

GOLDEN STAR

Q1 2016 RESULTS: Transition in Full Effect



DISCLAIMER AND OTHER MATTERS

SAFE 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: additional payments from RGLD Gold AG under the streaming agreement; the completion and timing of the bought deal financing; the timing and duration of the shutdown at Wassa; the effect of the Wassa shutdown and seasonality on Wassa production; the improvement of grades at Wassa due to Wassa Underground production; the timing for first ore and commercial production, and average annual production, from Wassa Underground; any production extension from the Prestea open pits; the opportunity for cost savings at the Prestea open pit and underground operations; production and cash operating costs for 2016; the results of the Prestea Underground mine feasibility study, including production, life of mine cash operating costs per ounce and all-in sustaining costs per ounce, and the impact of the change to mechanized shrinkage mining at Prestea Underground thereon; future work to be completed at Prestea Underground Mine, including the timing for mechanical and electrical rehabilitation work, as well as pre-development and development work and stoping; the timing of and amount of production from each of Wassa Underground mine and Prestea Underground Mine; and the ability to continue growth and extend mine life of the Prestea open pits; capital expenditures for the development of Wassa Underground and Prestea Underground mine. Factors that could cause actual results to differ materially include timing of and unexpected events at the Bogoso/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, 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; 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, 2015 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" and "all-in sustaining cost per ounce" or "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. "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 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 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. These measures are not necessarily indicative of operating profit or cash flow from operations as would be determined under International Financial Reporting Standards. 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. In order to indicate to stakeholders the Company's earnings excluding the non-cash (gain)/loss on the fair value of debentures, non-cash impairment charges and severance charges, the Company calculates adjusted net earnings / (loss) attributable to Golden Star shareholders" and "adjusted net earnings/ (loss) per share attributable to Golden Star shareholders" to supplement the condensed interim consolidated financial statements.

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 Ltd., Bogoso Prestea Gold Mine, Ghana" effective December 31, 2013, and (iii) "NI 43-101 Technical Report on a Feasibility Study of the Prestea Underground gold project in Ghana" effective November 5, 2015. Additional information is included in Golden Star's Annual Information Form for the year ended December 31, 2015 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.

MANAGEMENT PARTICIPANTS



Sam Coetzer
President and
Chief Executive Officer



André van Niekerk
Executive Vice President and
Chief Financial Officer



Daniel Owiredu
Executive Vice President and
Chief Operations Officer



Lisa Doddridge
Vice President, Investor
Relations & Corporate Affairs

FINANCIAL PERFORMANCE & OTHER CORPORATE DEVELOPMENTS

Q1 2016

Revenue	\$'000	61,067
Gold Sales	oz	52,669
Average Realized Gold Price	\$/oz	1,159
Earnings	\$'000	2,051
	\$/share	0.01
Adjusted Earnings ¹	\$'000	4,157
	\$/share	0.02
Cash Flow from Operations ²	\$'000	928
	\$/share	0.04
Capital Spending	\$'000	15,914
Cash Available	\$'000	14,561

- \$20M scheduled payment from Royal Gold as per the streaming agreement
 - \$50M in additional payments expected
- Repurchase of \$3.6M (principal) of Convertible Debentures for \$1.8M
 - \$73.9M principal amount remains outstanding
- Expect approximately \$15M in gross proceeds from bought deal financing closing on or about May 9, 2016
- Agreement with significant current account creditor to settle \$36.5 million outstanding
 - \$12 million payment end of by June 2016
 - \$24.5 million deferred until January 2018

