



GOLDEN STAR

Focused on Cash Flow Generation

INVESTOR
PRESENTATION
MAY 2018

Disclaimer

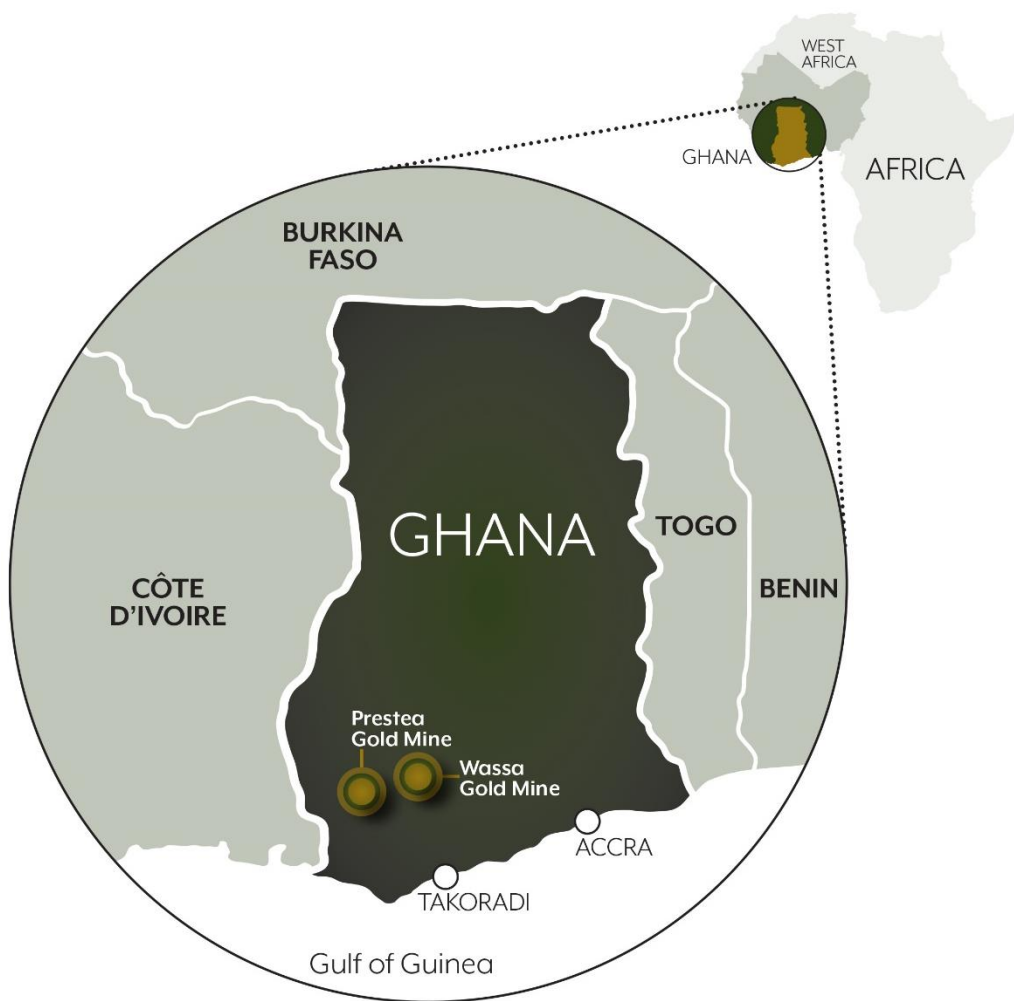
SAFE HARBOUR: Some statements contained in this presentation are forward-looking statements or forward-looking information (collectively, "forward-looking statements") within the meaning of the United States Private Securities Litigation Reform Act of 1995 and applicable Canadian securities laws. Investors 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 2018; the ability to extend production at Prestea Open Pits until end of H1 2018; the ability to focus on higher margin underground ore; the timing for completing the processing of ore from Prestea Open Pits; the ability to expand production at Wassa Underground and Prestea Underground; the ability to use excess shaft/decline capacity and processing capacity at Wassa Underground and Prestea Underground; the targeted 2018 mining rate at Wassa Underground and Prestea Underground; the ability to conduct additional drilling at Wassa Underground and Prestea Underground and the timing for completion thereof; the impact on grade as mining operations move further into B Shoot; the potential to add additional ounces to the short term mine plan at Wassa Underground and Prestea Underground; the potential drilling targets in 2018; planned stoping of the B Shoot at Wassa Underground and at West Reef at Prestea Underground; the ability to achieve 2018 production guidance; the ability to expand Mineral Reserves and Mineral Resources, extend the life of mine and supply additional ore to processing plants at Prestea Underground and Wassa Underground; the timing for releasing initial drilling results from the 2018 drilling program; and the dollar amount of capital expenditures to be incurred in 2018. Factors that could cause actual results to differ materially include timing of and unexpected events at the Prestea and/or the Wassa processing plants; variations in ore grade, tonnes mined, crushed or milled; delay or 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 Wassa Underground or Prestea Underground, inconsistent power supplies, plant and/or equipment failures and an inability to obtain supplies and materials on reasonable terms (including pricing) or at all; changes in U.S. 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, 2016 filed on SEDAR 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 thereby. 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 any estimate at any particular time 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 "AISC 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 depreciation 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 exploratory 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 and nine months ended September 30, 2017" 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 Wassa Open Pit Mine and Underground Project in Ghana" effective December 31, 2014; (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 on SEDAR. 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 estimation of the Mineral Resources is S. Mitchel Wasel, Golden Star Resources Vice President of Exploration.

