rules of procedure not inconsistent with (a) any provision of this Charter, (b) any provision of the constating documents or bylaws of Golden Star, or (c) applicable law and Listing Rules.

In the absence of the Committee chairman for any meeting, the Members shall elect a chairman from those in attendance to act as chairman of that meeting.

REPORTING

Following meetings of the Committee, the Committee chairman shall report to the Board issues before the Committee and actions taken by the Committee.

RESPONSIBILITIES, DUTIES AND POWERS

1. The Committee’s principal responsibility is one of oversight. Golden Star’s management is responsible for preparing Golden Star’s financial statements, and Golden Star’s outside auditors are responsible for auditing and reviewing those financial statements. In carrying out these oversight responsibilities, the Committee is not providing any expert or special assurance as to Golden Star’s financial statements or any professional certification as to the outside auditors’ work.
2. The designation or identification of a Member as a “financial expert” or “financially literate” does not impose on such person any duties, obligations, or liability that are greater than the duties, obligations, and liability imposed on such person as a Member of the Committee and Board in the absence of such designation or identification; and the designation or identification of a Member as a “financial expert” or “financially literate” does not affect the duties, obligations, or liability of any other Member or Board member.
3. The Committee’s specific responsibilities and powers are as set forth below.

General Duties And Responsibilities

- Periodically review with management and the outside auditors the applicable law and the Listing Rules relating to the qualifications, activities, responsibilities and duties of audit committees and compliance therewith, and also take, or recommend that the Board take, appropriate action to comply with such law and rules.
- Review, at least annually, the Committee’s duties, responsibilities and performance and determine if any changes in practices of the Committee or amendments to this Charter are necessary.
- Meet separately at least annually with each of Golden Star’s senior management, including its Chief Financial Officer, Director of Internal Audit, Controller and outside auditors in separate executive sessions to discuss any matters that the Committee or each of these persons believes should be discussed privately.
- Establish procedures for: (a) the receipt, retention and treatment of complaints received by Golden Star regarding accounting, internal accounting controls or auditing matters; and (b) the confidential, anonymous submission by employees of Golden Star of concerns regarding questionable business conduct, accounting or auditing matters.

- Retain, at Golden Star's expense, independent counsel, accountants or other advisors for such purposes as the Committee, in its sole discretion, determines to be appropriate to carry out its responsibilities.
- Determine the necessary funding for the payment of: (a) compensation to outside auditors engaged for the purpose of preparing or issuing an audit report or performing other audit, review or attest services for Golden Star; (b) compensation to any advisors employed by the Committee and (c) ordinary administrative expenses of the Committee that are necessary or appropriate in carrying out its duties.
- Review and approve Golden Star's hiring policies regarding partners, employees, former partners and former employees of the present and former external auditor of Golden Star.
- Prepare or approve annual reports of the Committee for inclusion in the management information circular for Golden Star's annual meetings.
- Investigate any matter brought to its attention related to reports of improper business conduct, financial, accounting and audit matters and have full access to all books, records, facilities and personnel of Golden Star.
- Undertake such additional responsibilities as from time to time may be delegated to it by the Board, required by Golden Star's articles or bylaws or required by law or Listing Rules.

Auditor Independence

- Be directly responsible for the recommendation of, appointment of, compensation, retention, termination and oversight, subject to the requirements of applicable law, of the work of any outside auditor engaged by Golden Star for the purpose of preparing or issuing an audit report or performing other audit, review or attest services. The outside auditors shall report directly to the Committee.
- Receive from the outside auditors, review and discuss not less frequently than annually, a formal written statement delineating all relationships between the outside auditors and Golden Star which may impact the objectivity and independence of the outside auditors, and other applicable standards. The statement shall include a description of all services provided by the outside auditors and the related fees. The Committee shall actively discuss any disclosed relationships or services that may impact the objectivity and independence of the outside auditors and take appropriate action to satisfy itself of the independence of the auditors.
- Pre-approve all engagement letters and fees for all auditing services (including providing comfort letters in connection with securities offerings) and permitted non-audit services performed by the outside auditors, subject to any de minimus exception under Section 10A(i)(1)(B) of the Exchange Act and Section 2.4 under NI 52-110 and any rules promulgated thereunder. Pre-approval authority may be delegated to one or more independent Members, and any such Member shall report any decisions to the full Committee at its next scheduled meeting. The Committee shall not approve an engagement of outside auditors to render non-audit services that are prohibited by law or the Listing Rules.
- Obtain annual assurance from the outside auditors that they (a) have complied with Section 10A (Audit Requirements), of the Exchange Act and the rules promulgated thereunder, and (b) they know of no violation of Rule 13b2-2 (Representations and Conduct in Connection with the Preparation of Required Reports and Documents) of the Exchange Act having occurred.
- Review with the outside auditors, at least annually, the auditors' internal quality control procedures and any material issues raised by the most recent internal quality peer review of the outside auditors.

