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

FORM 6-K

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

For the month of November 2016

Commission File Number 001-12284

GOLDEN STAR RESOURCES LTD.

(Translation of registrant's name into English)

150 King Street West
Suite 1200
Toronto, Ontario
M5H 1J9, Canada
(Address of principal executive office)

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

Form 20-F ☐ Form 40-F ☑

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

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

Indicate by check mark whether the registrant by furnishing the information contained in this Form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.

Yes ☐ No ☑

If "Yes" is marked, indicate below the file number assigned to the registrant in connection with Rule 12g3-2(b): ____

INCORPORATION BY REFERENCE

Exhibits 99.1 and 99.2 included in this report on Form 6-K are each hereby incorporated by reference in the Registration Statements on Form S-8 of the Registrant as each may be amended from time to time (File Nos. 333-105820, 333-105821, 333-118958, 333-169047, 333-175542 and 333-211926) and Form F-10, as may be amended from time to time (File No. 333-196906) to the extent not superseded by documents or reports subsequently filed by us under the Securities Act of 1933 or the Securities Exchange Act of 1934, in each case as amended.

SIGNATURES

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

GOLDEN STAR RESOURCES LTD.

Date: November 2, 2016

(signed) André van Niekerk

André van Niekerk
Executive Vice President and Chief Financial Officer

EXHIBIT INDEX

Exhibit	Description of Furnished Exhibit
99.1	Management's Discussion and Analysis for the three and nine months ended September 30, 2016
99.2	Condensed Interim Consolidated Financial Statements for the three and nine months ended September 30, 2016 and September 30, 2015
99.3	Form 52-109F2 - Certification of Interim Filing - CEO
99.4	Form 52-109F2 - Certification of Interim Filing - CFO

Management's Discussion and Analysis

For the Three and Nine Months Ended September 30, 2016

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

The following discussion and analysis provides information that management believes is relevant to an assessment and understanding of the consolidated financial condition and results of operations of Golden Star Resources Ltd. and its subsidiaries("Golden Star" or "the Company" or "we" or "our"). This Management’s Discussion and Analysis of Financial Condition and Results of Operations ("MD&A") should be read in conjunction with the Company's audited consolidated financial statements and related notes for the year ended December 31, 2015 and the unaudited condensed interim consolidated financial statements and related notes for the three and nine months ended September 30, 2016 and September 30, 2015 , which are prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB"). This MD&A includes information available to, and is dated, November 2, 2016 . Unless noted otherwise, all currency amounts are stated in U.S. dollars and all information presented in this MD&A is prepared in accordance with IFRS.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING INFORMATION

This MD&A contains “forward-looking information” within the meaning of applicable Canadian securities laws and “forward-looking statements” within the meaning of the United States Private Securities Litigation Reform Act of 1995, concerning the business, operations and financial performance and condition of Golden Star. Generally, forward-looking information and statements can be identified by the use of forward-looking terminology such as “plans”, “expects”, “is expected”, “budget”, “scheduled”, “estimates”, “forecasts”, “intends”, “anticipates”, “believes” or variations of such words and phrases (including negative or grammatical variations) or statements that certain actions, events or results “may”, “could”, “would”, “might” or “will be taken”, “occur” or “be achieved” or the negative connotation thereof. Forward-looking information and statements in this MD&A include, but are not limited to, information or statements with respect to: production and cash operating costs estimates for 2016; the achievement of full year guidance for 2016 at Wassa and Prestea; the timing for transforming Wassa and Prestea into lower cost producers; the impact of the brownfield underground development projects at Wassa and Prestea on the Company; the ability of the Company to transform into a reliable and stable low cost producer when both underground projects are in full production and the timing for such production; Wassa and Prestea Underground mines being in commercial production by the end of 2017 and full production in 2018; mining of the F Shoot stopes at Wassa Underground during the fourth quarter of 2016 and the dilution and the time for mining the B Shoot at Wassa Underground and the impact on 2016 production from Wassa Underground; sustaining and development capital expenditures estimates for 2016; total capital expenditures expected to be incurred at Prestea Underground and Wassa in 2016; the change to Alimak stoping at Prestea Underground mine and the safety and efficiency of such method of mining at Prestea Underground mine; the timing of stoping at Prestea Underground mine; expected funding under the Streaming Agreement (as defined herein); the sufficiency of the Company’s existing cash balance; Prestea open pit continuing to deliver better than expected mining rates and grades for the remainder of 2016; the ounces and grade of, and timing for mining at Mampon; the remaining proceeds from the Streaming Agreement and expected mine operating margin to fund operations and capital expenditures as required for the development of the Wassa Underground and the Prestea Underground mines; the timing for and payment by RGLD (as defined below) of the final $10.0 million of scheduled advance payment pursuant to the Streaming Agreement; the savings in interest charges during the remainder of 2016 resulting from the repayment of Ecobank loan II; working capital, debt repayments and requirements for additional capital; the timing for providing an update of the Company's exploration strategy; and the ability of the Company to repay the outstanding principal amount of the 5% Convertible Debentures when due or to restructure them or make alternate arrangements.

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

Forward-looking information and statements are subject to known and unknown risks, uncertainties and other important factors that may cause the actual results, performance or achievements of Golden Star to be materially different from those expressed or implied by such forward-looking information and statements, including but not limited to: risks related to international operations, including economic and political instability in foreign jurisdictions in which Golden Star operates; risks related to current global financial conditions; actual results of current exploration activities; environmental risks; future prices of gold; possible variations in mineral reserves and mineral resources, grade or recovery rates; mine development and operating risks; an inability to obtain power for operations on favourable terms or at all; mining plant or equipment breakdowns or failures; an inability to obtain products or services for operations or mine development from vendors and suppliers on reasonable terms, including pricing, or at all; accidents, labor disputes and other risks of the mining industry; delays in obtaining governmental approvals or financing or in the completion of development or construction activities; risks related to indebtedness and the service of such indebtedness, as well as those factors discussed in the section entitled “Risk Factors” in Golden Star's Annual Information Form for the year ended December 31, 2015. Although Golden Star has attempted to identify important factors that could cause actual results, performances and achievements to differ materially from those contained in forward-looking information and statements, there may be other factors that cause results, performance and achievements not to be as anticipated, estimated or intended. There can be no assurance that such statements will prove to be accurate, as actual results, performance, and achievements and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking information and statements. Forward-looking information and statements are made as of the date hereof and accordingly are subject to change after such date. Except as otherwise indicated by Golden Star, these statements do not reflect the potential impact of any non-recurring or other special items or of any dispositions, monetizations, mergers, acquisitions, other business combinations or other transactions that may be announced or that may occur after the date hereof. Forward-looking information and statements are provided for the purpose of providing information about management's current expectations and plans and allowing investors and others to get a better understanding of the Company's operating environment. Golden Star does not undertake to update any forward-looking information and statements that are included in this MD&A, except as required by applicable securities laws.

CAUTIONARY NOTE REGARDING RESERVES AND RESOURCES

Scientific and technical information contained in this MD&A was reviewed and approved by Dr. Martin Raffield, Senior Vice- President, Technical Services for Golden Star who is a “qualified person” as defined by National Instrument 43-101 - Standards of Disclosure for Mineral Projects (“NI 43-101”) and by S. Mitchel Wasel, BSc Geology who is a Qualified Person pursuant to NI 43-101. Mr. Wasel is Vice President Exploration for Golden Star and an active member of the Australasian Institute of Mining and Metallurgy. All mineral reserves and mineral resources have been calculated in accordance with the standards of the Canadian Institute of Mining, Metallurgy and Petroleum (“CIM”) and in compliance with the requirements of NI 43-101. All mineral resources are reported inclusive of mineral reserves. Mineral resources which are not mineral reserves do not have demonstrated economic viability. Information on data verification performed on, and other scientific and technical information relating to, the mineral properties mentioned in this MD&A that are considered to be material mineral properties of the Company are contained in Golden Star's Annual Information Form for the year ended December 31, 2015 and the following current technical reports for those properties available at www.sedar.com: (i) Wassa - "NI 43-101 Technical Report on feasibility study of the Wassa open pit mine and underground project in Ghana” effective date December 31, 2014; (ii) Bogoso - “NI 43-101 Technical Report on Resources and Reserves Golden Star Resources Ltd., Bogoso Prestea Gold Mine, Ghana” effective date December 31, 2013; and (iii) Prestea Underground - “NI 43-101 Technical Report on a Feasibility Study of the Prestea Underground Gold Project in Ghana" effective date November 3, 2015.

Cautionary Note to U.S. Investors

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

OVERVIEW OF GOLDEN STAR

Golden Star is an established gold producer that holds a 90% interest in the Wassa and Bogoso/Prestea gold mines in Ghana. The Company is pursuing brownfield underground development projects at its Wassa and Prestea mines that are expected to transform the Company into a reliable and stable low cost producer when both projects are in commercial production in 2017 and full production expected by the end of 2018. The Company is a reporting issuer or the equivalent in all provinces of Canada, in Ghana and in the United States, and files disclosure documents with securities regulatory authorities in Canada, Ghana and with the SEC in the United States.

SUMMARY OF OPERATING AND FINANCIAL RESULTS

		Three Months Ended September 30,		Nine Months Ended September 30,	
OPERATING SUMMARY		**2016**	**2015**	**2016**	**2015**
Wassa Main Pit gold sold	oz	20,229	28,848	72,207	76,871
Wassa Underground gold sold	oz	2,202	—	3,195	—
Bogoso/Prestea gold sold	oz	22,930	23,050	65,624	93,404
Total gold sold	oz	45,361	51,898	141,026	170,275
Total gold produced	oz	44,974	51,898	140,651	170,275
Average realized gold price	$/oz	1,286	1,088	1,219	1,167
Cash operating cost per ounce - Consolidated [1]	$/oz	964	988	870	1,056
Cash operating cost per ounce - Wassa [1]	$/oz	1,110	770	898	923
Cash operating cost per ounce - Bogoso/Prestea [1]	$/oz	835	1,261	839	1,164
All-in sustaining cost per ounce - Consolidated [1]	$/oz	1,153	1,151	1,059	1,237
FINANCIAL SUMMARY					
Gold revenues	$'000	55,511	56,452	168,035	198,767
Cost of sales excluding depreciation and amortization	$'000	44,608	55,199	128,622	206,140
Depreciation and amortization	$'000	5,111	5,525	15,043	30,285
Mine operating margin/(loss)	$'000	5,792	(4,272)	24,370	(37,658)
General and administrative expense	$'000	9,370	3,299	25,237	11,760
Loss/(gain) on fair value of financial instruments, net	$'000	5,784	(5,056)	26,516	(54)
Loss on repurchase of 5% Convertible Debentures, net	$'000	12,048	—	11,594	—
Net loss attributable to Golden Star shareholders	$'000	(23,110)	(6,832)	(43,093)	(81,462)
Adjusted net earnings/(loss) attributable to Golden Star shareholders [2]	$'000	1,148	(11,205)	11,119	(35,358)
Loss per share attributable to Golden Star shareholders - basic and diluted	$/share	(0.07)	(0.03)	(0.16)	(0.31)
Adjusted earnings/(loss) per share attributable to Golden Star shareholders - basic and diluted [2]	$/share	0.01	(0.04)	0.04	(0.14)
Cash provided by operations	$'000	20,964	45,341	28,015	47,515
Cash provided by operations before working capital changes [3]	$'000	21,500	43,223	51,561	23,712
Cash provided by operations per share - basic and diluted	$/share	0.06	0.17	0.10	0.18
Cash provided by operations before working capital changes per share - basic and diluted	$/share	0.07	0.15	0.19	0.09
Capital expenditures	$'000	21,656	17,789	60,577	43,325

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

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

[3] See "Non-GAAP Financial Measures" section for an explanation of the calculation of cash provided by operations before working capital changes.

- **Gold sales of 45,361 ounces in the third quarter of 2016 were 13% lower than the 51,898 ounces sold in the same period in 2015 .** Bogoso/Prestea gold sales in the third quarter of 2016 were consistent with the same period in 2015 . Wassa gold sales decreased to 22,431 ounces due mainly to a 28% decrease in ore grade processed as a result of mining in a lower grade zone. For the nine months ended September 30, 2016 , gold sales of 141,026 ounces were 17% lower than the 170,275 ounces sold in the same period in 2015, due primarily to the lower throughput at Bogoso/Prestea as 2016 production at Prestea was exclusively from the lower cost Prestea non-refractory operation.
- **Consolidated cash operating cost per ounce was $964 in the third quarter of 2016 , 2% lower than $988 in the same period in 2015 .** Wassa's cash operating cost per ounce of $1,110 in the third quarter of 2016 compared to $770 in the same period in 2015 . The higher cash operating cost per ounce at Wassa was due to a 30% decrease in gold sold attributable to the Wassa Main Pit as a result of a 28% decrease in ore grade processed compared to the same period in 2015. Bogoso/Prestea's cash operating cost per ounce was $835 in the third quarter of 2016 , compared to $1,261 in the same period in 2015 . The lower cash operating cost per ounce was a result of lower mine operating costs due to exclusively mining and processing Prestea oxide ore through the non-refractory plant in 2016. During the third quarter of 2015, 68% of the Bogoso/Prestea production was from the high cost Bogoso refractory operation, which was suspended at the end of the third quarter of 2015. For the nine months ended September 30, 2016 , consolidated cash operating cost per ounce was $870 , compared to $1,056 in the same period in 2015, representing a 18% decrease, due to the suspension of the high cost refractory plant at Bogoso/Prestea.
- **Gold revenues totaled $55.5 million in the third quarter of 2016 , compared to $56.5 million in the same period in 2015 .** The decline in gold revenues was a result of fewer ounces sold at Wassa, offset by a higher realized gold price in the third quarter of 2016 as compared to the same period in 2015 . The decline in ounces sold at Wassa was a result of decrease in ore grade processed. For the nine months ended September 30, 2016 , gold revenue totaled $168.0 million , a 15% decline compared to $198.8 million in the same period in 2015 due primarily to lower gold sales at Bogoso/Prestea following the suspension of the high cost refractory operation at Bogoso and lower gold sales at Wassa as a result of lower ore grade processed.
- **Cost of sales excluding depreciation and amortization in the third quarter of 2016 totaled $44.6 million compared to $55.2 million in the same period in 2015 .** For the nine months ended September 30, 2016 , cost of sales excluding depreciation and amortization totaled $128.6 million compared to $206.1 million in the same period in 2015. The decrease in cost of sales excluding depreciation and amortization for both the three and nine months ended September 30, 2016 were due primarily to a decrease in mine operating expenses at the Bogoso/Prestea mine. Lower mine operating expenses were a result of exclusively mining and processing lower cost Prestea oxide ore through the non-refractory plant as compared to processing primarily refractory ore through the higher cost refractory plant in 2015. Additionally, Bogoso incurred $13.0 million of severance charges in the first nine months of 2015 as compared to $nil during the first nine months of 2016, resulting in significant savings.
- **Depreciation and amortization expense totaled $5.1 million in the third quarter of 2016 compared to $5.5 million in the same period in 2015 .** For the nine months ended September 30, 2016 , depreciation and amortization totaled $15.0 million compared to $30.3 million in the same period in 2015. The decrease in depreciation and amortization expense for both the three and nine months ended September 30, 2016 were primarily a result of the lower production in both operations and higher reserve and resource estimates at the Bogoso/Prestea operation compared to prior year.
- **General and administrative costs totaled $9.4 million in the third quarter of 2016 , compared to $3.3 million in the same period in 2015** . For the nine months ended September 30, 2016 , general and administrative costs totaled $25.2 million compared to $11.8 million in the same period in 2015. The increase was due to the higher non-cash share-based compensation accrued for the three and nine months ended September 30, 2016, compared to the same periods in 2015. Non-cash share-based compensation expenses were $6.4 million and $16.2 million respectively for the three and nine months ended September 30, 2016, compared to a recovery of $0.2 million and an expense of $1.8 million respectively for the three and nine months ended September 30, 2015. Share-based compensation increased in 2016 as a result of significant improvement in the Company's share price. General and administrative costs excluding non-cash share-based compensation costs totaled $2.9 million and $9.1 million for the three and nine months ended September 30, 2016 were slightly lower than the same periods in 2015.
- **The Company recorded $17.7 million of losses on financial instruments in the third quarter of 2016 compared to a gain of $5.1 million in the same period in 2015 .** The losses in the third quarter of 2016 were comprised of $12.0 million losses on repurchases of the 5% Convertible Debentures, $1.9 million non-cash revaluation loss on the 5% Convertible Debentures, $3.3 million non-cash revaluation loss of the derivative liability of the 7% Convertible Debentures, $0.8 million non-cash revaluation loss on warrants, offset by $0.3 million gain on forward and collar contracts. The $5.1 million fair value gain recognized in the third quarter of 2015 was comprised of a $4.9 million non-cash revaluation gain on the 5% Convertible Debentures and a $0.2 million non-cash revaluation gain on warrants. The valuation techniques used for these financial