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

Golden Star: Snapshot



2018 production guidance
230,000-255,000oz



2018 AISC¹ guidance
\$850-950/oz



2018 capex budget (excl. exploration)
\$29.9m



2018 exploration budget
\$6.6m



Cash balance²
\$26.2m

Q1 2018 Production: A Solid Start to the Year

Stronger than expected production from Wassa Underground



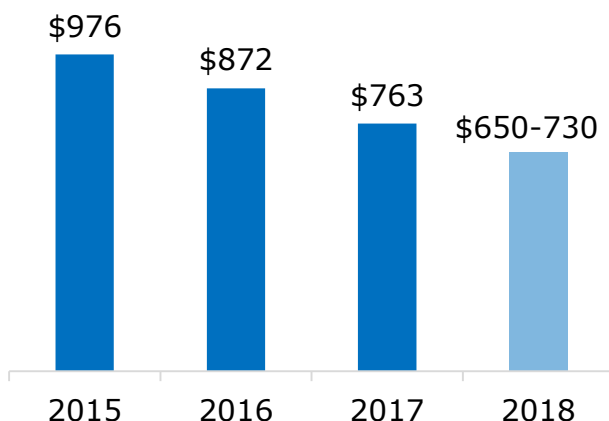
- Q1 2018 gold production of 57,616oz
 - Wassa complex: 35,506oz
 - Prestea complex: 22,110oz
- Stronger than expected production from Wassa Underground
 - 12% increase in grade to 4.54 g/t Au compared to Q4 2017
 - Average mining rate of 2,400 tpd
- Mining sequence at Prestea Underground continues to strengthen
 - Prestea Underground's performance in April 2018 represents significant improvement compared to Q1 2018
- \$12.6m of total \$18.6m (68%) paid in severance expenses - majority of severance payments now complete

Costs Expected to Reduce As 2018 Progresses

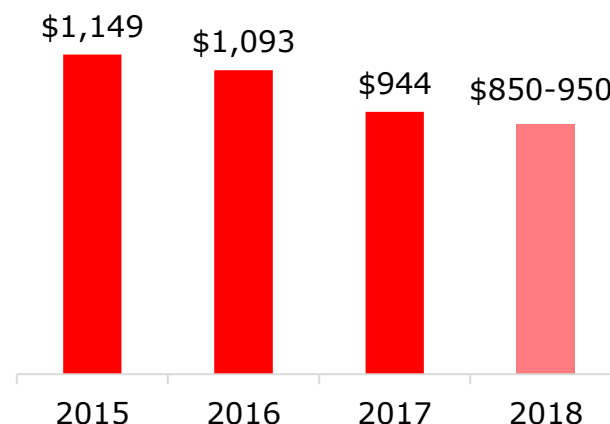
On track to achieve FY 2018 guidance on all stated metrics

- Q1 2018 cash operating cost per ounce¹ of \$909 and AISC per ounce¹ of \$1,171
- Higher than anticipated costs per ounce in Q1 2018 due primarily to challenges at Prestea Underground
- Cash operating cost¹ and AISC¹ per ounce expected to continue to reduce in 2018 and beyond as underground production profile continues to grow

