

NEWS RELEASE

Golden Star Resources Reports Fourth Quarter 2019 Results and Full Year 2019 Results

Toronto, ON - February 18, 2020 - Golden Star Resources Ltd. (NYSE American: GSS; TSX: GSC; GSE: GSR) ("Golden Star" or the "Company") reports its financial and operational results for the fourth quarter ended December 31, 2019 and the Full Year ("FY") 2019 results.

HIGHLIGHTS

- Q4 2019 production totaled 52.7koz, 8% higher than Q4 2018 and 7% higher than Q3 2019 production. In Q4 2019 the \$1,227/oz All-In Sustaining Cost ("AISC") was in line with the \$1,233/oz achieved in Q3 2019.
- FY 2019 production totaled 203.8koz, in line with the upper end of the 190-205koz revised production guidance range. The \$1,159/oz AISC is also in line with the \$1,100-1,200/oz revised guidance for FY 2019.
- FY 2019 cash flow from operations totaled \$22.8m, significantly higher than the \$7.6m of cash used in operations in 2018.
- The FY 2019 capex of \$73.4m was 19% above the \$61.7m guidance. This is due to the acceleration of underground development and exploration spend. The underground development improves the operational flexibility across the mines and the additional exploration expenditure at Wassa focused on infill drilling and some expansionary step-out drilling of the southern extension of the Wassa orebody.
- Cash position of \$53.4m at December 31, 2019 and total debt of \$106.8m for net debt of \$53.4m.
- Following a review of the operation, the value of Prestea is being impaired by \$56.8m based on a conservative valuation approach given recent performance and the execution risk in delivering the revised mine plan. The residual asset value is balanced by liabilities and working capital resulting in a zero net asset value.

Andrew Wray, Chief Executive Officer of Golden Star, commented:

"The fourth quarter operational performance was in line with our expectations with Wassa continuing to deliver strong mining rates and an increase in underground grades, while ongoing improvements in the Prestea underground performance were offset by the planned reduction in open pit contribution. As a result, we delivered on the upper end of the revised production range and the mid-point of the AISC guidance for 2019. The effort of our management and mine site teams in 2019, alongside the significant capital investment, has started to deliver improved operational performance and enhanced geological understanding at both of our mines. In 2020 we plan to continue to invest in our asset base with the completion of the paste plant project at Wassa which is expected to provide more flexibility in the mine plan, a new mining method and mining area at Prestea, and acceleration of the development and maintenance spend across both sites.

These initiatives are expected to deliver improved production rates and margins as we progress through the year. They will also help us to further define the long-term growth at Wassa. We remain excited by the potential to continue to increase the mining rates at Wassa, with the aim of improving the scale and margins at the operation. At Prestea, the investment is aimed at improving the sustainability and flexibility of the operation with the introduction of a second mining level in order to enable it to return to positive cash generation once fully ramped up through 2020. This is expected to also improve the options available for us to realize value from the asset having carried out the operational review, redesigned the mine plan and invested in the equipment for Long Hole Open Stopping (LHOS).

Following the update of the life of mine plans at each operation we have undertaken a carrying value review of the assets. As a result, the decision was made to reduce the carrying value of Prestea to reflect anticipated changes to future cash flow resulting from shifts in the unit costs, working capital and capex assumptions. We have taken a conservative approach given recent performance as well as the inherent execution risk in the new plan, resulting in an impairment charge of \$56.8m."

Q4 2019 & FY 2019 PERFORMANCE SUMMARY:

		Q4 2019	Q4 2018	YoY % change	FY 2019	FY 2018	YoY % change
Production and cost highlights							
Total gold produced	koz	52.7	48.8	8%	203.8	224.8	(9%)
Total gold sold	koz	53.4	48.4	10%	204.2	225.0	(9%)
Average realized gold price	\$/oz	1,410	1,185	19%	1,342	1,225	10%
Cash operating cost per ounce - Consolidated¹	\$/oz	831	905	(8%)	832	847	(2%)
All-In Sustaining cost per ounce - Consolidated¹	\$/oz	1,227	1,218	1%	1,159	1,107	5%
Profitability highlights							
Gold revenues	\$m	66.1	57.3	15%	264.7	273.0	(3%)
Adj. income/(loss)/share attributable to Golden Star shareholders - basic ¹	\$/share	0.05	(0.05)	214%	0.16	(0.02)	823%
Cash flow highlights							
Cash provided by operations before working capital changes	\$m	9.4	(9.4)	200%	36.8	9.6	283%
Changes in working capital	\$m	3.7	(15.3)	124%	(14.0)	(17.2)	19%
Capital expenditures	\$m	26.3	15.3	72%	73.4	44.9	63%
Cash	\$m	53.4	96.5	(45%)	53.4	96.5	(45%)

Notes:

1. See "Non-GAAP Financial Measures".

Q4 2019 & FY 2019 RESULTS CONFERENCE CALL DETAILS

The Company will host a conference call and webcast on Wednesday, February 19, 2020 at 10:00 am ET.

Toll Free (North America): **+1 833 231 8263**

Toronto Local and International: **+1 647 689 4108**

Toll Free (UK): **0800 051 7107**

Conference ID: **7897747**

Webcast: <https://event.on24.com/wcc/r/2151422/6B38EC7D5988C8FD57C818D1DDCD2EF8> and on the home page of the Company's website: www.gsr.com.

A recording and webcast replay of the call will be available on the Company's website: www.gsr.com following the call.

2019 KEY ACHIEVEMENTS

Management changes - In order to drive the operational and organizational changes in the business a completely new executive leadership team was put in place following the appointment mid-year of Andrew Wray as CEO. This is being accompanied by a transition of our corporate head office from Toronto to London to be more accessible to our operations in West Africa and enhance the executive team's support of the operations through a greater on the ground presence. The severance costs relating to the closure of the Toronto office and duplication of head office costs had an impact on the corporate costs (other expenses) in 2019, and this will continue into H1 2020 after which time the cost base is expected to normalize.

Wassa mining rates - Wassa delivered improved mining rates in 2019 while maintaining low per tonne unit costs. Mining rates exceeded 4,000tpd (tonnes per day) through H2 2019. Wassa is expected to continue to deliver at this level throughout 2020.

Prestea optimization - The independent review of the underground operation and improvement project, which commenced in 2019, positions the mine for a transformational year in 2020. The current Alimak mining areas on 24 Level are being optimized to improve orebody definition, reduce stope cycle time, and reduce dilution. Development has commenced on 17 Level for the introduction of LHOS in the 17-21 Level area. These changes are expected to be ongoing through 2020 and are aimed at improving the flexibility in the operation and are planned to result in an improved mining rate in excess of 500tpd on a consistent basis.

Sustainability - Philipa Varris was promoted to the Executive Committee in Q4 2019 to prioritize Golden Star's sustainability and safety initiatives. Implementation of our Safety and Health Strategy throughout 2019 saw increased alignment to our values and enhanced achievement of our principle that All Incidents Are Reported, which led to an expected increase in our Near Miss and All Injury Frequency Rates. Continued optimization of our malaria prevention program, in support of Sustainable Development Goal 3 (SDG), achieved the lowest per capita malaria case rate in the history of the business. These successes were recognized in the year by the Global Compact Network Canada in their SDGs Emerging Practice Guide case studies. To strengthen our relationship with our host communities, the Wassa mine signed a milestone Memorandum of Understanding with its local communities.

Financing - On October 17, 2019, the Company closed the \$60 million senior secured credit facility with Macquarie Bank Limited. The proceeds were used to refinance the Ecobank Loan III, Ecobank Loan IV, and the long-term payable under the Vendor Agreement with Volta River Authority.

