

Golden Star Reports Fourth Quarter and Full Year 2015 Financial Results: Significant Reduction in Costs Realized in the Fourth Quarter

Toronto, ON – February 23, 2016 – Golden Star Resources Ltd. (NYSE MKT: GSS; TSX: GSC; GSE: GSR) ("Golden Star" or the "Company") reports its financial results for the fourth quarter and full year ended December 31, 2015.

Fourth quarter and full year highlights include:

- 221,653 ounces of gold were sold during the year, exceeding revised guidance
 - 51,378 ounces were sold in the fourth quarter
- Full year consolidated cash operating costs¹ were \$976 per ounce at the low end of the revised guidance range
 - \$715 per ounce consolidated cash operating cost¹ for the fourth quarter - a five year record for the Company and significant improvement from the previous year
- All-in sustaining costs¹ were \$1,158 per ounce for the year and \$896 per ounce in the fourth quarter
- \$255 million of revenue generated for the year including \$56 million of revenue in the fourth quarter
- Consolidated cash balance of \$35 million at year end, with an additional \$70 million available under the streaming agreement and \$3 million available under the Ecobank II facility
- Cash generated by operations before changes in working capital¹ of \$0.11 per share in the quarter and \$0.21 per share for the year
- Wassa Underground development has advanced 1258 metres with access to the newly discovered "F Shoot" now being established
- Prestea delivered better than expected results including a 22% improvement in recoveries in the fourth quarter to recoveries of over 83%

"Results for the fourth quarter continue to clearly demonstrate our focus on transforming the Company into a low cost producer," commented Sam Coetzer, President and CEO. "The fourth quarter operated exactly as planned and true to the vision we have strived to achieve over the last few years. Golden Star will now continue to operate the non-refractory open pits at Prestea and Wassa. We will continue to advance our two underground projects at Wassa and Prestea and expect to see the first higher grade ounces reporting to the process facilities from Wassa during the second half of 2016. Now that we have suspended the refractory operations at Bogoso, our risk profile has improved and we are now a leaner and less complex company. I am excited and proud of what the team has achieved and our commitment to rebuild our future in low cost production is becoming a reality. The development of the Wassa Underground has advanced tremendously well and we continue to find additional upside as we investigate more of the orebody. At Prestea Underground we have now seen momentum in the refurbishment of the infrastructure and I am confident that we will deliver this project on time and on budget."

All references to currency are US dollars.

¹ See "Non-GAAP Financial Measures".

Summary of Consolidated Operational and Financial Results:

| | | For the three months ended | | For the years ended | |
|--|----------|----------------------------|---------------|---------------------|---------------|
| | | Dec. 31, 2015 | Sep. 30, 2015 | Dec. 31, 2015 | Dec. 31, 2014 |
| Wassa gold sold | oz | 30,880 | 28,848 | 107,751 | 112,831 |
| Bogoso / Prestea gold sold | oz | 20,498 | 23,050 | 113,902 | 147,957 |
| Total gold sold | oz | 51,378 | 51,898 | 221,653 | 260,788 |
| Average realized price | \$/oz | 1,098 | 1,088 | 1,151 | 1,261 |
| Cash operating cost per ounce ¹ | \$/oz | 715 | 988 | 976 | 1,090 |
| All-in sustaining cost per ounce ¹ | \$/oz | 896 | 1,151 | 1,158 | 1,252 |
| Gold revenues | \$'000 | 56,420 | 56,452 | 255,187 | 328,915 |
| Cost of sales excluding depreciation and amortization | \$'000 | 39,354 | 55,199 | 245,494 | 304,912 |
| Depreciation and amortization | \$'000 | 7,054 | 5,525 | 37,339 | 26,219 |
| Mine operating margin/(loss) | \$'000 | 10,012 | (4,272) | (27,646) | (2,216) |
| General and administrative expense | \$'000 | 2,521 | 3,299 | 14,281 | 16,367 |
| (Gain)/loss on fair value of 5% of Convertible Debentures | \$'000 | (1,658) | (4,911) | (1,712) | 538 |
| Impairment charges | \$'000 | — | — | 34,396 | 57,747 |
| Adjusted net income/(loss) attributable to Golden Star Shareholders ¹ | \$'000 | 6,829 | (10,831) | (30,359) | (12,234) |
| Net income/(loss) attributable to Golden Star shareholders | \$'000 | 13,781 | (6,832) | (67,681) | (73,079) |
| Adjusted earnings/(loss) per share – basic and diluted | \$/share | 0.03 | (0.04) | (0.12) | (0.05) |
| Cash provided by operations before working capital changes | \$'000 | 29,725 | 38,508 | 53,437 | 4,541 |
| Cash provided by operations before working capital changes | \$/share | 0.11 | 0.05 | 0.21 | 0.02 |
| Cash provided by operations | \$'000 | 12,633 | 45,341 | 60,148 | 2,411 |
| Cash provided by operations per share – basic and diluted | \$/share | 0.05 | 0.17 | 0.23 | 0.01 |
| Capital expenditures | \$'000 | 13,726 | 17,789 | 57,051 | 33,655 |

¹ See "Non-GAAP Financial Measures".

