GOLDEN STAR

CREATING A LEADING AFRICAN GOLD PRODUCER

Denver Gold Forum | September 2021

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, respectively. 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: Gold production, cash operating costs, production and cost guidance; capital and exploration expenditure guidance; the ability to expand the Company and its production profile through the exploration and development of its existing mine; estimated timing of the development of new mineral deposits and sources of funding for such development; expectations regarding the sustainability of current gold prices; implementation of exploration programs at Wassa and the timing thereof; the acceleration of the growth and development of the resource base at Wassa; the investment in drilling and development in 2021 resulting in increased mining rates; the nature, scope and timing of in mine exploration activities at Wassa; the ability to materially increase production at Wassa through development capital investments; the use of the non-hedge gold collar contracts; the delivery of a range of operational initiatives that improve the consistency of the operations and visibility of the longer-term potential of the operations; the life of mine; the future work plan with respect to the PEA; the ability of the Company to repay the 7% Convertible Debentures when due or to restructure them or make alternate arrangements; the term of the Macquarie credit facility, and the step down in capacity; the Company having sufficient cash available to support its operations and mandatory expenditures for the next 12 months; the continued commissioning process for the new paste plant; the introduction of second stopes planned for mining; the Company increasing exploration activities; planned exploration at Wassa and the timing and budget thereof; the ability to generate strong margins and sufficient free cash flow, raise additional financing or establish refinancing options for the Company’s current debt; the continued at-the-market equity distribution program from time-to-time; the timing, duration and overall impact of the COVID-19 pandemic on the Company’s operations and the ability to mitigate such impact; the quantum of cash flow from the sale of Prestea and the anticipated receipt and timing thereof; the availability of mineral reserves based on the accuracy of the Company’s updated mineral reserve and resource models; planned drilling activities; the ability to convert mineral resources to mineral reserves through the planned infill drilling program; the potential to increase the Company’s mineral resources outside of its existing mineral resources footprint; the anticipated impact of increased exploration on current mineral resources and mineral reserves; and the potential incurrence of further debt in the future. Generally, forward-looking information and statements can be identified by the use of forward-looking terminology such as “plans”, “expects”, “is expected”, “budget”, “scheduled”, “estimates”, “forecasts”, “intends”, “anticipates”, “believes” or variations of such words and phrases (including negative or grammatical variations) or statements that certain actions, events or results “may”, “could”, “would”, “might” or “will be taken”, “occur” or “be achieved” or the negative connotation thereof. Investors are cautioned that forward-looking statements and information are inherently uncertain and involve risks, assumptions and uncertainties that could cause actual facts to differ materially. Such statements and information are based on numerous assumptions regarding present and future business strategies and the environment in which Golden Star will operate in the future. Forward-looking information and statements are subject to known and unknown risks, uncertainties and other important factors that may cause the actual results, performance or achievements of Golden Star to be materially different from those expressed or implied by such forward-looking information and statements, including but not limited to: gold price volatility; discrepancies between actual and estimated production; mineral reserves and resources and metallurgical recoveries; mining operational and development risks; liquidity risks; suppliers suspending or denying delivery of products or services; regulatory restrictions (including environmental regulatory restrictions and liability); actions by governmental authorities; the speculative nature of gold exploration; ore type; the global economic climate; share price volatility; the availability of capital on reasonable terms or at all; risks related to international operations, including economic and political instability in foreign jurisdictions in which Golden Star operates; risks related to current global financial conditions; actual results of current exploration activities; environmental risks; future prices of gold; possible variations in mineral reserves and mineral resources, grade or recovery rates; mine development and operating risks; an inability to obtain power for operations on favourable terms or at all; mining plant or equipment breakdowns or failures; an inability to obtain products or services for operations or mine development from vendors and suppliers on reasonable terms, including pricing, or at all; public health pandemics such as COVID-19, including risks associated with reliance on suppliers, the cost, scheduling and timing of gold shipments, uncertainties relating to its ultimate spread, severity and duration, and related adverse effects on the global economy and financial markets; accidents, labor disputes and other risks of the mining industry; delays in obtaining governmental approvals or financing or in the completion of development or construction activities; litigation risks; and risks related to indebtedness and the service of such indebtedness. Although Golden Star has attempted to identify important factors that could cause actual results to differ materially from those contained in forward-looking information and statements, there may be other factors that cause results not to be as anticipated, estimated or intended. 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 management’s discussion and analysis of financial conditions and results of operations for the quarter ended June 30, 2021, and in our annual information form for the year ended December 31, 2020 as 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 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 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.