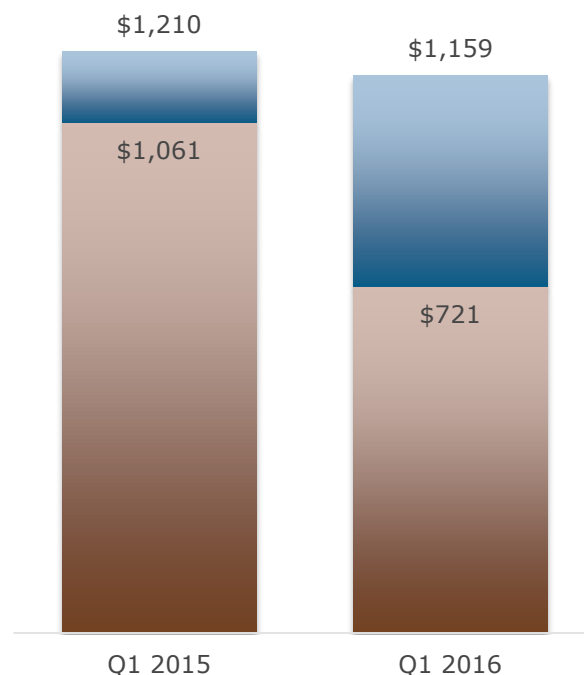
1. See note on slide 2 regarding Non-GAAP Financial Measures

2. Equal to Cash provided by operations before changes in working capital, a Non-GAAP financial measure, see slide 2

OPERATIONAL PERFORMANCE

Gold Production		
Wassa	oz	31,273
Prestea	oz	21,944
Total	oz	53,217
Cash Operating Costs¹		
Wassa	\$/oz	706
Prestea	\$/oz	742
Total	\$/oz	721
All-in Sustaining Costs¹	\$/oz	963

Cash operating margin per oz
(Average Realized Gold Price – Cash Operating Costs¹)

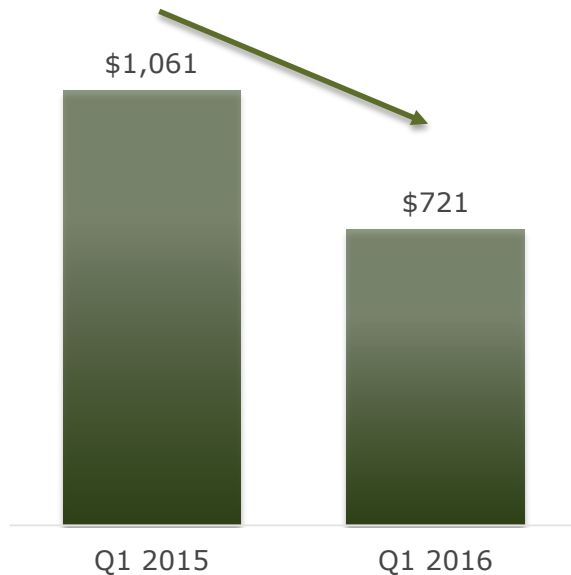


Production and costs in Q1 exceeded expectations

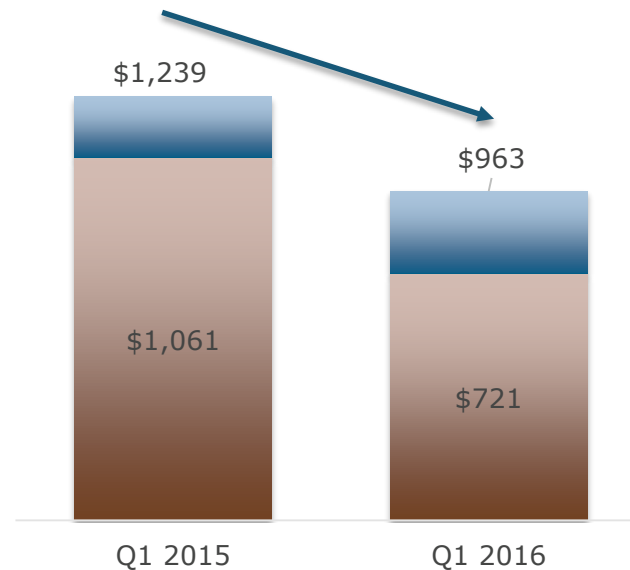
1. See note on slide 2 regarding Non-GAAP Financial Measures