instruments are disclosed in the "Financial Instruments" section of this MD&A. For the nine months ended September 30, 2016 , the Company recorded $38.1 million of losses on financial instruments compared to a gain of $0.1 million in the same period in 2015. The losses in the first nine months of 2016 were comprised of $11.6 million losses on repurchases of the 5% Convertible Debentures, $17.1 million non-cash revaluation loss on the 5% Convertible Debentures, $3.3 million non-cash revaluation loss of the derivative liability of the 7% Convertible Debentures, $2.8 million non-cash revaluation loss on warrants and $3.3 million loss on forward and collar contracts.

- **Net loss attributable to Golden Star shareholders for the third quarter of 2016 totaled $23.1 million or $0.07 loss per share, compared to a net loss of $6.8 million or $0.03 loss per share for the same period in 2015 .** For the nine months ended September 30, 2016 , net loss attributable to Golden Star shareholders totaled $43.1 million or $0.16 loss per share, compared to a net loss of $81.5 million or $0.31 loss per share in the same period in 2015. The increase in net loss attributable to Golden Star shareholders for the three months ended September 30, 2016 was due mainly to a $12.0 million realized loss on the repurchase of the 5% Convertible Debentures, a $10.9 million increase in loss on fair value of financial instruments, and a $6.7 million increase in non-cash share-based compensation expense, offset by a $10.1 million increase in mine operating margin and a $3.6 million decrease in net finance expenses.
- **Adjusted net earnings attributable to Golden Star shareholders (see "Non-GAAP Financial Measures" section) was $1.1 million in the third quarter of 2016 , compared to adjusted loss attributable to Golden Star shareholders of $11.2 million for the same period in 2015 .** For the nine months ended September 30, 2016 , adjusted net earnings attributable to Golden Star shareholders (see "Non-GAAP Financial Measures" section) was $11.1 million compared to adjusted loss of $35.4 million attributable to Golden Star shareholders in the same period in 2015. The higher adjusted net earnings attributable to Golden Star shareholders in the three and nine months ended September 30, 2016 was principally due to higher mine operating margin at the Bogoso/Prestea operation compared to same periods in 2015.
- **Cash provided by operations was $21.0 million for the third quarter of 2016 , compared to $45.3 million in the same period in 2015 .** Cash provided by operations was impacted by the amount of advance payments received from RGLD during the periods, even though mine operating margin improved significantly comparing the three and nine months ended September 30, 2016 to the same periods in 2015. For the three months ended September 30, 2015, an advance payment of $20.0 million was received from RGLD compared to $55.0 million of advance payments for the same period in 2015. For the nine months ended September 30, 2016 , cash provided by operations was $28.0 million compared to $47.5 million in the same period in 2015 due mainly to higher mine operating margin offset by $15 million decrease in advance payments from RGLD.
- **Capital expenditures for the third quarter of 2016 totaled $21.7 million compared to $17.8 million in the same period in 2015 .** The major capital expenditures in the third quarter of 2016 at Wassa included $6.4 million of expenditures relating to the development of the Wassa Underground Mine and $1.9 million for the improvement of the tailings storage facility. Capital expenditures at Bogoso/Prestea during the third quarter of 2016 included $11.4 million on expenditures relating to the development of Prestea Underground Mine and $0.5 million on the Prestea Open Pit Mines. For the nine months ended September 30, 2016, capital expenditures totaled $60.6 million compared to $43.3 million in the same period in 2015.

OUTLOOK FOR 2016

Full company production, cost and capital expenditures guidance for 2016 operations remains unchanged. As outlined in further detail in the development project update section which follows, production from the Wassa Underground mine is now anticipated to be in the range of 11,000 - 15,000 ounces for 2016. The Company's focus on expanding the resources in the F Shoot by better delineating the F Shoot stopes has delayed the timing of ore produced from the B Shoot. The Wassa surface operation anticipates production to be in the 89,000 - 97,000 range for 2016. The projected decrease in production is a result in realizing grades slightly below those anticipated. The cash operating cost per ounce for the Wassa surface operation is expected to be $900 - $990 per ounce.

At the Prestea open pit operation, better than anticipated mining rates and grade have delivered positive production and cost results. The Company continues to anticipate these positive results throughout the remainder of 2016. As a result, the Company anticipates the production range at Prestea to be 80,000 - 93,000 ounces for 2016. Cash operating cost per ounce guidance for Prestea is now $800 - 890 per ounce.

Full company 2016 production is expected to be between 180,000 - 205,000 ounces at a cash operating cost per ounce of $815 - $925, as per initial guidance.

CORPORATE DEVELOPMENTS

Gold prices

Spot gold prices closed at $1,323 per ounce on September 30, 2016, relatively unchanged from the spot gold price of $1,321 at the end of the second quarter. The Company realized an average gold price of $1,286 per ounce for gold sales during the third quarter of 2016, compared to an average realized gold price of $1,088 per ounce for the same period in 2015.

Revenue from spot sales during the third quarter of 2016 resulted in an average realized price of $1,331 per ounce whereas revenue recognized from the gold purchase and sale agreement (the "Streaming Agreement") with RGLD Gold AG ("RGLD") resulted in an average realized price of $905 per ounce.

Mining lease for high grade Mampon deposit received

On October 27, 2016, the Company announced that it had received a mining lease for the Mampon deposit ("Mampon") in Ghana. Mampon is a high grade, oxide deposit containing 45,000 ounces of gold at 4.60 grams per tonne. Following the receipt of the mining lease, the next step for the Company is to obtain an environmental permit. The Company expects to start mining Mampon in the first half of 2017.

Advance payment under Streaming Agreement received

During the quarter ended September 30, 2016, the Company received an advance payment of $20.0 million pursuant to the Streaming Agreement with RGLD. On October 3, 2016, the Company received an additional $20.0 million of scheduled advance payment. The final $10.0 million of scheduled advance payment is expected to be received in January 2017. Since the inception of the Streaming Agreement in July 2015, the Company has received total advance payments of $135.0 million which included the $20.0 million received on October 3, 2016.

Debt restructuring

During the first nine months of 2016, the Company entered into the following financing transactions to strengthen its Balance Sheet:

- On August 3, 2016, the Company completed a public offering of 40,000,000 common shares at a price of $0.75 per share. The underwriters for the offering exercised in full their option to purchase an additional 6,000,000 common shares. As a result, a total of 46,000,000 common shares were sold by the Company for gross proceeds of $34.5 million (net proceeds of $31.8 million).
- In addition, the Company completed a private placement of $65.0 million aggregate principal amount of the 7% Convertible Senior Notes due 2021 (the "7% Convertible Debentures"). As part of the offering of the 7% Convertible Debentures, the Company exchanged $42.0 million principal amount of its outstanding 5% Convertible Debentures due June 1, 2017 for an equal principal amount of the 7% Convertible Debentures. The principal amount exchanged is included in the total aggregate principal amount of the 7% Convertible Debentures issued. The Company did not receive any cash proceeds from the exchange. The net proceeds received from this private placement was $20.7 million .
- The net cash proceeds from the offering of common shares together with the net proceeds from the private placement of 7% Convertible Debentures were used to strengthen the Company's balance sheet by retiring certain outstanding indebtedness. In August 2016, the Company repaid the remaining outstanding balance of $22.4 million of its loan with Ecobank Ghana Limited. On August 3, 2016, the Company also repurchased $18.2 million principal amount of its 5% Convertible Debentures at face value. Total year to date repurchases of the 5% Convertible Debentures totaled $21.9 million in principal amount. As at September 30, 2016, $13.6 million principal amount of the 5% Convertible Debentures remain outstanding and will mature on June 1, 2017.
- In May 2016, the Company completed a bought deal transaction which resulted in 22,750,000 common shares sold at a price of $0.66 per share for gross proceeds of $15.0 million (net proceeds of $13.7 million). In May 2016, the Company also entered into an agreement with a significant current account creditor to settle $36.5 million of current liabilities. Under this agreement, the Company made a payment of $12.0 million in the second quarter of 2016 and deferred payment of the remaining $24.5 million until January 2018, after which the outstanding balance will be repaid in equal installments for 24 months commencing January 31, 2018. Interest of 7.5% per annum will accrue on the outstanding balance and will be payable beginning in January 2017.

Forward and collar contracts

During the first quarter of 2016, the Company initiated a gold hedging program to limit its exposure to the fluctuations in the gold price during the development phase of the Wassa Underground and Prestea Underground projects. On November 2, 2016 , the Company has the following outstanding contracts: (i) forward sales contracts for 2,000 ounces (or 1,000 ounces per month in November and December 2016) at a gold price of $1,188 per ounce, and (ii) costless collars on 8,000 ounces with a floor price of $1,125 per ounce and a ceiling price ranging between $1,245 per ounce and $1,325 per ounce for period from November to December 2016. During the third quarter of 2016, the Company realized a loss of $1.3 million on settled contracts.

Appointment of Gil Clausen to the Board of Directors

On July 18, 2016, Golden Star further strengthen its board by appointing Gil Clausen. Mr. Clausen is the president and Chief Executive Officer of Brio Gold and former president and chief executive officer and director of Augusta Resource Corporation. He also serves as an independent director of Plata Latina Minerals Corporation. With over 30 years of executive, financial, developmental and operational industry experience, Mr. Clausen has been responsible for executing growth strategies for mining companies on a range of continents and across a variety of commodities.

Exploration update

During the quarter, Golden Star's exploration program focused on stope definition at Wassa Underground and further Mineral Resource definition at Prestea South, which is one of the Prestea Open Pits.

Wassa Underground stope definition drilling totaled 10,300 metres for the third quarter of 2016, bringing the year to date drilling total to 20,800 metres. Drilling results for the F Shoot have determined that the higher grades are concentrated along fold noses, which plunge gently to the south. They have also demonstrated that the mineralized zones extend to the North, which indicates the potential to increase the deposit's Mineral Resources. The majority of the F Shoot drilling is expected to be completed in the fourth quarter of 2016 and the focus of the drilling program is then expected to shift to the B Shoot.

Drilling at Prestea South concentrated on Mineral Resource definition within the planned oxide pit shells as well as strike extensions on several of the mineralized trends. Results have confirmed the mine plan and several holes have intersected mineralized zones outside the current pit limits along strike. During the fourth quarter drilling will focus on confirming these positive results and if it is successful, the exploration team will then conduct Mineral Resource definition drilling with the objective of further extending the mine life of the Prestea South pits.

Golden Star expects to provide an update on its exploration strategy in the first quarter of 2017.

DEVELOPMENT PROJECTS UPDATE

Wassa Underground development

Wassa Underground commenced pre-commercial production in early July 2016. The successful blasting of the first stope delivered the first ore from the new underground mine to the Wassa processing plant, where it was blended with ore from Wassa Main Pit. Underground ore was mined using longitudinal longhole stoping, although the primary mining method that will be used in Wassa Underground is transverse stoping.

The development of Wassa Underground's infrastructure is at an advanced stage, with all surface infrastructure and plant modifications complete. Underground development has progressed sufficiently in order to accommodate the near term mine plan, including a twin decline and a ventilation system. Construction activities are expected to be complete at the end of the fourth quarter of 2016.

The first stope is in the upper part of the F Shoot, which is one of the more moderate grade areas of the underground mine. Golden Star is using the F Shoot mineralization for test stoping and to complete the training of our underground personnel before the mine plan moves on to the higher grade B Shoot.

Initial gold production from the F Shoot was lower than anticipated due to higher than expected internal dilution within the stopes. Golden Star drilled 10,300 metres in this area during the quarter in order to update the short range block models and delineate the stopes more effectively. With more informed stope design, the mining team will target the best areas of mineralization with minimal internal dilution during the fourth quarter of 2016.

Due to this focus on the F Shoot, Golden Star expects to begin mining the first stopes of the B Shoot in the first quarter of 2017. This means that during the fourth quarter of 2016, only development ore will be mined and processed from the B Shoot and planned 2016 production from the B Shoot will be deferred until the first quarter of 2017. Accordingly production from Wassa Underground in 2016 is now expected to be 11,000 - 15,000 ounces and the total production from Wassa (open pit and underground operations) is expected to be 100,000 - 112,000 ounces. Wassa's 2016 full year guidance for cash operating cost per ounce is expected to be $900 - $900. Golden Star's consolidated production guidance remains unchanged at 180,000 - 205,000 ounces at a cash operating cost per ounce of $815 - $925.