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 totaled measures in every instance. Please see our "Management's Discussion and Analysis of Financial Condition and Results of Operations for the quarter ended June 30, 2021" 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 mineral reserve and mineral resource estimates have been compiled by the Company's technical personnel in accordance with definitions and guidelines set out in the Definition Standards for Mineral Resources and Mineral Reserves adopted by the Canadian Institute of Mining, Metallurgy, and Petroleum and as required by Canada's National Instrument 43-101 – Standards of Disclosure for Mineral Projects ("NI 43-101"). All mineral resources are reported inclusive of mineral reserves. Mineral resources which are not mineral reserves do not have demonstrated economic viability. Mineral reserve estimates reflect the Company's reasonable expectation that all necessary permits and approvals will be obtained and maintained. Mining dilution and mining recovery vary by deposit and have been applied in estimating the mineral reserves. Additional scientific and technical information relating to the mineral properties referenced in this news release are contained in the technical report dated March 1, 2021 titled "NI 43-101 Technical Report on the Wassa Gold Mine, Mineral Resource and Mineral Reserve Update and Preliminary Economic Assessment of the Southern Extension Zone, Western Region, Ghana" effective December 31, 2020, which is available at: www.sedar.com;

The technical contents of this presentation have been reviewed and approved by S. Mitchel Wasel, BSc Geology, a Qualified Person pursuant to NI 43-101. Mr. Wasel is Vice President of Exploration for Golden Star and an active member and Registered Chartered Professional of the Australasian Institute of Mining and Metallurgy. The results for Wassa drilling stated herein are based on the analysis of saw-split HQ/NQ diamond half core or a three-kilogram single stage riffle split of a nominal 25 to 30 kg reverse circulation chip sample which has been sampled over nominal one metre intervals (adjusted where necessary for mineralized structures). Sample preparation and analyses have been carried out at Intertek Laboratories in Tarkwa, Ghana, which are independent from Golden Star, using a 1,000 gram slurry of sample and tap water which is prepared and subjected to an accelerated cyanide leach (LEACHWELL). The sample is then rolled for twelve hours before being allowed to settle. An aliquot of solution is then taken, gold extracted into Di-iso Butyl Keytone (DiBK), and determined by flame Atomic Absorption Spectrophotometry (AAS). Detection Limit is 0.01 ppm. All analytical work is subject to a systematic and rigorous Quality Assurance-Quality Control (QA-QC). At least 5% of samples are certified standards and the accuracy of the analysis is confirmed to be acceptable from comparison of the recommended and actual "standards" results. The remaining half core is stored on site for future inspection and detailed logging, to provide valuable information on mineralogy, structure, alteration patterns and the controls on gold mineralization.

CAUTIONARY NOTE TO US INVESTORS: This presentation uses the terms "measured mineral resources‟, "indicated mineral resources‟ and "inferred mineral resources.” The Company advises US investors that while these terms are recognized and required by NI 43-101, the US Securities and Exchange Commission ("SEC") does not recognize them. Also, although disclosure of contained ounces is permitted under Canadian regulations, the SEC generally requires mineral resource information to be reported as in-place tonnage and grade. US Investors are cautioned not to assume that any part or all of the mineral deposits in the measured and indicated categories will ever be converted into mineral reserves. US investors should also note that "Inferred mineral resources" have a great amount of uncertainty as to their existence, and great uncertainty as to their economic and legal feasibility. It cannot be assumed that all or any part of inferred mineral resources will ever be upgraded to a higher category. In accordance with Canadian rules, estimates of inferred mineral resources cannot form the basis of feasibility or other economic studies. US investors are cautioned not to assume that any part or all of the inferred mineral resource exists or is economically or legally mineable.