2019 PERFORMANCE VERSUS THE REVISED GUIDANCE:

		Revised guidance range	FY 2019 results	Variance versus guidance midpoint
Group Production	koz	190-205	203.8	3%
Group Cash Operating Costs	\$/oz	800-850	832	(1%)
Group AISC	\$/oz	1,100-1,200	1,159	(1%)
Wassa Production	koz	150-160	156.2	1%
Wassa Cash Operating Costs	\$/oz	600-650	633	(1%)
Wassa AISC	\$/oz	880-940	922	(1%)
Prestea Production	koz	40-45	47.6	12%
Prestea Cash Operating Costs	\$/oz	1,450-1,650	1,484	4%
Prestea AISC	\$/oz	1,900-2,150	1,937	4%
Group Capex	\$m	61.7	73.4	(19%)

- 2019 production delivered on the upper end of the revised guidance range. Wassa production was in line with the midpoint of its guidance range and Prestea production was 6% above the upper end of its guidance range.
- With both of the operations delivering cash operating cost and AISC performance within the respective guidance ranges, the Company achieved a consolidated cost performance broadly in line with the midpoint of the cash operating cost and AISC guidance ranges.
- In 2019 the capital spend exceeded guidance by 19%. This is attributable to the acceleration of underground development and exploration spend. During H2 2019 the decision was made to allocate an additional \$5m of budget to the Wassa definition drilling and extension drilling programs in order improve the confidence levels in planning mining areas, as well as furthering the understanding of the orebody in the current mining areas and the extensions to the south.

2020 OUTLOOK: (As announced January 22, 2020)

2020 Production, Cost and Capex Guidance:

Asset	Gold Production (koz)	Cash Operating Cost ¹ (\$/oz)	AISC ¹ (\$/oz)	Sustaining Capital ² (\$ millions)	Development Capital ² (\$ millions)	Total Capital Expenditures (\$ millions)
Wassa Complex	155-165	620-660	930-990	23-25	19-21	42-46
Prestea Complex	40-45	1,400-1,550	1,650-1,850	6.5-7.5	2.5-3	9-10.5
Capitalised exploration	-	-	-	-	3.5	3.5
Consolidated	195-210	790-850	1,080-1,180	29.5-32.5	25-27.5	55-60

Notes:

1. See "Non-GAAP Financial Measures".

2. Development capital are those costs incurred at new operations and costs related to major projects at existing operations where these projects will materially increase production. All other costs relating to existing operations are considered sustaining capital.

2020 Guidance

FY 2020 production guidance of 195-210koz is in line with 2019 performance. The AISC¹ guidance of \$1,080-1,180/oz delivers improvement on the 2019 performance. Underlying the 2020 guidance is a range of operational initiatives aimed at improving the consistency of the operations and visibility of the longer-term potential of the operations.

2020 Capex

The FY 2020 capex guidance totals \$55-60m. While the 2020 budget shows a lower level of investment than seen in 2019, the capex budget remains at elevated levels to fund the introduction of a new mining level and method at Prestea, the Wassa paste plant construction and accelerated maintenance and development at both mines.

2020 Exploration

The 2020 exploration budget is lower than in 2019 as the surface drilling of the deeper zones of the southern extensions to the Wassa orebody is now complete. Although the orebody remains open to the South, the future drilling is now expected to be carried out from underground drill positions in order to lower the cost of the infill drilling programs and to allow tighter infill drill spacing to be achieved more efficiently. In 2020, the greenfield and brownfield exploration programs will focus on near mine targets in-and-around Wassa and Prestea, as well as on regional exploration targets within 60km of the Wassa operation. A total of \$6.2m (\$3.5 m capitalized and \$2.7m expensed) has been allocated for exploration activities during 2020.

Wassa operating expectations

The mid-point of the 155-165koz production guidance for the year is 2% ahead of the 2019 performance. In 2020 the mining rate is expected to continue at the higher rates in excess of 4,000tpd, as achieved in H2 2019. The paste plant project is due to be completed in late Q3 2020, enabling the operation to better sequence and mine primary and secondary stopes, as well as recovering pillars and secondary stopes in

some previously mined areas. This is expected to make a small contribution in 2020 with a greater impact expected in 2021 as the paste fill system becomes fully operational. This timeline may be subject to change, as we have been notified by the project engineering consultant that there is potential for a delay to the delivery of materials and components being sourced from China. The situation is being closely monitored and we will provide further updates as soon as we are informed of any change.

Prestea operating expectations

The 40-45koz production guidance for 2020 is broadly in line with 2019 performance, with significant changes at the operation underway. Production from the underground is expected to improve in 2020 with reduced open pit contribution. At Prestea underground, the investment in a new mining area and the introduction of LHOS is expected to improve overall mining rates and reduce the operational risk with improved flexibility in the schedule. The improvements being implemented are expected to reduce the AISC by around \$200/oz as per the 2020 guidance when compared to the 2019 AISC of \$1,937/oz.

SUMMARY OF CONSOLIDATED OPERATIONAL RESULTS

		Q4 2019	Q4 2018	YoY % change	FY 2019	FY 2018	YoY % change
OPERATING SUMMARY							
Wassa gold sold	koz	41.9	37.2	13%	156.5	149.6	5%
Prestea gold sold	koz	11.5	11.2	3%	47.7	75.4	(37%)
Total gold sold	koz	53.4	48.4	10%	204.2	225.0	(9%)
Wassa gold produced	koz	41.3	37.6	10%	156.2	149.7	4%
Prestea gold produced	koz	11.3	11.3	-%	47.6	75.1	(37%)
Total gold produced	koz	52.7	48.8	8%	203.8	224.8	(9%)
Average realized gold price	\$/oz	1,410	1,185	19%	1,342	1,225	10%
Cost of sales per ounce - Consolidated¹	\$/oz	1,080	1,351	(20%)	1,055	1,156	(9%)
Cost of sales per ounce - Wassa ¹	\$/oz	799	836	(4%)	813	898	(9%)
Cost of sales per ounce - Prestea ¹	\$/oz	2,101	3,054	(31%)	1,848	1,681	10%
Cash operating cost per ounce - Consolidated¹	\$/oz	831	905	(8%)	832	847	(2%)
Cash operating cost per ounce - Wassa ¹	\$/oz	615	614	-%	633	629	1%
Cash operating cost per ounce - Prestea ¹	\$/oz	1,616	1,867	(13%)	1,484	1,292	15%
All-In Sustaining cost per ounce - Consolidated¹	\$/oz	1,227	1,218	1%	1,159	1,107	5%
All-In Sustaining cost per ounce - Wassa ¹	\$/oz	959	933	3%	922	886	4%
All-In Sustaining cost per ounce - Prestea ¹	\$/oz	2,202	2,164	2%	1,937	1,558	24%

Notes:

1. See "Non-GAAP Financial Measures".

OPERATIONAL PERFORMANCE - Production and costs in-line with FY 2019 guidance

Production

- In Q4 2019, Golden Star produced 52.7koz of gold, 8% higher than the same period in 2018 and 7% higher than in Q3 2019. This consists of 41.3koz of production from Wassa, up 20% from Q3 2019 due to a 33% increase in the underground grade. Prestea produced 11.3koz, 24% lower than in Q3 2019 due to reduced mined and milled tonnes. This is attributed to a lower open pit contribution, underground stope availability and sequencing, partially offset by an increase in grades.
- FY 2019 production of 203.8koz was 9% lower than the 224.8koz achieved in 2018. FY 2019 production performance is, however, in-line with the upper end of the 190-205koz production guidance range for the year. The production comprised 156.2koz from Wassa, 4% higher year on year (YoY), and 47.6koz from Prestea, 37% lower than in 2018.

