



INVESTOR PRESENTATION
12.15

**BUILDING
FOR GROWTH**

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 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; reductions in mine operating expenses in the second half of 2015; the Company being fully financed for development at a reduced cost of capital; the rise in total costs, and improved efficiencies that reduce unit and per ounce costs; Wassa grade forecasts and cash operating costs over the remainder 2015; reductions in accounts payable over the next 24 months; the improvement in the Company's cost profile once the underground mines are in production; the benefits of the stream and loan transaction; 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; plans for deeper drilling at Prestea Underground to increase daily tonnage and expand the mineral resource; and the timing of a feasibility study at Prestea. Factors that could cause actual results to differ materially include timing of and unexpected events at the Bogoso oxide and sulfide processing plants and/or at the Wassa processing plant; variations in ore grade, tonnes mined, crushed or milled; variations in relative amounts of refractory, non-refractory and transition ores; 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; 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" or "CoC 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 GAAP. "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 December 31, 2013, and (iii) "NI 43-101 Technical Report on Preliminary Economic Assessment of Shrinkage Mining of the West Reef Resource, Prestea Underground Mine, Ghana" effective December 18, 2014. Additional information is included in Golden Star's Annual Information Form for the year ended December 31, 2014 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.

INVESTING IN PROFITABLE GROWTH

- Established producing gold miner with extensive experience in Ghana
- Existing infrastructure provides significant operational leverage
- Brownfield low-risk development projects are transforming group production profile
- Successfully financed for development at reduced cost of capital
- On track to deliver ounces at cash operating cost of \$750 per ounce by the end of 2016

MANAGEMENT AND BOARD



Sam Coetzer, President and CEO
Appointed CEO in 2013 after joining in 2011 as COO. Sam is a mining engineer and member of the World Gold Council. He has 27 years of international experience with Kinross, Xstrata, Xstrata Coal and Placer Dome.



Daniel Owiredun, EVP and COO
Daniel was appointed COO in 2013, after joining Golden Star in 2006 as VP, Ghana Operations. He has 20 years of experience in West African mining. Most recently, he was Deputy COO for AngloGold where he managed construction and operation of the Bibiani, Siguiri and Obuasi mines.



Craig Nelson, Director
Craig is a geologist with 30 years of mining experience. He was Founder, CEO of Avanti Mining. Formerly, Craig was EVP Exploration of Gold Fields; Founder, CEO and Chairman of the Metallica Resources and held numerous strategic positions at Lac Minerals.



Rob Doyle, Director
Rob has 30 years of mining experience. Recently, he was Founder and CEO of Medoro Resources. Prior to this, he served as CFO of Pacific Stratus Energy, Coalcorp Mining and Bolivar Gold Corp. Currently, Rob serves as a Director of Mandalay Resources and Detour Gold



André van Niekerk, EVP and CFO
André joined in 2006 and spent 5 years in Ghana as head of finance and business operations, whereafter he was appointed Group Controller. He was appointed CFO in 2014. Prior to joining Golden Star, André spent 6 years with KPMG



Tim Baker, Chairman
Appointed Chairman in January 2013. Tim recently served as the COO of Kinross. He is a geologist with over 30 years of global project development and operational experience in Chile, Tanzania, US, Venezuela, Kenya and Liberia.



Tony Jensen, Director
Tony has 25 years of mining experience and is CEO of Royal Gold. Prior to joining Royal Gold, he was the Mine GM of Cortez and spent 18 years with Placer Dome. Tony has extensive experience in the US and Chile where he held several senior management positions.



Anu Dhir, Director
Anu is the MD of Miniqs, a private group that develops resource projects. She is a Director of Atlatsa Resources, Frontier Rare Earths and Energulf Resources. Prior to founding Miniqs, Anu was VP Corporate Development and Company Secretary at Katanga.



Bill Yeates, Director
Bill is one of the founding partners of Hein & Assoc where he served on the ExCo and was their National Director of Auditing and Accounting. Bill has 40 years of auditing experience with public companies in extractive industries.