**Annual Cash Operating Cost
Per Ounce^{1,2}**



Annual AISC Per Ounce^{1,2}



EXPLORATION



2018 Exploration Strategy

\$6.6m exploration budget in 2018 for 46,000 metres of drilling



Wassa Underground¹

\$2.4m
11,665 metres



Prestea Underground²

\$2.8m
22,980 metres



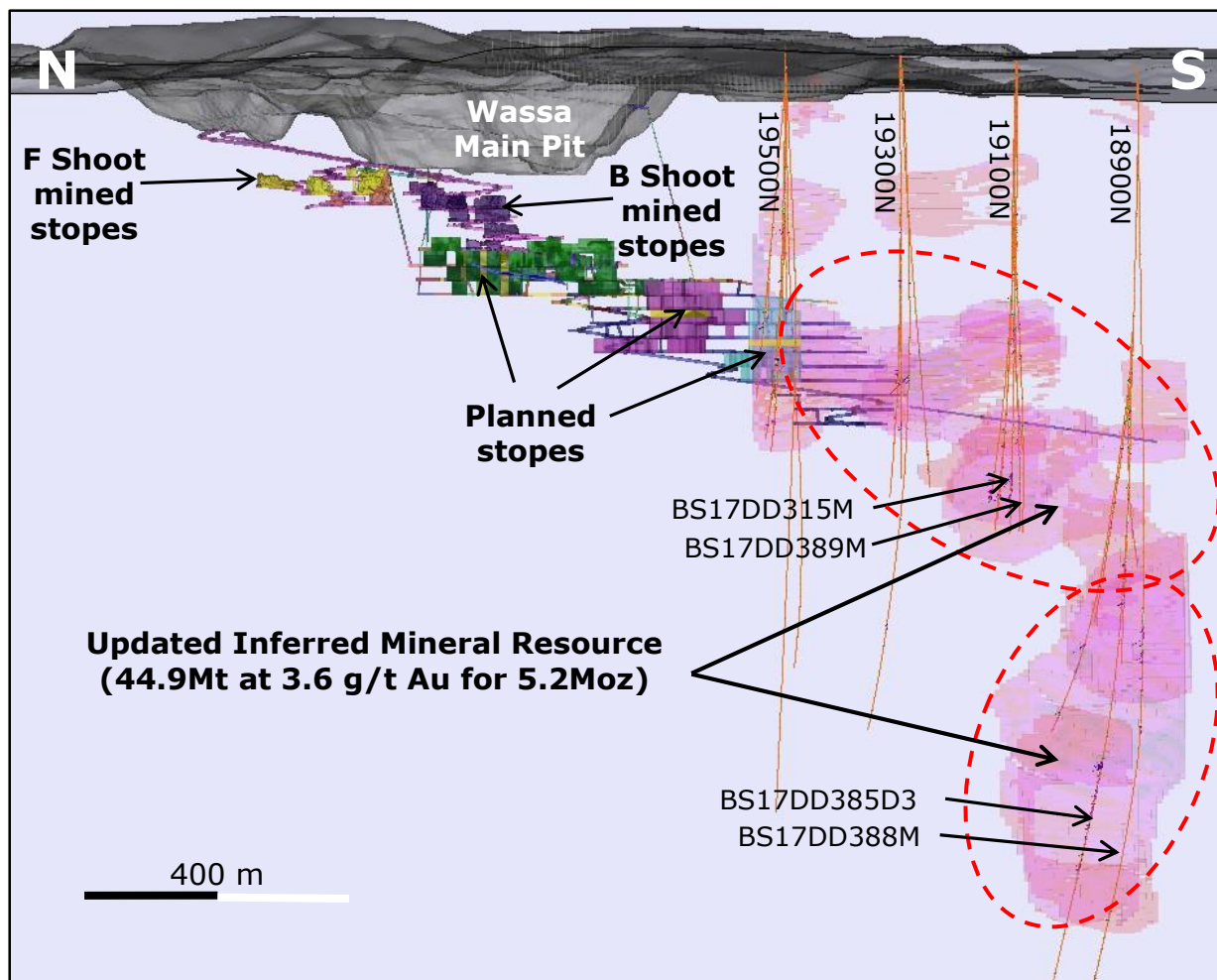
Five new targets

\$1.4m
11,550 metres

- Primary focus is to gain stronger understanding of potential of Wassa Underground ore body at depth
- Secondary focus is 2 fold:
 - Mineral Resource expansion at Prestea Underground
 - Investigate 5 new potential underground targets
- Potential to increase GSR's high grade, low cost production profile and extend mine lives of both operations
- Initial results expected in Q2 2018