This short term change in the mine plan is expected to allow for more ounces from the F Shoot to be mined than was previously anticipated, creating longer term upside. Generating production from two sources of ore (the F Shoot and the B Shoot) will also minimize the risk of the underground operations during the first half of 2017, when Wassa Underground is still ramping up to its nameplate capacity. Wassa Underground is expected to achieve commercial production in early 2017.

The capital expenditures for Wassa Underground are shown in the table below:

(in millions of U.S. dollars)	Quarter-to-date	Year-to-date	Project-to-date
Capital spending	$5.5	$18.9	$38.6
Interest capitalized	0.9	2.1	4.6
Capital expenditures	$6.4	$21.0	$43.2

The Company continues to expect total capital expenditures of approximately $34 million to be incurred for the Wassa Underground in 2016.

Prestea

The Prestea mine consists of an underground mine that has been in existence for over 100 years along with adjacent surface deposits. The Prestea mine is located 16 km south of the Bogoso mine and processing plants in the town of Prestea. The underground mine is currently being refurbished and drive development commenced in the third quarter of 2016. A number of high grade surface deposits exist to the south of the underground mine which the Company is currently mining and processing through the non-refractory processing plant.

Prestea Underground

Refurbishment work continued to progress as expected at the high grade Prestea Underground gold mine during the third quarter of 2016. With ore body development expected to begin in the fourth quarter of 2016, Golden Star appointed an underground mining contractor. Manroc Developments Inc. ("Manroc") was selected following a competitive bid process, involving a number of large mining contractors. Manroc specializes in Alimak stoping, a mechanized shrinkage mining method. The contractor has worked on major projects on a variety of continents and its clients have included Barrick Gold Corporation, Goldcorp Inc. and Nyrstar. Manroc has previously operated in Ghana and Tanzania.

Alimak stoping was selected as the mining method for Prestea Underground due to its safety and efficiency benefits over conventional shrinkage mining. Prestea Underground is a narrow, high grade deposit, with Mineral Reserves of 1.0Mt at 14.02g/t for 469,000 ounces and further exploration potential.

In line with the refurbishment plan, development of underground infrastructure commenced during the third quarter of 2016, with rehabilitation works along 24 Level to improve the track for high-speed haulage and the installation of new electrical and water supply services now complete. Work is continuing to advance with other engineering, procurement, rehabilitation and construction activities on-going, including the construction of a workshop and electrical bays and the slashing of existing drives to a size suitable for mechanized load-haul-dump equipment.

The winder upgrade is also progressing with manufacturing of key electrical and mechanical items, which combined with the shaft rehabilitation, will enable an increase in hoisting capacity to satisfy the production profile in 2017. The mining rate in the Prestea Underground Feasibility Study is 650 tonnes per day and the shaft's capacity is 1,200 tonnes per day, so if further Mineral Reserves are delineated, there is potential for the mine's production rate to be increased substantially. At the end of the third quarter of 2016, the rehabilitation of electrical infrastructure was well advanced.

Construction activities continue to advance according to schedule and stoping is expected to start in the second quarter of 2017, with commercial production anticipated to be declared in mid-2017.

The capital expenditures for Prestea Underground are shown in the table below:

(in millions of U.S. dollars)	Quarter-to-date	Year-to-date	Project-to-date
Capital spending	$ 11.1	$ 24.7	$ 30.7
Interest capitalized	0.3	1.3	2.5
Capital expenditures	$ 11.4	$ 26.0	$ 33.2

Construction capital expenditures of $63 million for the underground mine is expected. The Company continues to expect total capital expenditures of approximately $36 million to be incurred for the Prestea Underground in 2016, which is consistent with the 2016 guidance.

WASSA OPERATIONS

Through a 90% owned subsidiary Golden Star (Wassa) Limited, the Company owns and operates the Wassa open pit mine, located in the southwestern region of Ghana approximatel y 3 5 kilometers northeast of the town of Tarkwa, Ghana. Wassa has a non-refractory processing plant ("Wassa processing plant") consisting of a carbon-in-leach ("CIL") system with a capacity of 2.7 million tonnes per annum. Ore from the Wassa mine is processed at the Wassa processing plant.

		Three Months Ended September 30,		Nine Months Ended September 30,	
		2016	2015	2016	2015
WASSA FINANCIAL RESULTS					
Revenue	$'000	$ 25,958	$ 31,702	$ 87,556	$ 89,429
Mine operating expenses	$'000	22,473	23,389	69,799	72,620
Severance charges	$'000	—	1,013	113	1,816
Royalties	$'000	1,488	1,617	4,713	4,506
Operating costs to metals inventory	$'000	(20)	(1,178)	(4,988)	(1,655)
Inventory net realizable value adjustment	$'000	—	—	—	1,524
Cost of sales excluding depreciation and amortization	$'000	23,941	24,841	69,637	78,811
Depreciation and amortization	$'000	3,464	3,713	10,892	10,454
Mine operating (loss)/margin	$'000	$ (1,447)	$ 3,148	$ 7,027	$ 164
Capital expenditures	$'000	9,699	8,506	31,650	25,911
WASSA OPERATING RESULTS					
Ore mined	t	607,577	728,046	1,864,777	2,042,079
Waste mined	t	2,742,260	2,658,218	7,816,301	7,708,452
Ore processed	t	699,006	635,332	1,913,706	1,875,128
Grade processed	g/t	1.09	1.51	1.29	1.36
Recovery	%	93.4	92.9	93.8	93.2
Gold produced	oz	22,290	28,848	75,105	76,871
Gold sold - Main Pit	oz	20,229	28,848	72,207	76,871
Gold sold - Underground	oz	2,202	—	3,195	—
Gold sold - Total	oz	22,431	28,848	75,402	76,871
Cash operating cost per ounce [1]	$/oz	1,110	770	898	923

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

Three months ended September 30, 2016 compared to three months ended September 30, 2015

Production

Gold production was 22,290 ounces for the third quarter of 2016 , a 23% decrease from the 28,848 ounces produced during the same period of 2015 as the increases in ore processed and ore recovery were more than offset by the lower ore grade. Ore grade was lower in the third quarter of 2016, consistent with management's expectations, due to mining in a lower ore grade zone compared to the same period in 2015.

Gold revenues

Gold revenues were $26.0 million for the third quarter of 2016 , a 18% decrease compared to $31.7 million for the same period in 2015 . The decrease was due to a 30% decrease in ounces of gold sold attributable to the Wassa Main Pit, offset by an increase in the average realized gold price to $1,283 per ounce in the third quarter of 2016 , compared to $1,099 per ounce for the same quarter in 2015 .

Cost of sales excluding depreciation and amortization

Cost of sales excluding depreciation and amortization was $23.9 million for the third quarter of 2016 , compared to $24.8 million incurred during the same period in 2015 . Cost of sales excluding depreciation and amortization was higher in the third quarter of

2015 as severance charges of $1.0 million were recognized in the third quarter of 2015 compared to $nil in the third quarter of 2016.

Depreciation and amortization

Depreciation and amortization for the third quarter of 2016 totaled $3.5 million , down 5% compared to the $3.7 million recorded for the same period in 2015 due to lower production in the third quarter of 2016.

Cash operating cost per ounce

Cash operating cost per ounce for the third quarter of 2016 totaled $1,110 , up 44% from $770 in the same period of 2015 . The higher cash operating cost per ounce was mainly due to a 30% decrease in gold sold attributable to the Wassa Main Pit as a result of a 28% decrease in ore grade processed due to mining in a lower ore grade zone.

Capital expenditures

Capital expenditures for the third quarter of 2016 totaled $9.7 million compared with $8.5 million during the same period in 2015 . Sustaining capital expenditures were $1.3 million for both the three months ended September 30, 2016 and the three months ended September 30, 2015 . Development capital expenditures were $8.4 million for the three months ended September 30, 2016 compared to $7.2 million in the same period in 2015 . Development capital expenditures in the third quarter of 2016 included $6.4 million relating to the development of the Wassa Underground Mine and $1.9 million for the improvement of the tailings storage facility.

Nine months ended September 30, 2016 compared to nine months ended September 30, 2015

Production

Gold production was 75,105 ounces for the nine months ended September 30, 2016 , a 2% decrease from the 76,871 ounces produced during the same period in 2015 . Higher throughput and recovery in the first nine months of 2016 were offset by lower grade.

Gold revenues

Gold revenues were $87.6 million for the nine months ended September 30, 2016 , compared to $89.4 million for the same period in 2015 . The decrease was due to a 6% decrease in ounces of gold sold attributable to the Wassa Main Pit, offset by increase in the average realized gold price to $1,213 per ounce for the nine months ended September 30, 2016 , compared to $1,163 per ounce for the nine months ended September 30, 2015 .

Cost of sales excluding depreciation and amortization

Cost of sales excluding depreciation and amortization was $69.6 million for the nine months ended September 30, 2016 , compared to $78.8 million incurred during the same period in 2015 . The lower cost of sales was mainly related to the lower mine operating expenses, higher build up of inventories as a result of more material mined and lower severance charges. Furthermore, there was a $1.5 million writedown on inventories for the nine months ended September 30, 2015 compared to $nil in the same period of 2016.

Depreciation and amortization

Depreciation and amortization for the nine months ended September 30, 2016 totaled $10.9 million , up 4% compared to the $10.5 million recorded for the same period in 2015 due to lower production in the first nine months of 2016. The depreciation and amortization in the first nine months of 2016 was impacted by the lower reserve and resource estimates compared to the same period in 2015.

Cash operating cost per ounce

Cash operating cost per ounce for the nine months ended September 30, 2016 totaled $898 , down 3% from $923 in the same period of 2015 . The lower cash operating cost per ounce was due to a decline in processing cost per tonne as electricity costs were lower and efficiency on cyanide consumption improved.

Capital expenditures

Capital expenditures for the nine months ended September 30, 2016 were $31.7 million compared with $25.9 million during the same period in 2015 . Sustaining capital expenditures were $4.3 million for the nine months ended September 30, 2016 compared to $5.3 million in the same period in 2015 . Development capital expenditures were $27.4 million for the nine months ended September 30, 2016 compared to $20.6 million in the same period in 2015 . Development capital expenditures in the first nine months included $21.0 million of expenditures relating to the development of the Wassa Underground Mine and $6.2 million for the improvement of the tailings storage facility.

BOGOSO/PRESTEA OPERATIONS

Through a 90% owned subsidiary Golden Star (Bogoso/Prestea) Limited, the Company owns and operates the Bogoso gold mining and processing operations and the Prestea mining operations located near the town of Prestea, Ghana. Bogoso/Prestea has a CIL processing facility which is suitable for treating non-refractory gold ore ("Non-refractory plant") with capacity of up to 1.5 million tonnes per annum. Bogoso/Prestea also operated a gold ore processing facility with a capacity of 2.7 million tonnes of ore per annum, which used bio-oxidation technology to treat refractory ore ("Refractory plant"). The Company suspended the refractory operation at the end of the third quarter of 2015.

The Prestea mining operations consists of an existing underground mine, neighbouring open pit deposits and associated support facilities. Bogoso/Prestea currently processes the Prestea open pit ore through the non-refractory plant. Ore feed from the open pit operations commenced in the third quarter of 2015. The Prestea underground mine is currently being refurbished and development commenced in 2016.

		Three Months Ended September 30,		Nine Months Ended September 30,	
		2016	2015	2016	2015
BOGOSO/PRESTEA FINANCIAL RESULTS					
Revenue	$'000	$ 29,553	$ 24,750	$ 80,479	$ 109,338
Mine operating expenses	$'000	19,959	30,963	56,025	110,741
Severance charges	$'000	—	—	(184)	13,041
Royalties	$'000	1,515	1,294	4,131	5,526
Operating costs to metals inventory	$'000	(807)	(1,899)	(987)	(1,979)
Cost of sales excluding depreciation and amortization	$'000	20,667	30,358	58,985	127,329
Depreciation and amortization	$'000	1,647	1,812	4,151	19,831
Mine operating margin/(loss)	$'000	$ 7,239	$ (7,420)	$ 17,343	$ (37,822)
Capital expenditures	$'000	11,913	9,283	28,883	17,414
BOGOSO/PRESTEA OPERATING RESULTS					
Ore mined refractory	t	—	60,533	—	1,230,333
Ore mined non-refractory	t	469,075	179,186	1,158,409	179,186
Total ore mined	t	469,075	239,719	1,158,409	1,409,519
Waste mined	t	1,212,431	605,715	3,424,962	2,709,071
Refractory ore processed	t	—	435,185	—	1,520,541
Refractory ore grade	g/t	—	1.66	—	2.15
Gold recovery - refractory ore	%	—	60.4	—	67.5
Non-refractory ore processed	t	386,621	289,346	1,126,559	1,091,364
Non-refractory ore grade	g/t	2.20	1.35	2.12	1.02
Gold recovery - non-refractory ore	%	82.7	68.0	84.2	51.6
Gold produced - refractory	oz	—	15,648	—	75,939
Gold produced - non-refractory	oz	22,684	7,402	65,546	17,465
Gold produced - total	oz	22,684	23,050	65,546	93,404
Gold sold - refractory	oz	—	15,648	—	75,939
Gold sold - non-refractory	oz	22,930	7,402	65,624	17,465
Gold sold - total	oz	22,930	23,050	65,624	93,404
Cash operating cost per ounce [1]	$/oz	835	1,261	839	1,164

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

Three months ended September 30, 2016 compared to three months ended September 30, 2015

Production

Bogoso/Prestea non-refractory gold production was 22,684 ounces for the third quarter of 2016 , compared to 7,402 ounces for the same period in 2015 when non-refractory ounces were limited due to the commencement of mining and processing of the Prestea oxide ore in the third quarter of 2015. Refractory gold production, which was suspended at the end of the third quarter of 2015, produced 15,648 ounces of gold during the third quarter of 2015.

Gold revenues

Gold revenues for the third quarter of 2016 were $29.6 million , up 19% from $24.8 million in the third quarter of 2015 as a result of a 20% increase in average realized gold price. The realized gold price averaged $1,289 per ounce in the third quarter of 2016 , compared with $1,074 per ounce in the same period in 2015 . Gold sold totaled 22,930 ounces in the third quarter of 2016 , similar to the 23,050 ounces sold in the same period of 2015 .

Cost of sales excluding depreciation and amortization

Cost of sales excluding depreciation and amortization was $20.7 million for the third quarter of 2016 , down from $30.4 million for the same period in 2015 . Mine operating expenses totaled $20.0 million in the third quarter of 2016, 36% lower than the $31.0 million incurred during the same period in 2015 mainly as a result of processing material exclusively from the lower cost non-refractory plant in the third quarter of 2016.

