GOLDEN STAR

SIMPLE & LEAN PRODUCER

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: average cash operating costs per ounce over the life of mine and timing for achieving such costs; capital savings identified in the Prestea Underground studies; the Company being fully financed for development at a reduced cost of capital; the rise in total costs, improved efficiencies that reduce unit and per ounce costs; Wassa recovery, grade forecasts, and Bogoso/Prestea and cash operating costs for 2016; the improvement in the Company's cost profile once the underground mines are in production; the benefits of the stream and loan transaction with Royal Gold Inc. and affiliate; Golden Star transforming into a non-refractory miner with a declining cash cost profile; the timing for the development of and first production and commercial production from the underground mines; the resource potential from drilling at Wassa and the F shoot development; plans for deeper drilling at Prestea Underground to increase daily tonnage and expand the mineral resource; the improvement in mining and processing operations and staffing optimization on operating costs and G&A. 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, 2014 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.

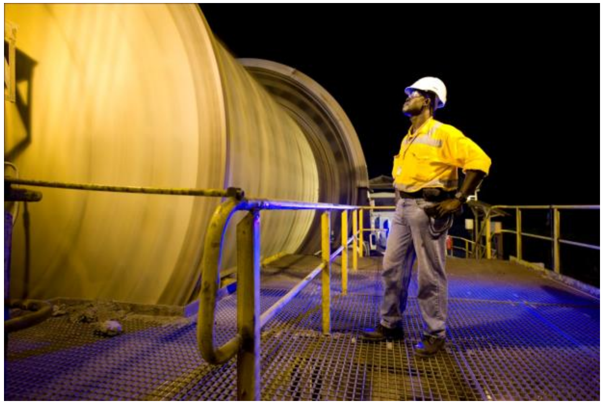
NON-GAAP FINANCIAL MEASURES: In this presentation, we use the terms "cash operating cost per ounce" and "all-in sustaining cost per ounce" or "AISC per ounce". These terms should be considered as Non-GAAP Financial Measures as defined in applicable Canadian and United States securities laws and should 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 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. "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 loss attributable to Golden Star shareholders" and "adjusted net 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 November 3, 2015, and (iii) "NI 43-101 Technical Report on a Feasibility Study of the Prestea Underground gold project in Ghana effective December 18, 2014. 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.

CHANGING DIRECTION – 2013
THE NEW GOLDEN STAR

- New leadership & corporate structure
- Strategic direction
  - Focus on unlocking and creating additional value in existing asset base



NEW LEADERSHIP

Board of Directors

- More than half of Board has been replaced since 2013
  - Additional Board member added, increasing Board to 8 members
  - New Board members add enhanced operational, development and finance skill sets

Management

- CEO / COO
- Empowered operational management
- Significant reduction in head count and reliance on ex-pats
- Executive management moved direct to site

Composition of the Board and Senior Management is now better equipped to guide the Company through the final stages of the transition and better reflects the new Golden Star

CHANGING THE CORPORATE CULTURE

- Moved head office from Denver to Toronto in 2013
  - Reduced head office staff by 30%
  - Corporate G&A reduced by almost 40% from 2012

Provided the opportunity to create a new culture from the top down

- Desire to work more harmoniously with surrounding communities / government
  - Reduced reliance on ex-pats
  - Decision making power pushed to site / operator level
  - Local employment focus
  - Renewed focus on training, health and safety