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

GOLDEN STAR - Overview

Wassa | Underground gold mine in Ghana

Positioning for Organic Growth Opportunity

Business Transformation

Corporate Transition

Corporate office relocated to London

New management team

Increasing Mining Rates & Delivering On Guidance

Delivered on increased 2020 guidance range

Delivered record underground mining rates in 2020

Balance Sheet Transformation

Bogoso-Prestea – Sale removed liabilities and improved cash generation

Macquarie facility amendments – Adds liquidity

At The Market program – Up to $50m of additional liquidity

Wassa Growth Opportunity

Reserve Mine Plan

Ave. production	Average AISC[1,2]	Mine life	NPV[3,7]
177 koz/year	$881 /oz	6 years	$336 M

PEA Life of Mine Extension (excludes Reserve plan)

Ave. production	Average AISC[1,2]	Mine life	NPV[4,7]
294 koz/year	$778 /oz	11 years	$783 M

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Safety and Health – Effective COVID-19 management

Q2 2021 Performance

All-injury frequency rate

2.91	3.57
Q2 2021	Q2 2020

Total recordable injury frequency rate (12-month average)

0.97	0.54
Q2 2021	Q2 2020

Rapid diagnosis and management response to COVID-19

- During Q2 2021, Wassa experienced 10 suspected COVID-19 cases with 6 confirmed cases and 2 pending results as at quarter end
- In-house PCR testing capability allows for rapid diagnosis and management response
- The number of people required to isolate as a result of contact tracing significantly reduced, supporting business continuity

Operational Impact

- COVID-19 impacted on the availability of our expatriate Jumbo operators in H1 2021. This resulted in lower than planned development rates being achieved
- Investment in additional resources is being made alongside changes to operating structures to mitigate the ongoing impact of COVID-19 on development rates

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2021 OUTLOOK – Investing for Continued Growth

2021 Focus

Infill Drilling

Resource to reserve conversion drilling

Development

Accelerating development rates to support future increases in mining rates

Exploration

Increased budget (versus 2020) to enable systematic testing of exploration targets

		Updated Guidance 2021
Production and cost highlights		
Production - Wassa	**koz**	**145-155**
Cash operating cost – Wassa[1]	**$/oz**	**750-800**
All-in sustaining cost – Wassa[1]	**$/oz**	**1,150-1,250**
Capital Expenditure		
Sustaining capital – Wassa	$m	32-25
Expansion capital – Wassa	$m	13-15
Total Capital – Wassa (excluding capitalized exploration)	**$m**	**45-50**
Capitalised exploration	$m	8
Expensed exploration	$m	6
Exploration	**$m**	**14**
Total capital and exploration	**$m**	**59-64**

2021 Guidance

Production

- Wassa is expected to produce 145 - 155koz in 2021
- The updated guidance assumes mining is exclusively from primary stopes throughout the year
- Investment in additional development resource is being made and changes to operating structures to mitigate the impact of COVID-19 that was experienced in H1 2021

Costs

- AISC guidance of $1,150/oz - $1,250/oz
- This includes an elevated allocation of the capex budget to sustaining capital
- The AISC is expected to reduce in future years as production volumes increase, as set out in the 2021 technical report

Capital Expenditure

- Capital expenditure guidance of $45-50m is unchanged
- Through H1 2021 the sustaining capital guidance was increased to enable increased investment in development and the TSF project
- Expansion capital guidance was reduced with some ventilation capital deferred for Q4 2021 to early 2022

Q2 2021 – Performance Summary & Key Events

Production And Sales (Continuing operations)

Production	Gold Sold
Q2 2021 37.9koz	Q2 2021 37.7koz
Q1 2021 40.1koz	Q1 2021 38.9koz

Unit Costs (Continuing operations)

Cash opex/oz[1]	AISC/oz[1]
Q2 2021 $752/oz	Q2 2021 $1,182/oz
Q1 2021 $718/oz	Q1 2021 $1,100/oz

Financial Performance

Adj. EBITDA[1]	Operating Cash Flow[5]
Q2 2021 $26.0m	Q2 2021 $23.2m
Q1 2021 $27.2m	Q1 2021 $23.3m

Cash	Net Debt
Q2 2021 $72.7m	Q2 2021 $31.0m
Q1 2021 $66.1m	Q1 2021 $39.5m

Q2 2021 Key Events

Wassa

- The mining rate averaged 3,963tpd in Q2 2021, 12% lower than Q1 2021 due to lower than planned development rates
- Underground mined grade averaged 3.1g/t, in line with the underground reserve grade of 3.1g/t and 4% higher than the grade achieved in Q1 2021
- Processing of low-grade stockpiles continued during Q2 2021, generating 5koz of production
- Investment in infrastructure continued throughout Q2 2021 to provide additional mining flexibility with the objective of increasing mining rates. Capex totaled $12m

Balance Sheet

- The cash position increased by $6.6m to $72.7m in Q2 2021
- At-the-Market Program – Limited use, $5.2m of net proceeds in April and May
- Macquarie senior secured credit facility was restructured and upsized to a three-year $90m revolving credit facility
- Adequate liquidity achieved to settle convertible debenture on maturity in August