Review of Financial Performance

Gold sold in 2015 was 221,653 ounces compared to 260,788 sold in 2014. At Bogoso / Prestea, 113,902 ounces of gold were sold, a decrease from 147,957 ounce the prior year as a result of the suspension of the refractory operations at Bogoso in the third quarter of 2015. At Wassa 107,751 ounces of gold were sold, a slight decrease from 112,831 ounces sold in 2014 which included production from the Father Brown pit. Fourth quarter 2015 gold sold remained in line with the third quarter of 51,378 ounces.

Consolidated cash operating costs for the fourth quarter were \$715 per ounce, reduced by approximately 28% from the third quarter. Cash operating costs at both Wassa and Bogoso / Prestea reached five year record lows of \$625 and \$849 per ounce, respectively. The decline in costs was mainly driven by lower mining and processing costs and the suspension of the high cost, energy intensive, refractory operation in the third quarter of 2015. Consolidated cash operating costs per ounce for the year totaled \$976 per ounce in 2015, down 10% from \$1,090 per ounce in 2014.

Revenue for the full year 2015 was \$255.2 million, lower than \$328.9 million of revenue in 2014, driven in part, by the continued decline in average realized gold prices and fewer ounces sold. The average realized gold price in 2015 of \$1,151 per ounce, was 9% below the average realized price of \$1,261 in 2014.

Corporate general and administrative expenditures of \$14.3 million in 2015 were reduced by approximately 13% from the 2014 level of \$16.4 million. The reductions were driven by lower legal fees and lower share based compensation during the year.

Cash provided by operations before changes in working capital for the year was \$53.4 million, or \$0.21 per share up significantly from the prior year as a result of the proceeds received from the Royal Gold Streaming Agreement. (For more information on this streaming agreement see "Other Financial Activity")

Capital expenditures for the fourth quarter totaled \$13.7 million, taking full year capital expenditures to \$57.1 million. The consolidated cash balance was \$35.1 million at December 31, 2015 with an additional \$70 million available under the streaming agreement and \$3 million available under the Ecobank II facility.

Other Financial Activity

Gold stream agreement and \$20 million term loan

On July 28, 2015, the Company successfully closed a \$130 million gold stream agreement ("Streaming Agreement") and \$20 million loan financing with Royal Gold, Inc. ("RGI") and its wholly-owned subsidiary RGLD Gold AG. The Streaming Agreement was subsequently amended on December 30, 2015 to provide an additional \$15 million of streaming advance payment with an option, subject to Golden Star satisfying certain conditions, to access a further \$5 million. The Streaming percentages were adjusted as follows to reflect the \$15 million additional advance payment: from January 1, 2016, the Company will deliver 9.25% of the Mines' production to RGLD at a cash purchase price of 20% of spot gold. From the earlier of January 1, 2018 or commercial production of the underground mines, Golden Star will deliver 10.5% of production at a cash purchase price of 20% of spot gold until 240,000 ounces have been delivered. If Golden Star exercises its option on the additional \$5 million stream advance, the stream percentage from the earlier of January 1, 2018 or commercial production of the underground mines would be

increased to 10.9% at a cash purchase price of 20% spot gold until 250,000 ounces have been delivered; thereafter, 5.5% of production at a cash purchase price of 30% of spot gold will be delivered.

The Streaming Agreement is a contract for the future delivery of gold ounces at the contracted cash purchase price. During the year ended December 31, 2015, the Company delivered 12,701 ounces of gold to RGLD. Revenue of \$12.5 million was recognized for the year ended December 31, 2015, consisting of \$2.9 million cash proceeds and \$9.6 million of deferred revenue realized.