COSTS CONTINUE TRACKING DOWNWARDS

Cash Operating Cost per ounce¹



All-in Sustaining Cost per ounce¹



- Cash operating costs declined by 32% from Q1 2015
- All-in sustaining costs declined by 17% from FY 2015
- Demonstration of the sustainability of the new cost structure

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

WASSA Q1 2016 OPERATIONAL PERFORMANCE

		Q1 2016	Q1 2015
Ore mined	kt	610	560
Waste mined	kt	2,406	2,362
Ore processed	kt	641	631
Grade processed	g/t	1.64	1.20
Recovery	%	94.1	92.6
Gold Production	oz	31,273	23,194
Gold sales	oz	30,887	23,194
Cash Operating Cost ¹	\$/oz	706	1,119

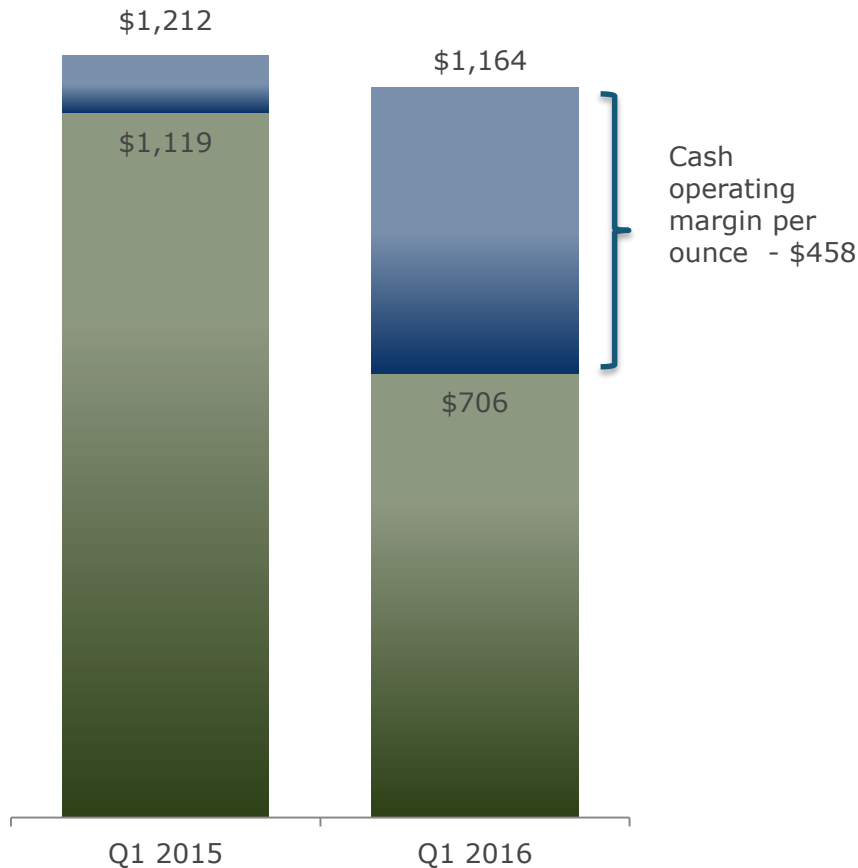
- Gold production increased by 35% from Q1 2015
- Grades and recovery improved
- Q2 and Q3 are expected to reflect seasonality, as well as planned shutdown in Q2 for maintenance of approximately 14 days

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

WASSA COSTS CONTINUE TO DECREASE

Cash operating margin per oz.

(Average Realized Gold Price – Cash Operating Costs¹)



- 37% decline in cash operating costs from Q1 2015 to Q1 2016
- Cash operating margin of \$458 per ounce or 39% of average realized gold price
 - Significant improvement from Q1 2015 despite the decline in the realized gold price
- Costs in Q2 will reflect lower levels of production due to the planned shutdown

