CREATING A LEADING UNDERGROUND AFRICAN GOLD PRODUCER
DISCLAIMER

SAE HARBOR: Some statements contained in this presentation are forward-looking statements or forward-looking information (collectively, “forward-looking statements”) within the meaning of the United States Private Securities Litigation Reform Act of 1995 and applicable Canadian securities laws. Investors are cautioned that forward-looking statements are inherently uncertain and involve risks and uncertainties that could cause actual results to differ materially, such statements include comments regarding production, cash operating cost, “All-In Sustaining Cost” and capital expenditure guidance for 2019, ability of long term relationship with La Mancha to strengthen balance sheet, unlock organic growth pipeline, fast track exploration and expansion programs, focus on increasing production and cash margin per ounce, and participate in consolidation of African region through seizing external growth opportunities; expected use of funds from La Mancha strategic investment towards exploration and timing thereof; and expected subsequential decrease in cash operating cost per ounce and annual operating costs, expectation of improved efficiency and better integration from bringing Allmara training program in-house; increased flexibility of mining sequence from installing of new Nalomas; increased recovery rate for underground material following downsizing of processing plant and power consumption; increased inferred Mineral resources through drilling and timing of announcements regarding such increases; potential of Wasa South to significantly increase production, achievement of targeted mining rate at Wasa Underground and Prestea Underground and timing thereof, and achievement of milestones in H2 2019 including accelerated exploration of Mineral Resource definition drilling at Wasa and Prestea, accelerated Wasa Underground development. Factors that could cause actual results to differ materially include timing of and unexpected events at the Prestea and/or the Wasa processing plants, variations in ore grade, timing, missed crushed ore, failure to receive board or government approvals and permits, construction delays, the availability and cost of electrical power, timing and availability of external financing on acceptable terms or at all, technical, permitting, mining or processing issues, including difficulties in establishing the infrastructure for Wasa Underground or Prestea Underground, inconsistent power supplies, plant and/or equipment failures or an inability to obtain supplies and materials on reasonable terms and at all locations. Wasa and/or Prestea could experience inclement weather in the United States and Canadian securities markets; heavy rainfall and flooding of underground mines, and fluctuations in gold price and input costs and general economic conditions.

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 our Annual Information Form for the year ended December 31, 2018 filed and available at www.sedar.com. The forecasts contained in this presentation constitute management’s current estimates, as of the date of this presentation, with respect to the matters covered therein. We expect that these estimates will change as new information is received and that actual results will vary from these estimates, possibly by material amounts. While we may elect to update these estimates at any time, we do not undertake to update these estimates, or in response to any particular event. Investors and others should not assume that any forecasts in this presentation represent management’s estimate as of any date other than the date of this presentation.

NON-GAAP FINANCIAL MEASURES: In this presentation, we use the terms “cash operating cost per ounce”, “All-In Sustaining Cost per ounce” and “ASC per ounce”. These terms 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 international financial reporting standards (IFRS). “Cash operating cost per ounce for a period” is equal to the cost of sales excluding depletion and amortization for the period less royalties, the cash component of metals inventory net realizable value adjustments and severance charges divided by the number of ounces of gold sold (excluding pre-commercial production ounces) during the period.

“All-In Sustaining Costs per ounce” commences with cash operating costs and then adds sustaining capital expenditures, corporate general and administrative costs, mine site exploration drilling and greenfield evaluation costs and environmental rehabilitation costs, divided by the number of ounces of gold sold (excluding pre-commercial production ounces) during the period. This measure seeks to represent the total costs of producing gold from operations. These measures are not representative of all cash expenditures as they do not include income tax payments or interest costs. Changes in numerous factors including, but not limited to, mining rates, milling rates, gold grade, gold recovery, and the 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 the same or similar to the measures of other gold mining companies, but may not be comparable to similarly titled measures in every instance. Please see our “Management’s Discussion and Analysis of Financial Condition and Results of Operations for the three months ended March 31, 2019” for a reconciliation of these Non-GAAP measures to the nearest IFRS measure.