Internal Control and Compliance with Corporate Business Conduct Or Ethics Policies

- Review annually the adequacy and quality of Golden Star's financial and accounting staff, the need for and scope of internal audit reviews, and the plan, budget and the designations of responsibilities for any internal audit.
- Review the performance and material findings of internal audit reviews.

- Review annually, evaluate and discuss with the outside auditors, management and internal audit, management's report on internal controls over financial reporting and the related auditor's report, when and as required by Section 404 of the Sarbanes-Oxley Act and National Instrument 52-109 - *Certification of Disclosure in Issuers' Annual and Interim Filings*. Discuss any significant deficiencies in the design or operation of the Company's internal controls, material weaknesses in internal controls, any fraud (regardless of materiality), as well as any significant changes in internal controls implemented by management during the most recent reporting period. Determine whether any internal control recommendations made by outside auditors have been implemented by management.
- Review major financial risk exposures and the guidelines, policies and insurance that management has put in place to govern the process of assessing, controlling, managing and reporting such exposures. Receive reports from officers responsible for oversight of any particular financial risks within the Golden Star upon change of any relevant policy, practice or circumstance within their department.
- Review and evaluate at least annually Golden Star's policies and procedures for maintaining and investing cash funds and for hedging (metals, foreign currency, etc.) as detailed in the corporate treasury policy. Approve any variations from the corporate treasury policy that may be required from time to time.
- Evaluate whether management is setting the appropriate tone at the top by communicating the importance of: internal controls; ethics and conduct codes; and ensuring that all supervisory and accounting employees understand their roles and responsibilities with respect to internal controls.
- Review with outside auditors and legal counsel, as the Committee deems appropriate, actions taken to ensure compliance with the code of ethics or conduct for Golden Star established by the Board.

Annual And Interim Financial Statements

- Review, evaluate and discuss with Golden Star's management and outside auditors (a) the nature and extent of any significant changes in Canadian accounting principles including under international financial reporting standards ("IFRS"), (b) the application of accounting principles and significant accounting and reporting principles, (c) practices and procedures applied in preparing the financial statements, (d) all critical accounting policies and practices to be used, (e) any major changes to Golden Star's accounting or reporting principles, practices or procedures, including those required or proposed by professional or regulatory pronouncements and actions, as brought to its attention by management or the outside auditors, (f) information related to significant unusual transactions, including the business rationale for such transactions, and (g) any material written communications between the outside auditors and management, such as any management letter or schedule of unadjusted differences.
- Review and discuss with outside auditors alternative treatments of financial information under generally accepted accounting principles including IFRS, including pro forma financial information, the ramifications of each treatment and the method preferred by the outside auditors.
- Review the scope, plan and procedures to be used on the annual audit and receive confirmation from the outside auditors that no limitations have been placed on the scope or nature of their audit scope, plan or procedures.
- Review the results of any difficulties, differences or disputes with management encountered by the outside auditors during the course of the audit or reviews and be responsible for overseeing the resolution of such difficulties, differences and disputes.
- Review, evaluate and discuss with the outside auditors and management Golden Star's audited annual financial statements and other information that is to be included in Golden Star's annual information form, annual financial statements and the Form 40-F (or such other annual report as may be required by the rules and regulations of the SEC), including the disclosures in respect of Golden Star's "management's discussion and analysis of financial condition and results of operations", and the results of the outside auditors' audit of Golden Star's annual financial statements, including the accompanying notes, and the outside auditors' report, and determine whether to recommend to the Board that the financial statements are satisfactory in form and substance for filing on SEDAR and with the SEC. Review and discuss with the

outside auditors and management Golden Star's quarterly financial statements and other information to be included in Golden Star's quarterly management discussion and analysis of financial condition and results of operations, prior to filing such reports on SEDAR and with the SEC.

Related Party Transactions

- Review and oversee any transaction exceeding US\$120,000 or otherwise material to Golden Star involving Golden Star and a related party, and review any other related party transactions.

Earnings Press Releases

- Review and discuss with management and the outside auditors prior to release all earnings press releases of Golden Star, as well as any financial information and/or earnings guidance, if any, to be provided by Golden Star to analysts and rating agencies.

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