CAPITAL MARKET STATISTICS

— Listed on NYSE MKT, TSX and Ghana Stock Exchange

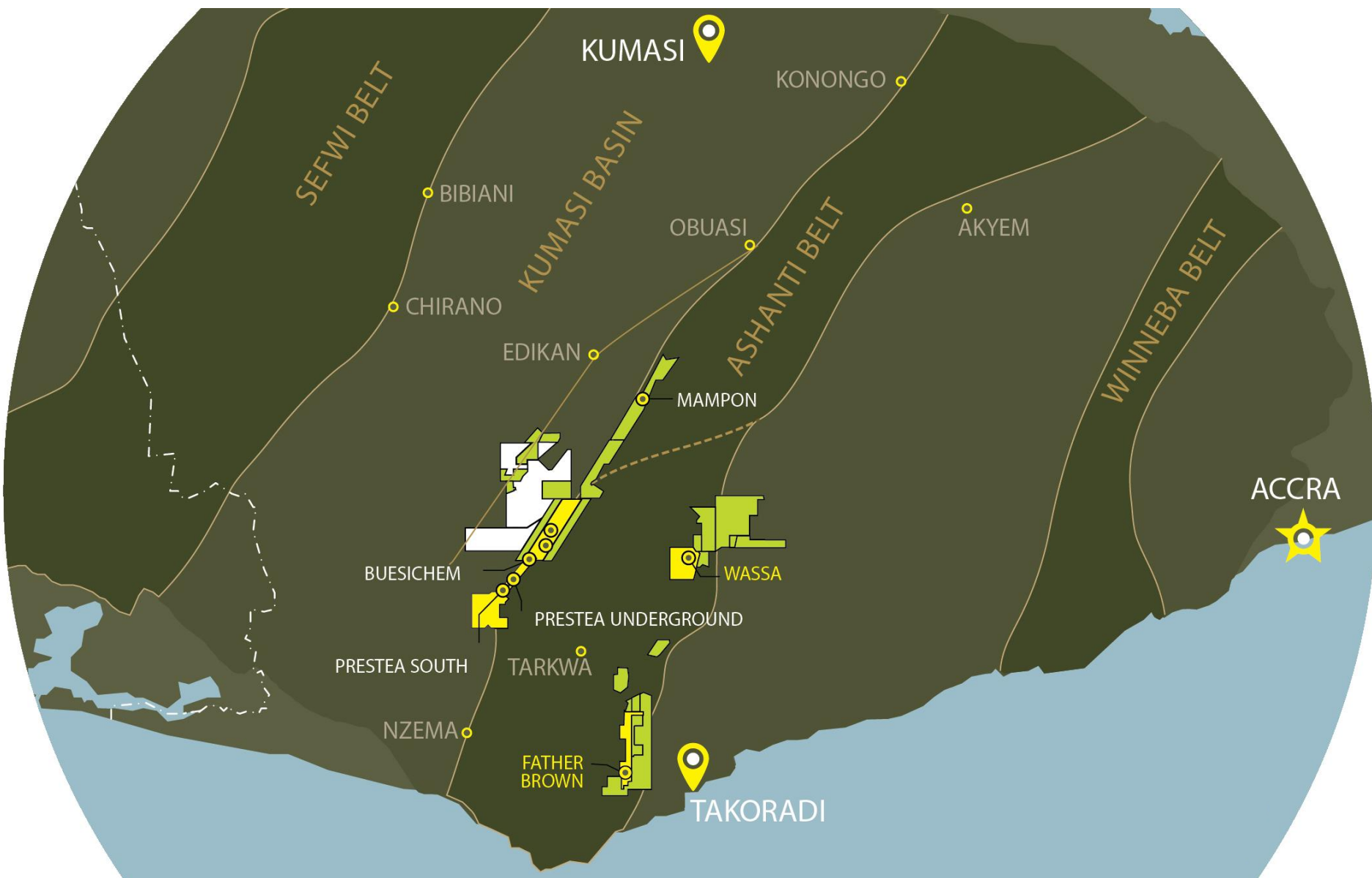
Share Price (Last close) (US\$) (as of Dec 2, 2015)		19cents
Shares Outstanding		259.9M
Market Capitalization (US\$)		49M
Cash and Equivalents (US\$) (Sept 30, 2015)		28M
Total Debt (US\$) ¹ (Sept 30, 2015)		89M
Enterprise Value (US\$)		110M
Daily Average Volume		TSX: 40K NYSE MKT: 595K