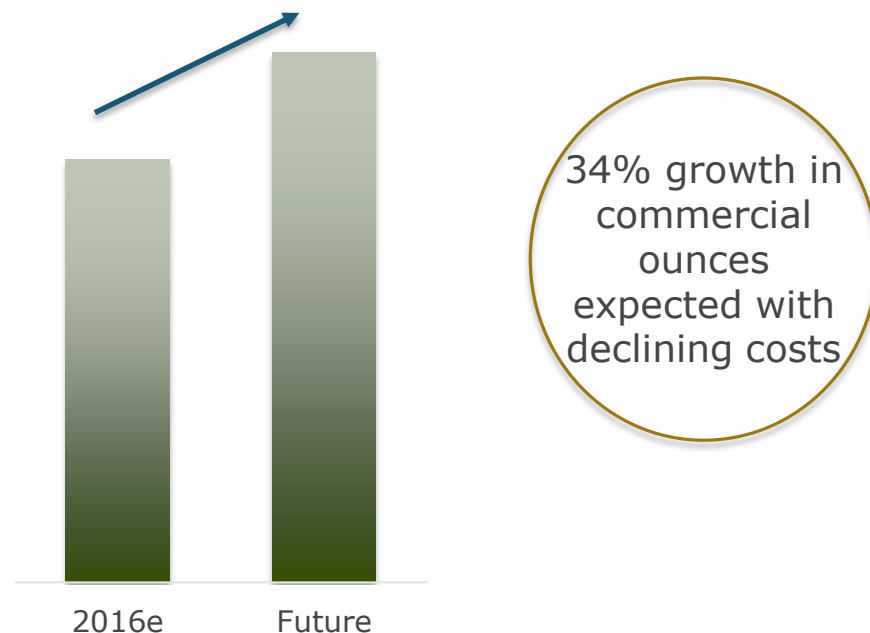
1. See note on slide 2 regarding Non-GAAP Financial Measures

WASSA – THE WAY FORWARD

- 2.7 mtpa processing plant
- Currently processing approximately 7,000 tpd
- Ore from the underground will be blended with open pit ore
- Tonnes processed will remain the same and grades will improve
 - Approximately 2,500 tpd is the expected contribution from the UG once fully ramped up
- First ore from the underground expected in mid-2016
- Commercial production expected in early 2017
- Life of Mine (LOM) average annual production expected to be approx. 160,000 ozs.

100,000- 110,000 ounces
of production expected from the open
pit in 2016 at cash operating costs¹ of
\$800 - \$900 per ounce

20,000 – 25,000 ounces
of pre- commercial production
expected from the Underground
in 2016



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

WASSA UNDERGROUND DEVELOPMENT CONTINUES

- ✓ Equipment sourcing and delivery – COMPLETED
- ✓ Staffing – COMPLETED
- ✓ Surface infrastructure construction – COMPLETED
- ✓ Transfer from generator power to grid power – COMPLETED
- ✓ Development of the main and ventilation portal – COMPLETED
- ❑ Development of the declines – approx. 8 metres per day
 - Total of over 1.9 kilometres to date – IN PROGRESS
- ❑ Development into the “halfway pod” (F-Shoot) – IN PROGRESS
- ❑ Minor modifications to the mill – Q2 2016
- ❑ Stope development

On track to deliver first gold production in mid-2016
Commercial production expected in early 2017

PRESTEA OPEN PITS Q1 2016 OPERATIONAL PERFORMANCE

		Q1 2016	Q4 2015
Ore mined	kt	383	301
Waste mined	kt	1,145	894
Ore processed	kt	362	318
Grade processed	g/t	2.21	2.36
Recovery	%	84.4	83.1
Gold Production	oz	21,944	20,746*
Gold sales	oz	21,782	20,498*
Cash Operating Costs ¹	\$/oz	742	849

- Q4 2015 provides benchmark for non-refractory production expectation and better comparability
- Q1 production consistent with level established in Q4 2015
- Cash operating costs declined by approximately 13% from Q4 2015
- Slight decline in grades offset by improved recovery and throughput