Paste Fill Commissioning

- The commissioning was delayed by some quality assurance testing returning lower than expected fill strengths in the test stope in April 2021
- Recent results, particularly at a higher cement content of 7-10%, support progression of the commissioning process onto filling of a second test stope
- Anticipate re-commencement of the filling schedule in Q4 2021 allowing for production from secondary stopes as planned in 2022

BALANCE SHEET – Strengthened Financial Position

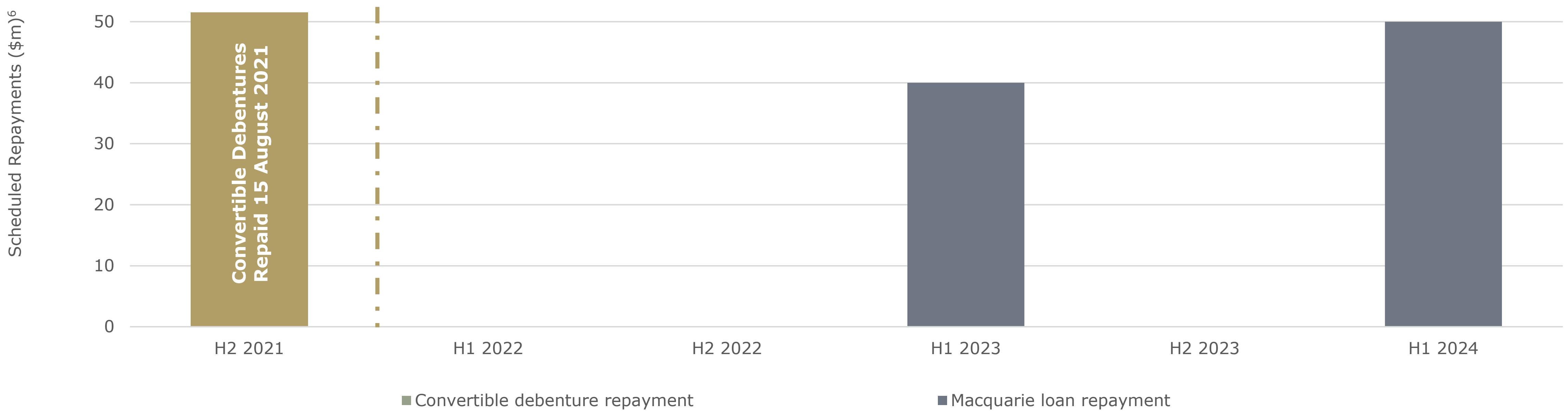
Macquarie Revolving Credit Facility

$90m Facility	Capacity steps down to $60m June 30, 2023	Removes Quarterly Amortisation Payments
Three Year Term to June 2024	Interest Charge LIBOR + 4.00-5.25%	Provided $50m of additional liquidity in 2021 & 2022

Hedging – Zero Cost Collars

	Unit	H2 2021	2022	2023	H1 2024
Total Ounces	Koz	25,000	50,000	50,000	25,000
Floor Price	$/oz	1,600	1,600	1,600	1,600
Ceiling Price	$/oz	2,171	2,179	2,115	2,115
Quarterly delivery obligation	koz	12,500	12,500	12,500	12,500