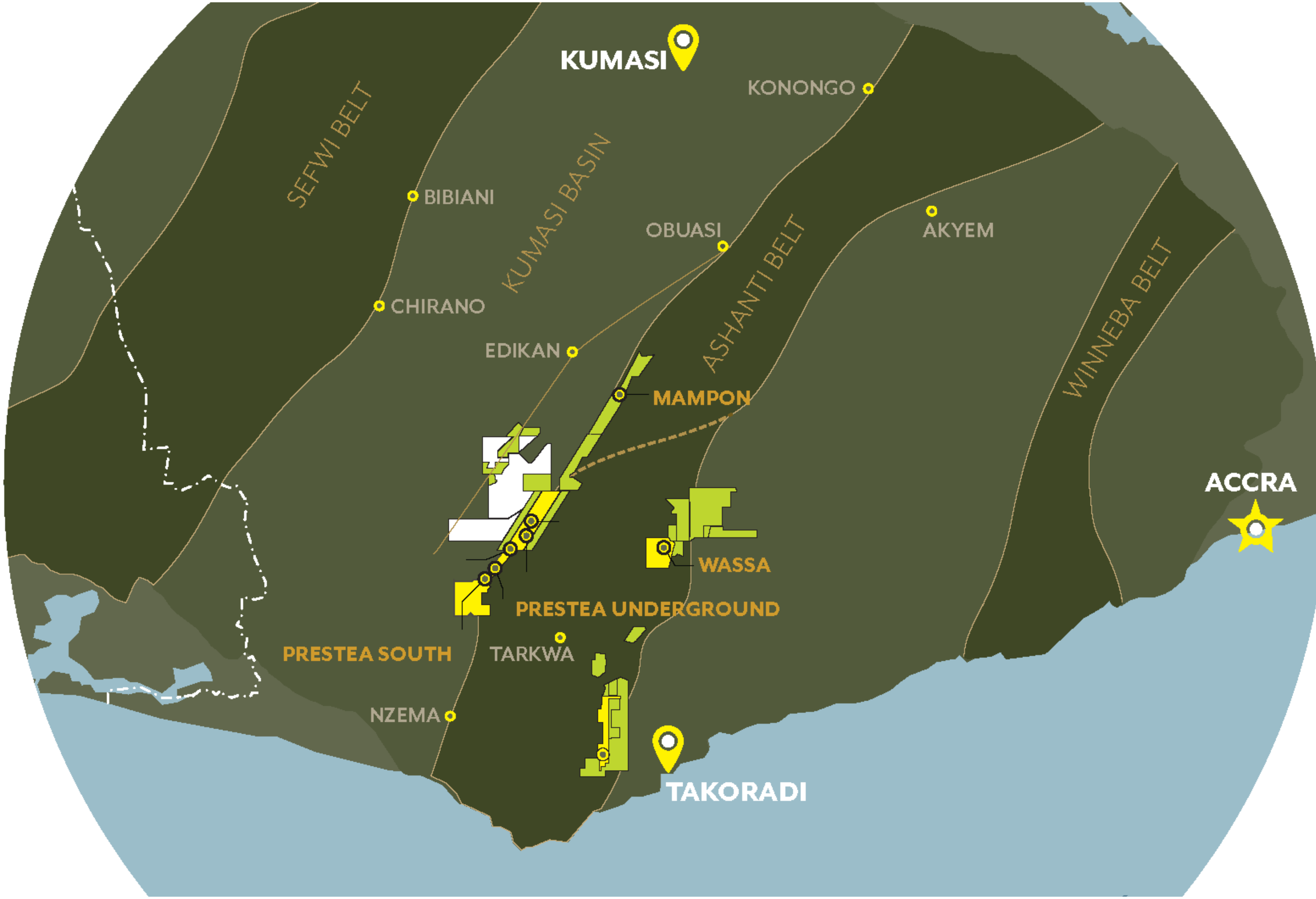
SHIFT IN STRATEGIC FOCUS

GOAL: to become a stable, reliable, predictable gold producer

Actions required:

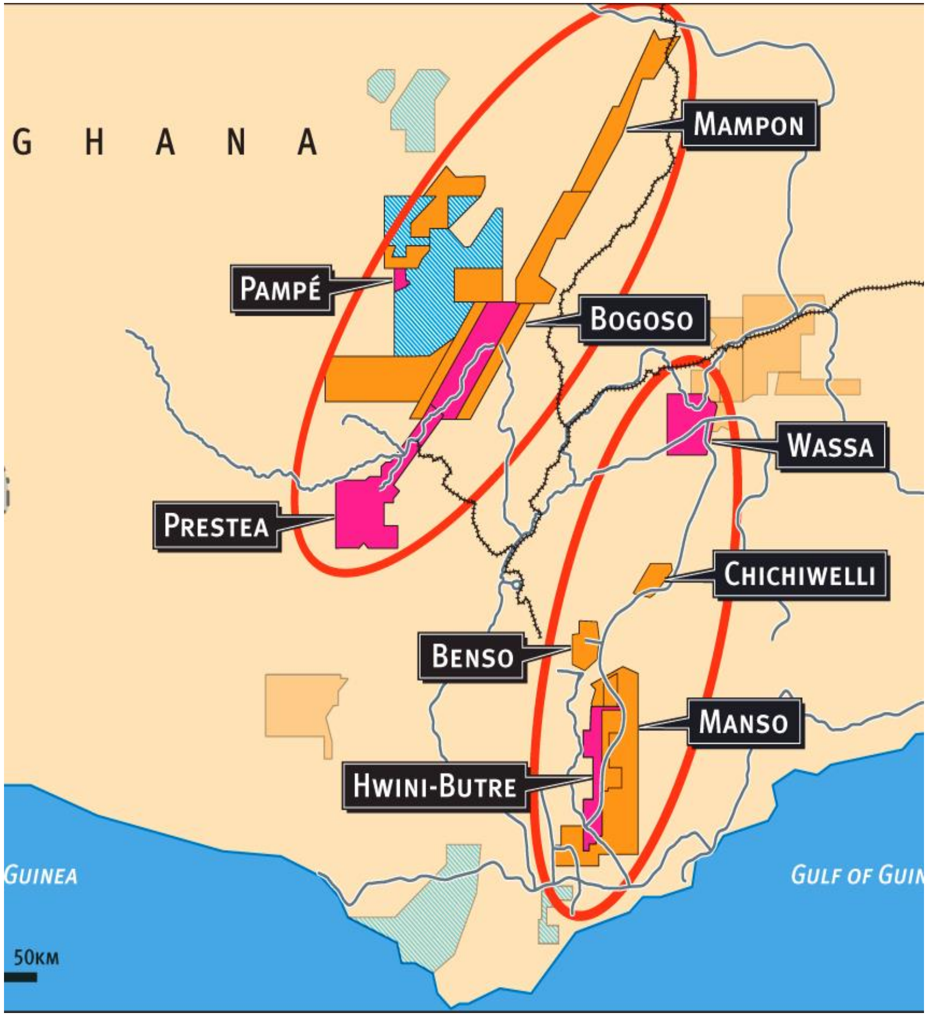
- **Eliminate the high cost refractory production**
    - High power consumption has a significant impact on costs
- **Convert mineral reserve base to all non–refractory ounces**
    - Ensures stability and predictability of future production
- **Unlock and create additional value in existing assets**
    - Evaluate approach at Wassa to reduce costs and increase reliability
    - Reduce capital and increase returns with growth projects – Prestea UG