Major Shareholders²	
Liao Family	~16%
Sentry Select Capital Corp.	11.6%
Renaissance Technologies	2.0%
Earth Resources	1.9%
1832 Asset Management	1.3%
Millennium Management LLC	1.1%

(1) Includes US\$52.8M of 5% Convertible Debentures at fair value

(2) As accessed on December 2, 2015 from NYSE Connect

GHANA OPERATIONS

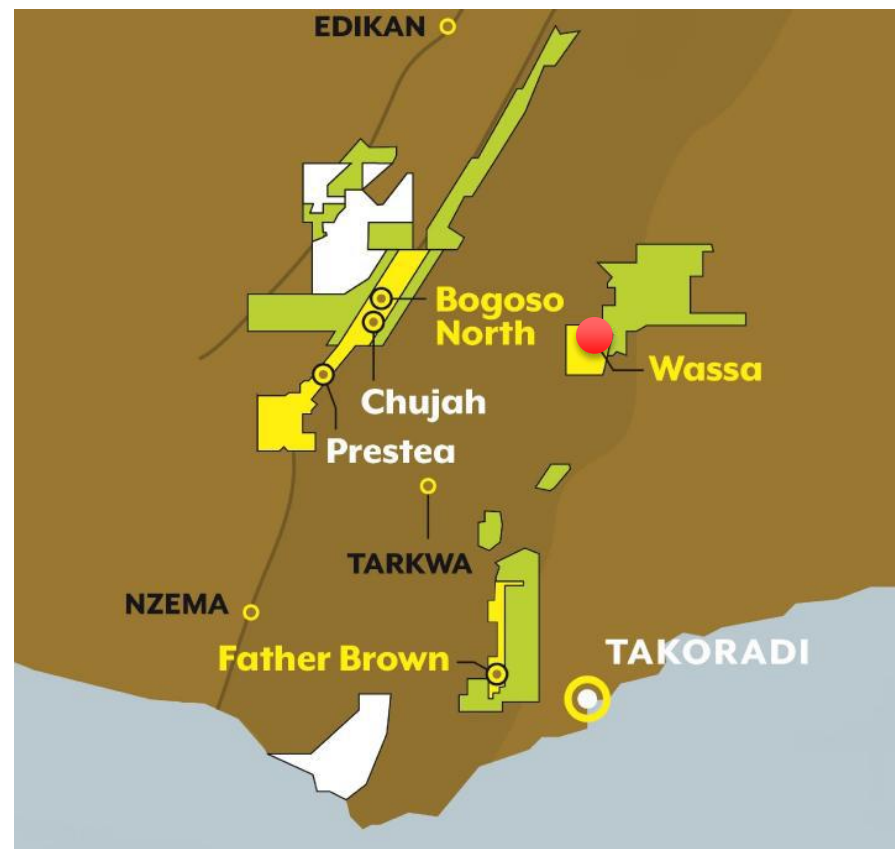


DELIVERING ON STRATEGY

- Favour operating margin over total ounces produced
 - 80,000 oz per year of high margin Prestea ounces have replaced 150,000 oz of higher cost annual Bogoso production
 - 1.2M oz high grade free milling ounces added to Mineral Resources at Wassa
 - High cost refractory ounces removed from Mineral Reserves
- Leverage off existing infrastructure
 - Robust IRR on projects achieved through operational leverage
 - Capex per ounce for both projects in lowest quartile for West Africa
- Reduce costs at operations through behavioural change and productivity enhancements
 - Mine operating expenses continue downward trend
- Disciplined focus on return on capital
 - Investment in development drilling extended Wassa's LOM and increased grade
 - Refined development plan for Prestea delivers in constrained gold price environment
 - Two year process secured financing at low cost of capital