Costs

- The consolidated cash operating cost per ounce was \$831 in Q4 2019, 8% lower than \$905 in the same period in 2018. Performance at Wassa of \$615/oz is consistent with the \$614/oz achieved in the same period in 2018. The cash operating cost per ounce at Prestea decreased 13% from \$1,867/oz in Q4 2018 to \$1,616/oz in the Q4 2019.
- FY 2019 consolidated cash operating cost per ounce of \$832 decreased from \$847 per ounce in 2018. This is due to higher production at the lower cost Wassa operation and a lower proportion

of the production mix coming from the higher cost Prestea operation as a result of lower production there.

- The consolidated AISC for Q4 2019 of \$1,227/oz is 1% higher than in Q4 2018. This results from small increases in the AISC at both operations with Wassa 3% higher and Prestea 2% higher. Relative to Q3 2019 the AISC performance at Wassa improved to \$959/oz, from \$1,061/oz. This 10% improvement relates to an improvement in the grade of ore produced from the underground operation.
- FY 2019 AISC of \$1,159/oz is 5% higher than the \$1,107/oz achieved in 2018. This results from a slight increase in the Wassa cost base and the decline in the performance at Prestea. Prestea has seen a reduction in the contribution of ore from the open pit operations which are reaching the end of the mine life, in addition to the underground mine operating issues that were highlighted earlier in 2019. The Prestea AISC of \$1,937/oz represents a 24% increase relative to FY 2018 performance. At Wassa the AISC of \$922/oz was 4% higher than in 2018.

FINANCIAL PERFORMANCE

Consolidated Statement of Operations and Comprehensive Loss

		Q4 2019	Q4 2018	FY 2019	FY 2018
Gold revenues	\$m	66.1	57.3	264.7	273.0
Cost of sales excluding depreciation and amortization	\$m	49.2	57.6	186.3	223.7
Depreciation and amortization	\$m	8.5	7.8	29.1	33.9
Mine operating margin	\$m	8.4	(8.1)	49.3	15.3
Exploration expense	\$m	0.7	1.0	3.2	3.0
General and administrative expense	\$m	4.0	2.2	19.1	16.4
Finance (income)/expense, net	\$m	(3.4)	3.8	7.6	18.1
Other expense/(income)	\$m	7.0	(1.5)	11.6	(3.6)
Impairment	\$m	56.8	-	56.8	-
Loss/(gain) on fair value of financial instruments, net	\$m	3.0	(3.3)	1.6	(6.8)
Loss before tax	\$m	(59.6)	(10.4)	(50.5)	(11.7)
Income tax expense	\$m	9.7	1.5	27.4	12.4
Net loss and comprehensive loss	\$m	(69.4)	(11.9)	(78.0)	(24.1)
Net income attributable to non-controlling interest	\$m	(6.9)	(2.6)	(10.5)	(5.9)
Net loss attributable to GSR shareholders	\$m	(62.4)	(9.3)	(67.4)	(18.1)
Loss per share attributable to Golden Star shareholders – basic and diluted	\$/share	(0.57)	(0.09)	(0.62)	(0.21)
Adj. net income/(loss) attributable to GSR shareholders ¹	\$m	6.0	(5.2)	17.9	(1.9)
Adj. income/(loss)/share attributable to GSR shareholders - basic¹	\$/share	0.05	(0.05)	0.16	(0.02)

- **Gold revenue** totaled \$75.3m for Q4 2019 before a \$9.3m negative non-cash adjustment to deferred revenue was recognized related to prior periods (\$66.1m after the adjustment) in Q4 2019. This compares to \$57.3m in the same period in 2018. Excluding the revenue adjustment, gold revenue for Q4 2019 was \$18.0m or 31% higher than the same period in 2018, due to a 19% increase in the consolidated average realized gold price and a 10% increase in gold sold. FY 2019 gold revenue was \$274.0m before the adjustment (\$264.7m after the adjustment), a slight increase compared to \$273.0m in 2018 due primarily to increased gold production from Wassa Underground, offset by a decrease in gold revenue at Prestea.
- **Non-cash adjustment to revenue** - The non-cash deferred revenue adjustment relates to the Company's streaming agreement. As the Company's streaming agreement contains a variable component, each time there is a significant change in the underlying total expected gold production of the Company's mines a cumulative catch-up adjustment to revenue is required. In 2019, the Company realized an adjustment to revenue and finance costs due to an increase in the Company's resource and reserve estimates related primarily to the Wassa mine. The result of the adjustment was to reduce revenue by \$9.3m, reduce finance expense by \$6.2m and increase deferred revenue by \$3.1m.
- **Cost of sales** - FY 2019 cost of sales excluding depreciation and amortization was \$186.3m, a 17% decrease compared to \$223.7m in 2018. The decrease is mainly due to a \$14.5m decrease in

severance charges which resulted from the Prestea improvement plan in the prior year, a \$13.2m decrease in operating costs from metal inventory, a \$17.7m decrease in mine operating costs at Prestea as production decreased compared to the same period in 2018, and a \$4.4m decrease in inventory net realizable value adjustments and write-offs primarily as a result of the materials and supplies inventories relating to open pit mining being written off at Wassa in the prior period.

- **Depreciation and amortization expense** totaled \$8.5m in Q4 2019 compared to \$7.8m in the same period in 2018. For FY 2019, depreciation and amortization expense was \$29.1m, a 14% decrease from the \$33.9m in 2018. The decrease in depreciation and amortization expense for FY 2019 was mainly due to a decrease at Wassa as a result of an increase in the total recoverable gold ounces over the life of mine of Wassa Underground.
- **General and administrative (G&A) expense** totaled \$4.0m in Q4 2019, compared to \$2.2m in the same period in 2018. The increase in G&A expense for Q4 2019 was primarily due to a \$2.0m increase in share-based compensation expense compared to the same period in 2018. G&A excluding share-based compensation totaled \$3.5m compared to \$3.7m in the same period in 2018. For FY 2019 G&A totaled \$19.1m compared to \$16.4m in the same period in 2018. The increase relates primarily to a \$1.8m increase in share-based compensation expense compared to the same period in 2018. In Q4 2019 there was some duplication of corporate overheads with both a London and Toronto office in operation. This duplication of cost is expected to continue for the first four months of H1 2020.
- **Other expense** totaled \$7.0m in Q4 2019, compared to other income of \$1.5m for the same period in 2018. The \$8.4m increase is primarily due to \$3.2m of termination costs related to the relocation of the corporate office and changes in senior management in 2019 and \$4.7m in mineral rights fees. The mineral rights fees relate to an assessment made by the Minerals Commission in Ghana for the years 2012 to 2018 for mineral rights fees due under the Minerals and Mining Regulations of 2012 not previously assessed. For FY 2019, other expenses totaled \$11.6m compared to income of \$3.6m in 2018. The \$15.2m increase is mainly due to \$7.2m of termination costs related to the relocation of the corporate office and changes in senior management in 2019, \$4.7m in mineral rights fees, and a decrease in non-cash gain on the reduction of asset retirement obligations which created other income of \$3.1m in 2018. The majority of the relocation and termination costs were accrued during FY 2019, therefore the Company expects lower charges to be incurred in 2020.
- **Income tax expense** was \$9.7m in Q4 2019 compared to \$1.5m for the same period in 2018. FY 2019 income tax totaled \$27.4m, compared to \$12.4m in 2018. The increase in income tax expense for the quarter and FY 2019 relates to the increase in mine operating margin at Wassa.
- **Impairment** - In Q4 2019, the Company completed its annual budgeting and life of mine process. Management observed a decrease in the Prestea mine's cash flow reflecting adjustments to key mine planning, cost and working capital assumptions following the conclusion of the independent review of the underground operations at Prestea and the revised life of mine plan. This resulted in a trigger for an impairment test. The book value of Prestea was determined by a discounted cash flow analysis of the indicative life of mine model. This life of mine model was developed solely for impairment testing purposes and it is management's best, but conservative, estimate of the recoverable value of Prestea's assets at December 31, 2019. The impairment test concluded that the Prestea value was lower than its previous carrying value, resulting in an impairment charge of \$56.8m. The Prestea asset value is now balanced by liabilities and working capital for a net asset value of zero.