OPERATING MINES ON PROLIFIC ASHANTI GOLD BELT



WASSA – CHANGING THE APPROACH TO UNLOCK VALUE

- Acquired in 2001
- Production began in 2005 with the mining of numerous shallow open pits of varying grades
- Production and costs variable
- Haulage costs increased over time as distance to processing plant increased



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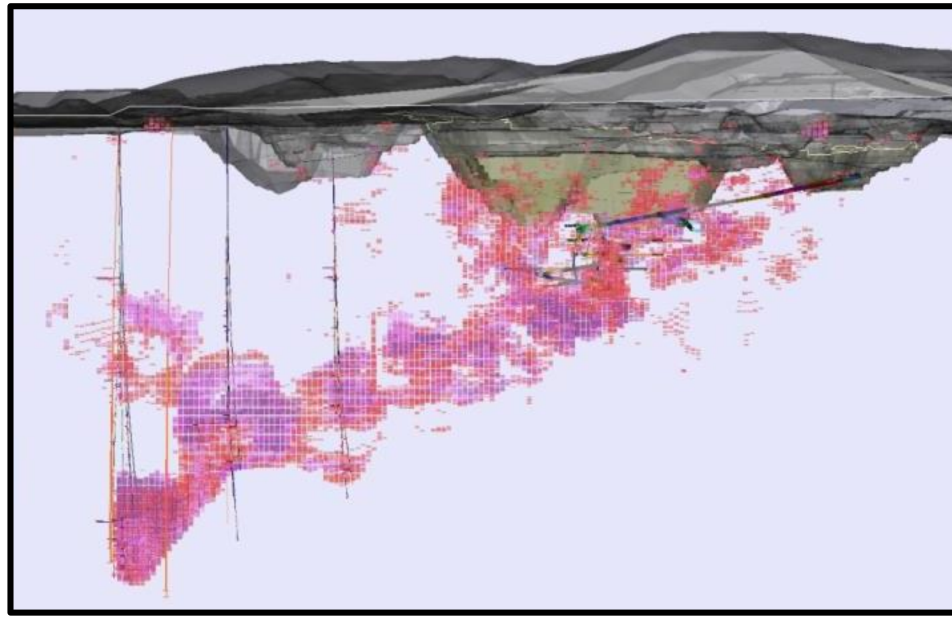
WASSA – THE NEW APPROACH
ACCESSING FROM THE OPEN PIT & UNDERGROUND

- Strategic focus:
  - One main large ore body
  - Main pit in production since 2013
  - Increase productivity
    - Larger equipment
    - Reduce reliance on contract mining
  - 500 metres from mill
  - Mill efficiency
    - Throughput and recoveries



- To accelerate cash flow generation – higher grade portion of the ore body to be accessed from the underground

New focus resulted in significant cost reductions

Mining costs reduced by 37% from 2013 to 2015

Site G&A reduced by over 40% over the same period

WASSA – THE WAY FORWARD

- 2.7 mtpa processing plant
- Ore from the underground will be blended with open pit ore
  - Tonnes processed will remain the same and grades will improve
- First ore from the underground expected in mid-2016
- Commercial production expected in early 2017
- LOM average annual production expected to be approximately 160,000 ounces

100,000- 110,000 ounces
of production expected from the open pit in 2016 at cash operating costs[1] of
$800 - $900 per ounce

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

Mineral Resources	Tonnes (000)	Grade (g/t Au)	Ounces (000)
Open Pit	37,974	1.23	1,501
Underground	13,090	3.85	1,621
Other	5,383	3.76	434
TOTAL	**56,647**	**2.02**	**3,556**