WASSA ESTABLISHED AS LOW COST OPEN PIT MINE

- Acquired in 2002, in operation as open pit mine since 2005
 - Historically mined smaller oxide pits, consolidated into large pit in 2013
- Free milling ore with high recoveries
- Large mine license area with 6 km of lease along strike
- 2.7mtpa CIL processing plant
 - 500m from Wassa Main pit
 - Running at high availability
 - Recently enhanced to increase throughput & recoveries on fresh rock
- 2015 production of 110-115,000 oz at cash operating cost of \$860-990/oz forecast



WASSA FEASIBILITY STUDY RESULTS MARCH 2015

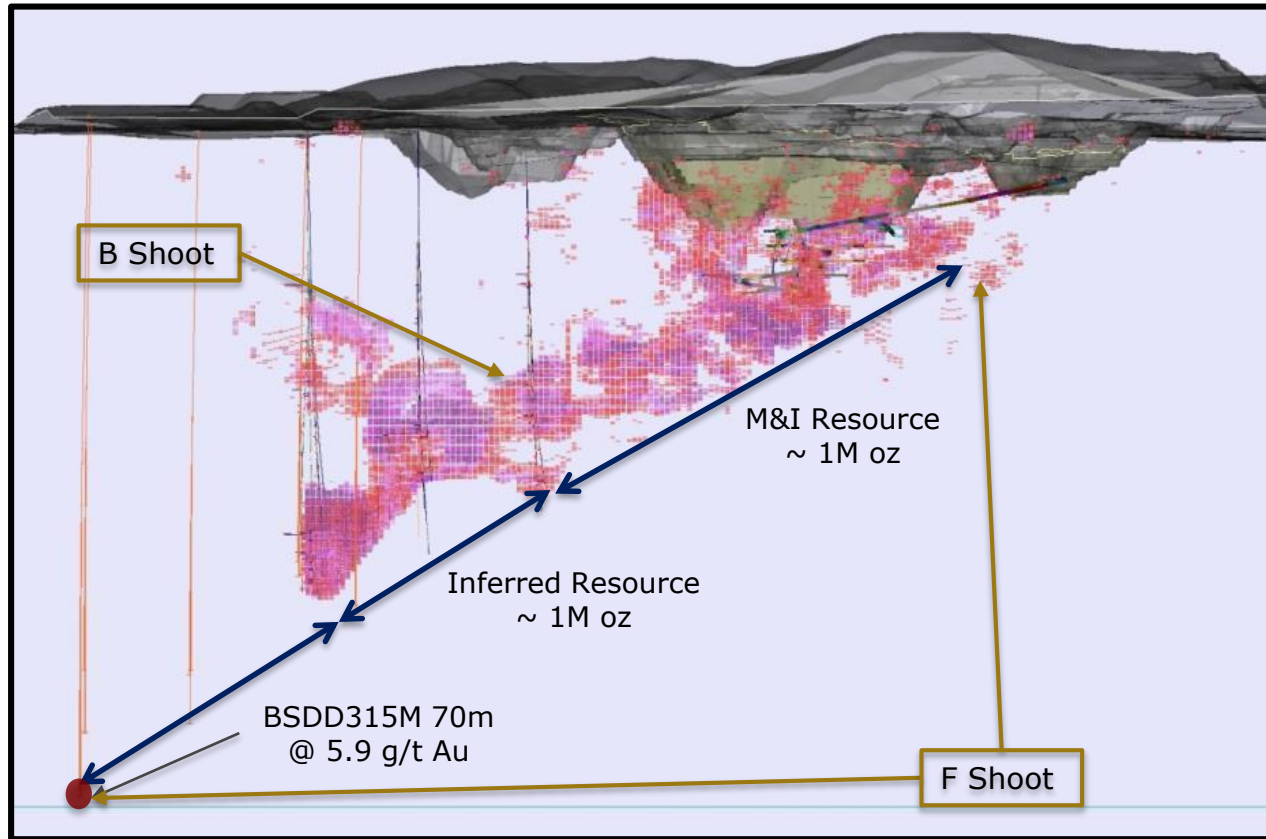
INVESTMENT		RETURN	
MINING	Long hole stoping below existing open pit	COC PER OZ	\$780
PROCESSING	Minor upgrades to existing Wassa processing plant	AISC PER OZ	\$938
SUPPORT INFRASTRUCTURE	Fully in place	IRR	83%
CAPEX	\$39M	NPV5%	\$176M
FIRST GOLD	Mid 2016	PAY BACK PERIOD	3.25 years