- **Net loss attributable to Golden Star shareholders** for Q4 2019 totaled \$62.4m or \$0.57 loss per share (basic), compared to a net loss of \$9.3m or \$0.09 loss per share (basic) in the same period in 2018. The increase was mainly due to a \$56.8m increase in impairment charges, a \$8.2m increase in income taxes, and a \$1.8m increase in general and administrative expenses, offset by a \$16.4m increase in mine operating margin. For FY 2019, net loss attributable to Golden Star shareholders totaled \$67.4m or \$0.62 loss per share (basic), compared to a net loss of \$18.1m or \$0.21 loss per share (basic) in the same period in 2018. The increase in loss is mainly due to a \$56.8m increase in impairment charges, a \$15.1m increase in income tax expense, a \$2.7m increase in G&A expenses, a \$15.2m increase in other expense, offset by a \$34.0m increase in mine operating margin.
- **Adjusted earnings per share (see non GAAP measures)** - The adjusted income per share attributable to Golden Star shareholders (basic) for Q4 2019 was \$0.05/share and \$0.16/share for FY 2019. The significant improvement in adjusted earnings from Q4 2018 results from the increase in revenue and reduction in the cost of sales as highlighted above.

Consolidated Statements of Cash Flow

		Q4 2019	Q4 2018	FY 2019	FY 2018
OPERATING ACTIVITIES:					
Net loss	\$m	(69.4)	(11.9)	(78.0)	(24.1)
Depreciation and amortization	\$m	8.6	7.8	29.6	34.0
Impairment charges	\$m	56.8	—	56.8	—
Share-based compensation	\$m	0.5	(1.5)	3.1	1.3
Deferred income tax expense	\$m	9.7	1.5	27.4	12.4
Loss/(gain) on fair value of 7% Convertible Debentures embedded derivative	\$m	2.5	(3.3)	1.4	(6.8)
Recognition of deferred revenue	\$m	(3.8)	(2.4)	(13.3)	(13.7)
Reclamation expenditures	\$m	(0.8)	(1.1)	(3.2)	(5.3)
Other	\$m	5.4	1.3	12.9	11.9
Changes in working capital	\$m	3.7	(15.3)	(14.0)	(17.2)
Net cash provided by/(used in) operating activities	\$m	13.1	(24.7)	22.8	(7.6)
INVESTING ACTIVITIES:					
Additions to mining interests	\$m	(26.3)	(15.3)	(73.4)	(44.9)
Change in accounts payable and deposits on mine equipment and material	\$m	(3.3)	(1.8)	1.5	(3.0)
Decrease/(increase) in restricted cash	\$m	4.5	—	4.5	—
Net cash used in investing activities	\$m	(25.1)	(17.1)	(67.4)	(48.0)
FINANCING ACTIVITIES:					
Principal payments on debt	\$m	(49.0)	(4.9)	(57.2)	(15.6)
Proceeds from debt agreements, net	\$m	57.4	—	57.4	35.0
Royal Gold loan repayment	\$m	—	—	—	(20.0)
Shares issued, net	\$m	—	124.8	—	124.8
Exercise of options	\$m	0.2	—	1.3	0.1
Net cash provided by financing activities	\$m	8.6	119.9	1.4	124.2
Cash and cash equivalents, beginning of period	\$m	56.8	18.4	96.5	27.8
(Decrease)/increase in cash and cash equivalents	\$m	(3.4)	78.1	(43.1)	68.7
Cash and cash equivalents, end of period	\$m	53.4	96.5	53.4	96.5
OTHER CASH FLOW METRICS:					
Cash provided by/(used in) operations before working capital changes	\$m	9.4	(9.4)	36.8	9.6
Cash provided by operations per share - basic	\$/share	0.12	(0.23)	0.21	(0.09)
Cash provided by operations before working capital changes per share - basic ¹	\$/share	0.09	(0.09)	0.34	0.11

- **Cash generated by operations before working capital changes** (see “Non-GAAP Financial Measures” section) was \$9.4m for the Q4 2019, compared to \$9.4m of cash used by operations in the same period in 2018. The increase in cash provided by operations before working capital changes was due primarily to a \$16.4m increase in the mine operating margin. For FY 2019 the cash provided by operations before working capital changes was \$36.8m compared to \$9.6m in 2018. The increase was primarily due to a \$34.0m increase in mine operating margin, partially offset by an increase in consolidated general and administrative expense (excluding share-based compensation).
- **Working capital movements** in Q4 2019 resulted in a cash inflow of \$3.7m, this comprised of a \$0.8m increase in accounts receivable, a \$1.7m increase in inventories, a \$0.1m decrease in

prepaids, offset by a \$6.1m increase in accounts payable. In FY 2019 there was a \$14.0m cash outflow to working capital.

- **Income taxes** - In FY 2019 Wassa paid \$7.7m in income tax, compared to zero in 2018. Given the lack of profitability in the period, and the significant historical losses, Prestea did not pay any income tax in 2019.
- **Capital expenditures** for Q4 2019 totaled \$26.3m compared to \$15.3m in the same period in 2018. Capital expenditures of \$21.7m at Wassa during Q4 2019 made up 83% of the group capital expenditure. The significant investments included \$5.4m on the paste fill plant, \$4.1m on Wassa Underground capitalized development, \$4.4m on mobile equipment, \$2.3m on electrical upgrades and \$1.1m on the pumping station. Capital expenditures at Prestea during Q4 2019 comprised 17% of total capital expenditures and totaled \$4.4m, which included \$3.7m on sustaining capital related to Prestea Underground, and \$0.3m on other equipment and capital expenditures.

2019 Capital Expenditures Breakdown (in millions)

(\$m)	Sustaining	Development	Total
Wassa Exploration Drilling	-	16.5	16.5
Wassa Main Pit and Processing Plant	4.8	-	4.8
Wassa Tailings Expansion	-	3.0	3.0
Wassa Underground	16.4	17.7	34.1
Wassa Equipment Purchase	0.8	0.9	1.7
Wassa Subtotal	22.0	38.1	60.1
Prestea Exploration Drilling	-	0.8	0.8
Prestea Open Pits and Processing Plant	2.3	-	2.3
Prestea Underground	9.7	-	9.7
Prestea Subtotal	12.0	0.8	12.8
Other	-	-	0.5
Consolidated	34.0	38.9	73.4

- **Year-end cash position** - The Company held \$53.4m in cash and cash equivalents as at December 31, 2019 compared to \$56.8m at the end of Q3 2019 and \$96.5m at the end of 2018. In Q4 2019 the business used \$3.4m as a result of the \$25.1m used in investing activities exceeding the \$13.1m of operating cash flow (after working capital movements) and the \$8.6m generated by financing activities. In FY 2019 the business used \$43.1m of cash as a result of the \$67.4m used in investing activities exceeding the \$22.8m of operating cash flow (after working capital movements) and the \$1.4m generated by financing activities in 2019.