INFORMATION: The information contained in this presentation has been obtained by Golden Star from its own records and from other sources deemed reliable, however no representation or warranty is made as to its accuracy or completeness. The technical information relating to Golden Star’s material properties disclosed herein is based upon technical reports prepared and filed pursuant to National Instrument 43-101 - Standards of Disclosure for Mineral Projects (“NI 43-101”) and other publicly available information regarding the Company, including the following: (i) “NI 43-101 Technical Report on a Feasibility Study of the Wasa Open Pit Mine and Underground Project in Ghana” effective December 31, 2014; and (ii) “NI 43-101 Technical Report on Resources and reserves, Golden Star Resources, Bogoso/ Prestea gold mine, Ghana” effective December 31, 2017. Additional information is included in Golden Star’s Annual Information Form for the year ended December 31, 2017 which is filed and available on www.sedar.com. Mineral Reserves were prepared under the supervision of Dr. Martin Raffield, Senior Vice President Technical Services for the Company. Dr. Raffield is a “Qualified Person” as defined by NI 43-101. The Qualified Person reviewing and validating the estimate of the Mineral Resources is Mitchel Waelz, Golden Star Resources Vice President of Exploration.

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

GOLDEN STAR

NYSE AMERICAN: GSS  TSX: GSC
## Participating Management

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Experience/Background</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andrew Wray</td>
<td>President &amp; CEO</td>
<td>Joined GSR in May 2019 as President and CEO&lt;br&gt;Previously CEO of La Mancha&lt;br&gt;Served as CFO and Head of Corporate Development at Acacia Mining plc&lt;br&gt;Worked at JP Morgan Cazenove in the Corporate Finance team with over 15 years advising mining companies</td>
</tr>
<tr>
<td>André van Niekerk</td>
<td>EVP &amp; Chief Financial Officer</td>
<td>Joined GSR in 2006 - 5 years in Ghana as GSR’s Head of Finance and Business Operations&lt;br&gt;Previously VP, Financial Controller&lt;br&gt;Trained at KPMG</td>
</tr>
<tr>
<td>Daniel Owiredu</td>
<td>EVP &amp; Chief Operating Officer</td>
<td>30 years’ experience in West African mining, based in Ghana&lt;br&gt;Previously Deputy COO for AngloGold - managed construction and operation of the Bibiani, Siguiri and Obuasi mines</td>
</tr>
<tr>
<td>Martin Raffield</td>
<td>EVP, Chief Technical Officer</td>
<td>Ph.D. geotechnical engineering &amp; P. Engineering&lt;br&gt;Previously worked for SRK, Placer Dome and Breakwater Resources</td>
</tr>
</tbody>
</table>
GOLDEN STAR SNAPSHOT

2019 Production Guidance
220,000-240,000 oz

Strong Cash Balance
$81.9 million

2019 AISC$ Guidance
$875-955/oz

2019 Capital Expenditure Guidance
$61.7 million

1. See note on slide 2 regarding Non-GAAP Financial Measures.
2. As at March 31, 2019
Q1 2019 OVERVIEW

- Focus on safety reflected in continued improvement with a lost time injury frequency rate ("LTIFR") of 0.07 and a total recordable injury frequency rate ("TRIFR") of 0.85.
- Production of 53,284 ounces in Q1, in line with budget.
  - 8% decrease compared to the first quarter of 2018 (57,616 ounces).
- Cash operating cost per ounce\(^2\) of $731 and AISC per ounce\(^2\) of $976 in Q1.
  - 20% and 17% lower than the same period last year, respectively.
- Mining rates at Wassa Underground of ~3,600 tpd on average in Q1.
  - Represents a 53% increase compared to same period last year; surpasses 2019 targeted average mining rate of 3,500 tpd.
- Production from Wassa was 42,910 ounces for Q1.
  - 21% increase from the 35,506 ounces produced during the same period in 2018.
- Prestea produced 10,374 ounces of gold in Q1.
  - 53% lower than same period in 2018 as a result of the focus on underground production and lower than planned tonnes and grade.
  - Wassa Underground Reserves increased by 47% and inferred mineral resources increased by 12%\(^3\).
- Father Brown Resource Statement released February 19, 2019;
  - 93% increase in Inferred Mineral Resources\(^3\).
- Cash provided by operations before changes in working capital of $14.9 million ($0.14 per share) in Q1 and mine operating margin of $16.6 million.
- Consolidated cash balance of $81.9 million at March 31, 2019.
- Golden Star remains on track to achieve 2019 guidance.

Notes:
1. See "Non-GAAP Financial Measures".