Debt Repayment Profile



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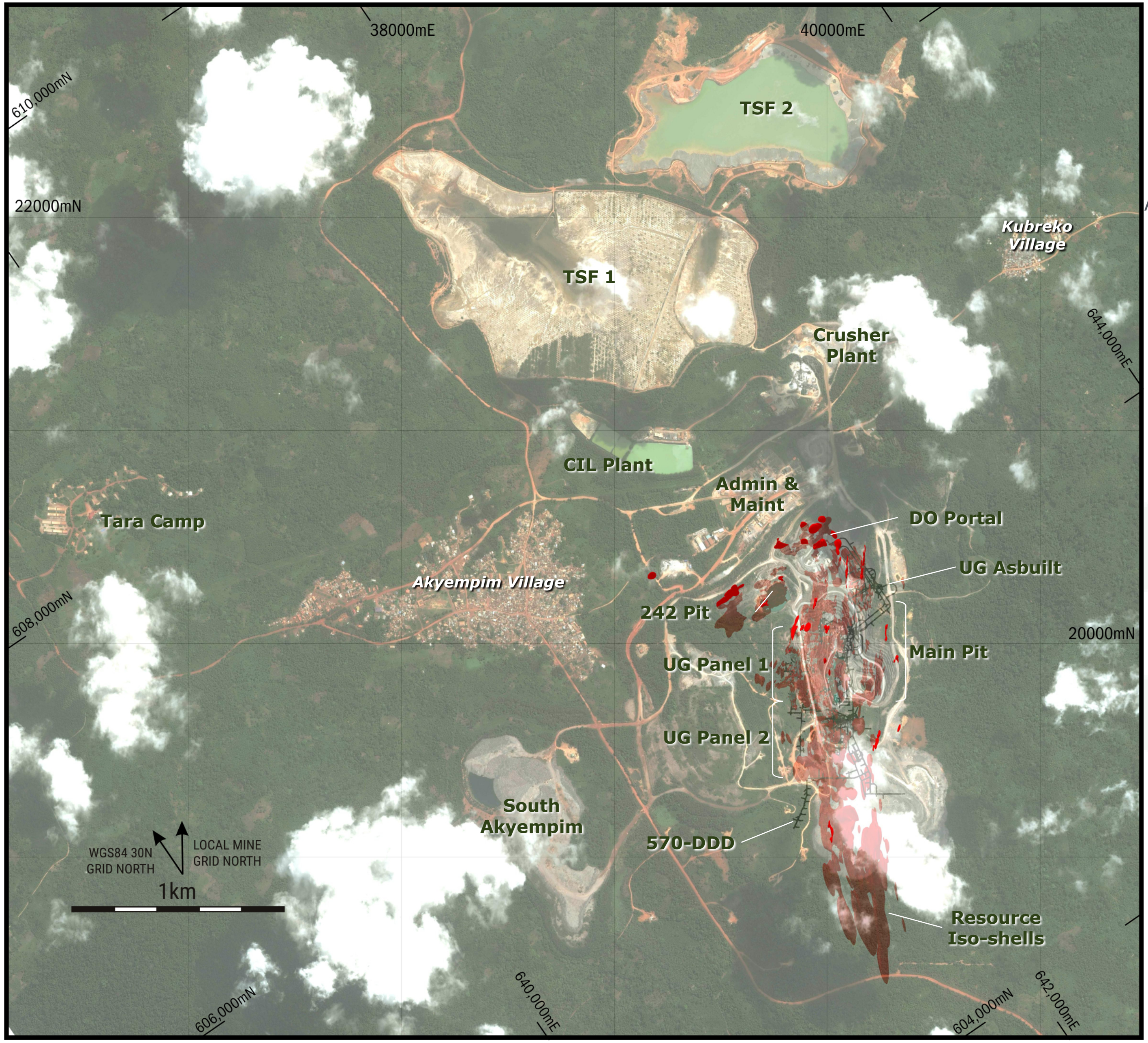
WASSA MINE

Scaling Production to Gold Endowment

WASSA – Site Layout & Mining History



- **2003** – Acquired Wassa Gold Mine
- **2005** – Wassa CIL plant commissioned
- **2006** – Acquired St. Jude Resources (HBB concessions)
- **2007** – 80km haul road constructed through HBB concessions
- **2011** – Father Brown open pit commences
- **2014** – Wassa Underground PEA - Father Brown pit ceases
- **2015** – Wassa Underground study & construction decision
- **2016** – Wassa Underground first stope
- **2017** – Wassa Underground commercial production
- **2019** – Definition drilling program accelerated
- **2020** – Paste fill plant constructed - Captive power plant constructed
- **2021** – PEA on Wassa Southern Extension

Resources & Reserves – at Dec-2020

Mineral Resource Estimate (Effective Date, December 31, 2020)

	Measured Mineral Resource 2020			Measured Mineral Resource 2019			Change
	Mt	g/t	koz	Mt	g/t	koz	% cont.Au
Wassa Open Pit	-	-	-	-	-	-	-
Wassa Underground	5.90	4.45	843	2.83	4.99	454	+86%
Father Brown/Adoikrom UG	-	-	-	-	-	-	-
Regional Open Pit	-	-	-	-	-	-	-
Total Wassa, Measured	5.90	4.45	843	2.83	4.99	454	+86%