*Assumption of a gold price of \$1,200 per ounce used in these calculations. For further critical assumptions used in these assessments, please refer to the reports titled "NI 43-101 Technical Report on a Preliminary Economic Assessment of the Wassa Open Pit Mine and Underground Project in Ghana" and "NI 43-101 Technical Report on Preliminary Economic Assessment of Shrinkage Mining of the West Reef Resource, Prestea Underground Mine, Ghana" both of which are filed on SEDAR.

WASSA UNDERGROUND PROGRESSING TO SCHEDULE

- Permits and finance secured
- Senior management team located on site
- First blast of decline in July 2015, 568 meters of decline advance to date
- Construction of support infrastructure nearing completion
- \$15M spent to date, further \$6M expected in 2015
- First production expected mid 2016

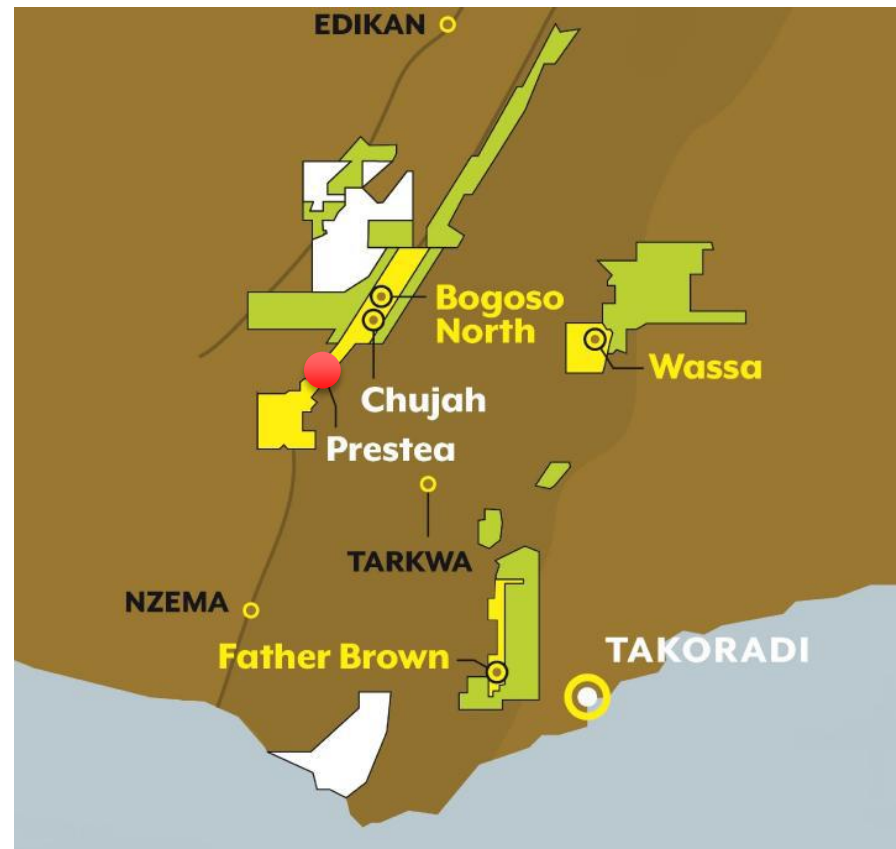
WASSA RESOURCE DEVELOPMENT



- Last step out drilling to the south intersected the projected zone which remains open down plunge
- Every 200m step out drill fence has potential to add 500k oz of Inferred Mineral Resource; geophysical and geochemical studies indicate trend continues 6 km south of the last step out fence
- Targeting zones close to existing infrastructure - deeper drilling will be conducted south of the known high grade mineralization
- F Shoot identified - expected to develop parallel to B Shoot