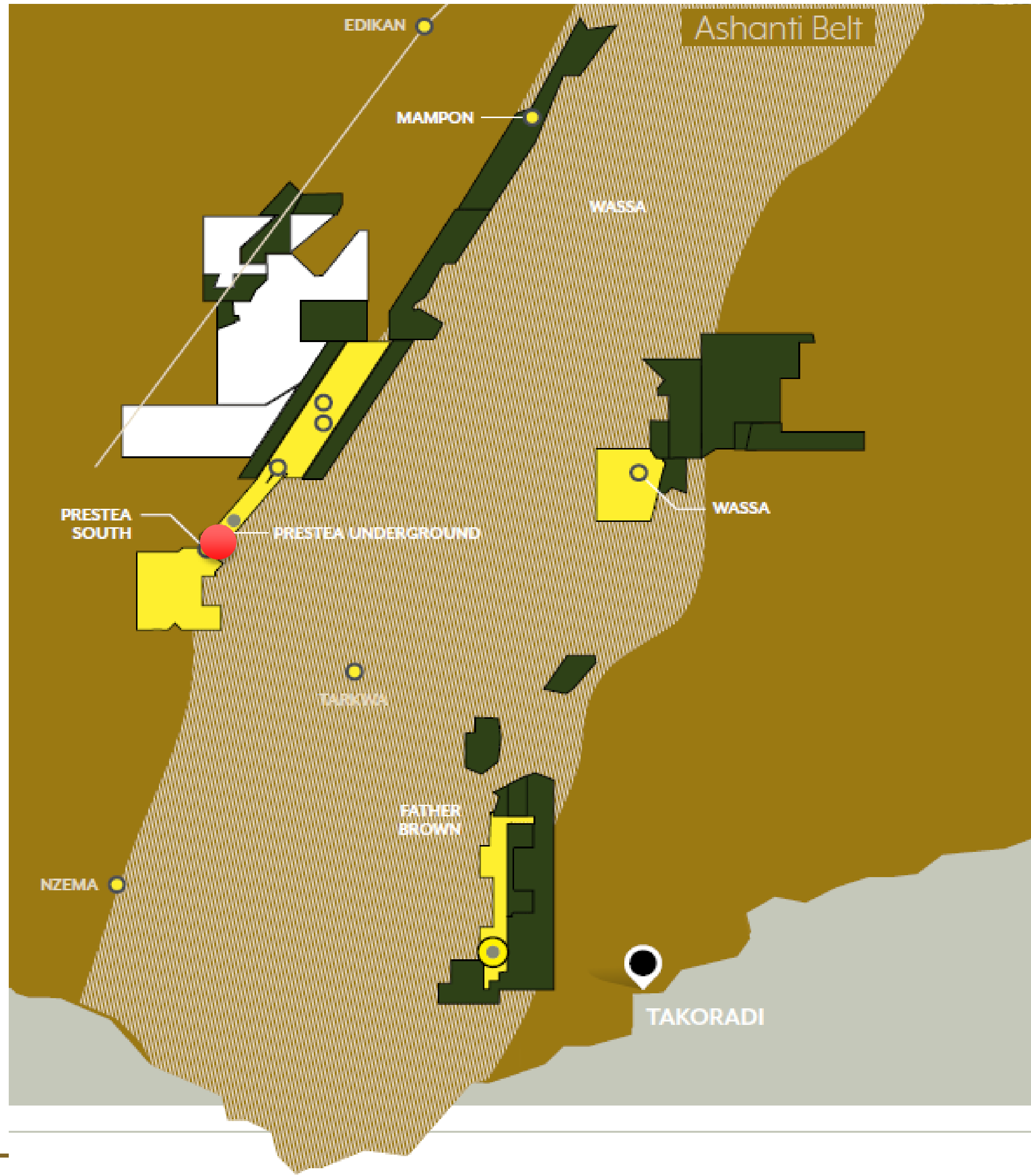
1. See note on slide 2 regarding Non-GAAP Financial Measures

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 1,600 metres 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 – NEWEST NON-REFRACTORY PRODUCTION



PRESTEA OPEN PIT & UNDERGROUND MINES

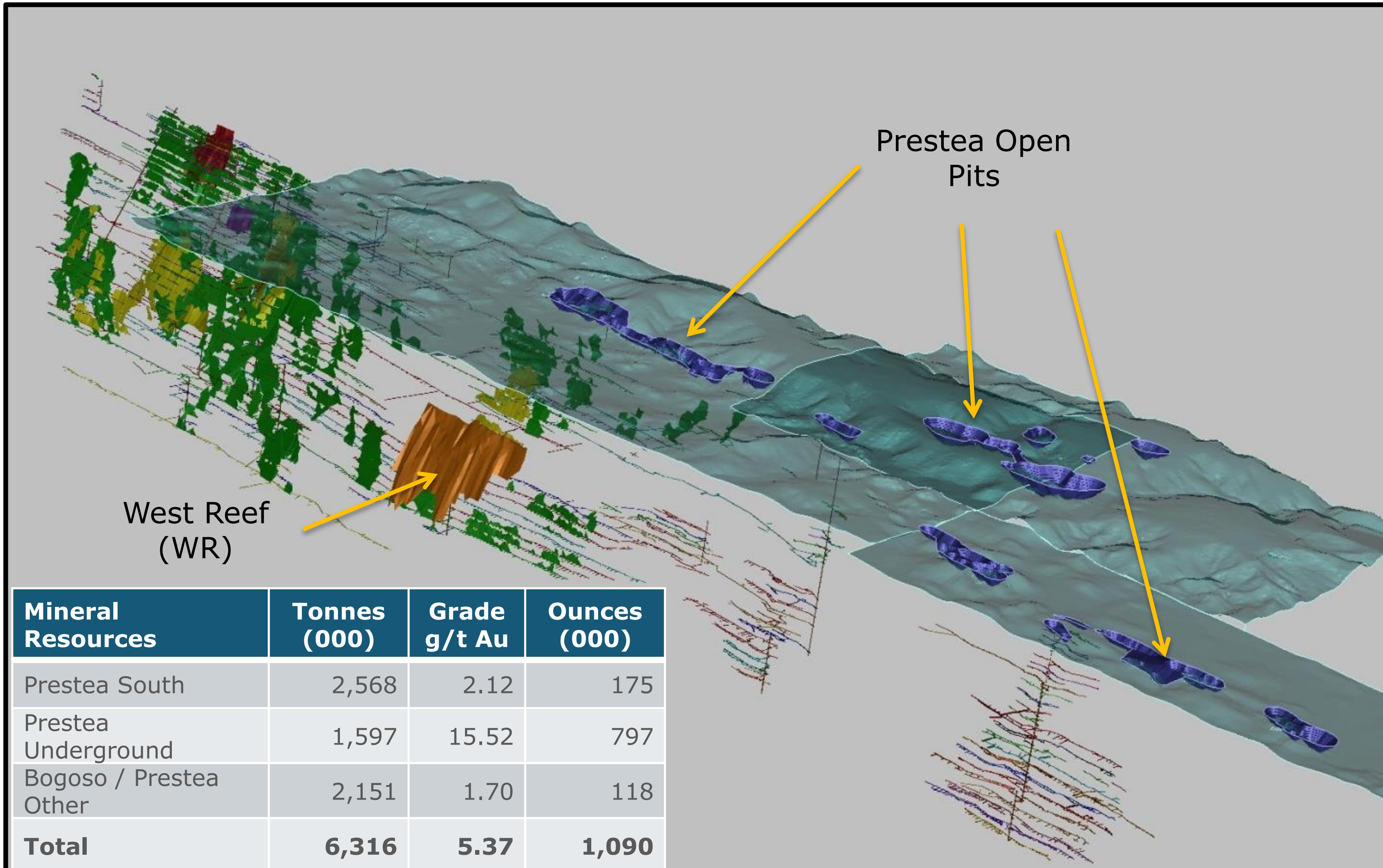
- Production from Prestea replaced high cost refractory ounces
  - Open pit bridging the production gap until underground production established
- Prestea open pits have been contributing to production for only 5 months
- Growth in Prestea Mineral Reserves indicates potential production extension from 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 costs[1] of
$840 - $970 per ounce