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

* Includes 1,042 refractory ounces

PRESTEA OPEN PIT & UNDERGROUND MINES

- Production from Prestea replaced high cost refractory ounces
 - Open pit bridging the production gap until underground production established
- Prestea open pits have been contributing to production since July 2015
- Growth in Prestea Mineral Reserves indicates potential production extension from the open pits
- Rehabilitation of the underground underway
- Underground mine established in late 1900's, 9M oz of historic production
 - Two surface and two internal shafts operational

Combined open
pit & underground
operation
provides
opportunity for
significant cost
savings

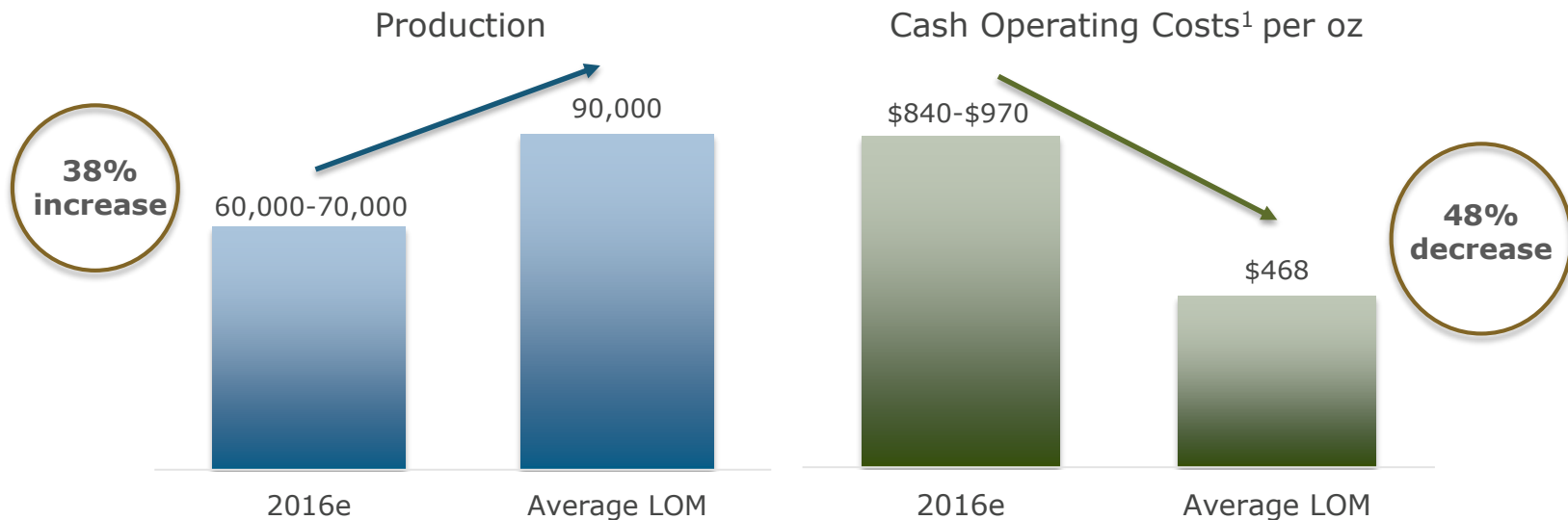
60,000 – 70,000 ounces
of production expected in 2016 from
the Prestea open pits at cash operating
costs¹ of
\$840 - \$970 per ounce

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

NEW PROJECT REVIEW AND STATUS – PRESTEA UNDERGROUND

From March 2016 update to the Feasibility Study:

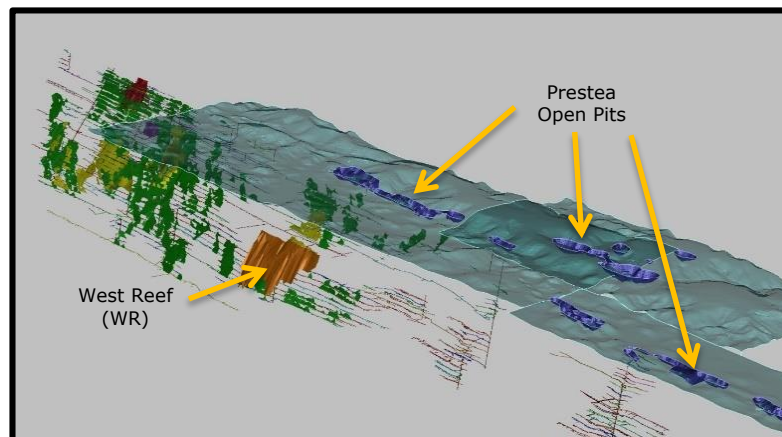
- Total LOM average annual production 90,000 ounces
- Average LOM Cash Operating Costs¹ \$468 per ounce
- Average LOM All-in Sustaining Costs¹ \$615 per ounce
- First gold from Prestea Underground expected in mid-2017