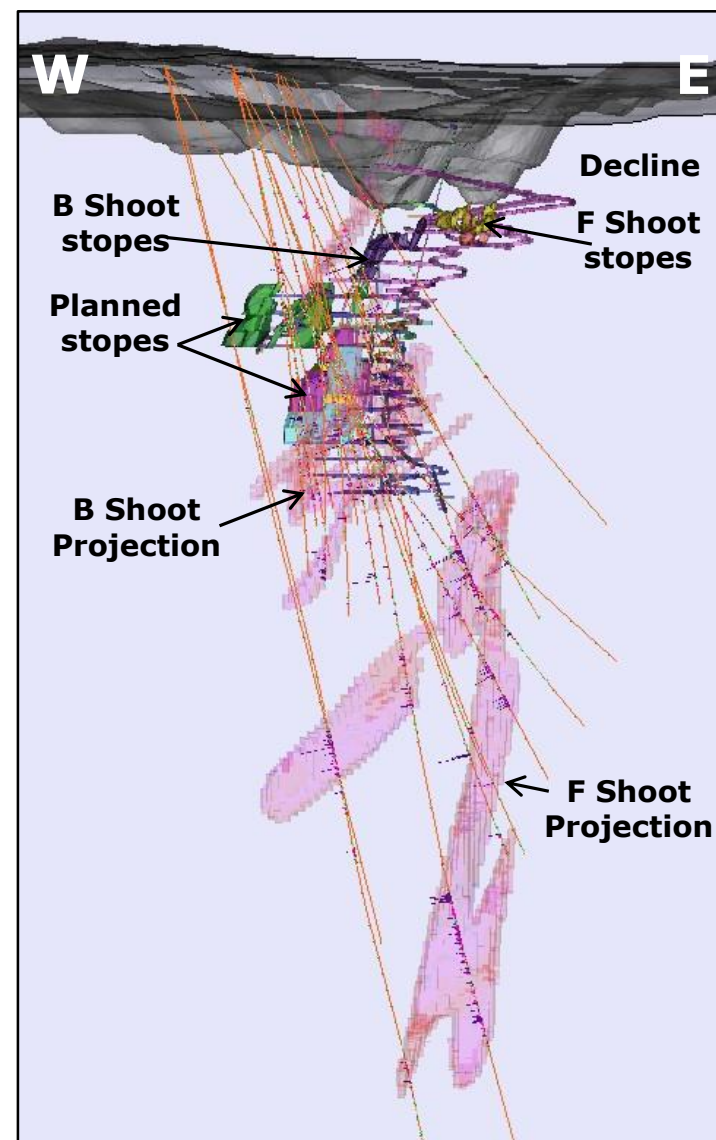
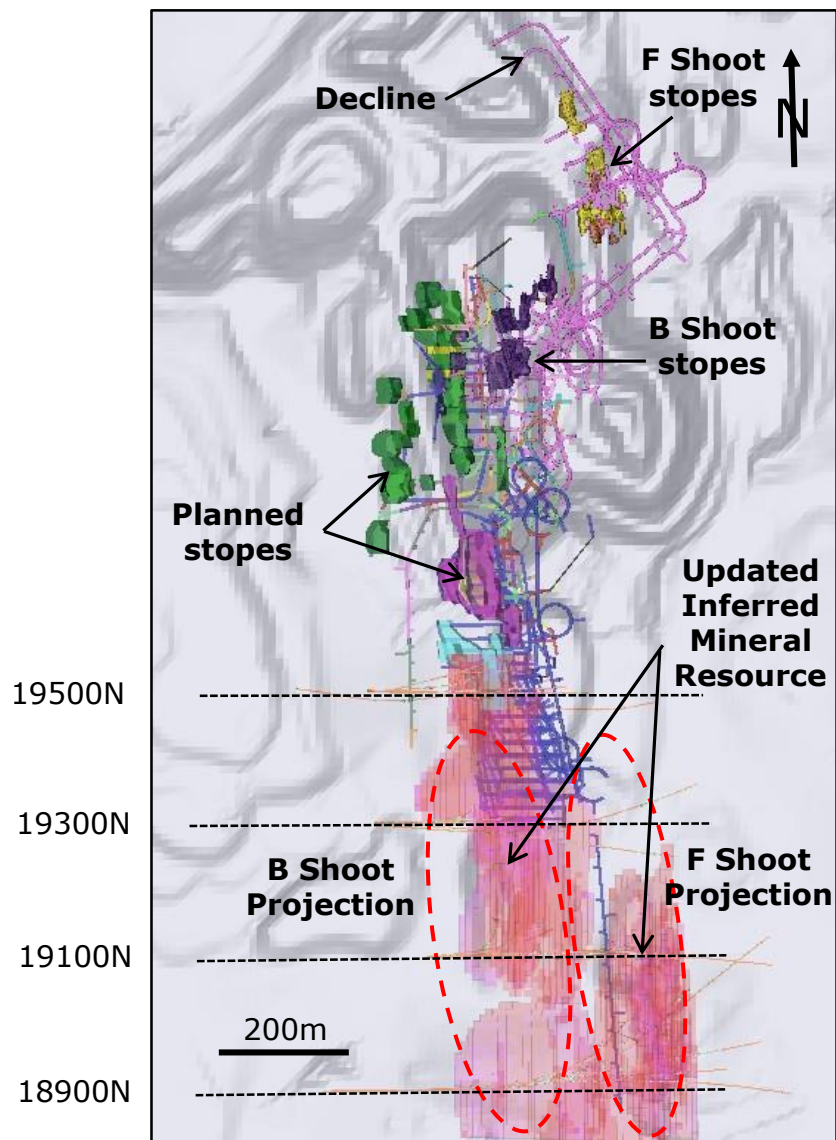
Inferred Mineral Resource Doubled at Wassa Underground