Review of Operational Performance

Wassa Operations

| | | For the three months ended | | For the years ended | |
|---|--------|----------------------------|---------------|---------------------|---------------|
| | | Dec. 31, 2015 | Sep. 30, 2015 | Dec. 31, 2015 | Dec. 31, 2014 |
| WASSA FINANCIAL RESULTS | | | | | |
| Revenue | \$'000 | 33,760 | 31,702 | 123,133 | 142,734 |
| Mine operating expenses | \$'000 | 22,532 | 23,389 | 95,152 | 114,667 |
| Severance charges | \$'000 | — | 1,013 | 1,816 | — |
| Royalties | \$'000 | 1,728 | 1,617 | 6,234 | 7,144 |
| Operating costs to metals inventory | \$'000 | (3,231) | (1,178) | (4,886) | (5,126) |
| Inventory net realizable value adjustment | \$'000 | — | — | 1,524 | 800 |
| Cost of sales excluding depreciation and amortization | \$'000 | 21,029 | 24,841 | 99,840 | 117,485 |
| Depreciation and amortization | \$'000 | 4,068 | 3,713 | 14,522 | 14,619 |
| Mine operating margin | \$'000 | 8,663 | 3,148 | 8,827 | 10,630 |
| Capital expenditures | \$'000 | 8,001 | 8,506 | 33,912 | 16,406 |
| WASSA OPERATING RESULTS | | | | | |
| Ore mined | t | 806,153 | 728,046 | 2,849,061 | 2,656,064 |
| Waste mined | t | 2,924,040 | 2,658,218 | 10,631,663 | 12,398,568 |
| Ore processed | t | 620,047 | 635,332 | 2,495,176 | 2,629,029 |
| Grade processed | g/t | 1.77 | 1.51 | 1.46 | 1.41 |
| Recovery | % | 93.9 | 92.9 | 93.4 | 92.7 |
| Gold sold | oz | 30,880 | 28,848 | 107,751 | 112,831 |
| Cash operating cost per ounce ¹ | \$/oz | 625 | 770 | 838 | 971 |

¹ See "Non-GAAP Financial Measures".

Gold sold in the fourth quarter of 2015 of 30,880 ounces was a 7% increase from the third quarter driven by higher grades and recoveries. The higher grades and resulting recoveries were a result of mining from the lower elevation of the pit. Full year gold sold in 2015 was slightly lower as a result of slightly fewer tonnes processed offset by higher grades and recoveries.

Cash operating costs in the fourth quarter declined by over 18% from the third quarter to \$625 per ounce. The reduced cost structure is the result of cost saving measures implemented including a reduction in personnel, a review and renegotiation of contracts

and lower fuel and cyanide costs. Cash operating costs for the year in 2015 of \$838 per ounce also showed significant improvement, declining by 14% from the 2014 level of \$971 per ounce.

Capital expenditures for the fourth quarter totaled \$8.0 million, of which \$1.1 million was sustaining capital expenditures and \$6.9 million was development capital, including \$4.8 for Wassa Underground Mine development. For the full year, capital spending was \$34 million of which \$6.5 million was sustaining capital. Total capital also includes \$20.1 million on the development of the Wassa Underground Mine, \$5.4 million for the improvement of the tailings storage facility and \$1.9 million on development drilling at Wassa.

Production at Wassa in 2016 is expected to be 100,000 - 110,000 ounces of gold at cash operating costs of \$800 - \$900 per ounce.

Wassa Underground Development

In March 2015, the positive results of a Feasibility Study on the economic viability of an underground mine operating in conjunction with the existing open pit mine were announced and the decision to progress with the construction of the underground mine was affirmed.

Decline development commenced in July 2015, approximately 1258 metres of development has been achieved on the Main and Ventilation declines as of February 23, 2016. Decline development advanced at an average of seven metres per day during the fourth quarter and is expected to increase in 2016 as efficiencies improve.

An update to the resource model has been completed which includes additional drilling undertaken between July 2014 (when the Feasibility Study resource model was completed) and March 2015. The mine design and schedule has been updated to reflect the changes to the resource model and the expansion of the "F shoot" area. Stope development of the upper mineralization is expected to commence in the second quarter of 2016 with first ore production expected in the second half of 2016.

Construction of the surface infrastructure and the transfer from generator power to grid power was completed in the fourth quarter of 2015.

Wassa Underground development capital expenditures totaled \$20.1 million during the year and \$22.2 million since late 2014 when development began.

The Company expects approximately \$51 million of capital expenditures in 2016 at Wassa which includes \$34 million on Wassa Underground development, \$11 million on tailings and plant upgrades and \$6 million in sustaining capital.

Production at Wassa Underground is expected to commence sometime in mid-2016 with pre-commercial production of 20,000 – 25,000 ounces for 2016.