PRESTEA MINES HAS POTENTIAL FOR NUMEROUS ORE SOURCES

- Underground mine since late 1900's, 9M oz of production, acquired 2002 and placed on care and maintenance
- 16.7 g/t Au orebody with excellent potential for high grade extensions outside known resource
- Two surface and two internal shafts operational, levels developed to 950m
- Drilling identified and defined *West Reef* mineralized zone, subject of ongoing Feasibility Study
- Undeveloped surface deposits at Prestea South, 4 km from underground mine with Mineral Reserve of 122k oz at 2.6 g/t
- Dedicated haul road 15 kms to processing plant



PRESTEA UNDERGROUND FEASIBILITY STUDY RESULTS

INVESTMENT	
MINING	Mining of West Reef on existing 17 and 24 levels
PROCESSING	Modifications to be made to existing processing plant
SUPPORT INFRASTRUCTURE	Existing 15km haul road
CAPEX	\$63M
FIRST GOLD	Late 2016

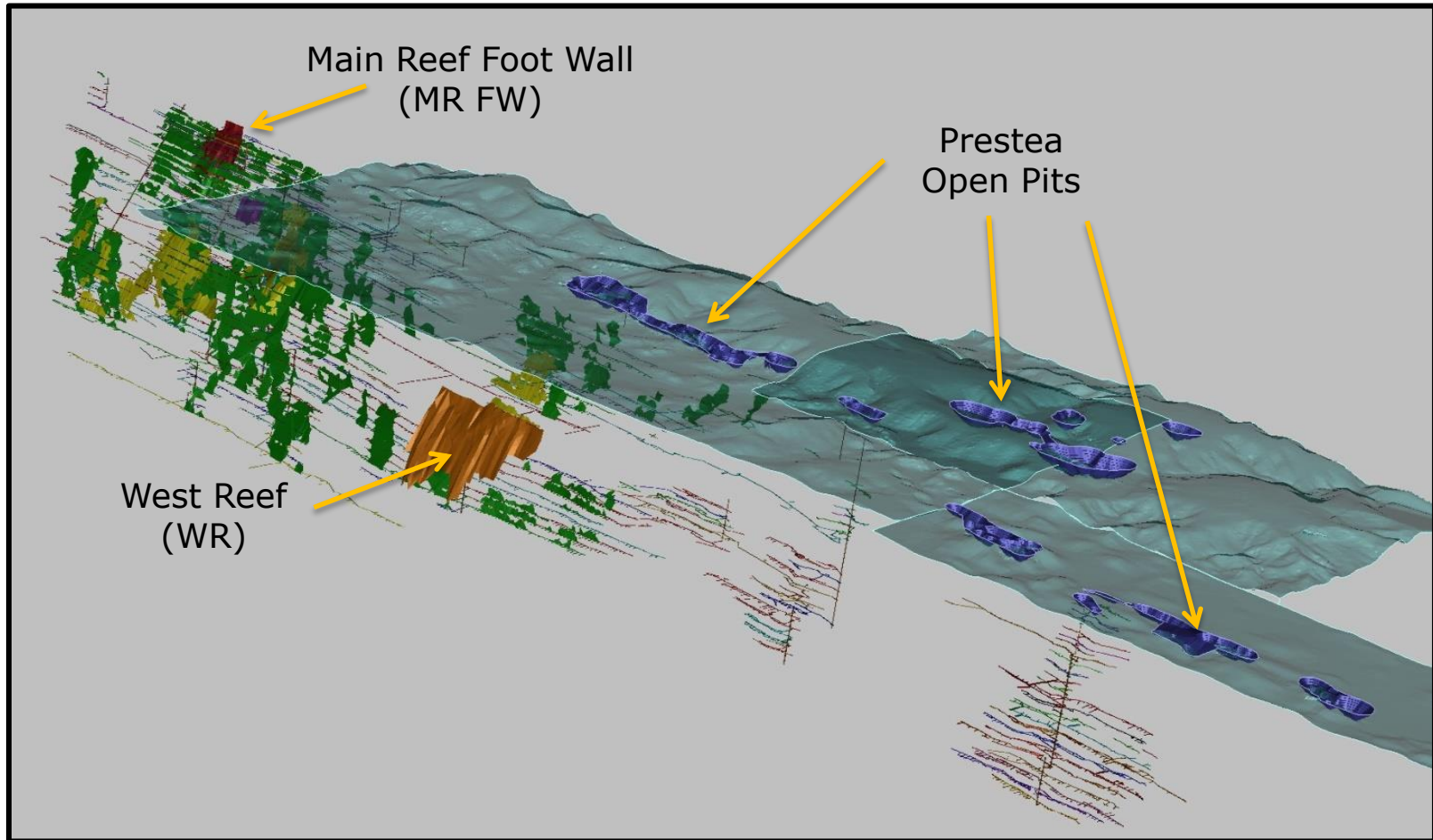
RETURN	
COC PER OZ	\$462
AISC PER OZ	\$603
IRR	42%
NPV5%	\$124M
PAY BACK PERIOD	2.9 years