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

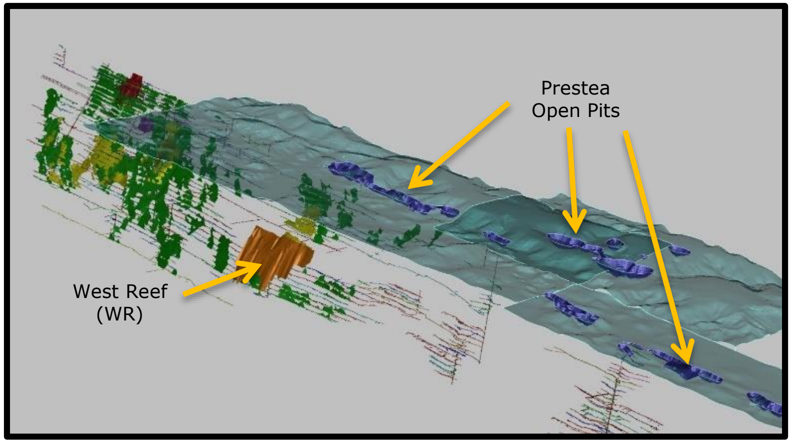
PRESTEA OPEN PITS & PRESTEA UNDERGROUND



Mineral Resources	Tonnes (000)	Grade g/t Au	Ounces (000)
Prestea South	2,568	2.12	175
Prestea Underground	1,597	15.52	797
Bogoso / Prestea Other	2,151	1.70	118
Total	**6,316**	**5.37**	**1,090**

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



4th QUARTER 2015 & FULL YEAR RESULTS
FINANCIAL RESULTS AFTER THE TRANSITION

- **2015 Production – 222,416 ounces**
  - Q4 production – 52,141 ounces
- **2015 Full year cash operating costs[1] - $976 / oz. AISC - $1,158 / oz.**
  - Q4 cash operating costs - $715 / oz. AISC - $896 / oz.
- **Generating Earnings**
  - Q4 $0.05 per share
- **Generating cash flow**
  - Q4 generated cash flow before changes in working capital[1] of $29.7 million or $0.11 per share
- **Development projects fully funded**
  - Wassa Underground to commence production in mid-2016
  - Prestea Underground to commence production in mid-2017
- **Cash and Cash Equivalents**
  - $35.1 million
- **Debt as of December 31, 2015**
  - Accounts payable – $111 million
  - Long-term debt – $114 million