Bogoso / Prestea Operations

| | | For the three months ended | | For the years ended | |
|---|--------|----------------------------|---------------|---------------------|---------------|
| | | Dec. 31, 2015 | Sep. 30, 2015 | Dec. 31, 2015 | Dec. 31, 2014 |
| BOGOSO / PRESTEA FINANCIAL RESULTS | | | | | |
| Revenue | \$'000 | 22,760 | 24,750 | 131,998 | 186,181 |
| Mine operating expenses | \$'000 | 17,591 | 30,963 | 128,332 | 180,020 |
| Severance charges | \$'000 | (231) | — | 12,810 | 2,844 |
| Royalties | \$'000 | 1,143 | 1,294 | 6,669 | 9,315 |
| Operating costs to metals inventory | \$'000 | (178) | (1,899) | (2,157) | (5,405) |
| Cost of sales excluding depreciation and amortization | \$'000 | 18,325 | 30,358 | 145,654 | 187,427 |
| Depreciation and amortization | \$'000 | 2,986 | 1,812 | 22,817 | 11,600 |
| Mine operating margin/(loss) | \$'000 | 1,349 | (7,420) | (36,473) | (12,846) |
| Capital expenditures | \$'000 | 5,725 | 9,283 | 23,139 | 17,249 |
| BOGOSO / PRESTEA OPERATING RESULTS | | | | | |
| Ore mined refractory | t | — | 60,533 | 1,230,333 | 2,690,760 |
| Ore mined non-refractory | t | 301,397 | 179,186 | 480,583 | — |
| Total ore mined | t | 301,397 | 239,719 | 1,710,916 | 2,690,760 |
| Waste mined | t | 894,081 | 605,715 | 3,603,153 | 12,169,105 |
| Refractory ore processed | t | — | 435,185 | 1,520,541 | 2,542,273 |
| Refractory ore grade | g/t | — | 1.66 | 2.15 | 2.30 |
| Gold recovery – refractory ore | % | — | 60.4 | 67.5 | 70.3 |
| Non-refractory ore processed | t | 317,764 | 289,346 | 1,409,128 | 1,382,213 |
| Non-refractory ore grade | g/t | 2.36 | 1.35 | 1.32 | 0.96 |
| Gold recovery - non-refractory ore | % | 83.1 | 68.0 | 64.3 | 39.2 |
| Gold sold refractory | oz | 1,042 | 15,648 | 76,981 | 130,208 |
| Gold sold non-refractory | oz | 19,456 | 7,402 | 36,921 | 17,749 |
| Gold sold (total) | oz | 20,498 | 23,050 | 113,902 | 147,957 |
| Cash operating cost per ounce ¹ | \$/oz | 849 | 1,261 | 1,108 | 1,180 |

¹ See "Non-GAAP Financial Measures".

Gold sold in the fourth quarter of 2015 was 20,498 ounces, a slight decline from the third quarter reflecting the suspension of the refractory operation which occurred during the third quarter. During the fourth quarter 95% of production was sourced from the Prestea South Pits oxide ores, which only commenced production during the third quarter. Production from this area resulted in higher throughput, higher grades and higher recoveries from the non-refractory operation compared to the third quarter. Gold sold for the full year was 113,902 ounces.

Cash operating costs in the fourth quarter declined by 33% from the third quarter to \$849 per ounce. The reduced cost structure is the result of the suspension of the refractory operation in the third quarter. Costs for the full year showed more modest declines to \$1,108 per ounce as they include three quarters of the higher cost refractory production. Costs are expected to be maintained at the lower levels established in this quarter as the production going forward being sourced from the Prestea Open Pits and beginning in 2017, from the Prestea Underground.

Capital expenditures in the fourth quarter totaled \$5.7 million, of which \$3.4 million was development capital spending on the development of the Prestea Underground. Capital spending for 2015 totaled \$23.1 million, of which \$17.1 million were expenditures related to development at Prestea Underground and \$4.5 million were related to Prestea open pit mines.

Production in 2016, which will be sourced from the Prestea Open Pit mines, is expected to be 60,000 – 70,000 ounces at cash operating costs of \$840 - \$970 per ounce.

Prestea Underground Development

In December 2015 the positive results of a Feasibility Study for the Prestea Underground Mine were indicated a post-tax internal rate of return of 42% and net present value of \$124 million based on a discount rate of 5% and gold price assumption of \$1,150 per ounce. Cash operating costs of \$462 per ounce and all-in sustaining costs of \$603 per ounce were estimated over the life of mine.

All rehabilitation works are on schedule for completion in the first quarter of 2016. Mechanical and electrical rehabilitation work is planned to be completed in the third quarter of 2016 after which, development will commence. Pre-development of the resource will take place from the fourth quarter of 2016 to mid-2017. Stoping is expected to start in mid-2017, ramping up to 500 tonnes per day by the end of the 2017.

The Company incurred capital expenditures totaling \$17.1 million on the Prestea Underground development in 2015. The Company expects to incur approximately \$36 million of capital expenditures in 2016 on the project.