Depreciation and amortization

Depreciation and amortization expense of $1.6 million for the third quarter of 2016 was 11% lower than the $1.8 million for the third quarter of 2015 due to lower production and higher reserve and resource estimates at the Bogoso/Prestea operation compared to the same period in 2015.

Cash operating cost per ounce

Cash operating cost per ounce was $835 for the third quarter of 2016 , compared to $1,261 for the same period in 2015 . This 34% decrease in cash operating costs per ounce is due to the change in cost profile at Prestea. Mining and processing costs in the third quarter of 2016 were attributable to the lower cost non-refractory operation whereas 68% of gold sold in the same period in 2015 was attributable to the higher cost, higher power consuming refractory operation.

Capital expenditures

Capital expenditures for the third quarter of 2016 were $11.9 million compared to $9.3 million incurred during the same period in 2015 as a result of an increase in development capital expenditures. Development capital expenditures increased to $11.4 million in the third quarter of 2016 compared to $8.8 million in the same period in 2015 . Development capital expenditures in the third quarter of 2016 were spent on the Prestea Underground Mine.

Nine months ended September 30, 2016 compared to nine months ended September 30, 2015

Production

Bogoso/Prestea non-refractory gold production was 65,546 ounces for the nine months ended September 30, 2016 , compared to 17,465 ounces for the same period in 2015 when non-refractory ounces were limited due to the commencement of mining and processing of the Prestea oxide ore in the third quarter of 2015. Refractory gold production, which was suspended at the end of the third quarter of 2015, produced 75,939 ounces of gold during the first nine months of 2015.

Gold revenues

Gold revenues for the nine months ended September 30, 2016 were $80.5 million compared to $109.3 million for the same period in 2015 . Gold sold totaled 65,624 ounces in the nine months ended September 30, 2016 , down 30% from 93,404 ounces sold in the same period in 2015 as a result of the suspension of the high cost refractory operation in the third quarter of 2015. The realized gold price was up 5% , averaging $1,226 per ounce in the nine months ended September 30, 2016 , compared to $1,171 per ounce in the same period in 2015 .

Cost of sales excluding depreciation and amortization

Cost of sales excluding depreciation and amortization was $59.0 million for the nine months ended September 30, 2016 , down 54% from the $127.3 million for the same period in 2015 . Mine operating expenses totaled $56.0 million for the nine months ended September 30, 2016 , 49% lower than the $110.7 million incurred during the same period in 2015 mainly as a result of less ore mined and processed and the $13.0 million of severance charges in the nine months ended September 30, 2015.

Depreciation and amortization

Depreciation and amortization expense decreased to $4.2 million for the nine months ended September 30, 2016 , compared to $19.8 million for the same period in 2015 . The lower depreciation and amortization expense for the nine months ended September 30, 2016 was due to lower production in the first nine months of 2016 and higher reserve and resource estimates compared to the same period in 2015.

Cash operating cost per ounce

Cash operating cost per ounce was $839 for the nine months ended September 30, 2016 , compared to $1,164 for the same period in 2015 . This 28% decrease in cash operating costs per ounce is due to the change in cost profile as a result of mining oxide, non-refractory ore at Prestea compared to refractory ore at Bogoso during 2015. Mining and processing costs in the first nine months of 2016 were attributable to the lower cost non-refractory operation whereas 81% of gold sold in the same period in 2015 was attributable to the higher cost, higher power consuming refractory operation.

Capital expenditures

Capital expenditures for the nine months ended September 30, 2016 were $28.9 million compared to $17.4 million during the same period in 2015 . Development capital expenditures were $26.0 million in the first nine months of 2016 compared to $16.4 million in the same period in 2015 . Development capital expenditures in the first nine months of 2016 were all attributable to the Prestea Underground Mine.

SUMMARIZED QUARTERLY FINANCIAL RESULTS

	Three Months Ended,							
(Stated in thousands of U.S dollars except per share data)	**Q3 2016**	**Q2 2016**	**Q1 2016**	**Q4 2015**	**Q3 2015**	**Q2 2015**	**Q1 2015**	**Q4 2014**
Revenues	$ 55,511	$ 51,457	$ 61,067	$ 56,420	$ 56,452	$ 65,796	$ 76,519	$ 86,586
Cost of sales excluding depreciation and amortization	44,608	42,956	41,058	39,354	55,199	78,738	72,203	71,410
Net (loss)/earnings	(23,792)	(22,836)	2,314	14,217	(8,526)	(68,988)	(15,113)	(53,545)
Net (loss)/earnings attributable to shareholders of Golden Star	(23,110)	(22,034)	2,051	13,781	(6,832)	(61,503)	(13,127)	(48,155)
Net (loss)/earnings per share attributable to shareholders of Golden Star:								
- Basic and diluted	$ (0.07)	(0.08)	$ 0.01	$ 0.05	$ (0.03)	$ (0.24)	$ (0.05)	$ (0.19)

LIQUIDITY AND FINANCIAL CONDITION

The Company held $17.5 million in cash and cash equivalents as of September 30, 2016 , down from $35.1 million at December 31, 2015 . The Company received an additional $20.0 million scheduled advance payment from RGLD on October 3, 2016 . The December 31, 2015 cash balance included the $20.0 million scheduled advance payment from RGLD on December 31, 2015. During the nine months ended September 30, 2016 , operations provided $28.0 million , investing activities used $66.5 million and financing activities provided $20.9 million of cash.

Before working capital changes, operations provided $51.6 million of operating cash flow during the nine months ended September 30, 2016 , compared to $23.7 million provided by operations in the same period in 2015. Advance payment of $40.0 million was received from RGLD pursuant to the Streaming Agreement during the first nine months of 2016 compared to $55.0 million for the same period in 2015. Cash provided by operations increased primarily due to a higher mine operating margin during the first nine months of 2016 compared to the same period in 2015, offset by $15.0 million decrease in advance payment from RGLD.

Working capital used $23.5 million during the first nine months of 2016, compared to $23.8 million provided by working capital in the same period in 2015. The working capital changes in the first nine months of 2016 related to a $16.6 million decrease in accounts payable and accrued liabilities, a $7.1 million increase in inventory, and a $0.3 million increase in accounts receivable, offset by a $0.5 million increase in prepaid and other. The reduction of accounts payable and accrued liabilities included a payment of $12.0 million to a vendor pursuant to an agreement reached in the second quarter of 2016. There is $24.5 million in payables remaining with this vendor which is payable in 24 equal monthly installments starting in January 2018 which has been reclassified as long-term debt.

Investing activities used $66.5 million during the first nine months of 2016, which included $21.0 million on the development of the Wassa Underground Mine, $26.0 million on the development of the Prestea Underground Mine, $6.2 million on the expansion of the tailings storage facility at Wassa and $2.9 million on the Prestea open pit mines.

Financing activities provided $20.9 million cash in 2016 compared to $14.2 million used in 2015. Financing activities for the nine months ended September 30, 2016 included net proceeds of $13.7 million from the bought deal in May 2016, net proceeds of $31.8 million from the equity offering in August 2016 and net proceeds of $20.7 million from the private offering of the 7% Convertible Debentures. Cash flow used for financing activities included $19.9 million repurchase of the 5% Convertible Debentures and $22.4 million repayment on the Ecobank loan II.

LIQUIDITY OUTLOOK

As of September 30, 2016 , the Company had $17.5 million in cash and a working capital deficit of $59.0 million . Excluding the non-cash deferred revenue, the working capital deficit was $41.6 million compared to $54.2 million at December 31, 2015.

During the nine months ended September 30, 2016, the Company bought back $19.9 million principal of the 5% Convertible Debentures. Furthermore, there was $42.0 million in exchange of the 5% Convertible Debentures for an equal principal amount of the 7% Convertible Debentures during the third quarter of 2016. As a result, the outstanding balance on the 5% Convertible Debentures that are due on June 1, 2017 has been reduced to a principal amount of $13.6 million.

The Streaming Agreement with RGLD consists of a $145.0 million gold stream, of which $135.0 million (including $20.0 million received on October 3, 2016) has been received to date. The Company expects to receive the remaining $10.0 million in stream payments upon satisfaction of the development progress of the Wassa and Prestea underground mines.

In addition to cash operating costs, the Company pays 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 expects to incur $20.0 million on capital expenditures during the remainder of 2016, of which approximately $17.0 million is development capital expenditure and approximately $3.0 million is sustaining capital expenditure. If gold prices fall significantly from current levels, the Company could defer some of the development capital expenditure to meet its obligations.

The Company expects that the existing cash balance, the remaining proceeds from the Streaming Agreement combined with the expected mine operating margin will be sufficient to fund operations and capital expenditures as required for the development of the Wassa Underground and the Prestea Underground Mines.

The Company has $13.6 million principal amount of the 5% Convertible Debentures due on June 1, 2017. On maturity, the Company may, at its option, satisfy the repayment obligation by paying the principal amount of the 5% 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 5% 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 due date (the “Current Market Price”) provided that 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 original issue date of the 5% Convertible Debentures. If the Company elects to repay the principal amount of the 5% 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 5% 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 5% Convertible Debentures outstanding and the value of the common shares (based on the Current Market Price) delivered in repayment of the 5% Convertible Debentures.

The Company intends to settle the remaining balance of $13.6 million of its 5% Convertible Debentures in cash. However, the Company may decide to settle the balance in shares or a combination of shares and cash depending on expected gold price, the Company's cash balance prior to maturity, the Company's share price prior to maturity and the expected future cash flow generated by operations. Failure by the Company to repay the 5% Convertible Debentures may cause the Company to delay or indefinitely postpone development activities or may cause the Company to suspend or terminate its operations or development activities, any of which could have a material adverse effect on the Company's results of operations and financial conditions.

TABLE OF CONTRACTUAL OBLIGATIONS

	Payment due by period				
(Stated in thousands of U.S dollars)	**Less than 1 Year**	**1 to 3 years**	**4 to 5 years**	**More than 5 Years**	**Total**
Accounts payable and accrued liabilities	$ 87,603	$ —	$ —	$ —	$ 87,603
Debt [1]	14,504	15,364	97,266	—	127,134
Interest on long term debt	782	15,860	15,023	—	31,665
Purchase obligations	17,729	—	—	—	17,729
Rehabilitation provisions [2]	4,687	19,512	26,313	31,679	82,191
Total	$ 125,305	$ 50,736	$ 138,602	$ 31,679	$ 346,322

[1] Includes the outstanding repayment amounts from the 5% Convertible Debentures maturing in June 2017, the 7% Convertible Debentures maturing in August 2021, the loan from Royal Gold, the finance leases and the vendor agreement.

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

RELATED PARTY TRANSACTIONS

There were no material related party transactions in the nine months ended September 30, 2016 and 2015 other than compensation of key management personnel which is presented in the table below. Key management personnel are defined as members of the Board of Directors and certain senior officers. Compensation of key management personnel are made on terms equivalent to those prevailing in an arm's length transaction.

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Salaries, wages, and other benefits	$ 531	$ 508	$ 1,720	$ 1,902
Bonuses	284	327	815	983
Share-based compensation	4,493	97	11,523	664
	$ 5,308	$ 932	$ 14,058	$ 3,549

OFF-BALANCE SHEET ARRANGEMENTS

The Company has no material off-balance sheet arrangements.

NON-GAAP FINANCIAL MEASURES

In this MD&A, we use the terms "cash operating cost", “cash operating cost per ounce”, "all-in sustaining costs", "all-in sustaining costs per ounce", "adjusted net earnings/(loss) attributable to Golden Star shareholders","adjusted earnings/(loss) per share attributable to Golden Star shareholders" and "cash provided by operations before working capital changes".

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

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

"All-in sustaining costs" commences with cash operating costs and then adds sustaining capital expenditures, corporate general and administrative costs (excluding non-cash share-based compensation expenses), mine site exploratory drilling and greenfield evaluation costs and environmental rehabilitation costs. "All-in sustaining costs per ounce" is that amount divided by the number of ounces of gold sold during the period. This measure seeks to represent the total costs of producing gold from current operations, and therefore it does not include capital expenditures attributable to projects or mine expansions, exploration and evaluation costs attributable to growth projects, income tax payments, interest costs or dividend payments. Consequently, this measure is not representative of all of the Company's cash expenditures. In addition, the calculation of all-in sustaining costs does not include depreciation expense as it does not reflect the impact of expenditures incurred in prior periods. Therefore, it is not indicative of the Company's overall profitability. Non-cash share-based compensation expenses are now also excluded from the calculation of all-in sustaining costs as the Company believes that such expenses may not be representative of the actual payout on equity and liability based awards. Non-cash share-based compensation expenses were previously included in the calculation of all-in sustaining costs. The Company has presented comparative figures to conform with the computation of all-in sustaining costs as currently calculated by the Company.

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

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

(Stated in thousands of U.S dollars except cost per ounce data)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Cost of sales excluding depreciation and amortization	$ 44,608	$ 55,199	$ 128,622	$ 206,140
Severance charges	—	(1,013)	71	(14,857)
Royalties	(3,003)	(2,911)	(8,844)	(10,032)
Metals inventory net realizable value adjustment	—	—	—	(1,524)
Cash operating costs	41,605	51,275	119,849	179,727
Royalties	3,003	2,911	8,844	10,032
Metals inventory net realizable value adjustment	—	—	—	1,524
Accretion of rehabilitation provision	342	440	1,026	1,321
General and administrative costs, excluding share-based compensation	2,944	3,528	9,071	9,930
Sustaining capital expenditures	1,850	1,815	7,114	6,312
All-in sustaining costs	$ 49,744	$ 59,969	$ 145,904	$ 208,846
Ounces sold [1]	43,159	51,898	137,831	170,275
Cost per ounce measures ($/oz):				
Cash operating cost per ounce	964	988	870	1,056
All-in sustaining cost per ounce	1,153	1,151	1,059	1,237

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

(Stated in thousands of U.S dollars except cost per ounce data)	Three Months Ended September 30, 2016		
	Wassa	Bogoso/Prestea	Combined
Cost of sales excluding depreciation and amortization	$ 23,941	$ 20,667	$ 44,608
Royalties	(1,488)	(1,515)	(3,003)
Cash operating costs	$ 22,453	$ 19,152	$ 41,605
Ounces sold [1]	20,229	22,930	43,159
Cash operating cost per ounce	$ 1,110	$ 835	$ 964

[1] For the calculation of cash operating cost per ounce and all-in sustaining cost per ounce, Wassa ounces sold only include those attributable to the Wassa Main Pit. The ounces mined from the Wassa Underground is excluded since it's not yet in commercial production. As such, Wassa Underground expenditures are capitalized net of revenues.