Consolidated Balance Sheet

	FY 2019	FY 2018
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	53,367	96,507
Accounts receivable	6,503	3,213
Inventories	38,860	35,196
Prepays and other	8,559	5,291
Total Current Assets	107,289	140,207
NON-CURRENT ASSETS:		
Restricted cash	2,082	6,545
Mining interests	264,689	270,640
Deferred tax assets	—	595
Total non-current assets	266,771	277,780
Total Assets	374,060	417,987
LIABILITIES		
CURRENT LIABILITIES:		
Accounts payable and accrued liabilities	90,842	78,484
Current portion of rehabilitation provisions	5,826	7,665
Current portion of deferred revenue	11,191	14,316
Current portion of long term debt	15,987	27,482
Other liability	—	6,410
Total Current Liabilities	123,846	134,357
NON-CURRENT LIABILITIES:		
Rehabilitation provisions	62,609	58,560
Deferred revenue	102,784	105,632
Long term debt	90,782	73,224
Derivative liability	5,608	4,177
Deferred tax liability	20,554	—
Total non-current liabilities	282,337	241,593
Total Liabilities	406,183	375,950
SHAREHOLDERS' EQUITY		
Share capital - Common shares, without par value, unlimited shares authorized	910,205	908,035
Contributed surplus	38,964	37,258
Deficit	(898,779)	(831,283)
Shareholders' equity attributable to Golden Star shareholders	50,390	114,010
Non-controlling interest	(82,513)	(71,973)
Total Equity	(32,123)	42,037
Total Liabilities and Shareholders' Equity	374,060	417,987

Financial position and liquidity

- The Company held \$53.4m in cash and cash equivalents as at December 31, 2019 compared to \$96.5m in cash and cash equivalents at December 31, 2018.
- At December 31, 2019 the Company held \$106.8m of debt, for net debt of \$53.4m.
- On October 17, 2019, the Company closed the \$60 million senior secured credit facility with Macquarie Bank Limited (the "Credit Facility") previously announced in its July 31, 2019 news release. Golden Star has used the proceeds to refinance the Ecobank Loan III, Ecobank Loan IV, and the long-term payable under the Vendor Agreement with Volta River Authority. The remaining balance is available for general corporate purposes. The Credit Facility is repayable in \$5 million quarterly installments, commencing on June 30, 2020. The final maturity date is March 31, 2023. The interest rate is 4.5% plus the applicable USD LIBOR rate. The Credit Facility is subject to normal financial covenants including a Debt Service Coverage Ratio of greater than 1.20:1 and a Net Debt to EBITDA ratio of less than 3.00:1.

Current and Long Term Debt Summary:

(\$m)	December 31, 2019
Current debt:	
Macquarie	15.0
Finance leases	1.0
Total current debt	16.0
Long term debt:	
Macquarie	42.4
Finance leases	1.4
7% Convertible Debentures	47.0
Total long term debt	90.8
Total	106.8

- In aggregate, the financing activities provided \$1.4m during FY 2019, compared to \$124.2m in the same period in 2018. Financing activities were comprised of the \$57.4m Credit Facility proceeds net of fees and \$1.3m received on exercise of options, offset by \$57.2m in principal repayments of the Ecobank loans and the Vendor Agreement.

WASSA COMPLEX (“Wassa”)

		Q4 2019	Q4 2018	YoY % change	FY 2019	FY 2018	YoY % change
WASSA FINANCIAL RESULTS							
Revenue	\$m	53.6	44.1	21%	203.8	183.1	11%
Mine operating expenses	\$m	26.2	22.0	19%	98.7	86.9	14%
Royalties	\$m	3.1	2.3	32%	10.9	9.5	14%
Severance	\$m	-	-	-	0.2	5.0	(96%)
Operating costs (to)/from metals inventory	\$m	(0.4)	0.8	(152%)	0.3	7.2	(96%)
Inventory net realizable value adjustment and write-off	\$m	-	0.3	(100%)	-	3.7	(100%)
Cost of sales excluding depreciation and amortization	\$m	28.8	25.5	13%	110.1	112.3	(2%)
Depreciation and amortization	\$m	4.7	5.6	(17%)	17.1	22.1	(22%)
Mine operating margin	\$m	20.1	13.0	54%	76.6	48.8	57%
Capital expenditures	\$m	21.7	13.9	56%	60.1	35.4	70%
WASSA OPERATING RESULTS							
Ore mined - Underground	kt	376.0	309.5	21%	1,421.7	1,075.2	32%
Waste mined - Underground	kt	121.9	89.3	36%	363.0	309.3	17%
Ore processed - Main Pit/Stockpiles	kt	40.3	92.2	(56%)	160.6	525.7	(69%)
Ore processed - Underground	kt	349.1	309.5	13%	1,387.9	1,075.2	29%
Ore processed - Total	kt	389.4	401.7	(3%)	1,548.5	1,600.9	(3%)
Grade processed - Main Pit/Stockpiles	g/t	0.68	0.66	3%	0.65	0.76	(14%)
Grade processed - Underground	g/t	3.78	3.80	(1%)	3.57	4.18	(15%)
Recovery	%	95.4%	95.4%	-	95.6%	95.7%	(0.10%)
Gold produced - Main Pit/Stockpiles	koz	0.7	1.9	(60%)	3.3	12.4	(74%)
Gold produced - Underground	koz	40.6	35.7	14%	152.9	137.3	11%
Gold produced - Total	koz	41.3	37.6	10%	156.2	149.7	4%
Gold sold - Main Stockpiles	koz	0.7	1.5	(49%)	3.3	12.3	(74%)
Gold sold - Underground	koz	41.2	35.7	15%	153.2	137.3	12%
Gold sold - Total	koz	41.9	37.2	13%	156.5	149.6	5%
Cost of sales per ounce ¹	\$/oz	799	836	(4%)	813	898	(9%)
Cash operating cost per ounce ¹	\$/oz	615	614	-	633	629	1%
All-In Sustaining cost per ounce¹	\$/oz	959	933	3%	922	886	4%

Notes:

1. See "Non-GAAP Financial Measures".

Wassa Operational Overview

Production

- Gold production totaled 41.3koz in Q4 2019, a 10% increase from the 37.6koz produced during the same period in 2018 and a 17% increase on Q3 2019 production. This increase in production was primarily due to an increase in underground tonnes mined compared to the same period in 2018. Mining rates at the Wassa Underground increased to approximately 4,090tpd on average in Q4 2019, compared to approximately 3,360tpd in the same period in 2018.
- FY 2019 gold production was 156.2koz, a 4% increase from the 149.7koz produced in 2018. This increase in production was due to the increase in tonnes mined and processed at the Wassa Underground mine compared to 2018. In February 2018, Wassa became an underground-only mining operation, however, open pit stockpiled ore continued to be processed for much of 2018 and to a lesser extent in 2019.

Grades

- The underground mining delivered grades of 3.78g/t in Q4 2019, 33% higher than achieved in Q3 2019 and in line with the 3.80g/t achieved in Q4 2018. The improvement in grades in the quarter is attributable to mining progressing in the 595 and 620 Levels, moving out of the areas where lower than expected grades were experienced in the prior quarter. For FY 2019, the underground mining grade was 3.57g/t compared to 4.18g/t the previous year.

Costs

- Cost of sales per ounce decreased 4% to \$799 for Q4 2019, from \$836 in the same period in 2018. In FY 2019 the cost of sales per ounce reduced by 9% to \$813, down from the \$898 achieved in 2018.
- The Q4 2019 cash operating cost per ounce remained consistent at \$615 compared to \$614 for the same period in 2018. For the FY 2019 the \$633 cash operating cost was in line with 2018 performance.
- In Q4 2019 the AISC per ounce increased 3% to \$959 from \$933 for the same period in 2018 mainly due to an increase in sustaining capital expenditures. In FY 2019 the AISC of \$922/oz was 4% higher than in 2018.