The Prestea Underground is expected to begin production in mid-2017. Life of mine cash operating costs, as per the Feasibility Study, are expected to be approximately \$462 per ounce for average annual production of approximately 85,000 ounces over 5.5 years.

Outlook

The Company remains focused on transforming into a low cost gold producer. During 2015, with the suspension of the refractory operation, the Company's efforts to lower production costs are being realized. Costs in the fourth quarter were a five year Company

record. With the development of the underground mines at Wassa and Prestea, the average life of mine cash operating costs for the Company are expected to decline further beginning in 2017 when both projects will be in operation.

For 2016 the Company expects the following:

Production and costs

| | Gold production | Cash operating costs |
|------------------------|----------------------------|-------------------------------------|
| | (000) ounces | \$ per ounce |
| Wassa Open Pit | 100 – 110 | 800 – 900 |
| Wassa Underground | 20 – 25 | N/A * |
| Prestea Open Pit Mines | 60 – 70 | 840 – 970 |
| Consolidated | 180 – 205 | 815 – 925 |

*Costs incurred at Wassa Underground will be capitalized until commercial production is achieved. As a result, these costs are reflected in the Company's development capital expenditure guidance set out in the table below and are not included in the Company's cash operating cost per ounce guidance set out in the table above.

Wassa - Production is expected to remain at approximately the same level as 2015. Grade and strip ratio are expected to decline slightly in 2016 resulting in slightly lower production guidance.

Wassa Underground - During the development phase of the Wassa Underground Mine, the Company expects to produce 20,000 - 25,000 ounces in 2016. As these ounces are expected to be produced prior to the commercial production phase of the mine, the revenues from these ounces will be credited against the capital expenditures incurred.

Prestea Open Pit Mines - Production at Prestea is expected to be lower in 2016 relative to the prior year as mining is expected to be exclusively focused on the low-cost non-refractory ore. Production is expected to come from satellite pits in the Prestea South property.

Capital expenditures

| | Sustaining | Development | Total |
|-------------------------------------|-------------------|--------------------|--------------|
| Wassa Open Pit and Processing Plant | 6 | 2 | 8 |
| Wassa tailings expansion | — | 9 | 9 |
| Wassa Underground | — | 34 | 34 |
| Prestea Open Pit Mines | 3 | — | 3 |
| Prestea Underground | — | 36 | 36 |
| Consolidated | 9 | 81 | 90 |

Wassa - The Company expects to spend \$6 million on sustaining capital expenditures at the Wassa open pit operations. In addition the Company expects to spend \$34 million of capital on development activities related to the Wassa Underground Mine, \$9 million on the expansion of the Wassa tailings facility and \$2 million on development activities related to the Wassa Open Pit and Processing Plant. Revenue earned on underground

ounces produced will be credited against capital expenditures until commercial production is achieved.

Prestea - The Company expects to spend \$3 million on sustaining capital at the Prestea Open Pit Mines. In addition, the Company expects to spend \$36 million on the development of the Prestea Underground Mine during 2016.

The Company will conduct a conference call and webcast tomorrow, February 24, 2016, to discuss these results at 10:00am EST.

The call can be accessed by telephone or by webcast as follows:

Participants - Toll free: +1 888 390 0605

Participants - Toll: +1 416 764 8609

Conference ID (all numbers): 34902047

Webcast: www.gsr.com

A recording of the conference call will be available until March 2, 2016 by dialing:

Toll Free: +1 888 390 0541

Toll: +1 416 764 8677

Replay Passcode: 902047#

The webcast will also be available after the call at www.gsr.com

Company Profile:

Golden Star is an established gold mining company that owns and operates the Wassa and Prestea mines situated on the prolific Ashanti Gold Belt in western Ghana, Africa. Listed on the NYSE MKT, the TSX, and the GSE, Golden Star is strategically focused on increasing operating margins and cash flow through the development of two high grade, low cost underground mines both beneath existing open pit operations. The Wassa Underground is expected to commence production in 2016 with the Prestea Underground commencing production in 2017. Both projects are fully funded and on track to begin production as expected. Production in 2016 is expected to be between 180,000 – 205,000 ounces of gold with costs of \$815 - \$925 per ounce.