147% increase in Inferred Mineral Resources to 5.2 million ounces

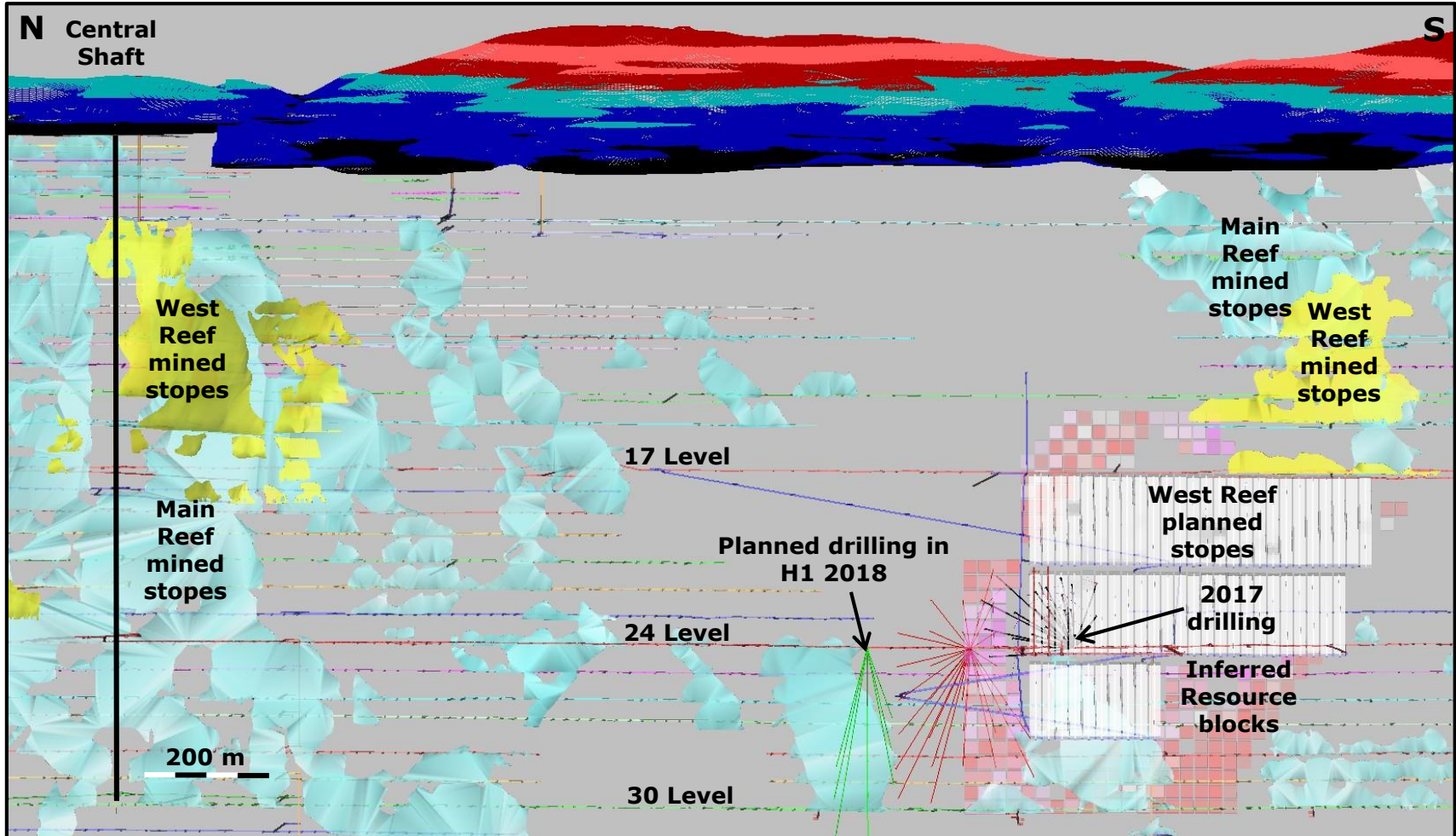


- 9% increase in grade of Inferred Mineral Resources to 3.6 g/t Au
- Gold mineralization extends 75m up dip and 150m down dip
- Ore body remains open down plunge – further upside potential
- PEA on Inferred Mineral Resources expected to begin later in Q2 2018