	Measured & Indicated Resource 2020			Measured & Indicated Resource 2019			Change
	Mt	g/t	koz	Mt	g/t	koz	% cont.Au
Wassa Open Pit	-	-	-	29.18	1.29	1,206	-100%
Wassa Underground	**24.85**	**3.76**	**3,005**	**16.20**	**3.89**	**2,027**	**+48%**
Father Brown/Adoikrom UG	1.31	7.96	335	0.91	8.67	254	+32%
Regional Open Pit	3.10	1.98	197	2.51	2.32	187	+5%
Total Wassa, M&I	29.26	3.76	3,537	48.81	2.34	3,675	-4%

	Inferred Mineral Resource 2020			Inferred Mineral Resource 2019			Change
	Mt	g/t	koz	Mt	g/t	koz	% cont.Au
Wassa Open Pit	-	-	-	0.62	1.31	26	-100%
Wassa Underground	**70.50**	**3.39**	**7,689**	**58.82**	**3.75**	**7,097**	**+8%**
Father Brown/Adoikrom UG	2.66	5.30	453	1.88	6.07	367	+23%
Regional Open Pit	0.87	1.47	41	0.42	2.14	29	+41%
Total Wassa	74.02	3.44	8,183	61.74	3.79	7,518	+9%

Mineral Reserve Estimate (Effective Date, December 31, 2020)

	Proven Mineral Reserve 2020			Proven Mineral Reserve 2019			Change
	Mt	g/t	koz	Mt	g/t	koz	% cont.Au
Wassa Open Pit	-	-	-	-	-	-	
Wassa Underground	**4.28**	**3.28**	**451**	**1.72**	**4.11**	**228**	**+98%**
Stockpiles	0.69	0.58	13	1.06	0.62	21	-38%
Total Wassa	4.97	2.91	464	2.79	2.78	249	+86%

	Probable Mineral Reserve 2020			Probable Mineral Reserve 2019			Change
	Mt	g/t	koz	Mt	g/t	koz	% cont.Au
Wassa Open Pit	-	-	-	9.92	1.57	500	-100%
Wassa Underground	**6.54**	**2.97**	**625**	**5.70**	**3.61**	**661**	**-5%**
Stockpiles	-	-	-	-	-	-	-
Total Wassa	6.54	2.97	625	15.62	2.31	1,160	-46%

	P&P Mineral Reserve 2020			P&P Mineral Reserve 2019			Change
	Mt	g/t	koz	Mt	g/t	koz	% cont.Au
Wassa Open Pit	-	-	-	9.92	1.57	500	-100%
Wassa Underground	**10.82**	**3.09**	**1,076**	**7.42**	**3.72**	**889**	**+21%**
Stockpiles	0.69	0.58	13	1.06	0.62	21	-38%
Total Wassa	11.50	2.94	1,089	18.41	2.38	1,410	-23%