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

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GOLDEN STAR RESOURCES LTD.
CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(Stated in thousands of U.S. dollars except shares and per share data)

| | For the years ended December 31, | |
|--|---|-------------|
| | 2015 | 2014 |
| Revenue | \$ 255,187 | \$ 328,915 |
| Cost of sales excluding depreciation and amortization | 245,494 | 304,912 |
| Depreciation and amortization | 37,339 | 26,219 |
| Mine operating loss | (27,646) | (2,216) |
| Other expenses/(income) | | |
| Exploration expense | 1,307 | 556 |
| General and administrative | 14,281 | 16,367 |
| Finance expense, net | 10,670 | 7,375 |
| Other income | (8,178) | (1,104) |
| Loss/ (gain) on fair value of 5% Convertible Debentures | (1,712) | 538 |
| Impairment charges | 34,396 | 57,747 |
| Loss before tax | (78,410) | (83,695) |
| Income tax recovery | — | (254) |
| Net loss and comprehensive loss | \$ (78,410) | \$ (83,441) |
| Net loss attributable to non-controlling interest | (10,729) | (10,362) |
| Net loss attributable to Golden Star shareholders | \$ (67,681) | \$ (73,079) |
| Net loss per share attributable to Golden Star shareholders | | |
| Basic and diluted | \$ (0.26) | \$ (0.28) |
| Weighted average shares outstanding-basic and diluted (millions) | 259.7 | 259.4 |

GOLDEN STAR RESOURCES LTD.
CONSOLIDATED BALANCE SHEETS
(Stated in thousands of U.S. dollars)

| | As of December 31, 2015 | As of December 31, 2014 |
|--|--|--|
| ASSETS | | |
| Current assets | | |
| Cash and cash equivalents | \$ 35,108 | \$ 39,352 |
| Accounts receivable | 5,114 | 14,832 |
| Inventories | 36,694 | 54,279 |
| Prepays and other | 5,754 | 4,767 |
| Total Current Assets | 82,670 | 113,230 |
| Restricted cash | 6,463 | 2,041 |
| Mining interests | 149,849 | 142,782 |
| Total Assets | \$ 238,982 | \$258,053 |
| LIABILITIES | | |
| Current liabilities | | |
| Accounts payable and accrued liabilities | \$ 110,811 | \$123,451 |
| Current portion of rehabilitation provisions | 3,660 | 4,562 |
| Current portion of long term debt | 22,442 | 17,181 |
| Current portion of deferred revenue | 11,507 | — |
| Total Current Liabilities | 148,420 | 145,194 |
| Long term debt | 91,899 | 85,798 |
| Deferred revenue | 53,872 | — |
| Rehabilitation provisions | 76,025 | 81,254 |
| Total Liabilities | 370,216 | 312,246 |
| 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 | 695,555 | 695,266 |
| Contributed surplus | 32,612 | 31,532 |
| Deficit | (793,304) | (725,623) |
| Total Golden Star Equity | (65,137) | 1,175 |
| Non-controlling interest | (66,097) | (55,368) |
| Total Equity | (131,234) | (54,193) |
| Total Liabilities and Shareholders' Equity | \$ 238,982 | \$258,053 |

GOLDEN STAR RESOURCES LTD.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Stated in thousands of U.S. dollars)

| | For the years ended December 31, | |
|---|-------------------------------------|-------------|
| | 2015 | 2014 |
| OPERATING ACTIVITIES: | | |
| Net loss | \$ (78,410) | \$ (83,441) |
| Reconciliation of net loss to net cash provided by operating activities: | | |
| Depreciation and amortization | 37,372 | 26,267 |
| Net realizable value adjustment on inventory | 1,524 | 1,453 |
| Impairment charges | 34,396 | 57,747 |
| Share-based compensation | 2,005 | 2,515 |
| Gain on deferral of other long term liabilities | (2,432) | — |
| Accretion of other long term liabilities | 912 | — |
| Accretion of rehabilitation provisions | 1,761 | 1,746 |
| Amortization of financing fees | 1,097 | 248 |
| Recognition of deferred revenue | (9,621) | — |
| Proceeds from Royal Gold stream | 75,000 | — |
| Gain on reduction of rehabilitation provisions | (5,652) | — |
| Reclamation expenditures | (2,947) | (3,554) |
| Other | (1,568) | 1,560 |
| Changes in working capital | 6,711 | (2,130) |
| Net cash provided by operating activities | 60,148 | 2,411 |
| INVESTING ACTIVITIES: | | |
| Additions to mining properties | (758) | (73) |
| Additions to plant and equipment | (1,416) | (499) |
| Additions to construction in progress | (54,877) | (33,083) |
| Change in accounts payable and deposits on mine equipment | 4,974 | (2,894) |
| Increase in restricted cash | (4,422) | (12) |
| Net cash used in investing activities | (56,499) | (36,561) |
| FINANCING ACTIVITIES: | | |
| Principal payments on debt | (48,611) | (12,049) |
| Proceeds from debt agreements | 22,000 | 20,000 |
| Exercise of options | 18,718 | — |
| Net cash (used in)/provided by financing activities | (7,893) | 7,951 |
| Decrease in cash and cash equivalents | (4,244) | (26,199) |
| Cash and cash equivalents, beginning of period | 39,352 | 65,551 |
| Cash and cash equivalents, end of period | \$ 35,108 | \$ 39,352 |