3.1Moz Added to Wassa's Inferred Mineral Resource



Prestea Underground: Planned 2018 Drilling

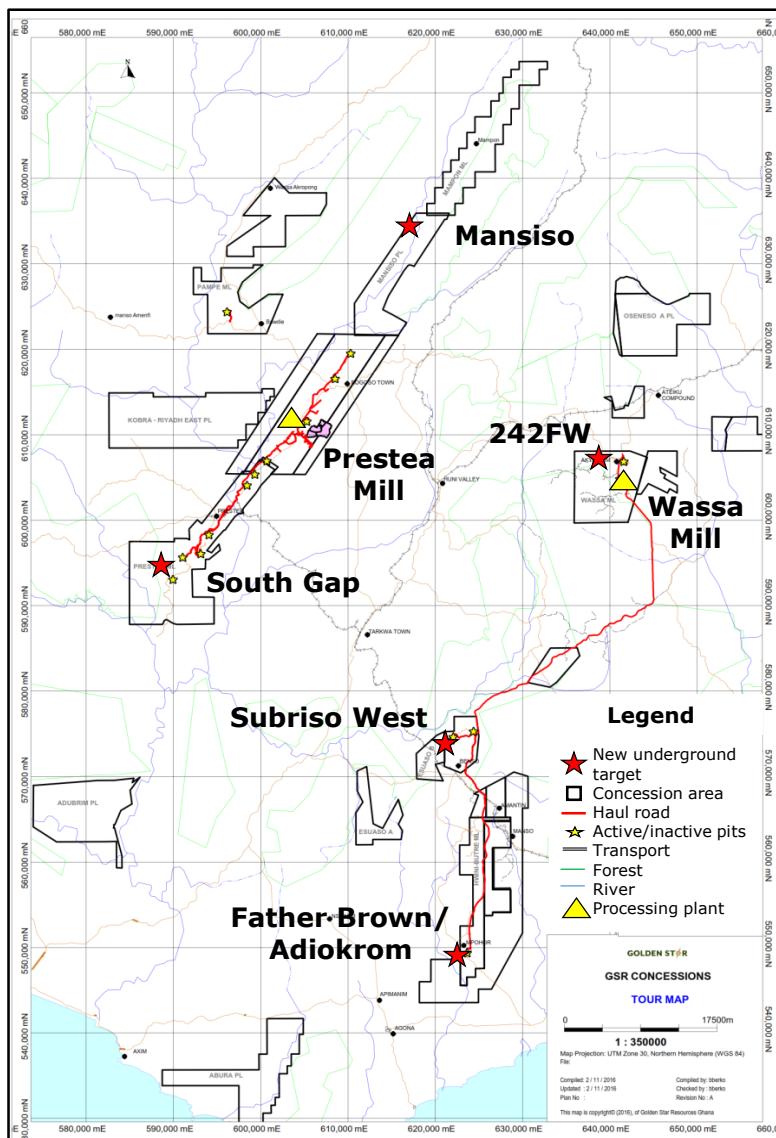


- Planned drilling in early 2018 will access the larger, longer term exploration target - the projected down plunge extension of the high grade West Reef ore body

Five New Underground Targets

All targets are within trucking distance of Wassa or Prestea processing plants

- Large land package in Ghana (956 sq.km)
- Previously known targets reviewed for underground mining potential
- Objective is to find additional sources of high margin ore to 'fill the mills'



Target	Mill?	2018 Action
Father Brown	Wassa	Create conceptual block model
242 FW	Wassa	5,250m drilling
South Gap	Prestea	2,500m drilling
Mansiso	Prestea	3,800m drilling
Subriso West	Wassa	Create conceptual block model

OPERATIONAL & FINANCIAL REVIEW



Wassa Gold Mine: Snapshot

- Underground gold mine in south-western Ghana
- Production commenced from open pit in 2005 and underground in 2016
- Wassa Underground Mineral Reserves of 647Koz (4.9Mt at 4.21g/t Au)
- Wassa Underground is expected to continue to ramp up during 2018
- Decision taken to defer next pushback of Wassa Main Pit to focus on high grade, high margin ounces
- This strategy reduces capital expenditure required for Wassa in 2018 and is expected to generate the strongest free cash flow



WASSA

	Unit	Rate
2017 Production¹	Koz	137
2017 Cash Operating Cost^{1,2}	\$/oz	880
2018 Forecast Production²	Koz	137-142
2018 Forecast Cash Operating Cost²	\$/oz	600-650

Wassa Underground: A Strong First Quarter



- First quarter of primarily underground production (83%)
 - Production ceased from Wassa Main Pit in Jan 2018 as planned
- Production at Wassa focused on higher grade, higher margin, underground ounces
- 84% increase in grade from Wassa Underground to 4.54 g/t Au compared to Q1 2017
- 40% increase in average mining rate (2,400 tpd) achieved compared to Q1 2017
- Mining rate from Wassa Underground is anticipated to be increased to 2,700-3,000 tpd in FY 2018, with potential to expand further
- Stockpiled open pit ore planned to continue to be processed during Q2 and Q3 2018