(Stated in thousands of U.S dollars except cost per ounce data)	Nine Months Ended September 30, 2016		
	Wassa	Bogoso/Prestea	Combined
Cost of sales excluding depreciation and amortization	$ 69,637	$ 58,985	$ 128,622
Severance charges	(113)	184	71
Royalties	(4,713)	(4,131)	(8,844)
Cash operating costs	$ 64,811	$ 55,038	$ 119,849
Ounces sold [1]	72,207	65,624	137,831
Cash operating cost per ounce	$ 898	$ 839	$ 870

(Stated in thousands of U.S dollars except cost per ounce data)	Three Months Ended September 30, 2015		
	Wassa	Bogoso/Prestea	Combined
Cost of sales excluding depreciation and amortization	$ 24,841	$ 30,358	$ 55,199
Severance charges	(1,013)	—	(1,013)
Royalties	(1,617)	(1,294)	(2,911)
Metals inventory net realizable value adjustment	—	—	—
Cash operating costs	$ 22,211	$ 29,064	$ 51,275
Ounces sold [1]	28,848	23,050	51,898
Cash operating cost per ounce	$ 770	$ 1,261	$ 988

(Stated in thousands of U.S dollars except cost per ounce data)	Nine Months Ended September 30, 2015		
	Wassa	Bogoso/Prestea	Combined
Cost of sales excluding depreciation and amortization	$ 78,811	$ 127,329	$ 206,140
Severance charges	(1,816)	(13,041)	(14,857)
Royalties	(4,506)	(5,526)	(10,032)
Metals inventory net realizable value adjustment	(1,524)	—	(1,524)
Cash operating costs	$ 70,965	$ 108,762	$ 179,727
Ounces sold [1]	76,871	93,404	170,275
Cash operating cost per ounce	$ 923	$ 1,164	$ 1,056

[1] For the calculation of cash operating cost per ounce and all-in sustaining cost per ounce, Wassa ounces sold only include those attributable to the Wassa Main Pit. The ounces mined from the Wassa Underground is excluded since it's not yet in commercial production. As such, Wassa Underground expenditures are capitalized net of revenues.

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

We use cash operating cost per ounce and cash (used in)/provided by operations before working capital changes as key operating indicators. We monitor these measures monthly, comparing each month's values to prior periods' values to detect trends that may indicate increases or decreases in operating efficiencies. These measures are also compared against budget to alert management of trends that may cause actual results to deviate from planned operational results. We provide these measures to the investors to allow them to also monitor operational efficiencies of the mines owned by the Company. We calculate these measures for both individual operating units and on a consolidated basis.

Cash operating cost per ounce and cash provided by operations before working capital changes should be considered as non-GAAP financial measures as defined in the Canadian securities laws and should not be considered in isolation or as a substitute for measures of performance prepared in accordance with IFRS. There are material limitations associated with the use of such non-GAAP measures. Since these measures do not incorporate revenues, changes in working capital and non-operating cash costs,

they are not necessarily indicative of operating profit or cash flow from operations as determined under IFRS. Changes in numerous factors including, but not limited to, mining rates, milling rates, ore grade, gold recovery, costs of labor, consumables and mine site general and administrative activities can cause these measures to increase or decrease. We believe that these measures are similar to the measures of other gold mining companies, but may not be comparable to similarly titled measures in every instance.

Adjusted net earnings/(loss) attributable to Golden Star shareholders

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

(Stated in thousands of U.S dollars except per share data)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Net loss attributable to Golden Star shareholders	$ (23,110)	$ (6,832)	$ (43,093)	$ (81,462)
Add back:				
Share-based compensation expenses	6,426	(229)	16,166	1,830
Loss/(gain) on fair value of financial instruments	5,784	(5,056)	26,516	(54)
Loss on repurchase of 5% Convertible Debentures, net	12,048	—	11,594	—
Severance charges	—	1,013	(71)	14,857
Impairment charges	—	—	—	34,396
	1,148	(11,104)	11,112	(30,433)
Adjustments attributable to non-controlling interest	—	(101)	7	(4,925)
Adjusted net earnings/(loss) attributable to Golden Star shareholders	$ 1,148	$ (11,205)	$ 11,119	$ (35,358)
Adjusted earnings/(loss) per share attributable to Golden Star shareholders				
Basic and diluted	$ 0.01	$ (0.04)	$ 0.04	$ (0.14)
Weighted average shares outstanding - basic (millions)	325.3	259.7	269.7	259.6
Weighted average shares outstanding - diluted (millions)	325.3	259.7	269.7	259.6

In order to indicate to stakeholders the Company's earnings excluding the non-cash loss on the fair value of the 5% Convertible Debentures, non-cash loss on the fair value of the derivative liability relating to the 7% Convertible Debentures, non-cash loss on repurchase of the 5% Convertible Debentures, non-cash impairment charges, non-cash gain on reduction of asset retirement obligations, non-cash share-based compensation expenses, and severance charges, the Company calculates "adjusted net earnings/(loss) attributable to Golden Star shareholders" and "adjusted earnings/(loss) per share attributable to Golden Star shareholders" to supplement the unaudited condensed interim consolidated financial statements.

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

OUTSTANDING SHARE DATA

As of November 2, 2016 , there were 328,745,758 common shares of the Company issued and outstanding, 16,118,582 stock options outstanding, 5,733,986 deferred share units outstanding, 5,000,000 warrants outstanding, 5% Convertible Debentures which are convertible into an aggregate of 8,249,091 common shares and 7% Convertible Debentures which are convertible into an aggregate of 72,222,222 common shares.

CRITICAL ACCOUNTING JUDGMENTS, ESTIMATES AND ASSUMPTIONS

The critical accounting estimates and assumptions are disclosed in Note 4 of the audited consolidated financial statements for the year ended December 31, 2015.

CHANGES IN ACCOUNTING POLICIES

The changes in accounting policies and standards, interpretations and amendments not yet effective are disclosed in Note 3 of the unaudited condensed interim consolidated financial statements for the three and nine months ended September 30, 2016 .

FINANCIAL INSTRUMENTS

(Stated in thousands of U.S dollars)	Fair value at September 30, 2016	Basis of measurement	Associated risks
Cash and cash equivalents $	17,494	Loans and receivables	Interest/Credit/Foreign exchange
Accounts receivable	5,464	Loans and receivables	Foreign exchange/Credit
Trade and other payables	77,262	Amortized cost	Foreign exchange/Interest
Derivative liabilities	4,324	Fair value through profit and loss	Market price
Equipment financing facility	1,771	Amortized cost	Interest
Finance leases	2,220	Amortized cost	Interest
5% Convertible Debentures	13,145	Fair value through profit and loss	Interest
7% Convertible Debentures	50,817	Amortized cost	Interest
Royal Gold loan, net of fees	18,416	Amortized cost	Interest
Vendor agreement	22,156	Amortized cost	Interest/Foreign exchange
Long term derivative liability	15,600	Fair value through profit and loss	Market price

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

Amortized costs - Trade and other payables, the 7% Convertible Debentures, the Royal Gold loan, the vendor agreement, the equipment financing facility and the finance leases approximate their carrying values as the interest rates are comparable to current market rates. Carrying value of the vendor agreement has been discounted to reflect its fair value.

Fair value through profit or loss

Warrants - The fair value of the warrants is estimated using a Black-Scholes model. For the three and nine months ended September 30, 2016 , revaluation losses of $0.8 million and $2.8 million were recorded respectively.

Non-hedge derivative instruments - The fair value of the non-hedge derivative instruments is estimated based on the Black-Scholes model. For the three and nine months ended September 30, 2016 , a revaluation gain of $1.6 million and a revaluation loss of $1.1 million were recorded on collars and forward contracts that have not been settled.

5% Convertible Debentures - The debt component of the 5% Convertible Debentures is valued based on discounted cash flows and the conversion feature is valued using a Black Scholes model. The risk free interest rate used in the fair value computation is the interest rate on the US treasury rate with maturity similar to the remaining life of the 5% Convertible Debentures. The discount rate used is determined by adding the risk premium to the risk free interest rate. A market-based volatility rate was also applied to the fair value computation. For the three and nine months ended September 30, 2016 , revaluation losses of $1.9 million and $17.1 million were recorded respectively. Realized loss on repurchase of $12.0 million and $11.6 million were recorded respectively for the three and nine months ended September 30, 2016.

Long term derivative liability - The fair value of the derivative liability relating to the 7% Convertible Debentures is estimated using a convertible note valuation model. For the three months ended September 30, 2016 , revaluation losses of $3.3 million was recorded.

DISCLOSURES ABOUT RISKS

The Company's exposure to significant risks include, but are not limited to, the following risks: change in interest rates on our debt, change in foreign currency exchange rates, commodity price fluctuations, liquidity risk and credit risk. In recognition of the Company's outstanding accounts payable, the Company cannot guarantee that vendors or suppliers will not suspend or deny delivery of products or services to the Company. For a complete discussion of the risks, refer to the Company's Annual Information Form for the year ended December 31, 2015 available on the SEDAR website at www.sedar.com.

CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

The Company's management, with the participation of its President and Chief Executive Officer and Executive Vice President and Chief Financial Officer, has evaluated the effectiveness of the Company's disclosure controls and procedures. Based upon the results of that evaluation, the Company's President and Chief Executive Officer and Executive Vice President and Chief Financial Officer have concluded that, as of September 30, 2016 , the Company's disclosure controls and procedures were effective to provide reasonable assurance that the information required to be disclosed by the Company in reports it files is recorded, processed, summarized and reported, within the appropriate time periods and is accumulated and communicated to management, including the President and Chief Executive Officer and Executive Vice President and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

Management's Report on Internal Control Over Financial Reporting

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

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

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

Changes in Internal Control Over Financial Reporting

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

ADDITIONAL INFORMATION

Additional information regarding the Company, including the Company's Annual Information Form for the year ended December 31, 2015, is available under the Company's profile on SEDAR at www.sedar.com.

GOLDEN STAR

Unaudited

Condensed Interim Consolidated Financial Statements

For the Three and Nine Months Ended September 30, 2016 and September 30, 2015

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NOTES TO THE FINANCIAL STATEMENTS

GOLDEN STAR RESOURCES LTD.

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

	Notes	Three Months Ended September 30,		Nine Months Ended September 30,	
		2016	2015	2016	2015
Revenue	16	$ 55,511	$ 56,452	$ 168,035	$ 198,767
Cost of sales excluding depreciation and amortization	17	44,608	55,199	128,622	206,140
Depreciation and amortization		5,111	5,525	15,043	30,285
Mine operating margin/(loss)		5,792	(4,272)	24,370	(37,658)
Other expenses/(income)					
Exploration expense		408	381	1,389	1,018
General and administrative		9,370	3,299	25,237	11,760
Finance expense, net	18	2,001	5,573	6,837	10,347
Other (income)/expense		(27)	57	(2,889)	(2,498)
Loss/(gain) on fair value of financial instruments, net	4	5,784	(5,056)	26,516	(54)
Loss on repurchase of 5% Convertible Debentures, net	4	12,048	—	11,594	—
Impairment charges		—	—	—	34,396
Net loss and comprehensive loss		$ (23,792)	$ (8,526)	$ (44,314)	$ (92,627)
Net loss attributable to non-controlling interest		(682)	(1,694)	(1,221)	(11,165)
Net loss attributable to Golden Star shareholders		$ (23,110)	$ (6,832)	$ (43,093)	$ (81,462)
Net loss per share attributable to Golden Star shareholders					
Basic and diluted	15	$ (0.07)	$ (0.03)	$ (0.16)	$ (0.31)
Weighted average shares outstanding-basic and diluted (millions)		325.3	259.7	269.7	259.6

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

GOLDEN STAR RESOURCES LTD.

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

	Notes	As of September 30, 2016	As of December 31, 2015
ASSETS			
CURRENT ASSETS			
Cash and cash equivalents		$ 17,494	$ 35,108
Accounts receivable		5,464	5,114
Inventories	5	43,657	36,694
Prepaids and other		5,219	5,754
Total Current Assets		71,834	82,670
RESTRICTED CASH		6,463	6,463
MINING INTERESTS	6	195,435	149,849
Total Assets		$ 273,732	$ 238,982
LIABILITIES			
CURRENT LIABILITIES			
Accounts payable and accrued liabilities	7	$ 87,603	$ 110,811
Derivative liabilities	8	4,324	407
Current portion of rehabilitation provisions	9	5,961	3,660
Current portion of long term debt	11	15,535	22,035
Current portion of deferred revenue	10	17,422	11,507
Total Current Liabilities		130,845	148,420
LONG TERM DEBT	11	92,990	91,899
DEFERRED REVENUE	10	79,462	53,872
REHABILITATION PROVISIONS	9	70,724	76,025
LONG TERM DERIVATIVE LIABILITY	4	15,600	—
OTHER LONG TERM LIABILITY	14	13,097	—
Total Liabilities		402,718	370,216
SHAREHOLDERS' EQUITY			
SHARE CAPITAL			
First preferred shares, without par value, unlimited shares authorized. No shares issued and outstanding		—	—
Common shares, without par value, unlimited shares authorized	12	741,079	695,555
CONTRIBUTED SURPLUS		33,650	32,612
DEFICIT		(836,397)	(793,304)
Deficit attributable to Golden Star		(61,668)	(65,137)
NON-CONTROLLING INTEREST		(67,318)	(66,097)
Total Liabilities and Shareholders' Equity		$ 273,732	$ 238,982

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

Signed on behalf of the Board,

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

"William L. Yeates"
William L. Yeates, Director

GOLDEN STAR RESOURCES LTD.