Capital expenditures

- Capital expenditures for Q4 2019 totaled \$21.7m compared with \$13.9m incurred during the same period in 2018. The increase in capital expenditures was due primarily to a \$5.4m investment in the paste fill plant, a \$4.2m increase in spend on mobile equipment, a \$2.3m increase in electrical upgrades, and a \$1.1m investment in the pumping station project, offset by a \$4.1m decrease in exploration drilling compared to the same period in 2018.

Projects update

Infrastructure investment - In order to equip the mine for its future as a long life, low cost operation, a number of projects were implemented in 2019 in order to upgrade some of the infrastructure. These projects included the following initiatives:

- **Ventilation upgrade** - The upgrade to the ventilation infrastructure was completed in Q4 2019. The completion of this project supports the current production areas and provides the ventilation capacity for the next few years of mining activities with further investment expected in 2021 to extend the ventilation system.

- **Electrical upgrade** - This is a more significant infrastructure project which is intended to support the mine plan for the next five years. The civils work for the installation of the electrical substation is currently ongoing and is expected to be completed in conjunction with the completion of the paste fill project. Work to upgrade the underground electrical infrastructure is progressing alongside the substation project.
- **Upgraded pumping capacity** - In order to prepare the mine for the future transition to operations at greater depth, and in order to improve the reliability of the pumping systems, the cascading pump system is being replaced by a modernized pumping station on 620 Level. The pumping station is nearing completion with the primary pump already installed and the secondary (back-up) pump now being installed. The consolidation of the multi-pump system into a larger, higher capacity system should simplify the maintenance program for the mine's pumping infrastructure and reduce operational risk.
- **Paste fill plant project update** - The paste fill plant project at Wassa continued to progress in Q4 2019, the project is currently at 55% completion with long lead items ordered and early works contracts now awarded. Construction of the project is expected to be completed in Q3 2020 with commissioning in Q4 2020. This timeline may be subject to change, as we have been notified by the project engineering consultant that there is potential for a delay to the delivery of materials and components being sourced from China. The situation is being closely monitored and we will provide further updates as soon as we are informed of any change. The paste fill process is expected to add approximately \$6/t to the mining unit costs but results in a higher recovery of the resource with less ore left in remnant pillars which is expected to support further optimization of the mining sequence and increases in the production rate.

PRESTEA COMPLEX ("Prestea")

		Q4 2019	Q4 2018	YoY % change	FY 2019	FY 2018	YoY % change
PRESTEA FINANCIAL RESULTS							
Revenue	\$m	12.5	13.2	(5%)	60.9	89.9	(32%)
Mine operating expenses	\$m	18.5	21.0	(12%)	71.4	89.1	(20%)
Severance charges	\$m	0.0	9.9	(100%)	0.1	9.9	(99%)
Royalties	\$m	1.6	0.7	129%	4.1	4.8	(15%)
Operating costs from/(to) metals inventory	\$m	0.1	(0.01)	764%	(0.7)	5.7	(111%)
Inventory net realizable value adjustment and write off	\$m	0.2	0.5	(68%)	1.2	2.0	(38%)
Cost of sales excluding depreciation and amortization	\$m	20.4	32.1	(36%)	76.2	111.5	(32%)
Depreciation and amortization	\$m	3.8	2.2	71%	11.9	11.9	-
Mine operating loss	\$m	(11.7)	(21.1)	44%	(27.2)	(33.4)	19%
Capital expenditures	\$m	4.4	1.4	218%	13.0	11.4	14%
PRESTEA OPERATING RESULTS							
Ore mined - Open Pits	kt	112.4	32.3	248%	493.9	374.2	32%
Ore mined - Underground	kt	34.4	29.7	16%	152.3	128.0	19%
Ore mined - Total	kt	146.8	61.9	137%	646.3	502.3	29%
Waste mined - Open Pits	kt	207.3	89.6	131%	749.7	921.1	(19%)
Waste mined - Underground	kt	9.1	3.0	203%	17.4	7.4	136%
Waste mined - Total	kt	216.4	92.6	134%	767.1	928.5	(17%)
Ore processed - Open Pits	kt	117.4	185.0	(37%)	567.1	1,179.4	(52%)
Ore processed - Underground	kt	34.4	24.2	42%	152.3	122.6	24%
Ore processed - Total	kt	151.8	209.2	(27%)	719.4	1,302.0	(45%)
Grade processed - Open Pits	g/t	1.45	1.01	44%	1.56	1.20	30%
Grade processed - Underground	g/t	6.87	8.56	(20%)	5.58	10.12	(45%)
Recovery	%	86.0%	84.9%	1%	85.7%	86.8%	(1%)
Gold produced - Open Pits	koz	4.8	4.6	3%	23.4	37.6	(38%)
Gold produced - Underground	koz	6.6	6.7	(1%)	24.2	37.5	(35%)
Gold produced - Total	koz	11.3	11.3	-	47.6	75.1	(37%)
Gold sold - Open Pits	koz	4.9	4.6	6%	23.4	37.9	(38%)
Gold sold - Underground	koz	6.7	6.7	-	24.3	37.5	(35%)
Gold sold - Total	koz	11.5	11.2	3%	47.7	75.4	(37%)
Cost of sales per ounce ¹	\$/oz	2,101	3,054	(31%)	1,848	1,681	10%
Cash operating cost per ounce ¹	\$/oz	1,616	1,867	(13%)	1,484	1,292	15%
All-In Sustaining cost per ounce¹	\$/oz	2,202	2,164	2%	1,937	1,558	24%

Notes:

1. See "Non-GAAP Financial Measures".

Prestea Operational Overview

Production

- Gold production from Prestea was 11.3koz in Q4 2019, in line with the same period in 2018, but 24% lower than in Q3 2019 due to a lower contribution from the open pits as mining at the Opon area was impacted by heavy rains due to the constrained nature of the open pit as it is nearing the end of its design life. Some relatively small-scale oxide resources close to the Bogoso processing plant have been evaluated for open pit mining and we expect it to form a lower proportion of the plan in H1 2020.
- The decrease in FY 2019 production relative to 2018 was due to a 38% decrease in the open pit production and a 35% decrease in underground production. The lower open pit production results from a planned decrease in the volume of open pit ore processed, offset in part by a 30% increase in open pit grades. The reduced underground production resulted from a 45% decrease in head grades caused by a combination of higher dilution and ore loss, this effect was partially offset by a 24% increase in underground ore tonnes processed.

Grades

- In Q4 the work to address dilution in the underground mine delivered improvements, particularly in stope S12, which was the first stope with a reduced raise height. This helped to better control mining execution and manage dilution. The initiative to separate ore from waste to further reduce dilution of the mill feed is also starting to yield benefits with 9kt of waste material successfully removed from processing in the quarter.

Stope availability

- Underground production was slightly higher in Q4 2019 than the prior quarter, albeit lower than anticipated due to ore locked up in stope S13 as a result of oversize material blocking the stope. As mining activity progresses through the adjacent stope S14 during Q1 2020 we expect some of this ore to be released.

Open pit mine life exceeding expectations

- The Open Pits produced 4.8koz in Q4 2019, in line with the 4.6koz in the same period in 2018. The Prestea Open Pits were expected to complete gold production earlier in 2019, however open pit mining continued into Q4 2019 with additional ore being sourced from the pits close to Bogoso.