*Assumption of a gold price of \$1,150 per ounce used in these calculations. For more detail see news release at www.gsr.com.

PRESTEA UNDERGROUND REHABILITATION MOVING AHEAD

- Feasibility Study confirms expectations from PEA
- All mining rehabilitation works are on schedule for completion in the first quarter of 2016
- Mechanical and electrical work is planned to be completed by the third quarter of 2016
- Stoping is expected to start in early 2017, ramping up to 500 tonnes per day by the end of that year
- Feasibility Study considers a new standalone plant, however, reviewing the option of modifying currently installed processing infrastructure to reduce capital spending

PRESTEA RESOURCES



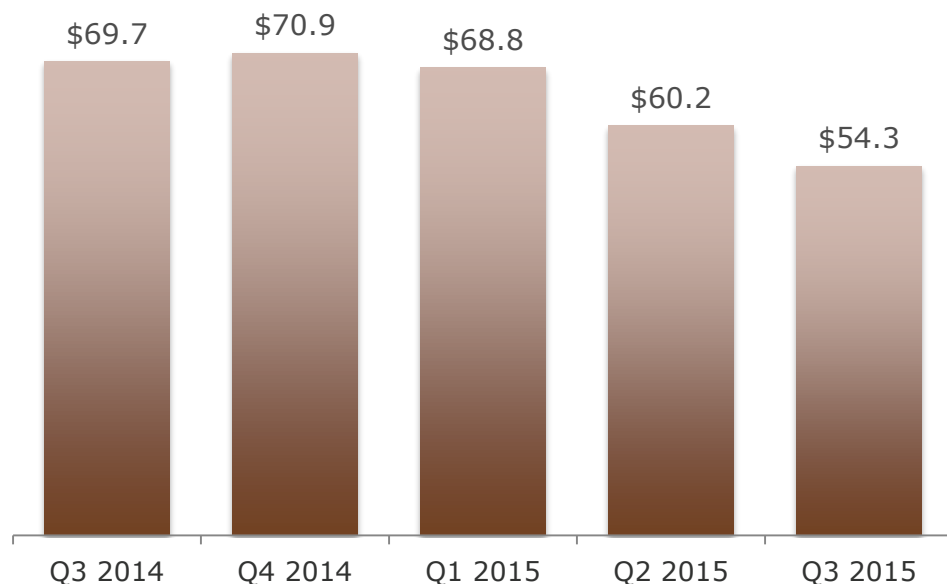
- Exploration strategy aimed at increasing daily tonnage
- Drilling expected to expand Mineral Resource - conversion and up/down plunge extension of the West Reef orebody
- Significant Main Reef upside at depth below the current workings in West Reef