Prestea Gold Mine: Snapshot

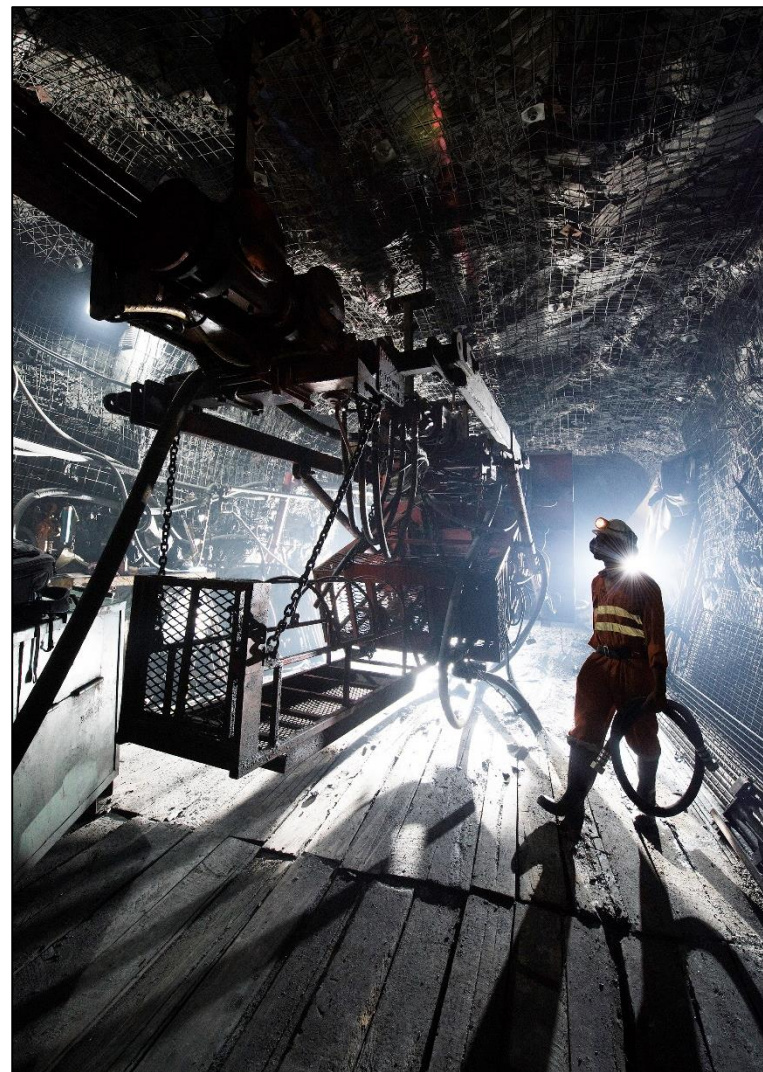
- +100 year history of mining at Prestea in Ghana – acquired by GSR in 1999
- Prestea Underground has very high grade Mineral Reserves of 1.2Mt at 12.35g/t for 463Koz
- Currently mining non-refractory ore from Prestea Open Pits and Prestea Underground
- Commercial production at Prestea Underground achieved on February 1, 2018
- 5 year mine life of Prestea Underground expected to be extended through exploration
- Production from Prestea Open Pits extended to Q3 2018



PRESTEA		
	Unit	Rate
2017 Production	Koz	130
2017 Cash Operating Cost ²	\$/oz	632
2018 Forecast Production	Koz	93-113
2018 Forecast Cash Operating Cost ²	\$/oz	740-880

Stronger Q2 Expected at Prestea Underground

- Stope 1 blasting issues continued into Q1 2018
- Blasted ore from Stope 1 contained higher levels of dilution than anticipated – grade processed of 8.22 g/t Au
- Adjustments made to blasting practices and initial results from Stope 2 have been stronger
- Average production rate of 613 tpd achieved from April 17 to April 29 2018, reaching a maximum of 851 tpd
- Initial grades from Stope 2 are in line with the block model expectations
- Management team expects Prestea Underground's Q2 2018 results to reflect significant improvements



Q1 2018: Financial Snapshot

- 3% increase in revenue compared to Q1 2017 due primarily to revenue received from Wassa Underground (up 22%)
- Net income attributable to GSR shareholders of \$1.0m compared to \$0.2m in Q1 2017
- 31% decrease in capital expenditures compared to Q1 2017 as both underground mines are now in commercial production
- \$12.6m of severance payments now complete - \$6.0m remaining in Q2 and Q3 2018
- Drawdown of remaining \$15m of Ecobank debt brings total debt outstanding to \$121.7m
- \$26.2m cash at March 31, 2018



Mine operating margin

\$3.0m



Net income

\$1.0m



Cash provided by operations

\$0.8m



Capex incurred

\$11.6m



Debt¹

\$121.7m



Cash balance¹

\$26.2m

Financial position expected to gain strength and flexibility

FUTURE GROWTH



Expansion Potential At Both Underground Operations

Operation

**2018 Targeted
Mining Rate**

**Shaft / Decline
Capacity**

**Processing
Plant Capacity**

WASSA UNDERGROUND



2,700-3,000 tpd

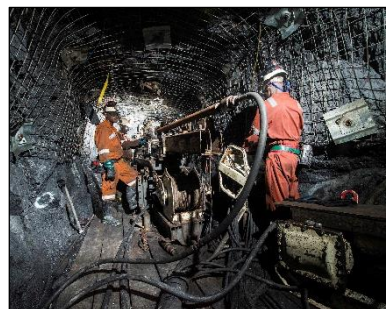


4,000 tpd



7,700 tpd

PRESTEA UNDERGROUND



650 tpd



1,500 tpd



4,000 tpd

GOLDEN STAR



Contact Us

Katharine Sutton, Investor Relations
+1 416 583 3800
investor@gsr.com

NYSE American: GSS
TSX: GSC

Follow Us



Appendices: Market Information

One Year Share Price (GSS)^{1,2}



Market Information¹

Markets	NYSE American / TSX / GSE
Tickers	NYSE: GSS TSX: GSC GSE: GSR
Shares in Issue ³	380,824,555
Options ³	17,932,033
Share Price ²	\$0.71
Market Capitalization	\$271m
Cash ⁴	\$26.2m
Debt ⁴	\$121.7m
Daily Volumes Traded (3 Month Average) ²	1.3m shares