Costs

- Cost of sales excluding depreciation and amortization was \$20.4m for Q4 2019, compared to \$32.1m for the same period in 2018. The decrease was due primarily to \$9.9m of severance payments from the Prestea improvement plan in Q4 2018 not being repeated in 2019, a \$2.4m decrease in mine operating expenses related to less ore processed from Prestea Open Pits, and a \$0.4m decrease inventory net realizable value adjustment and write-off, offset by a \$0.1m increase in operating costs from metals inventory.
- Cash operating cost per ounce of \$1,616 decreased 13% from \$1,867 for the same period in 2018 and increased by 30% from \$1,249 in the previous quarter due to lower production.
- AISC per ounce increased 2% to \$2,202 from \$2,164 for the same period in 2018. In Q4 2019 the AISC rose 35% from the \$1,630/oz AISC achieved in Q3 2019, again primarily due to the lower ounces produced and a largely fixed cost base. With production volumes anticipated to rise through 2020 the unit costs are expected to reduce to an AISC guidance range of \$1,650-1,850/oz.

Prestea operational review

Following the completion of CSA's independent review and phase 2 design, the implementation of a revised mining plan is progressing at the Prestea underground mine, with several of the independent review recommendations underway within Project Okode.

Extraction of the 17L - 21L has been redesigned for LHOS and development has commenced with the new design using conventional equipment. Orders have been placed to mechanize the LHOS zones including a development jumbo, long hole drill, an additional loader (scoop) and a small truck to haul material back to 17L. The jumbo is expected to be delivered during H1 2020 and is expected to significantly improve development productivity. An operational readiness plan for the implementation of the LHOS mining method is currently underway.

In the Alimak stope area from 21L - 24L, stopes have been redesigned to reduce the overall hanging wall span as recommended by CSA. This is achieved by reducing the height where possible to improve travel times and stope turnover rates. Where the height cannot be reduced, due to lack of access, the strike length of the stopes has been reduced to improve stability. A slightly narrower Alimak platform is being trialled to reduce overall dilution levels. Ventilation connections have been completed on 24L enabling the development focus to move to the set-up of stopes to the north and south of the current block.

Several other initiatives recommended by CSA and prioritized by the site team are being managed under Project Okode supported by a project manager and operations specialist as well as project teams on site. Some of these initiatives include the increase in drilling for resource definition, overbreak controls, maintenance improvements and various productivity improvements such as rail upgrades, shaft schedule improvements and an upgraded rock-breaker.

EXPLORATION

In 2019, the Company invested \$20.5m in exploration, of which \$3.2m was expensed and \$17.3m was capitalized. The 2019 exploration spend therefore exceeded the \$15.8m budget for the year. The increased investment in exploration was made during H2 2019 with additional budget allocated for infill and step-out drill holes into the southern extensions of the Wassa orebody and on 8,000 metres of infill definition drilling budget into Panel 4. The 12 additional holes drilled in southern extension zone increased the geological and structural understanding of the zone, which allows for more detailed planning of the mining of this area. Finally, additional budget was also allocated to drilling 5,000 metres in the deeper areas of the Father Brown resource area.

In 2020, the greenfield and brownfield exploration programs will focus on near mine targets in and around Wassa and Prestea, as well as on regional exploration targets. A total of \$6.2m (\$3.5m budget for capitalized exploration and \$2.7m for expensed exploration) has been allocated for exploration programs across the project portfolio.

Wassa

In 2019, the Wassa exploration drilling (infill and step-out extension drilling from surface) was completed with a total of 45,047 metres drilled with assay results released in Q4 (for more information please see the Company's news release issued on November 13, 2019). An update of the resource model has commenced, the results of which we expect to announce in Q1 2020. In Q4 2019, the exploration team also completed a detailed review of the exploration portfolio in Ghana, generating a pipeline of early stage target delineation and drill testing targets.

With the 2019 surface program at Wassa now complete, the Company has commenced a complete review of the geological interpretation, involving external structural geology and geochemistry specialists. Updated geological interpretations and resource estimations for the year-end 2019 is expected to be reported during Q1 2020, however, we expect further refinements to the interpretations and subsequent resource estimation updates in H2 2020 based on additional detailed analysis of the geological model. The drilling to date at Wassa has been targeted at the conversion of inferred resources to indicated as well as the definition and expansion of current inferred resources. Results have been successful in converting portions of the inferred resources to indicated as well as better defining mineralization on the southern extension of the orebody, and within the hanging-wall and footwall zones of the main B-Shoot mineralization. Deeper infill drilling into the wide zones of mineralization intersected in the southern extension drilling in late 2018 and early 2019 has shown that the previously interpreted single high-grade mineralized zone can now be interpreted as several sub-parallel mineralized zones and this new understanding will be incorporated into the resource update expected to be released in Q1 2020. Although the previously interpreted single broad zone of mineralization is now interpreted as several narrower (20-70 metre wide) zones of mineralization we do not expect to see a significant variation in the overall resource volume.

At Wassa, drilling in 2020 is planned to be focused on testing the footwall to the main mining area (B-Shoot) investigating for underground plunge extensions of gold mineralization between the mined out Wassa South East pit and the recently identified footwall zones in the southern extension drilling. This programme is expected to commence in Q1-2020 and consists of an initial 4-6 holes for ~3,000 metres of diamond core on 200 metre-spaced sections drilled from underground platforms. If successful, this drilling program may identify a new underground mining area at Wassa outside the current decline system, potentially adding incremental tonnes to the currently under-utilized processing plant.

Father Brown

As stated in the Q3 2019 results, the review of the asset showed that the project, as it currently stands, does not deliver sufficient returns to move into a feasibility study. As a result, the 2020 exploration budget will not see any significant investment in Father Brown. Resource estimation and evaluation work is being progressed in conjunction with desktop mine design work. This work will be used to assess whether future drill programs are justified.

Prestea Underground

In 2019 drilling at Prestea focused on improving the understanding of the orebody and waste zones that had been impacting the productivity of the Alimak mining process earlier in 2019. During 2019 63 holes were drilled totaling 12,424 metres. Most of this drilling was infill drilling to the north and south of the existing stopes on 24 Level. The updated resources and reserves will be disclosed in the year-end Mineral Resource and Reserve statements, due in Q1 2020.

Notes

1. See "Non-GAAP Financial Measures".

For further information, please visit www.gsr.com or contact:

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All monetary amounts refer to United States dollars unless otherwise indicated.

Company Profile:

Golden Star is an established gold mining company that owns and operates the Wassa and Prestea underground mines in Ghana, West Africa. Listed on the NYSE American, the Toronto Stock Exchange and the Ghanaian Stock Exchange, Golden Star is focused on delivering strong margins and free cash flow from its two underground mines. Gold production guidance for 2020 is 195,000-210,000 ounces at a cash operating cost per ounce¹ of \$790-\$850. Since winning the PDAC 2018 Environmental and Social Responsibility Award, Golden Star has remained committed to leaving a positive and sustainable legacy in its areas of operation.