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

PRESTEA UNDERGROUND PROJECT UPDATE

- ☑ Rehabilitation works – COMPLETED
- ☑ Long lead time equipment ordered – COMPLETED
- ☐ Mechanical and electrical upgrades – to be completed in Q3 2016
- ☐ Pre-development of the Mineral Resource to begin Q4 2016
- ☐ Stoping expected to commence in mid-2017
 - Ramping up to 500 tonnes per day by end of 2017
- ☐ First gold from Prestea Underground on track for mid-2017



WHAT TO EXPECT IN 2016

	Production	Cash Operating Costs
	'000 ounces	US\$ per ounce ⁽¹⁾
Wassa Open Pit	100 - 110	800 - 900
Wassa Underground	20 - 25	N/A
Prestea Open Pit	60 - 70	840 - 970
GSR Total	180 - 205	815 - 925

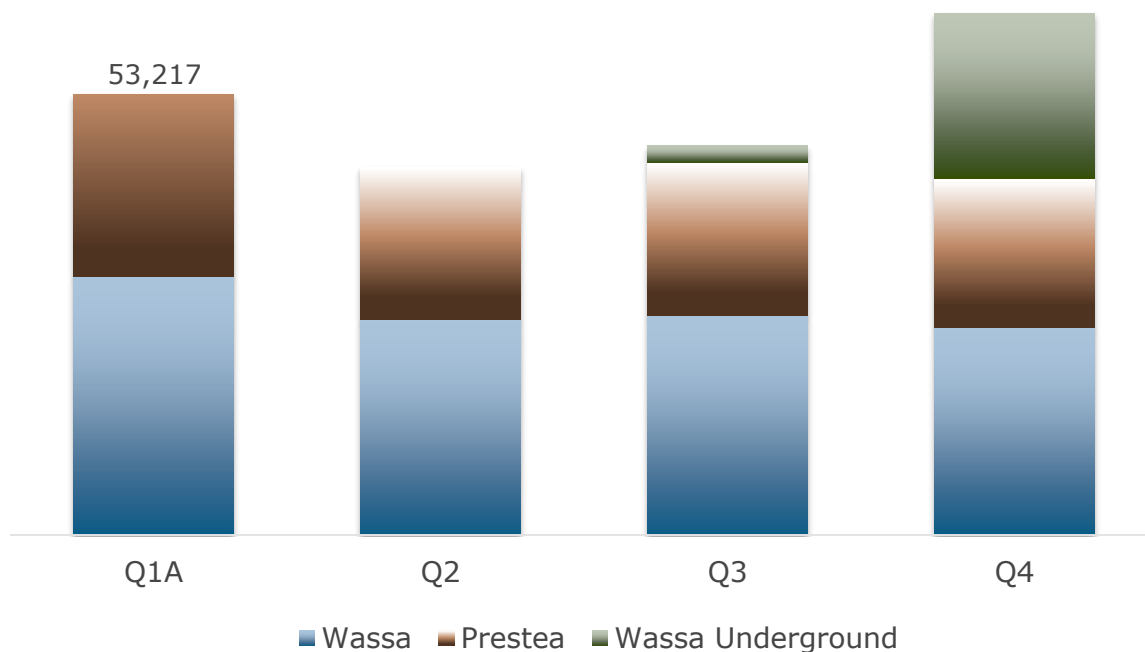
2016 guidance for production, costs and capital spending of \$90 million reiterated