GOLDEN STAR

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# Q1 2019 Consolidated Financial Results

<table>
<thead>
<tr>
<th>(in $ thousands)</th>
<th>Q1 2019</th>
<th>Q1 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gold revenues</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Wassa</td>
<td>53,992</td>
<td>45,352</td>
</tr>
<tr>
<td>- Prestea</td>
<td>13,265</td>
<td>25,467</td>
</tr>
<tr>
<td><strong>Cost of sales excluding depreciation and amortization</strong></td>
<td>43,804</td>
<td>59,574</td>
</tr>
<tr>
<td><strong>Depreciation and amortization</strong></td>
<td>6,862</td>
<td>8,221</td>
</tr>
<tr>
<td><strong>Mine operating (loss)/margin</strong></td>
<td><strong>16,591</strong></td>
<td><strong>3,024</strong></td>
</tr>
<tr>
<td>- Wassa</td>
<td>22,840</td>
<td>9,507</td>
</tr>
<tr>
<td>- Prestea</td>
<td>(6,249)</td>
<td>(6,483)</td>
</tr>
<tr>
<td><strong>Income before tax</strong></td>
<td>4,543</td>
<td>2,496</td>
</tr>
<tr>
<td>- Wassa</td>
<td>21,050</td>
<td>8,095</td>
</tr>
<tr>
<td>- Prestea</td>
<td>(6,693)</td>
<td>(7,233)</td>
</tr>
<tr>
<td>- Corporate &amp; Other</td>
<td>(9,814)</td>
<td>1,634</td>
</tr>
<tr>
<td><strong>Income tax expense</strong></td>
<td>7,202</td>
<td>2,891</td>
</tr>
<tr>
<td><strong>Net (loss)/income attributable to Golden Star shareholders</strong></td>
<td><strong>(1,924)</strong></td>
<td><strong>1,015</strong></td>
</tr>
<tr>
<td><strong>Adj0 net income/(loss) attributable to Golden Star shareholders</strong></td>
<td>9,394</td>
<td>(2,123)</td>
</tr>
</tbody>
</table>
Q1 2019 CASH FLOW

Net Cash Used in Operating Activities

Changes in Working Capital

Opening Cash Balance: $96.5M
Mine Operating Margin, - Wassa: $27.2M
(3.8)
Mine Operating Loss, - Peséa
(1.5)
Exploration/Reclamation
(3.2)
Interest
(2.8)
Decrease in AIP
(10.0)
Increase in Inventory
(3.5)
Increase in AIR
(2.0)
Decreased Revenue, Other
(1.0)
Investing Activities
(11.3)
Financing Activities
(2.8)
Closing Cash Balance: $81.9M
WASSA
Golden Star’s Flagship Asset
WASSA: CONTINUES TO IMPROVE

- Gold production from Wassa was 42,910 ounces for the first quarter of 2019, a 21% increase from the 35,506 ounces produced during the same period in 2018.
- 43% increase in production from Wassa Underground.
- Mining rates at Wassa Underground surpasses 2019 targeted average mining rate of 3,500 tpd at approximately 3,600 tpd on average in the first quarter of 2019.

**Targeted Mining Rate**

- 3,500 TPD

**Ramp Capacity**

- 4,000 TPD

**Processing Plant Capacity**

- ~8,000 TPD
## Q1 2019: WASSA OPERATIONAL RESULTS

<table>
<thead>
<tr>
<th></th>
<th>Q1 2019</th>
<th>Q1 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ore Mined</td>
<td>Kt</td>
<td>327</td>
</tr>
<tr>
<td>Waste Mined</td>
<td>Kt</td>
<td>56</td>
</tr>
<tr>
<td>Ore Processed</td>
<td>Kt</td>
<td>367</td>
</tr>
<tr>
<td>Grade Processed</td>
<td>g/t</td>
<td></td>
</tr>
<tr>
<td>Recovery</td>
<td>%</td>
<td>95.6</td>
</tr>
<tr>
<td>Gold Production</td>
<td>Oz</td>
<td>42,910</td>
</tr>
<tr>
<td>Gold Sales</td>
<td>Oz</td>
<td>42,999</td>
</tr>
<tr>
<td>Cash Op. Cost¹</td>
<td>$/oz</td>
<td>552</td>
</tr>
</tbody>
</table>

- 19% Decrease in cash operating cost per ounce¹ for the first quarter of 2019 to $552 compared to the first quarter of 2018
- 20% Increase in gold sold in Q1 2019 compared to Q1 2018
- 53% Increase in ore tonnes mined underground in Q1 compared to the same period in 2018
- Wassa Underground’s Q1 2019 gold production represents approximately 98% of Wassa’s total production for the quarter
- Underground ore processed increased 53% to 326,747 tonnes in Q1 2019 compared to 213,392 tonnes in the same period in 2018

**Notes:**
1. See note on slide 2 regarding Non-GAAP Financial Measures.

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**GOLDEN STAR**

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PRESTEA: ESTABLISHING STABLE PRODUCTION