GOLDEN STAR RESOURCES LTD.
CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited - Stated in thousands of U.S. dollars except shares and per share data)

| | For the three months ended December 31, | |
|---|--|-------------|
| | 2015 | 2014 |
| Revenue | \$ 56,420 | \$ 86,586 |
| Cost of sales excluding depreciation and amortization | 39,354 | 71,410 |
| Depreciation and amortization | 7,054 | 8,150 |
| Mine operating margin | 10,012 | 7,026 |
| Other expenses/(income) | | |
| Exploration expense | 289 | 229 |
| General and administrative | 2,521 | 2,819 |
| Finance expense, net | 323 | 1,847 |
| Other income | (5,680) | (316) |
| Gain on fair value of financial instruments | (1,658) | (1,501) |
| Impairment charges | — | 57,747 |
| Net income/(loss) before tax | 14,217 | (53,799) |
| Income tax recovery | — | (254) |
| Net income/(loss) | \$ 14,217 | \$ (53,545) |
| Net income/(loss) attributable to non-controlling interest | 436 | (5,390) |
| Net income/(loss) attributable to Golden Star shareholders | \$ 13,781 | \$ (48,155) |
| Net income/(loss) per share attributable to Golden Star shareholders | | |
| Basic and diluted | \$ 0.05 | \$ (0.19) |
| Weighted average shares outstanding (millions) | 259.8 | 259.4 |
| Weighted average shares outstanding-diluted (millions) | 311.2 | 259.4 |

GOLDEN STAR RESOURCES LTD.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited - Stated in thousands of U.S. dollars)

| | For the three months ended December 31, | |
|--|--|-------------|
| | 2015 | 2014 |
| OPERATING ACTIVITIES: | | |
| Net income/(loss) | \$ 14,217 | \$ (53,545) |
| Reconciliation of net income/(loss) to net cash provided by operating activities: | | |
| Depreciation and amortization | 7,060 | 8,160 |
| Impairment of asset | — | 57,747 |
| Share-based compensation | 175 | 326 |
| Accretion of rehabilitation provisions | 440 | 437 |
| Accretion of gain on deferral of other long term liabilities | 304 | — |
| Amortization of deferred financing fees | 167 | 62 |
| Recognition of deferred revenue | (4,747) | — |
| Proceeds from Royal Gold stream | 20,000 | — |
| Reclamation expenditures | (599) | (408) |
| Gain on reduction of rehabilitation provisions | (5,652) | — |
| Other | (1,640) | (1,097) |
| Changes in working capital | (17,092) | (7,366) |
| Net cash provided by operating activities | 12,633 | 4,316 |
| INVESTING ACTIVITIES: | | |
| Additions to mining properties | (289) | — |
| Additions to plant and equipment | (305) | — |
| Additions to construction in progress | (13,132) | (9,219) |
| Change in accounts payable and deposits on mine equipment and material | 2,247 | 1,889 |
| Increase in restricted cash | (3) | (7) |
| Net cash used in investing activities | (11,482) | (7,337) |
| FINANCING ACTIVITIES: | | |
| Principal payments on debt | (709) | (3,657) |
| Proceeds from debt agreements | 7,000 | 10,000 |
| Proceeds from Royal Gold loan, net | (7) | — |
| Net cash provided by financing activities | 6,284 | 6,343 |
| Increase in cash and cash equivalents | 7,435 | 3,322 |
| Cash and cash equivalents, beginning of period | 27,673 | 36,030 |
| Cash and cash equivalents, end of period | \$ 35,108 | \$ 39,352 |

Non-GAAP Financial Measures

In this press release, we use the terms "cash operating cost per ounce", "all-in sustaining costs per ounce", "cash provided by operations before changes in working capital" and "adjusted net income/ (loss) attributable to shareholders". These should be considered as non-GAAP financial measures as defined in applicable Canadian and United States securities laws and should not be considered in isolation or as a substitute for measures of performance prepared in accordance with GAAP.

"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 per ounce" for a period is equal to "Cost of sales excluding depreciation and amortization" for the period less royalties and production taxes, minus the cash component of metals inventory net realizable value adjustments and severance charges 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 third quarters' 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 International Financial Reporting Standards ("IFRS").

"All-in sustaining costs" commences with cash operating costs and then adds sustaining capital expenditures, corporate general and administrative costs, mine site exploratory drilling and greenfield evaluation costs and environmental rehabilitation costs. 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.

"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.