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

WHAT TO EXPECT IN 2016

2016 Production*: 180,000 – 205,000 ounces
Cash Operating Costs¹: \$815 – \$925 per ounce

2016E Quarterly Production Profile

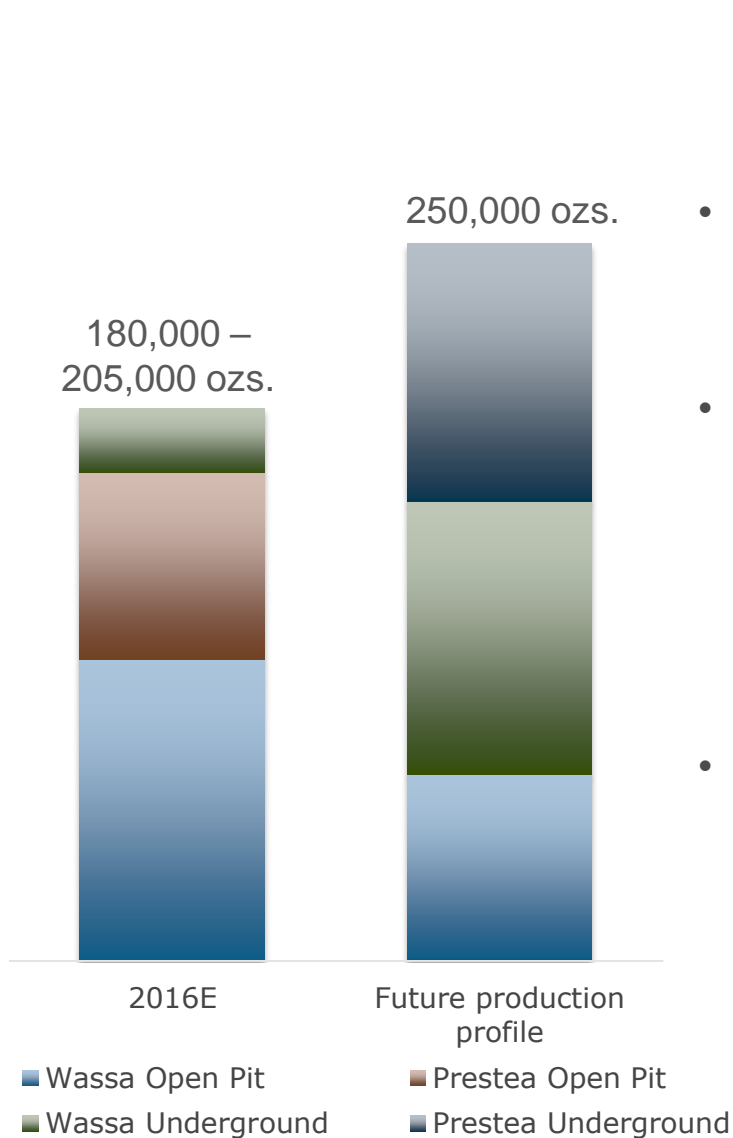


- Stable production base established
- Q2 and Q3 are expected to be impacted slightly by rainy season and planned maintenance shut down in Q2
- Q4 production reflects the contribution from the Wassa Underground

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

* - includes 20,000 – 25,000 of pre commercial production from the Wassa Underground

FUTURE PRODUCTION PROFILE



- 2016 production expected
 - 180,000 – 205,000

Future production to increase by 30%

- Future production* increases by approximately 30% once both Underground operations are fully ramped up to average annual production:
 - Total Wassa* – 160,000 ounces
 - Total Prestea* – 90,000 ounces
- Opportunity
 - Continued growth and mine life extension of the Prestea Open Pits

* Based on average annual production as per the respective feasibility studies. Please refer to the company's filings on SEDAR.

2016 STRATEGIC FOCUS

- Bring Wassa Underground into production as planned
- Advance Prestea Underground
- Improve Balance Sheet
- Disciplined approach to all aspects of the business