- Prestea produced 10,374 ounces of gold during the quarter, 53% lower than the first quarter of 2018 as a result of the focus on underground production and the lower than planned tonnes and grade.
- 71% of production was attributable to Prestea Underground.
- Mining rates increased by 19% from 360 tpd in the fourth quarter of 2018 to 430 tpd in the first quarter of 2019.
- Prestea reported a cash operating cost per ounce\(^1\) of $1,463 in the first quarter of 2019.
- Factors that affected performance during the quarter:
  - lower than planned ore tonnes, unplanned waste zones within the stopes, increased dilution and long hole drilling efficiency issues.
- A broad review of the operation is underway, and a number of initiatives have been implemented to address these.

Notes:
1. See "Non-GAAP Financial Measures".

GOLDEN STAR

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### Q1 2019: PRESTEA OPERATIONAL RESULTS

<table>
<thead>
<tr>
<th></th>
<th>Q1 2019</th>
<th>Q1 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ore Mined</td>
<td>Mt</td>
<td>83</td>
</tr>
<tr>
<td>Waste Mined</td>
<td>Mt</td>
<td>35</td>
</tr>
<tr>
<td>Ore Processed</td>
<td>Mt</td>
<td>134</td>
</tr>
<tr>
<td>Grade Processed</td>
<td>g/t</td>
<td></td>
</tr>
<tr>
<td>Recovery</td>
<td>%</td>
<td>87.4</td>
</tr>
<tr>
<td>Underground Gold Production</td>
<td>Koz</td>
<td>7,344</td>
</tr>
<tr>
<td>Open Pit Production</td>
<td>Koz</td>
<td>3,030</td>
</tr>
<tr>
<td><strong>Total Gold Production</strong></td>
<td>Koz</td>
<td><strong>10,374</strong></td>
</tr>
<tr>
<td>Gold Sales</td>
<td>Koz</td>
<td>10,497</td>
</tr>
<tr>
<td>Cash Op. Cost(^1)</td>
<td>$/oz</td>
<td>1,463</td>
</tr>
</tbody>
</table>

**Notes:**
1. See note on slide 2 regarding Non-GAAP Financial Measures.
EXPLORATION
EXPLORATION UPDATE

Wassa Drilling
- Wassa surface drilling:
  - 7 rigs currently
- 25 holes completed totaling 20,582 metres (at mid-April 2019)

Father Brown Drilling
- 17 holes completed totaling 8,900 metres (at March 31, 2019)
- Drilling has been targeting down plunge extensions of Father Brown (“FBZ”) and Adoikrom (“ADK”) zones
- Four holes remaining to test both ADK and FBZ plunge

Prestea Underground West Reef
- 11 holes completed totaling ~2,135 metres (at mid-April 2019)
- 2019 Drill results received thus far have extended HG mineralization ~150 metres to the North

Drilling results for all three programs expected to be released in Q2
WASSA 2019 BUDGETED DRILLING REMAINING

- 7 Surface rigs turning
- 20,582 Metres drilled at mid April against a budget of 18,700 m
- Drilling focusing on both inferred and indicated mineral resource conversion, as well as deep inferred definition and expansion
- Total of ~28,500 metres of drilling remaining
- ~22,000 metres to convert B shoot inferred mineral resource to indicated mineral resource
- ~6,500 metres to expand and define inferred material at depth
FATHER BROWN MINERALIZED STRUCTURES - LOOKING NORTH

- 85 Km from Wassa
- 17,000 metres drilled to date at Father Brown
- Drilling resulted in definition of two high grade shoots
- Remaining 2019 drilling to test at depth
- Drilling paused to thoroughly assess results

GOLDEN STAR
PRESTEA - WEST REEF LONG SECTION WITH 2019 DRILLING

- 2 Drill rigs currently running underground, scheduled to remain active all of 2019
  - One on potential mineral resource expansion
  - One on stope definition drilling
- Drill results to be reported 2019 Q2
IN CONCLUSION
WRAP-UP

- Solid start to the first quarter of 2019

- On track to achieve reported guidance

Wassa

- Focus will be to continue to deliver value from Wassa and identify future growth path in order to increase rate of extraction with the aim of achieving 8,000 tpd

Prestea

- Operational review to be undertaken at Prestea to identify what is required to improve operation on all metrics

Exploration

- Drill results to be reported from Wassa, Father Brown and Prestea in Q2 2019

Future Growth

- Assess potential within the current portfolio as well as value enhancing external opportunities