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

	Notes	Three Months Ended September 30, 2016	Three Months Ended September 30, 2015	Nine Months Ended September 30, 2016	Nine Months Ended September 30, 2015
OPERATING ACTIVITIES:					
Net loss		$ (23,792)	$ (8,526)	$ (44,314)	$ (92,627)
Reconciliation of net loss to net cash provided by operating activities:					
Depreciation and amortization		5,114	5,533	15,056	30,312
Impairment charges		—	—	—	34,396
Share-based compensation	14	6,426	(229)	16,166	1,830
Loss on fair value of embedded derivatives	4	3,341	—	3,341	—
Loss/(gain) on fair value of 5% Convertible Debentures	4	1,920	(4,911)	17,086	91
Loss on repurchase of 5% Convertible Debentures, net	4	12,048	—	11,594	—
Loss/(gain) on fair value of warrants	4	820	(145)	2,804	(145)
(Gain)/loss on fair value of non-hedge derivative contracts	4	(297)	—	3,285	—
Realized loss on non-hedge derivative contracts		(1,320)	—	(2,172)	—
Recognition of deferred revenue	10	(2,889)	(4,874)	(8,495)	(4,874)
Proceeds from Royal Gold stream	10	20,000	55,000	40,000	55,000
Reclamation expenditures	9	(1,325)	(275)	(4,026)	(2,348)
Other	21	1,454	1,650	1,236	2,077
Changes in working capital	21	(536)	2,118	(23,546)	23,803
Net cash provided by operating activities		20,964	45,341	28,015	47,515
INVESTING ACTIVITIES:					
Additions to mining properties		(261)	(373)	(873)	(469)
Additions to plant and equipment		—	(237)	—	(1,111)
Additions to construction in progress		(21,395)	(17,179)	(59,704)	(41,745)
Change in accounts payable and deposits on mine equipment and material		146	3,542	(5,910)	2,727
Increase in restricted cash		—	(4,419)	—	(4,419)
Net cash used in investing activities		(21,510)	(18,666)	(66,487)	(45,017)
FINANCING ACTIVITIES:					
Principal payments on debt	11	(23,803)	(39,175)	(28,429)	(47,902)
Proceeds from debt agreements		—	—	3,000	15,000
Proceeds from 7% Convertible Debentures, net	11	20,729	—	20,729	—
5% Convertible Debentures repurchase		(18,240)	—	(19,941)	—
Proceeds from Royal Gold loan, net		—	18,725	—	18,725
Shares issued, net	12	31,771	—	45,477	—
Exercise of options		6	—	22	—
Net cash provided by/(used in) financing activities		10,463	(20,450)	20,858	(14,177)
Increase/(decrease) in cash and cash equivalents		9,917	6,225	(17,614)	(11,679)
Cash and cash equivalents, beginning of period		7,577	21,448	35,108	39,352
Cash and cash equivalents, end of period		$ 17,494	$ 27,673	$ 17,494	$ 27,673

See Note 21 for supplemental cash flow information.

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

GOLDEN STAR RESOURCES LTD.

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

	Number of Common Shares	Share Capital	Contributed Surplus	Deficit	Non-Controlling Interest	Total Shareholders' Equity
Balance at December 31, 2014	**259,490,083**	**$ 695,266**	**$ 31,532**	**$ (725,623)**	**$ (55,368)**	**$ (54,193)**
Shares issued under DSUs	407,012	289	(289)	—	—	—
Options granted net of forfeitures	—	—	538	—	—	538
DSU's granted	—	—	584	—	—	584
Net loss	—	—	—	(81,462)	(11,165)	(92,627)
Balance at September 30, 2015	**259,897,095**	**$ 695,555**	**$ 32,365**	**$ (807,085)**	**$ (66,533)**	**$ (145,698)**
Balance at December 31, 2015	**259,897,095**	**$ 695,555**	**$ 32,612**	**$ (793,304)**	**$ (66,097)**	**$ (131,234)**
Shares issued (see Note 12)	68,750,000	49,515	—	—	—	49,515
Shares issued under DSUs	39,744	9	(9)	—	—	—
Shares issued under options	58,919	39	(17)	—	—	22
Options granted net of forfeitures	—	—	618	—	—	618
DSU's granted	—	—	446	—	—	446
Share issue costs	—	(4,039)	—	—	—	(4,039)
Net loss	—	—	—	(43,093)	(1,221)	(44,314)
Balance at September 30, 2016	**328,745,758**	**$ 741,079**	**$ 33,650**	**$ (836,397)**	**$ (67,318)**	**$ (128,986)**

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

1 . NATURE OF OPERATIONS

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

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

2 . BASIS OF PRESENTATION

Statement of compliance

These unaudited condensed interim consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (“IFRS”) as issued by the International Accounting Standards Board (“IASB”) including International Accounting Standards ("IAS") 34 Interim financial reporting. These condensed interim consolidated financial statements should be read in conjunction with the Company's annual consolidated financial statements for the year ended December 31, 2015, which have been prepared in accordance with IFRS as issued by the IASB. The accounting policies and methods of application adopted are consistent with those disclosed in Note 3 of the Company’s consolidated financial statements for the year ended December 31, 2015, except for the changes in accounting policies as described below.

These condensed interim consolidated financial statements were approved by the Board of Directors of the Company on November 2, 2016 .

Basis of presentation

These condensed interim consolidated financial statements include the accounts of the Company and its subsidiaries, whether owned directly or indirectly. The financial statements of the subsidiaries are prepared for the same period as the Company using consistent accounting policies for all periods presented. All inter-company balances and transactions have been eliminated. Subsidiaries are entities controlled by the Company. Non-controlling interests in the net assets of consolidated subsidiaries are a separate component of the Company's equity.

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

The condensed interim consolidated financial statements have been prepared on a historical cost basis, except for derivative financial instruments and the Company's 5% Convertible Debentures which are measured at fair value through profit or loss.

3 . CHANGES IN ACCOUNTING POLICIES

The Company has adopted the following new and revised standards, effective January 1, 2016. These changes were made in accordance with the applicable transitional provisions.

IAS 1 *Presentation of financial statements* was amended to clarify guidance on materiality and aggregation, the presentation of subtotals, the structure of financial statements and the disclosure of accounting policies. The adoption of this amendment did not result in any impact to the Company's financial statements.

IFRS 7 *Financial instruments: Disclosures* amended to (i) add guidance on whether an arrangement to service a financial asset which has been transferred constitutes continuing involvement, and (ii) clarify that the additional disclosure required by the amendments to IFRS 7, *Disclosure - Offsetting financial assets and financial liabilities,* is not specifically required for interim periods, unless required by IAS 34. The adoption of this improvement did not result in any impact to the Company's financial statements.

IAS 34 *Interim financial reporting* amended to (i) clarify what is meant by “information disclosed elsewhere in the interim financial report” and (ii) require a cross reference to the location of that information. The adoption of this amendment did not result in any impact to the Company's financial statements.

Standards, interpretations and amendments not yet effective

IAS 7 *Statement of cash flows - Disclosures related to financing activities* was amended to require disclosures about changes in liabilities arising from financing activities, including both changes arising from cash flows and non-cash changes. This amendment is effective for years beginning on/after January 1, 2017. The Company is still assessing the impact of this standard.

IAS 12 *Income taxes - Deferred tax* was amended to clarify (i) the requirements for recognizing deferred tax assets on unrealized losses; (ii) deferred tax where an asset is measured at a fair value below the asset's tax base, and (iii) certain other aspects of accounting for deferred tax assets. This amendment is effective for years beginning on/after January 1, 2017. The Company is still assessing the impact of this standard.

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

IFRS 16 *Leases* specifies how an IFRS reporter will recognize, measure, present and disclose leases. The standard provides a single lessee accounting model, requiring lessees to recognize assets and liabilities for all leases unless the lease term is 12 months or less or the underlying asset has a low value. Lessors continue to classify leases as operating or finance, with IFRS 16's approach to lessor accounting substantially unchanged from its predecessor, IAS 17. IFRS 16 was issued in January 2016 and applies to annual reporting periods beginning on or after January 1, 2019. The Company is still assessing the impact of this standard.

4 . FINANCIAL INSTRUMENTS

The following tables illustrate the classification of the Company's recurring fair value measurements for financial instruments within the fair value hierarchy and their carrying values and fair values as at September 30, 2016 and December 31, 2015 :

		September 30, 2016		December 31, 2015	
	Level	Carrying value	Fair value	Carrying value	Fair value
Financial Liabilities					
Fair value through profit or loss					
5% Convertible Debentures	3	$ 13,145	$ 13,145	$ 46,406	$ 46,406
Warrants	2	3,211	3,211	407	407
Non-hedge derivative contracts	2	1,112	1,112	—	—
7% Convertible Debentures embedded derivative	3	15,600	15,600	—	—

There were no non-recurring fair value measurements of financial instruments as at September 30, 2016 .

The three levels of the fair value hierarchy are:

Level 1 - Unadjusted quoted prices in active markets for identical assets or liabilities;

Level 2 - Inputs other than quoted prices that are observable for the asset or liability either directly or indirectly; and

Level 3 - Inputs that are not based on observable market data.

The Company's policy is to recognize transfers into and transfers out of the fair value hierarchy levels as of the date of the event or change in circumstances that caused the transfer. During the nine months ended September 30, 2016 , the non-hedge derivative contracts entered into by the Company were added as Level 2 fair valued financial instruments within the fair value measurement hierarchy. During the nine months ended September 30, 2016 , the 7% Convertible Senior Notes due 2021 (the "7% Convertible Debentures") embedded derivative was added as Level 3 fair value instruments within the fair value measurement hierarchy. During the nine months ended September 30, 2016 , there were no transfers into or out of Level 1 fair value measurements.

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

5% Convertible Debentures

The debt component of the 5% Convertible Debentures is valued based on discounted cash flows and the conversion feature is valued based on a Black-Scholes model. The risk free interest rate used in the fair value computation is the interest rate on US treasury bills with maturity similar to the remaining life of the 5% Convertible Debentures. The discount rate used is determined by adding our risk premium to the risk free interest rate. A market-based volatility rate has been applied to the fair value computation. Inputs used to determine the fair value on September 30, 2016 and December 31, 2015 were as follows:

	September 30, 2016	December 31, 2015
5% Convertible Debentures		
Risk-free interest rate	0.5%	1.1%
Risk premium	10.5%	41.0%
Expected volatility	40.0%	40.0%
Remaining life (years)	0.7	1.4

The following table presents the changes in the 5% Convertible Debentures for the nine months ended September 30, 2016 :

	Fair value
Balance, December 31, 2015	$ 46,406
Repurchase [1]	(19,941)
Exchange [2]	(42,000)
Loss on repurchase, net	11,594
Loss in the period included in earnings	17,086
Balance, September 30, 2016	$ 13,145

[1] On April 7, 2016, the Company repurchased $3.6 million principal amount of its 5% Convertible Debentures for $1.7 million. On August 3, 2016, the Company repurchased $18.2 million principal amount of its 5% Convertible Debentures for $18.2 million. Total interest payments of $0.5 million were also made upon repurchase of the debentures.

[2] The Company entered into exchange and purchase agreements with two holders of its 5% Convertible Debentures to exchange $42.0 million principal amount for an equal principal amount of newly issued 7% Convertible Debentures (see Note 11).

If the risk premium increases by 5%, the fair value of the 5% Convertible Debentures would decrease and the related loss in the Statement of Operations would decrease by $0.4 million for the nine months ended September 30, 2016 . In general, an increase in risk premium would increase the gain on fair value of the 5% Convertible Debentures.

Warrants

As part of the term loan transaction with Royal Gold, Inc. ("RGI"), 5,000,000 warrants to purchase Golden Star shares were issued to RGI. The warrants have a $0.27 exercise price and expire on July 28, 2019, being the fourth year anniversary of the date of issuance. These instruments are fair valued based on a Black-Scholes model with the following inputs on September 30, 2016 and December 31, 2015 :

	September 30, 2016	December 31, 2015
Warrants		
Risk-free interest rate	0.6%	1.2%
Expected volatility	84.3%	83.2%
Remaining life (years)	2.8	3.6

The following table presents the fair value changes in the warrants for the nine months ended September 30, 2016 :

	Fair value
Balance, December 31, 2015	$ 407
Loss in the period included in earnings	2,804
Balance, September 30, 2016	$ 3,211

Non-hedge derivative contracts

During the nine months ended September 30, 2016 , the Company entered into the following gold forward and collar contracts with maturities of the contracts ranging from March to December 2016:

- Forward contracts for 9,000 ounces of gold at $1,188 per ounce; and
- Costless collars consisting of puts and calls, on 38,000 ounces of gold with a floor price of $1,125 per ounce and a ceiling ranging between $1,240 per ounce and $1,325 per ounce.

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

During the nine months ended September 30, 2016 , the Company recognized losses of $2.2 million on settled derivative contracts. At September 30, 2016 , the revaluation loss included in earnings on the derivative contracts was $ 1.1 million .

7% Convertible Debentures embedded derivative

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

The embedded derivative was valued upon the initial measurement date and at September 30, 2016 using a convertible note valuation model. The significant inputs used in the convertible note valuation are as follows:

	September 30, 2016
Embedded derivative	
Risk-free interest rate	1.7%
Risk premium	11.8%
Expected volatility	40.0%
Remaining life (years)	4.9

The following table presents the changes in the 7% Convertible Debentures embedded derivative for the nine months ended September 30, 2016 :

	Fair value
Balance, August 3, 2016	$ 12,259
Loss in the period included in earnings	3,341
Balance, September 30, 2016	$ 15,600

5 . INVENTORIES

Inventories include the following components:

	As of September 30, 2016	As of December 31, 2015
Stockpiled ore	$ 25,539	$ 20,338
In-process ore	4,620	3,843
Materials and supplies	13,158	12,024
Finished goods	340	489
Total	$ 43,657	$ 36,694

The cost of inventories expensed for the nine months ended September 30, 2016 and 2015 was $119.8 million and $196.1 million , respectively.

No materials and supplies inventories were written off in the nine months ended September 30, 2016 (nine months ended September 30, 2015 - $12.9 million of materials and supplies inventories and $12.8 million of refractory ore inventory). There was no net realizable value adjustment on stockpiled and in-process ore in the nine months ended September 30, 2016 (nine months ended September 30, 2015 - $2.2 million on stockpiled and in-process ore and $1.0 million due to obsolescence).

6 . MINING INTERESTS

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

	Plant and equipment	Mining properties	Construction in progress	Total
Cost				
As of December 31, 2015	$ 452,645	$ 729,746	$ 71,902	$ 1,254,293
Additions	—	873	56,266	57,139
Transfers	1,884	1,385	(3,269)	—
Capitalized interest	—	—	3,438	3,438
Disposals and other	(620)	—	—	(620)
As of September 30, 2016	$ 453,909	$ 732,004	$ 128,337	$ 1,314,250
Accumulated depreciation				
As of December 31, 2015	$ 423,665	$ 680,779	$ —	$ 1,104,444
Depreciation and amortization	6,734	8,175	—	14,909
Disposals and other	(538)	—	—	(538)
As of September 30, 2016	$ 429,861	$ 688,954	$ —	$ 1,118,815
Carrying amount				
As of December 31, 2015	$ 28,980	$ 48,967	$ 71,902	$ 149,849
As of September 30, 2016	$ 24,048	$ 43,050	$ 128,337	$ 195,435

As at September 30, 2016 , equipment under finance leases had net carrying amounts of $1.2 million . The total minimum lease payments are disclosed in Note 11 - Debt.

Construction in progress is shown net of $4.2 million pre-commercial production revenue from the Wassa Underground development project. No depreciation is charged to construction in progress assets.