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

UNDERSTANDING THE DEBT

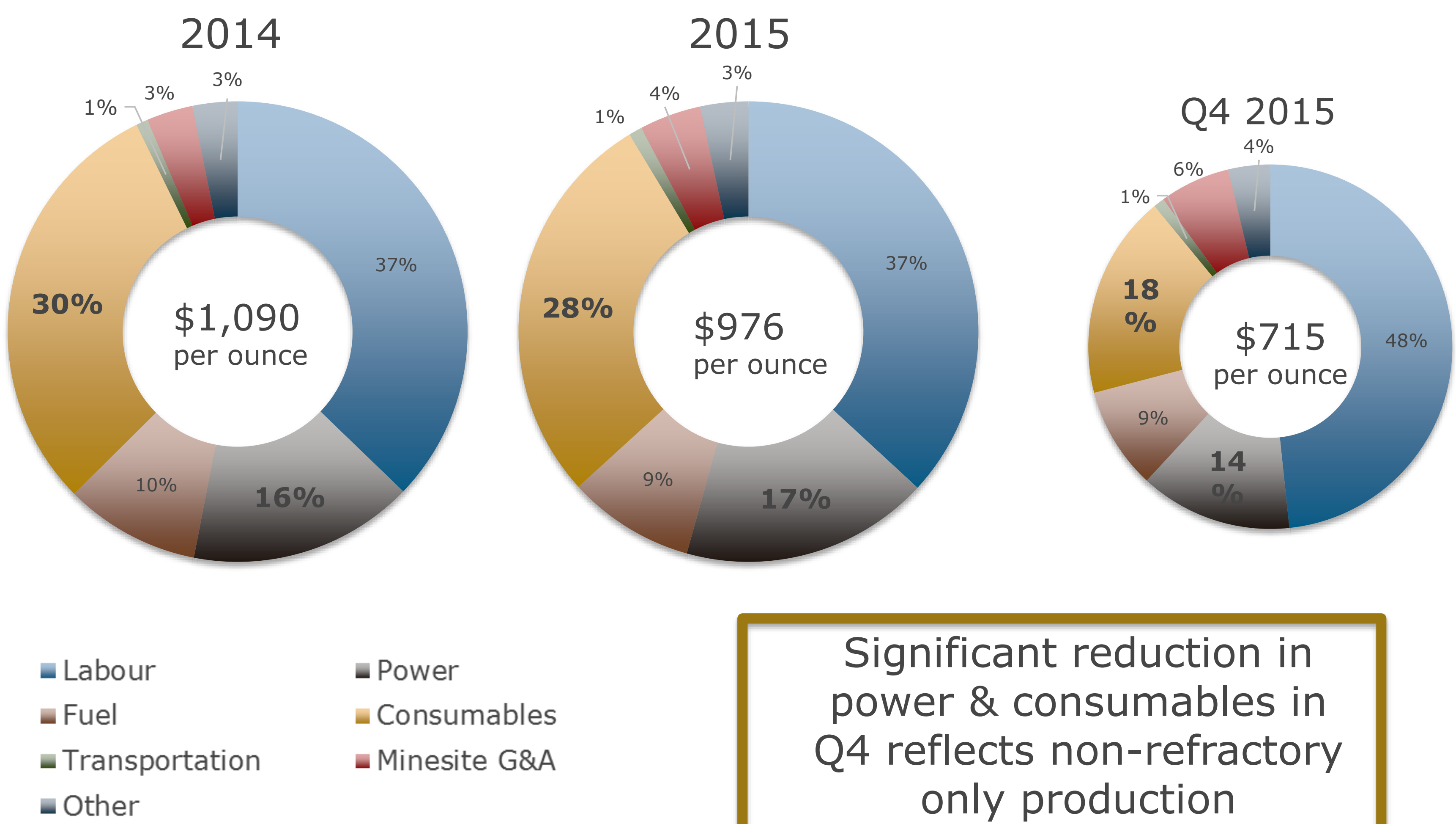
- Accounts payable
  - Majority related to amounts owing to Ghana power provider for the operation of the BIOX® / refractory operation in 2014
  - Periodic payments and negotiations ongoing
  - Since the suspension of the refractory operation, the Company has remained current

- Long-term debt
  - 5% convertible debenture due June 2017
    - Valued at $46.4 million
    - Tightly held issue
  - Ecobank Term Loan Facility - $22 million
  - Royal Gold Loan - $20 million
    - Repay in 2019 – bullet payment

Stability and predictability in operations allows the Company to focus on improving the balance sheet

$50 million in additional funding expected in 2016 under the stream

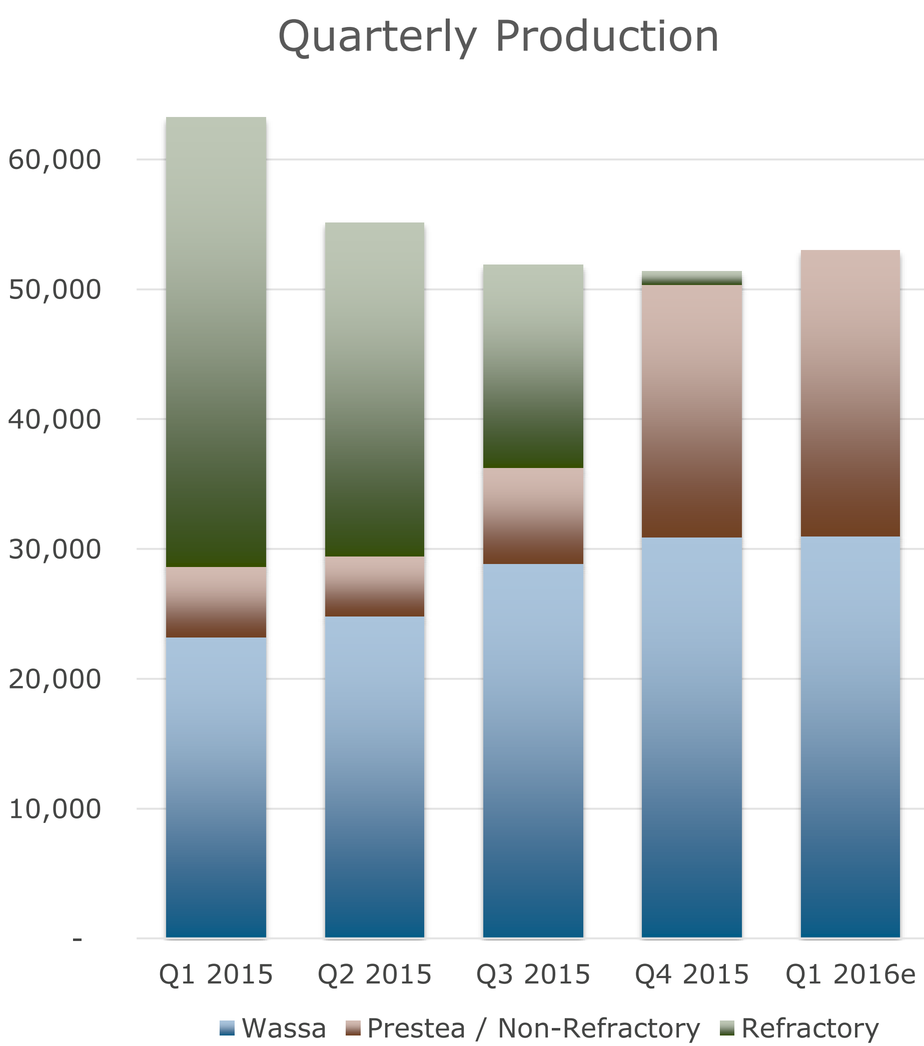
NEW SUSTAINABLE COST[1] STRUCTURE



Significant reduction in power & consumables in Q4 reflects non-refractory only production