In order to indicate to stakeholders the Company's earnings excluding the non-cash (gain)/loss on the fair value of the Company's outstanding convertible debentures and non-cash impairment charges, the Company calculates "adjusted net income/ (loss) attributable to shareholders" to supplement the condensed consolidated financial statements.

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.

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. 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.

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 full year ended December 31, , available at www.sedar.com.

Cautionary note regarding forward-looking information

This report 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 include, but are not limited to, information or statements with respect to: plans to continue to operate the non-refractory open pits at Prestea and Wassa, while concurrently continuing the Wassa Underground and Prestea Underground development; the timing of stope development and production from Wassa Underground, and the grade of such production; the risk profile of the Company and the Company being less operationally complex; the potential upside of Wassa Underground; Prestea Underground development being on time and on budget;; gold production forecast for 2016; 2016 gold production, cash operating costs and capital expenditures at Wassa and Wassa Underground; 2016 gold production, cash operating costs and capital expenditures at Prestea and Prestea Underground; the Company's strategy of transforming its business to being a lower cost non-refractory producer; the rate of decline development at Wassa Underground in 2016; and matters relating to Ghana energy sources; matters relating to the feasibility study for Prestea Underground, including estimated post-tax internal rate of return and net present value of Wassa underground (including assumed discount rates), and the timing for first production from Wassa underground; Prestea Underground; the timing of rehabilitation works, mechanical and electrical rehabilitation work, pre-development, development and stoping (including the rate of stoping) at Prestea Underground; and the impact of Wassa Underground and Prestea Underground production on the average life of mine cash operating costs and the timing thereof.

Forward-looking information and statements are made based upon certain assumptions and other important factors that, if untrue, could cause the actual results, performances or achievements of Golden Star to be materially different from future results, performances or achievements expressed or implied by such statements. Such statements and information are based on numerous assumptions regarding present and future business strategies and the environment in which Golden Star will operate in the future, including the price of gold, anticipated costs and ability to achieve goals. Forward-looking information and statements are subject to known and unknown risks, uncertainties and other important factors that may cause the actual results, performance or achievements of Golden Star to be materially different from those expressed or implied by such forward-looking information and statements, 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 such statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking information and statements. Forward-looking information and statements are made as of the date hereof and accordingly are subject to change after such date. 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 news release except in accordance with applicable securities laws.

Technical Information and Quality Control

The technical contents of this press release have been reviewed and approved by S. Mitchel Wasel, BSc Geology, a "Qualified Person" pursuant to National Instrument 43-101 ("NI 43-101"). Mr. Wasel is Vice President Exploration for Golden Star and an active member of the Australasian Institute of Mining and Metallurgy.

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 feasibility study of the Wassa open pit mine and underground project in Ghana" effective date December 31, 2014; (ii) Prestea Underground - "NI 43-101 Technical Report on a Feasibility Study of the Prestea Underground Gold Project in Ghana" effective date November 3, 2015; and (iii) Bogoso - "NI 43-101 Technical Report on Resources and Reserves Golden Star Resources Ltd., Bogoso Prestea Gold Mine, Ghana" effective date December 31, 2013.

Cautionary note to U.S. investors

This news release 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. The terms "mineral reserve", "proven

mineral reserve" and "probable mineral reserve" are Canadian mining terms as defined in accordance with NI 43-101. These definitions differ from the definitions of the Securities and Exchange Commission (the "SEC") set forth in Industry Guide 7 under the United States Securities Exchange Act of 1934, as amended (the "Exchange Act"). Under SEC Industry Guide 7 standards, 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 the reserve determination is made.

In addition, the terms "mineral resource", "measured mineral resource", "indicated mineral resource" and "inferred mineral resource" are defined in and required to be disclosed by NI 43-101; however, these terms are not defined terms under SEC Industry Guide 7 and are normally not permitted to be used in reports and registration statements filed with the SEC. Investors are cautioned not to assume that any part or all of mineral deposits in these categories will ever be converted into reserves. "Inferred mineral resources" have a great amount of uncertainty as to their existence, and great uncertainty as to their economic and legal feasibility. It cannot be assumed that all or any part of an inferred mineral resource will ever be upgraded to a higher category. Investors are cautioned not to assume that all or any part of an inferred mineral resource exists or is economically or legally mineable. Disclosure of "contained ounces" in a resource is permitted disclosure under Canadian regulations; however, the SEC normally only permits issuers to report mineralization that does not constitute "reserves" by SEC Industry Guide 7 standards as in place tonnage and grade without reference to unit measures.

For the above reasons, information contained in this news release or in the documents referenced herein containing descriptions of our mineral deposits may not be comparable to similar information made public by U.S. companies subject to the reporting and disclosure requirements under the United States federal securities laws and the rules and regulations thereunder.