7 . ACCOUNTS PAYABLE AND ACCRUED LIABILITIES

Accounts payable and accrued liabilities include the following components:

	As of September 30, 2016	As of December 31, 2015
Trade and other payables	$ 47,521	$ 71,081
Accrued liabilities	29,741	31,496
Payroll related liabilities	10,341	6,376
Accrued severance	—	1,858
Total	$ 87,603	$ 110,811

During the nine months ended September 30, 2016 , the Company entered into an agreement with a significant current account creditor to settle $36.5 million of current liabilities. Under this agreement, the Company paid $12.0 million and deferred the payment of the remaining $24.5 million until January 2018, after which the outstanding balance will be repaid in equal installments over 24 months commencing on January 31, 2018 (see Note 11).

8 . DERIVATIVE LIABILITIES

Current derivative liabilities at fair value include the following components:

	As of September 30, 2016	As of December 31, 2015
Warrants (see Note 4)	$ 3,211	$ 407
Non-hedge derivative contracts (see Note 4)	1,112	—
Total	$ 4,323	$ 407

9 . REHABILITATION PROVISIONS

At September 30, 2016 , the total undiscounted amount of the estimated future cash needs was estimated to be $81.2 million . A discount rate assumption of 2% and an inflation rate assumption of 2% were used to value the rehabilitation provisions. The changes in the carrying amount of the rehabilitation provisions are as follows:

	Nine Months Ended September 30, 2016	Year Ended December 31, 2015
Beginning balance	$ 79,685	$ 85,816
Accretion of rehabilitation provisions	1,026	1,761
Changes in estimates	—	(4,945)
Cost of reclamation work performed	(4,026)	(2,947)
Balance at the end of the period	$ 76,685	$ 79,685
Current portion	$ 5,961	$ 3,660
Long term portion	70,724	76,025
Total	$ 76,685	$ 79,685

10 . DEFERRED REVENUE

During the nine months ended September 30, 2016 , the Company sold 13,319 ounces of gold to RGLD Gold AG ("RGLD") pursuant to a gold purchase and sale agreement ("Streaming Agreement") with RGLD. Revenue recognized on the ounces sold to RGLD during the nine months ended September 30, 2016 consisted of $3.3 million of cash payments received and $8.5 million of deferred revenue recognized in the period (see Note 16). The Company has delivered a total of 26,020 ounces of gold to RGLD since the inception of the Streaming Agreement.

	Nine Months Ended September 30, 2016	Year Ended December 31, 2015
Beginning balance	$ 65,379	$ —
Deposits received	40,000	75,000
Deferred revenue recognized	(8,495)	(9,621)
Balance at the end of the period	$ 96,884	$ 65,379
Current portion	$ 17,422	$ 11,507
Long term portion	79,462	53,872
Total	$ 96,884	$ 65,379

11 . DEBT

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

	As of September 30, 2016	As of December 31, 2015
Current debt:		
Equipment financing credit facility	$ 1,330	$ 2,761
Finance leases	1,060	1,016
Ecobank Loan II	—	4,889
5% Convertible Debentures at fair value (see Note 4)	13,145	—
Current portion of other long term liabilities	—	13,369
Total current debt	$ 15,535	$ 22,035
Long term debt:		
Equipment financing credit facility	$ 441	$ 1,625
Finance leases	1,160	2,019
Ecobank Loan II	—	16,548
5% Convertible Debentures at fair value (see Note 4)	—	46,406
7% Convertible Debentures	50,817	—
Royal Gold loan	18,416	18,175
Vendor agreement	22,156	7,126
Total long term debt	$ 92,990	$ 91,899
Current portion	$ 15,535	$ 22,035
Long term portion	92,990	91,899
Total	$ 108,525	$ 113,934

Schedule of payments on outstanding debt as of September 30, 2016 :

	Three months ending December 31, 2016	Year ending December 31, 2017	Year ending December 31, 2018	Year ending December 31, 2019	Year ending December 31, 2020	Year ending December 31, 2021	Maturity
Equipment financing loans							
Principal	$ 632	$ 931	$ 208	$ —	$ —	$ —	2016 to 2018
Interest	31	34	4	—	—	—	
Finance leases							
Principal	261	1,088	871	—	—	—	2018
Interest	36	100	24	—	—	—	
5% Convertible Debentures							
Principal	—	13,611	—	—	—	—	June 1, 2017
Interest	340	340	—	—	—	—	
7% Convertible Debentures							
Principal	—	—	—	—	—	65,000	August 15, 2021
Interest	—	4,550	4,550	4,550	4,550	4,550	
Royal Gold loan							
Principal	—	—	—	20,000	—	—	2019
Interest [1]	375	1,500	1,500	875	—	—	
Vendor agreement							
Principal	—	—	12,266	12,266	—	—	
Interest	—	1,840	1,418	498	—	—	
Total principal	$ 893	$ 15,630	$ 13,345	$ 32,266	$ —	$ 65,000	
Total interest	782	8,364	7,496	5,923	4,550	4,550	
	$ 1,675	$ 23,994	$ 20,841	$ 38,189	$ 4,550	$ 69,550	

[1] Interest payments on the Royal Gold loan are based on the average daily London Bullion Market Association ("LBMA") gold price multiplied by 62.5% divided by 10,000 to a maximum interest rate of 11.5% per annum. The estimated interest payments are calculated based on $1,200 per ounce LBMA gold price.

5% Convertible Debentures

The 5% Convertible Debentures were issued on May 31, 2012, in the amount of $77.5 million, in exchange for $74.5 million of our 4% convertible senior unsecured debentures (the "4% Convertible Debentures") in privately negotiated transactions with certain holders of the 4% Convertible Debentures exempt from the registration requirements of the U.S. Securities Act of 1933, as amended.

On April 7, 2016, the Company repurchased $3.6 million principal amount of its 5% Convertible Debentures for $1.7 million. On August 3, 2016, the Company repurchased $18.2 million principal amount of its 5% Convertible Debentures for $18.2 million. Total interest payments of $0.5 million were also made upon repurchase of the debentures. The Company recorded a loss on repurchase of $11.6 million (see Note 4). As at September 30, 2016 , $13.6 million principal amount of 5% Convertible Debentures remains outstanding.

During the quarter, the Company entered into exchange and purchase agreements with two holders of its 5% Convertible Debentures to exchange $42.0 million principal amount of the outstanding convertible debentures for an equal principal amount of newly issued 7% Convertible Debentures.

The 5% Convertible Debentures mature on June 1, 2017, and therefore have been classified as current liabilities during the current quarter.

As at September 30, 2016 , the fair value of the 5% Convertible Debentures is valued at $13.1 million with a loss on fair value of $17.1 million and a loss on repurchase of $11.6 million recorded in the nine months ended September 30, 2016 (see Note 4).

Vendor agreement

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

Ecobank Loan II

During the quarter, the remaining $22.0 million of the Ecobank Loan II, as well as all accrued interest thereon, was repaid in full using the proceeds from the shares issued in the Equity Offering (see Note 12).

7% Convertible Debentures

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

The 7% Convertible Debentures are senior unsecured obligations of the Company, bear interest at a rate of 7.0% per annum, payable semi-annually on February 1 and August 1 of each year, beginning on February 1, 2017, and will mature on August 15, 2021, unless earlier repurchased, redeemed or converted. Subject to earlier redemption or purchase, the 7% Convertible Debentures are convertible at any time until the close of business on the third business day immediately preceding August 15, 2021 at the option of the holder, and may be settled, at the Company's election, in cash, common shares of the Company, or a combination of cash and common shares based on an initial conversion rate. The initial conversion rate of the 7% Convertible Debentures, subject to adjustment, is approximately 1,111 common shares of the Company per $1,000 principal amount of 7% Convertible Debentures being converted, which is equivalent to an initial conversion price of approximately $0.90 per common share. The initial conversion price represents a 20% premium to the price per common share in the concurrent public offering of the Company's common shares (see Note 12). The initial conversion rate is subject to adjustment upon the occurrence of certain events. If the 7% Convertible Debentures are converted before August 1, 2019, the Company will, in addition to the consideration payable with the conversion, be required to make a conversion make-whole payment in cash, common shares of the Company or a combination thereof, at the Company's election, equal to the present value of the remaining scheduled payments of interest that would have been made on the 7% Convertible Debentures converted had such debentures remained outstanding from the conversion date to August 1, 2019, subject to certain restrictions. The present value of the remaining scheduled interest payment will be computed using a discount rate equal to 2.0%.

Prior to August 15, 2019, the Company may not redeem the 7% Convertible Debentures except in the event of certain changes in applicable tax law. On or after August 15, 2019, the Company may redeem all or part of the outstanding 7% Convertible Debentures at the redemption price, only if the last reported sales price of the Company's common shares for 20 or more trading days in a period of 30 consecutive trading days ending on the trading day prior to the date the Company provides the notice of redemption to holders exceeds 130% of the conversion price in effect on each such trading day. The redemption price is equal to the sum of (1) 100% of the principal amount of the 7% Convertible Debentures to be redeemed, (2) any accrued and unpaid interest to, but excluding, the redemption date, and (3) a redemption make-whole payment, payable in cash, common shares of the Company or a combination thereof, at the Company's election, equal to the present value of the remaining scheduled payments of interest that would have been made on the 7% Convertible Debentures to be redeemed had such debentures remained outstanding from the redemption date to August 15, 2021 (excluding interest accrued to, but excluding, the redemption date, which is otherwise paid pursuant to the preceding clause (2)). The present value of the remaining scheduled interest payment will be computed using a discount rate equal to 2.0%.

The conversion feature referred to above is an embedded derivative. The Company selected to bifurcate the conversion feature from the host instrument, thereby separating it from the debt component. The debt component is recorded at amortized cost, and the embedded derivative is accounted for at fair value. As of August 3, 2016, the date of the debt issuance, the fair value of the embedded derivative was $12.3 million . At September 30, 2016 , the fair value of the embedded derivative was $15.6 million . The revaluation loss of $3.3 million is recorded in the Statement of Operations (see Note 4).

The following table presents the balance sheet information related to the 7% Convertible Debentures at September 30, 2016 :

	As of September 30, 2016
Principal value of the debt component	$ 65,000
Unamortized value of the debt discount and issuance costs	(14,183)
Net carrying value of the debt component	$ 50,817

12 . SHARE CAPITAL

Bought deal

On April 28, 2016, the Company entered into an agreement with BMO Nesbitt Burns Inc. (the "Underwriter") under which the Underwriter purchased on a bought deal basis 22,750,000 common shares at a price of $0.66 per share for gross proceeds of $15.0 million. The Company incurred share issue costs of $1.3 million resulting in net proceeds of $13.7 million. The net proceeds were used for settlement with a significant current account creditor.

Equity offering

On August 3, 2016, the Company issued 40,000,000 common shares in an underwritten public offering led by the Underwriter, at a price of $0.75 per share (the "Equity Offering"). The Company granted the underwriters of the Equity Offering a 30-day option to purchase up to 6,000,000 common shares. The option was exercised for 6,000,000 common shares on August 3, 2016. The Company incurred share issue costs of $2.7 million resulting in net proceeds of $31.8 million.

13 . COMMITMENTS AND CONTINGENCIES

The Company has capital commitments of $15.7 million , all of which are expected to be incurred within the next three months.

14 . SHARE-BASED COMPENSATION

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Share-based compensation	$ 6,426	$ (229)	$ 16,166	$ 1,830

Share options

During the second quarter, the Fourth Amended and Restated 1997 Stock Option Plan (the “Fourth Amended and Restated 1997 Stock Option Plan”) was approved by shareholders to (i) reserve an additional 10,000,000 common shares (or approximately 3.8% of the issued and outstanding common shares) for the Fourth Amended and Restated 1997 Stock Option Plan, thereby increasing the total number of common shares issuable from 25,000,000 Common Shares under the Stock Option Plan to 35,000,000 common shares under the Fourth Amended and Restated 1997 Stock Option Plan; (ii) provide for the grant of “incentive stock options” (being stock options designated as “incentive stock options” in an option agreement and that are granted in accordance with the requirements of, and that conforms to the applicable provisions of, Section 422 of the Internal Revenue Code); and (iii) to make such other changes to update the provisions of the Stock Option Plan in light of current best practices.

The fair value of option grants is estimated at the grant dates using the Black-Scholes option-pricing model. Fair values of options granted during the nine months ended September 30, 2016 and 2015 were based on the weighted average assumptions noted in the following table:

	Nine Months Ended September 30,	
	2016	**2015**
Expected volatility	72.40%	68.98%
Risk-free interest rate	1.28%	1.30%
Expected lives	4.86 years	5.59 years
Dividend yield	0%	0%

The weighted average fair value per option granted during the nine months ended September 30, 2016 was $0.35 (nine months ended September 30, 2015 - $0.23). As at September 30, 2016 , there was $0.4 million of share-based compensation expense (September 30, 2015 - $0.5 million) relating to the Company's share options to be recorded in future periods. For the nine months ended September 30, 2016 , the Company recognized an expense of $0.6 million (nine months ended September 30, 2015 - $0.5 million).

A summary of option activity under the Company's Fourth Amended and Restated 1997 Stock Option Plan during the nine months ended September 30, 2016 are as follows:

	Options ('000)	Weighted–Average Exercise price ($CAD)	Weighted–Average Remaining Contractual Term (Years)
Outstanding as of December 31, 2015	13,911	1.48	5.9
Granted	3,245	0.46	9.0
Exercised	(59)	0.36	9.0
Forfeited	(610)	1.09	5.7
Expired	(47)	3.94	—
Outstanding as of September 30, 2016	16,440	1.32	5.9
Exercisable as of December 31, 2015	10,050	1.84	4.8
Exercisable as of September 30, 2016	12,060	1.59	4.9

Share Bonus Plan

There were no bonus shares issued during the nine months ended September 30, 2016 .

Deferred share units ("DSUs")

For the nine months ended September 30, 2016 , the DSUs that were granted vested immediately and a compensation expense of $0.4 million was recognized for these grants (nine months ended September 30, 2015 - $0.6 million). As of September 30, 2016 , there was no unrecognized compensation expense related to DSUs granted under the Company's DSU Plan.

A summary of DSU activity during the nine months ended September 30, 2016 and 2015 :

	Nine Months Ended September 30,	
	2016	**2015**
Number of DSUs, beginning of period ('000)	4,496	1,962
Grants	1,178	2,449
Exercises	(40)	(407)
Number of DSUs, end of period ('000)	5,634	4,004

Share appreciation rights ("SARs")

As of September 30, 2016 , there was approximately $0.4 million of total unrecognized compensation cost related to unvested SARs (September 30, 2015 - $0.2 million). For the nine months ended September 30, 2016 , the Company recognized an expense of $0.7 million related to these cash settled awards (nine months ended September 30, 2015 - $0.0 million).