Estimation prices

Mineral Resource $1,500 /oz

Mineral Reserve $1,300 /oz

Geological confidence improved during 2020

Measured Resource increased 86%

43% of Reserve is Proved

Open Pit transitioned to UG

Cut 3 and 242 Pits now Panel 3 UG

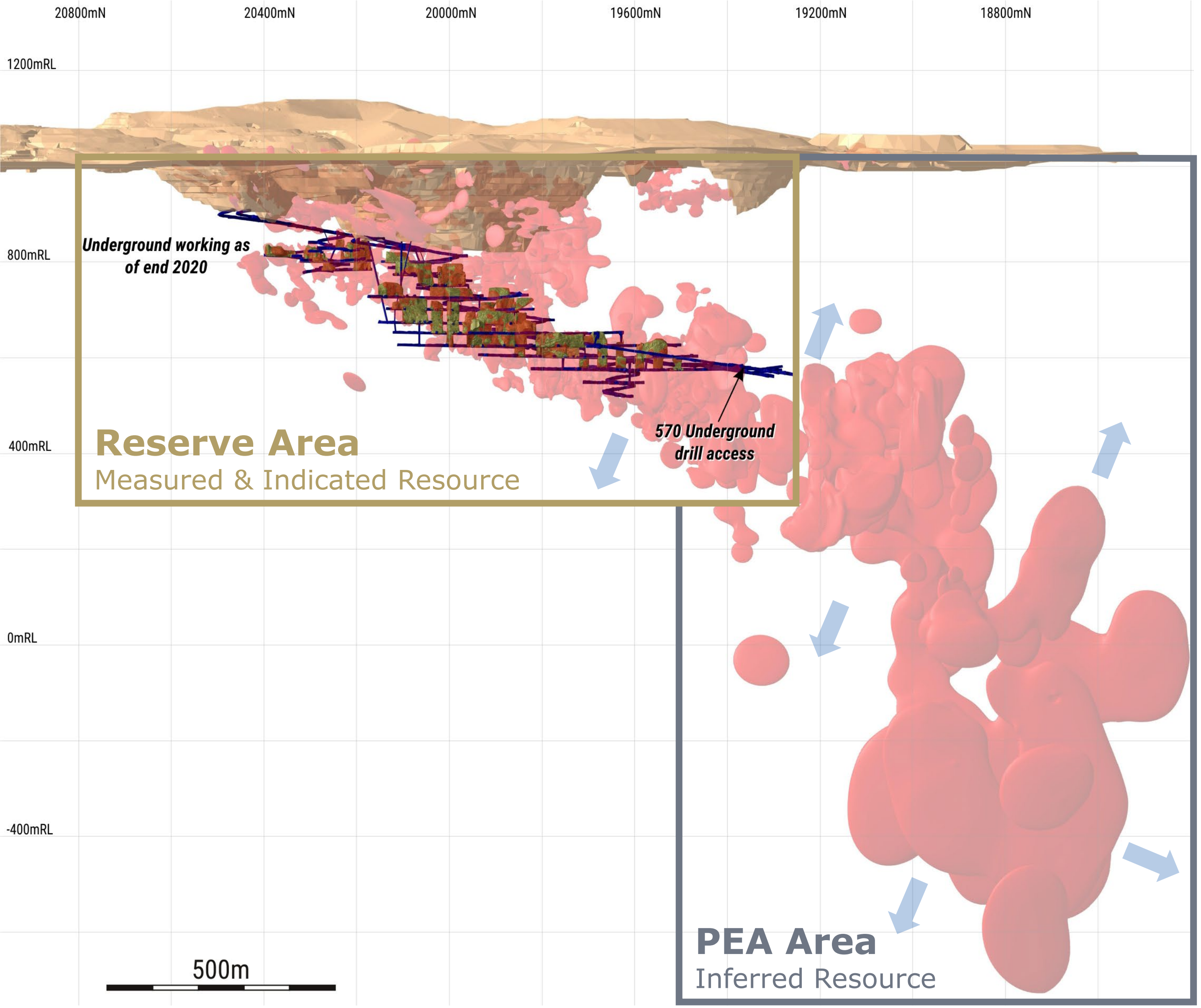
Earlier production access & removal of low margin ounces

Operating efficiency flowing through to Plan

Reserve cut-off 2.4 down to 1.9 g/t

(+129 koz at 1.98 g/t)

WASSA – Resource Potential & Infrastructure Capacity



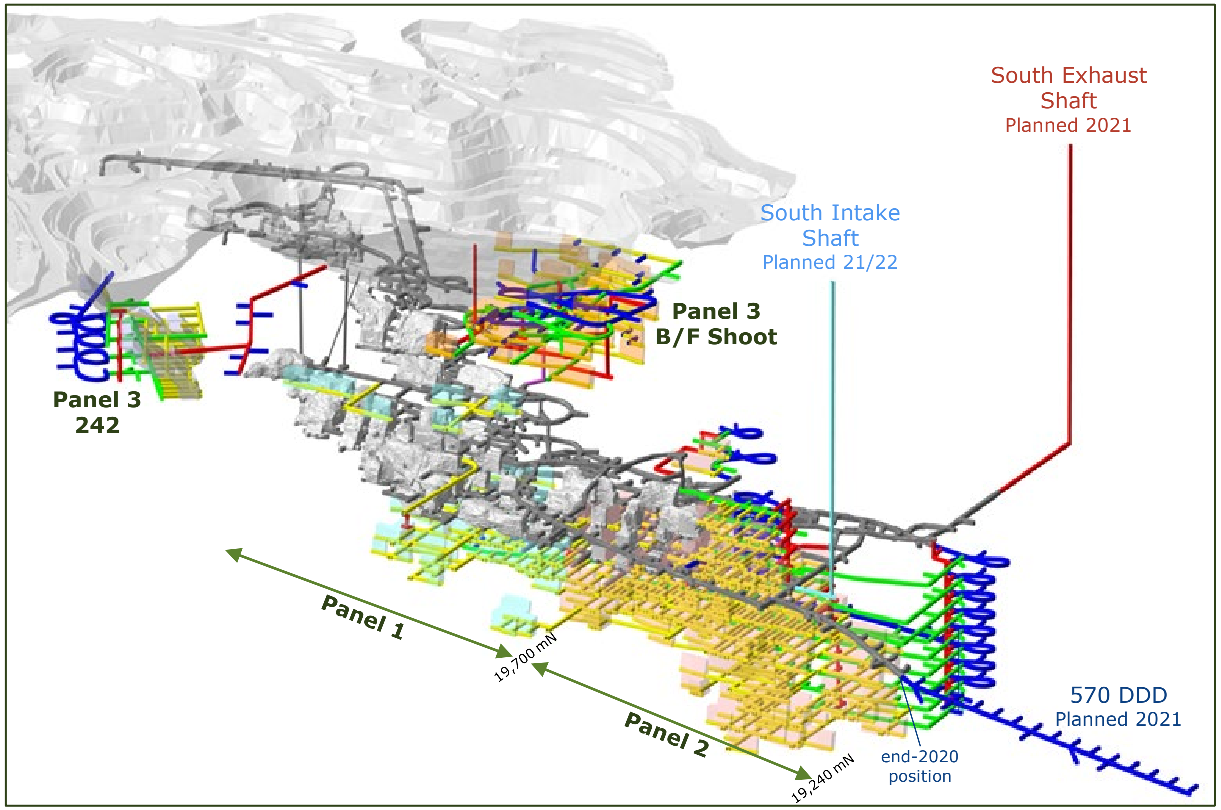
Resource – Scale supports growth	
Measured & indicated resource[9]	Inferred resource[9]
3.0Moz	7.7Moz