Statements Regarding Forward-Looking Information

Some statements contained in this news release are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995 and "forward looking information" within the meaning of Canadian securities laws. Forward looking statements and information include but are not limited to, statements and information regarding: continuing to invest in the Company's asset base in 2020, including the completion of the paste plant project at Wassa to provide more flexibility in the mine plan, a new mining method and mining area at Prestea, and the acceleration of the development and maintenance spend across both sites; initiatives expected to deliver improved production rates and margins in 2020 and helping to further define the long-term growth at Wassa; the potential to continue to increase the mining rates at Wassa and improving the scale and margins at the operation; improving the sustainability and flexibility of the Prestea operation with the introduction of a second mining level which will enable it to return to positive cash generation once fully ramped up through 2020; improving the options available to realize value from the Prestea asset; anticipated changes to future cash flow at Prestea resulting from shifts in the unit costs, working capital and capex assumptions; Wassa continuing to deliver 4,000tpd (tonnes per day) throughout 2020; Prestea being positioned for a transformational year in 2020;

improved orebody definition, reduced stope cycle time, and reduce dilution at Prestea; improved flexibility at Prestea resulting in an improved mining rate in excess of 500tpd on a consistent basis; severance costs impacting the G&A into H1 2020; 2020 gold production of 195 to 210koz, cash operating costs of \$790-\$850 \$/oz, AISC of \$1,080-1,180/oz, sustaining capital of \$29.5 to 32.5 million, development capital of \$25 to \$27.5 million and total capital expenditures of \$55 to \$60 million; operational initiatives aimed at improving the consistency of the operations and visibility of the longer-term potential of the operations; funding the introduction of a new mining level and method at Prestea, the Wassa paste plant construction and accelerated maintenance and development at both mines; future drilling from underground drill positions; focusing greenfield and brownfield exploration programs on near mine targets in-and-around Wassa and Prestea, as well as on regional exploration targets within 60km of the Wassa operation; a mining rate in excess of 4,000tpd at Wassa; the completion of the paste plant project in late Q3 2020 but being subject to change; production at Prestea from the underground improving in 2020; the investment in a new mining area and the introduction of LHOS at Prestea and the improvement in overall mining rates and the reduction of operational risk; the reduction of AISC at Prestea by around \$200/oz; the upgrade to the ventilation infrastructure providing the ventilation capacity for the next few years of mining activities with further investment in 2021 to extend the ventilation system; the electrical upgrade supporting the mine plan for the next five years and being expected to be completed in conjunction with the completion of the paste fill project; the replacement of the cascading pump system with a modernized pumping station on 620 Level to simplify the maintenance program for the mine's pumping infrastructure and reduce operational risk; construction of the paste fill plant project being completed in Q3 2020 and commissioned in Q4 2020 and, while adding approximately \$6/t to the mining unit costs, resulting a higher recovery of the resource and increasing the production rate; production volumes at Prestea rising through 2020 and unit costs being reduced; the delivery of the jumbo at Prestea in H1 2020 and the significant improvement to development productivity; the focus of greenfield and brownfield exploration programs in 2020 focussing on near mine targets in and around Wassa and Prestea, as well as on regional exploration targets; the results of the update of Wassa's resource model being announced in Q1 2020; updated geological interpretations and resource estimations for the year-end 2019 for Wassa being reported in Q1 2020 and further refinements to the interpretations and subsequent resource estimation updates in H2 2020; the anticipated drilling focus in 2020 at Wass, its commencement in Q1-2020 and the potential to identify a new mining area within the Wassa underground system that could provide ore from another area and add incremental tonnes to the currently under-utilized processing plant; no significant investment in Father Brown in 2020; assessing whether future drill programs at Father Brown are justified; and the updated resources and reserves for Prestea being disclosed in the year-end Mineral Resource and Reserve statements in Q1 2020. 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. Investors are cautioned that forward-looking statements and information are inherently uncertain and involve risks, assumptions and uncertainties that could cause actual facts to differ materially. Such statements and information are based on numerous assumptions regarding present and future business strategies and the environment in which Golden Star will operate in the future, including the price of gold, anticipated costs and ability to achieve goals. Forward-looking information and statements are subject to known and unknown risks, uncertainties and other important factors that may cause the actual results, performance or achievements of Golden Star to be materially different from those expressed or implied by such forward-looking information and statements, 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; risks related to joint venture operations; actual results of current exploration activities; environmental risks; future prices of gold; possible variations in Mineral Reserves, grade or recovery rates; mine development and operating risks; 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 and risks related to indebtedness and the service of such indebtedness. Although Golden Star has attempted to identify important factors that could cause actual results to differ materially from those contained in forward-looking information and statements, there may be other factors that cause results not to be as anticipated, estimated or intended. There can be no assurance that future developments affecting the Company will be those anticipated by management. Please refer to the discussion of these and other factors in Management's Discussion and Analysis

of financial conditions and results of operations for the year ended December 31, 2018 and in our annual information form for the year ended December 31, 2018 as filed on SEDAR at www.sedar.com. The forecasts contained in this press release constitute management's current estimates, as of the date of this press release, with respect to the matters covered thereby. We expect that these estimates will change as new information is received. While we may elect to update these estimates at any time, we do not undertake any estimate at any particular time or in response to any particular event.

Non-GAAP Financial Measures

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

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

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

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

“All-in sustaining costs” commences with cash operating costs and then adds the cash component of metals inventory net realizable value adjustments, royalties, sustaining capital expenditures, corporate general and administrative costs (excluding share-based compensation expenses and severance charges), and accretion of rehabilitation provision. For mine site all-in sustaining costs, corporate general and administrative costs (excluding share-based compensation expenses and severance charges) are allocated based on gold sold by each operation. “All-in sustaining costs per ounce” is that amount divided by the number of ounces of gold sold (excluding pre-commercial production ounces sold) during the period. This measure seeks to represent the total costs of producing gold from current operations, and therefore it does not include capital expenditures attributable to projects or mine expansions, exploration and evaluation costs attributable to growth projects, income tax payments, interest costs or dividend payments. Consequently, this measure is not representative of all of the Company's cash expenditures. In addition, the calculation of all-in sustaining costs does not include depreciation expense as it does not reflect the impact of expenditures incurred in prior periods. Therefore, it is not indicative of the Company's overall profitability. Share-based compensation expenses are also excluded from the calculation of all-in sustaining costs as the Company believes that such expenses may not be representative of the actual payout on equity and liability based awards.

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

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

For additional information regarding the Non-GAAP financial measures used by the Company, please refer to the heading “Non-GAAP Financial Measures” in the Company's Management Discussion and Analysis of Financial Condition and Results of Operations for the year ended ended December 31, 2019, which are available at www.sedar.com.

Technical Information

The Mineral Reserve and Mineral Resource estimates have been compiled by the Company's technical personnel in accordance with definitions and guidelines set out in the Definition Standards for Mineral Resources and Mineral Reserves adopted by the Canadian Institute of Mining, Metallurgy, and Petroleum and as required by Canada's National Instrument 43-101 - Standards of Disclosure for Mineral Projects (“NI 43-101”). Mineral Reserve estimates reflect the Company's reasonable expectation that all necessary permits and approvals will be obtained and maintained. Mining dilution and mining recovery vary by deposit and have been applied in estimating the Mineral Reserves.

The Mineral Resource technical contents of this press release have been reviewed and approved by S. Mitchel Wasel, BSc Geology, 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. The Mineral Reserve technical contents of this press release have been reviewed and approved by and were prepared under the supervision of Matt Varvari, Vice President, Technical Services for the Company. Mr. Varvari is a “Qualified Person” as defined by NI 43-101.

Additional scientific and technical information relating to the mineral properties referenced in this news release are contained in the following current technical reports for those properties available at www.sedar.com: (i) Wassa - “NI 43-101 Technical Report on Resources and Reserves, Golden Star Resources, Wassa Gold Mine, Ghana” effective date December 31, 2018; and (ii) Prestea Underground - “NI 43-101 Technical Report on Resources and Reserves, Golden Star Resources, Bogoso/Prestea Gold Mine, Ghana” effective date December 31, 2017.

Cautionary Note to US Investors Concerning Estimates of Measured and Indicated Mineral Resources

This press release uses the terms “Measured Mineral Resources” and “Indicated Mineral Resources”. The Company advises US investors that while these terms are recognized and required by NI 43-101, the US Securities and Exchange Commission (“SEC”) does not recognize them. Also, disclosure of contained ounces is permitted under Canadian regulations; however the SEC generally requires Mineral Resource information to be reported as in-place tonnage and grade. US Investors are cautioned not to assume that any part or all of the mineral deposits in these categories will ever be converted into Mineral Reserves.

Source: Golden Star Resources Ltd.