A summary of the SARs activity during the nine months ended September 30, 2016 and 2015 :

	Nine Months Ended September 30,	
	2016	2015
Number of SARs, beginning of period ('000)	2,934	3,220
Grants	1,850	700
Exercises	(10)	—
Forfeited	(480)	(624)
Number of SARs, end of period ('000)	4,294	3,296

Performance share units ("PSUs")

Each PSU represents one notional common share that is redeemed for cash based on the value of a common share at the end of the three year performance period, to the extent performance and vesting criteria have been met. The PSUs vest at the end of a three year performance period based on the Company's total shareholder return relative to a performance peer group of gold companies as listed in the PSU Plan. The cash award is determined by multiplying the number of units by the performance adjustment factor, which range from 0% to 200%. The performance adjustment factor is determined by comparing the Company's share price performance to the share price performance of a peer group of companies. For the nine months ended September 30, 2016 , the Company recognized an expense of $14.4 million (nine months ended September 30, 2015 - $0.7 million). As at September 30, 2016 , the long term PSU liability is $13.1 million , recognized on the balance sheet as Other Long Term Liability and the current portion of $1.9 million is included in accounts payable and accrued liabilities.

A summary of the PSU activity during the nine months ended September 30, 2016 and 2015 :

	Nine Months Ended September 30,	
	2016	2015
Number of PSUs, beginning of period ('000)	9,618	2,346
Grants	6,058	8,010
Forfeited	(196)	(738)
Number of PSUs, end of period ('000)	15,480	9,618

15 . LOSS PER COMMON SHARE

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Net loss attributable to Golden Star shareholders	$ (23,110)	$ (6,832)	$ (43,093)	$ (81,462)
Weighted average number of basic and diluted shares (millions)	325.3	259.7	269.7	259.6
Loss per share attributable to Golden Star shareholders:				
Basic and diluted	$ (0.07)	$ (0.03)	$ (0.16)	$ (0.31)

16 . REVENUE

Revenue includes the following components:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Revenue - Streaming Agreement				
Cash payment proceeds	$ 1,212	$ 1,431	$ 3,333	$ 1,431
Deferred revenue recognized	2,889	4,874	8,495	4,874
	4,101	6,305	11,828	6,305
Revenue - Spot sales	51,410	50,147	156,207	192,462
Total revenue	$ 55,511	$ 56,452	$ 168,035	$ 198,767

17 . COST OF SALES EXCLUDING DEPRECIATION AND AMORTIZATION

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Mine operating expenses	$ 42,432	$ 54,352	$ 125,824	$ 183,361
Severance charges	—	1,013	(71)	14,857
Operating costs to metal inventory	(827)	(3,077)	(5,975)	(3,634)
Inventory net realizable value adjustment	—	—	—	1,524
Royalties	3,003	2,911	8,844	10,032
	$ 44,608	$ 55,199	$ 128,622	$ 206,140

18 . FINANCE EXPENSE, NET

Finance income and expense includes the following components:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Interest income	$ (11)	$ (4)	$ (21)	$ (21)
Interest expense, net of capitalized interest (see Note 6)	2,043	3,304	6,398	7,495
Net foreign exchange (gain)/loss	(373)	1,833	(566)	1,552
Accretion of rehabilitation provision	342	440	1,026	1,321
	$ 2,001	$ 5,573	$ 6,837	$ 10,347

19 . RELATED PARTY TRANSACTIONS

There were no material related party transactions for the three and nine months ended September 30, 2016 and 2015 other than the items disclosed below.

Key management personnel

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Salaries, wages, and other benefits	$ 531	$ 508	$ 1,720	$ 1,902
Bonuses	284	327	815	983
Share-based compensation	4,493	97	11,523	664
	$ 5,308	$ 932	$ 14,058	$ 3,549

20 . OPERATIONS BY SEGMENT AND GEOGRAPHIC AREA

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

Three Months Ended September 30,	Wassa	Bogoso/Prestea	Other	Corporate	Total
2016					
Revenue	$ 25,958	$ 29,553	$ —	$ —	$ 55,511
Mine operating expenses	22,473	19,959	—	—	42,432
Operating costs to metal inventory	(20)	(807)	—	—	(827)
Royalties	1,488	1,515	—	—	3,003
Cost of sales excluding depreciation and amortization	23,941	20,667	—	—	44,608
Depreciation and amortization	3,464	1,647	—	—	5,111
Mine operating (loss)/margin	(1,447)	7,239	—	—	5,792
Net loss attributable to non-controlling interest	(317)	(365)	—	—	(682)
Net (loss)/earnings attributable to Golden Star	$ (1,411)	$ 7,300	$ (1,733)	$ (27,266)	$ (23,110)
Capital expenditures	$ 9,699	$ 11,913	$ 44	$ —	$ 21,656
2015					
Revenue	$ 31,702	$ 24,750	$ —	$ —	$ 56,452
Mine operating expenses	23,389	30,963	—	—	54,352
Severance charges	1,013	—	—	—	1,013
Operating costs to metal inventory	(1,178)	(1,899)	—	—	(3,077)
Royalties	1,617	1,294	—	—	2,911
Cost of sales excluding depreciation and amortization	24,841	30,358	—	—	55,199
Depreciation and amortization	3,713	1,812	—	—	5,525
Mine operating margin/(loss)	3,148	(7,420)	—	—	(4,272)
Net earnings/(loss) attributable to non-controlling interest	192	(1,886)	—	—	(1,694)
Net earnings/(loss) attributable to Golden Star	$ 804	$ (8,536)	$ (1,342)	$ 2,242	$ (6,832)
Capital expenditures	$ 8,506	$ 9,283	$ —	$ —	$ 17,789

Nine Months Ended September 30,	Wassa	Bogoso/Prestea	Other	Corporate	Total
2016					
Revenue	$ 87,556	$ 80,479	$ —	$ —	$ 168,035
Mine operating expenses	69,799	56,025	—	—	125,824
Severance charges	113	(184)	—	—	(71)
Operating costs to metal inventory	(4,988)	(987)	—	—	(5,975)
Royalties	4,713	4,131	—	—	8,844
Cost of sales excluding depreciation and amortization	69,637	58,985	—	—	128,622
Depreciation and amortization	10,892	4,151	—	—	15,043
Mine operating margin	7,027	17,343	—	—	24,370
Net earnings/(loss) attributable to non-controlling interest	137	(1,358)	—	—	(1,221)
Net earnings/(loss) attributable to Golden Star	$ 5,467	$ 18,983	$ (5,683)	$ (61,860)	$ (43,093)
Capital expenditures	$ 31,650	$ 28,883	$ 44	$ —	$ 60,577
2015					
Revenue	$ 89,429	$ 109,338	$ —	$ —	$ 198,767
Mine operating expenses	72,620	110,741	—	—	183,361
Severance charges	1,816	13,041	—	—	14,857
Operating costs to metal inventory	(1,655)	(1,979)	—	—	(3,634)
Inventory net realizable value adjustment	1,524	—	—	—	1,524
Royalties	4,506	5,526	—	—	10,032
Cost of sales excluding depreciation and amortization	78,811	127,329	—	—	206,140
Depreciation and amortization	10,454	19,831	—	—	30,285
Mine operating margin/(loss)	164	(37,822)	—	—	(37,658)
Impairment charges	—	34,396	—	—	34,396
Net loss attributable to non-controlling interest	(1,093)	(10,072)	—	—	(11,165)
Net loss attributable to Golden Star	$ (6,397)	$ (61,469)	$ (1,788)	$ (11,808)	$ (81,462)
Capital expenditures	$ 25,911	$ 17,414	$ —	$ —	$ 43,325

	Wassa	Bogoso/Prestea	Other	Corporate	Total
September 30, 2016					
Total assets	$ 167,234	$ 95,327	$ 1,491	$ 9,680	$ 273,732
December 31, 2015					
Total assets	$ 149,019	$ 68,454	$ 21,606	$ (97)	$ 238,982

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

21 . SUPPLEMENTAL CASH FLOW INFORMATION

During the nine months ended September 30, 2016 and 2015, there was no payment of income taxes. The Company paid $5.9 million of interest during the nine months ended September 30, 2016 (nine months ended September 30, 2015 - $5.2 million).

Changes in working capital for the nine months ended September 30, 2016 and 2015 are as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Decrease/(increase) in accounts receivable	$ 1,354	$ 2,986	$ (349)	$ 7,610
Increase in inventories	(906)	(2,657)	(7,110)	(1,333)
(Increase)/decrease in prepaids and other	(405)	466	471	105
(Decrease)/increase in accounts payable and accrued liabilities	(579)	1,323	(3,189)	17,421
Decrease in current portion of other long term liabilities	—	—	(13,369)	—
Total changes in working capital	$ (536)	$ 2,118	$ (23,546)	$ 23,803

Other include the following components:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Loss on retirement of assets	$ —	$ 80	$ —	$ 80
Net realizable value adjustment on inventory	—	—	—	1,524
Loss/(gain) on marketable securities	—	20	(84)	46
Gain on deferral of payables (see Note 7)	—	—	(2,682)	(2,432)
Accretion of vendor agreement (see Note 11)	183	304	1,825	608
Accretion of rehabilitation provisions (see Note 8)	342	440	1,026	1,321
Amortization of financing fees	582	806	804	930
Amortization of 7% Convertible Debentures discount	347	—	347	—
	$ 1,454	$ 1,650	$ 1,236	$ 2,077

Exhibit 99.3

FORM 52 - 109F2
CERTIFICATION OF INTERIM FILINGS
FULL CERTIFICATE

I, Samuel T. Coetzer, President and Chief Executive Officer of Golden Star Resources Ltd., certify the following:

1. ***Review:*** I have reviewed the interim financial report and interim MD&A (together, the "interim filings") of Golden Star Resources Ltd. (the "issuer") for the interim period ended September 30, 2016 .

2. ***No misrepresentations:*** Based on my knowledge, having exercised reasonable diligence, the interim filings do not contain any untrue statement of a material fact or omit to state a material fact required to be stated or that is necessary to make a statement not misleading in light of the circumstances under which it was made, with respect to the period covered by the interim filings.

3. ***Fair presentation:*** Based on my knowledge, having exercised reasonable diligence, the interim financial report together with the other financial information included in the interim filings fairly present in all material respects the financial condition, financial performance and cash flows of the issuer, as of the date of and for the periods presented in the interim filings.

4. ***Responsibility:*** The issuer's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (DC&P) and internal control over financial reporting (ICFR), as those terms are defined in National Instrument 52-109 *Certification of Disclosure in Issuers' Annual and Interim Filings* , for the issuer.

5. ***Design:*** Subject to the limitations, if any, described in paragraphs 5.2 and 5.3, the issuer's other certifying officer and I have, as at the end of the period covered by the interim filings

A. designed DC&P, or caused it to be designed under our supervision, to provide reasonable assurance that

I. material information relating to the issuer is made known to us by others, particularly during the period in which the interim filings are being prepared; and

II. information required to be disclosed by the issuer in its annual filings, interim filings or other reports filed or submitted by it under securities legislation is recorded, processed, summarized and reported within the time periods specified in securities legislation; and

B. designed ICFR, or caused it to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with the issuer's GAAP.

5.1 ***Control framework:*** The control framework the issuer's other certifying officer and I used to design the issuer's ICFR is the Internal Control – Integrated Framework (COSO Framework) published by The Committee of Sponsoring Organizations of the Treadway Commission (2013).

5.2 ***ICFR - material weakness relating to design:*** N/A

5.3 ***Limitation on scope of design:*** N/A

6. ***Reporting changes in ICFR:*** The issuer has disclosed in its interim MD&A any change in the issuer's ICFR that occurred during the period beginning on July 1, 2016 and ended on September 30, 2016 that has materially affected, or is reasonably likely to materially affect, the issuer's ICFR.

Date: November 2, 2016

(signed) Samuel T. Coetzer

Samuel T. Coetzer
President and Chief Executive Officer

Exhibit 99.4

FORM 52 - 109F2
CERTIFICATION OF INTERIM FILINGS
FULL CERTIFICATE

I, André van Niekerk, Executive Vice President and Chief Financial Officer of Golden Star Resources Ltd., certify the following:

1. ***Review:*** I have reviewed the interim financial report and interim MD&A (together, the "interim filings") of Golden Star Resources Ltd. (the "issuer") for the interim period ended September 30, 2016 .

2. ***No misrepresentations:*** Based on my knowledge, having exercised reasonable diligence, the interim filings do not contain any untrue statement of a material fact or omit to state a material fact required to be stated or that is necessary to make a statement not misleading in light of the circumstances under which it was made, with respect to the period covered by the interim filings.

3. ***Fair presentation:*** Based on my knowledge, having exercised reasonable diligence, the interim financial report together with the other financial information included in the interim filings fairly present in all material respects the financial condition, financial performance and cash flows of the issuer, as of the date of and for the periods presented in the interim filings.

4. ***Responsibility:*** The issuer's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (DC&P) and internal control over financial reporting (ICFR), as those terms are defined in National Instrument 52-109 *Certification of Disclosure in Issuers' Annual and Interim Filings* , for the issuer.

5. ***Design:*** Subject to the limitations, if any, described in paragraphs 5.2 and 5.3, the issuer's other certifying officer and I have, as at the end of the period covered by the interim filings

A. designed DC&P, or caused it to be designed under our supervision, to provide reasonable assurance that

I. material information relating to the issuer is made known to us by others, particularly during the period in which the interim filings are being prepared; and

II. information required to be disclosed by the issuer in its annual filings, interim filings or other reports filed or submitted by it under securities legislation is recorded, processed, summarized and reported within the time periods specified in securities legislation; and

B. designed ICFR, or caused it to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with the issuer's GAAP.

5.1 ***Control framework:*** The control framework the issuer's other certifying officer and I used to design the issuer's ICFR is the Internal Control – Integrated Framework (COSO Framework) published by The Committee of Sponsoring Organizations of the Treadway Commission (2013).

5.2 ***ICFR - material weakness relating to design:*** N/A

5.3 ***Limitation on scope of design:*** N/A

6. ***Reporting changes in ICFR:*** The issuer has disclosed in its interim MD&A any change in the issuer's ICFR that occurred during the period beginning on July 1, 2016 and ended on September 30, 2016 that has materially affected, or is reasonably likely to materially affect, the issuer's ICFR.

Date: November 2, 2016

(signed) André van Niekerk

André van Niekerk
Executive Vice President and Chief Financial Officer