LARGEST LAND TRACT WITH SUBSTANTIAL RESOURCE POTENTIAL

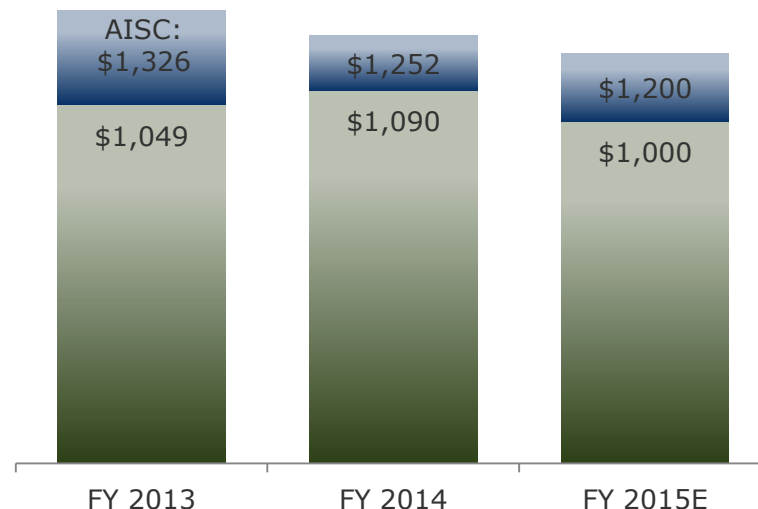
- Wassa Underground Reserve based on Indicated Resources in the B Shoot, additional 1M oz of Inferred Resources defined to the south and ore body is open down plunge
- Parallel to B shoot, the *F Shoot* is emerging as new zone accessible from current planned Wassa Underground development
- Prestea Underground *West Reef* target remains open down dip, recent resource model based on additional drilling expected to expand this Mineral Resource and Reserve
- Prestea Underground *Main Reef* remains relatively untested below 30 level and will be drill tested once ventilation enhanced
- Drilling ongoing on targets adjacent to Prestea South, expectations are this will extend the mine life of oxide mining beyond 2016

COSTS AND EXPENSES CONTINUE TRACKING DOWNWARDS

Mine Operating Expenses (\$ M)



Cash Operating Costs per Ounce¹ (\$)



- Mine operating expenses continue to decrease
 - Wassa costs reduced from \$24.4M to \$23.4M, quarter on quarter
 - Prestea costs reduced from \$35.8M to \$31.0M, quarter on quarter
- Cash operating costs continue to improve

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

REDUCING COMPLEXITY, MEETING CHALLENGES

- Continued reduction in cash operating costs
 - Ongoing improvements in mining and processing operations are expected to contribute to lower operating costs
 - Further staffing optimization is expected to lower G&A costs
- Planning for longer term market pressure
 - Optimising Wassa Main pit for \$1,000 gold price
 - Targeting further 15% unit cost reductions in Wassa Open Pit mining
 - Exploring additional low cost oxide resources at Prestea south

TIMELINE TO DELIVERY



Establish
Wassa
Main pit

Q2'14



Updated
Mineral
Resource
estimate for
Wassa

Q3'14



Finance
raised for
Wassa
development

Q2'15



Construction
of exploration
decline
commences

Q3'15

First
stopes
reached

Q1'16

First
production
from
underground

Q2'16

Commercial
production
levels reached
underground

Q3'16

WASSA

PRESTEA*

Q2'14

PEA on
underground
mining at
Wassa
complete



Q3'14

Revised PEA
for Prestea
Underground



Q3'15

First
production
from Prestea
South



Q4'15

Feasibility
study
completed



Q1'16 – Q3'16

General
infrastructure
refurbishment
and stope
development

Q4'16

First production
from
underground
stopes

* Development of projects dependent on positive study results

Investment Case

Established gold mining company with 15 years of production history in Ghana

Successfully reduced overall operating costs over last two years

Funded projects to deliver low cost ounces through 2026

Largest land package on the Ashanti Gold belt

Low political risk in a stable African mining jurisdiction

Significant exploration & development upside

Offers investors leveraged, un-hedged exposure to the gold price