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

FOCUSED ON LOW COST OUNCES
REFRACTORY OPERATION SUSPENDED IN Q3 2015



- Over 2015, the high cost refractory ounces were phased out
- The refractory operation was suspended in Q3 with some residual ounces in Q4
- Q1 2016 production comprised of only non-refractory production

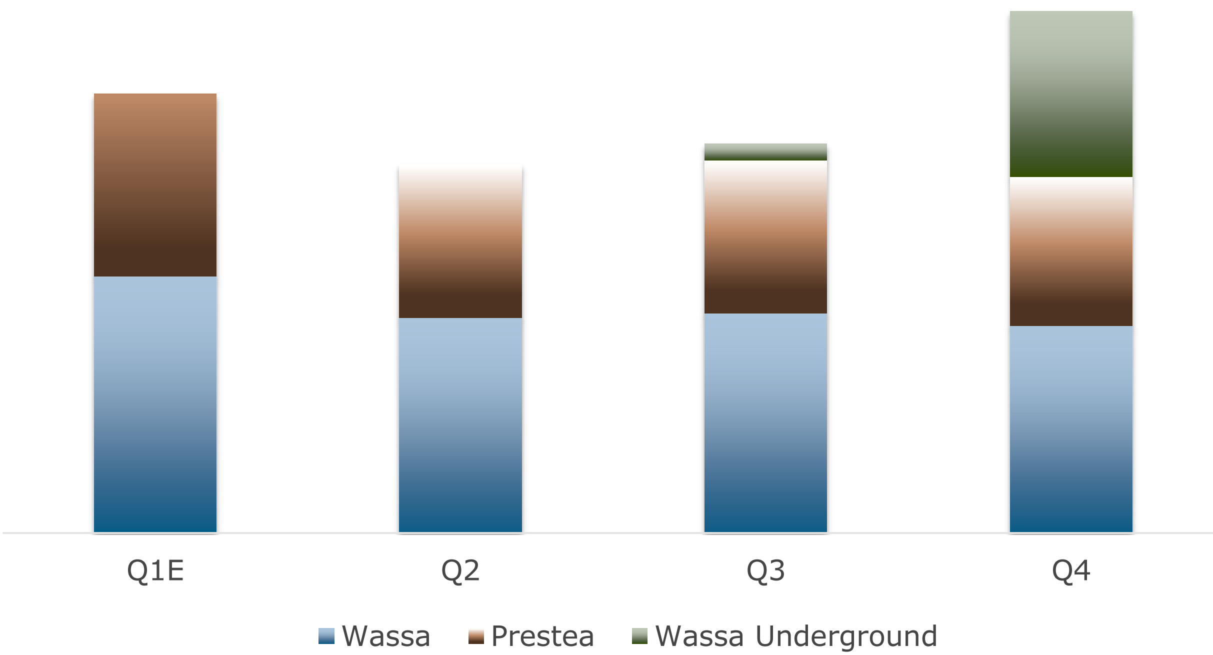
Q1 2016 preliminary production – 53,000 ounces at cash operating costs[1] below $750

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

WHAT TO EXPECT IN 2016

2016 Production*: 180,000 – 205,000 ounces
Cash Operating Costs[1] : $815 – $925 per ounce

2016E Quarterly Production Profile



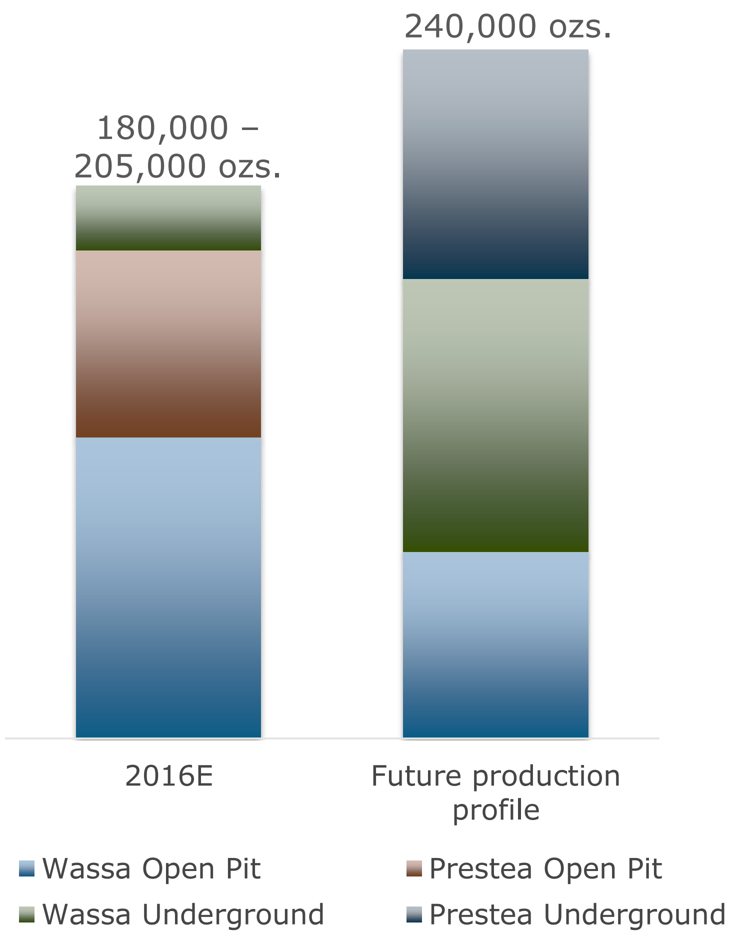
- Stable production base established
- Q2 & Q3 impacted slightly by rainy season
- Q4 production reflects the contribution from the Wassa Underground