Analyst Coverage

- Beacon Securities
- BMO Capital Markets
- CIBC Capital Markets
- Clarus Securities
- Desjardins Capital Markets
- HC Wainwright & Co
- National Bank Financial
- Numis Securities
- Scotia Bank

Key Institutional Shareholders

- Van Eck
- Franklin Templeton
- Condire Investors
- Oppenheimer Funds
- Sentry Investments
- USAA Asset Management
- Earth Resources
- Konwave (Gold 2000)
- AGF Management
- Baker Steel

Experienced Management and Technical Leadership



Sam Coetzer, President & CEO

- Mining engineer with over 28 years' experience with Kinross, Xstrata Nickel, Xstrata Coal and Placer Dome
- Previously SVP South American Operations for Kinross



André van Niekerk, EVP & Chief Financial Officer

- Joined GSR in 2006 - 5 years in Ghana as GSR's Head of Finance and Business Operations
- Previously VP, Financial Controller
- Trained at KPMG



Daniel Owiredun, EVP & Chief Operating Officer

- 30 years' experience in West African mining, based in Ghana
- Previously Deputy COO for AngloGold - managed construction and operation of the Bibiani, Siguiri and Obuasi mines



Martin Raffield, SVP, Project Development & Technical Services

- Ph.D. geotechnical engineering & P. Engineering
- Previously worked for SRK, Placer Dome and Breakwater Resources
- Based at Prestea mine in Ghana



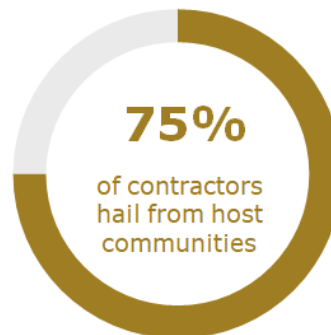
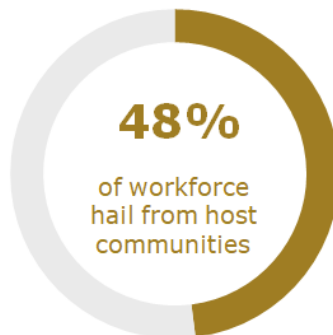
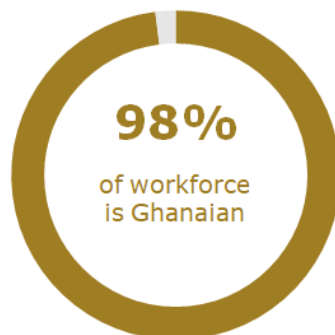
Mitch Wasel, VP Exploration

- Joined GSR in 1993
- Based in Ghana for GSR for past 17 years
- Previously spent 10 years in gold & base metal exploration in north-western Canada

A Responsible Corporate Citizen

SUSTAINABLE
DEVELOPMENT
GOALS

#gsr17



SUSTAINABLE
DEVELOPMENT
GOALS

#gsr17



\$67m in salaries in 2017



\$6.2m in sustainable
agribusiness to date



\$3.5m+ in development fund
projects to date

\$47m paid in Government payments in 2017

Winner of PDAC 2018 Environmental & Social Responsibility Award

Mineral Reserves and Mineral Resources

Mineral Reserves ^{1,2}	Tonnes ('000)	Grade (Au g/t)	Content (Koz)
Proven Mineral Reserves			
Wassa	1,595	0.71	37
Prestea	547	1.21	21
Total	2,143	0.84	58
Probable Mineral Reserves			
Wassa	17,153	2.10	1,159
Prestea	1,373	10.79	476
Total	18,525	2.75	1,635
Total Proven & Probable	20,668	2.55	1,693

Mineral Resources ¹	Tonnes ('000)	Grade (Au g/t)	Content (Koz)
Measured & Indicated Mineral Resources			
Wassa	43,906	2.35	3,323
Prestea	23,601	3.52	2,673
Total	67,507	2.76	5,996
Inferred Mineral Resources			
Wassa	47,011	3.59	5,431
Prestea	4,666	6.48	973
Total	50,756	3.88	6,326

- For the Mineral Reserves and Measured and Indicated Mineral Resources please refer to the Company's Annual Information Form ("AIF") for the year-ended December 31, 2017 and dated March 29, 2018. The AIF is available at www.gsr.com. For the Inferred Mineral Resources, please refer to the press release entitled, 'Golden Star doubles Inferred Mineral Resources at Wassa Underground Gold Mine', dated April 12, 2018.
- All numbers exclude refractory ore.