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

Future production to increase by 25%



- 2016 production expected
  - 180,000 – 205,000 ounces
- Future production* increases by approximately 25% once both Underground operations are fully ramped up to average annual production:
  - Total Wassa* – 160,000 ounces
  - Total Prestea* – 80,000 ounces
- Opportunity
  - Continued growth and minelife extension of the Prestea open pits
  - Potential for significant Mineral Reserve growth at Underground projects with continued exploration

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

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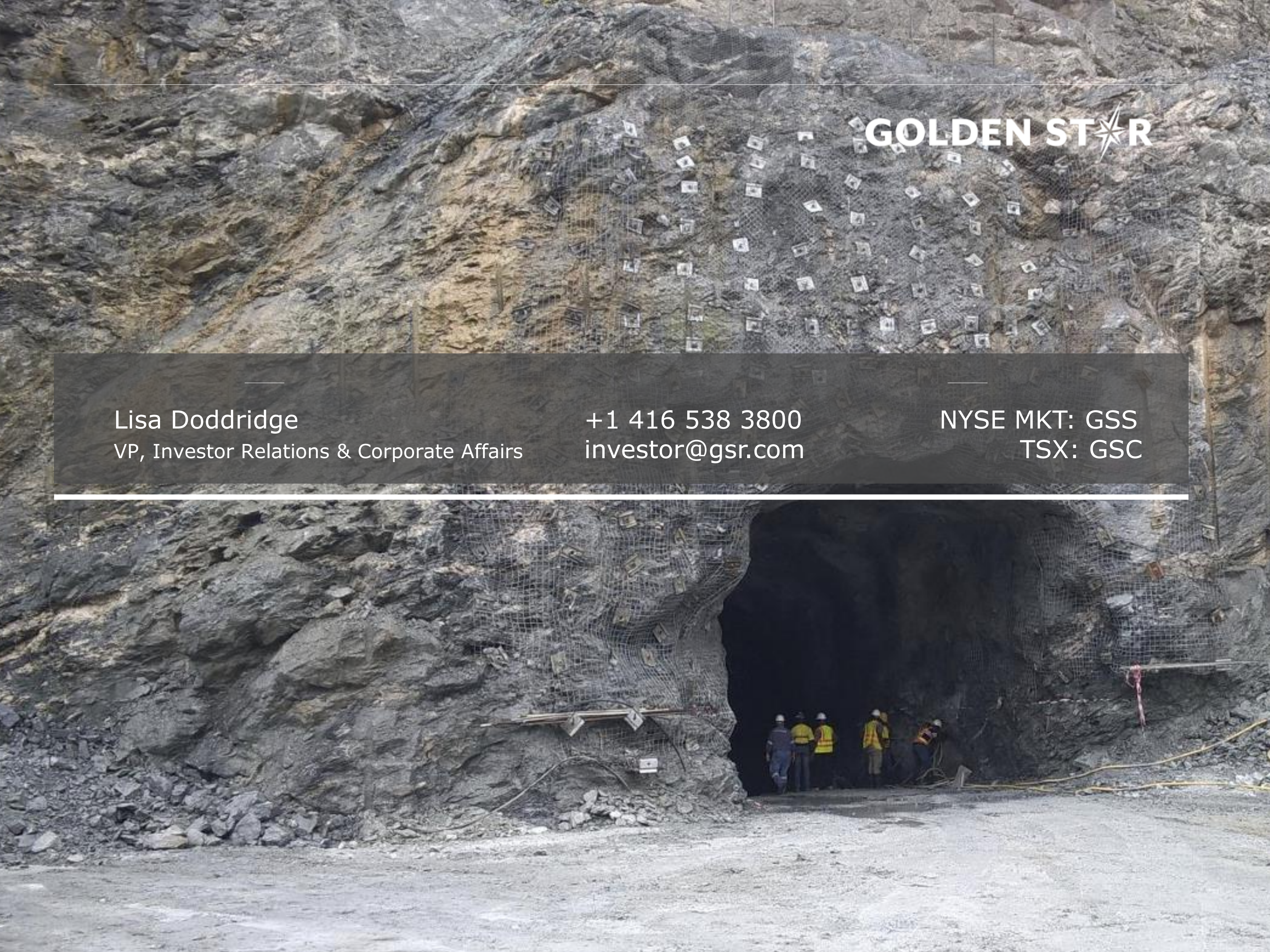
2016 STRATEGIC FOCUS

- Bring Wassa Underground into production as planned
- Advance Prestea Underground
- Improve Balance Sheet
- Disciplined approach



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