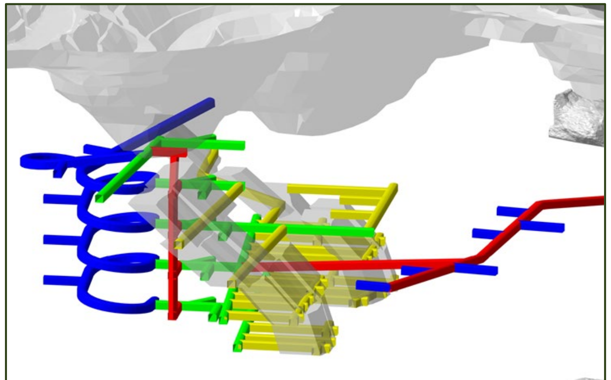
Next steps – Infill drilling targeting resource-reserve conversion

Infrastructure – Available capacity	
Decline Capacity 5,000tpd	Commission paste fill plant in Q1 2021
Plant Capacity 7,400tpd	Transition to 60 tonne trucks as 40 tonne trucks are decommissioned

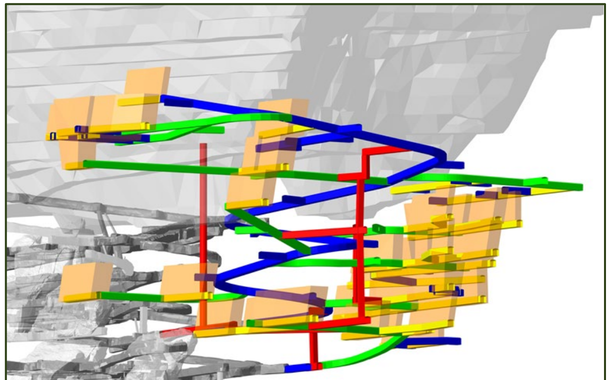
Projected Mine Plan	
Reserve Plan[10]	Panels 1-2 (B-Shoot, H/W), Panel 3 (B-Shoot, 242) 1.1 Moz | 3.1 g/t[9]
PEA Plan[11]	Southern Extensions (inferred resource) 3.6 Moz | 3.8 g/t

WASSA RESERVE MINE PLAN – Highlights





Panel 3, 242



Panel 3, B/F-Shoot

Production – 7% Growth[12]

Ave. Rate	LOM production
177 koz/yr	**1.02 Moz**
6 year life	

Unit Costs – Consistent AISC[2]

Ave. Cash opex/oz[1]	Ave. AISC/oz[1,2]
$682 /oz	**$881 /oz**

Increased Use of Installed Capacity

Mining Rate	Processing Capacity
1.8 – 2.0 Mtpa	**2.7 Mtpa**
4,900 – 5,500 t/d	*7,400 t/d*

Valuation

NPV[11] 5%	NPV4[11] 5%
Base case ($1,300 /oz)	*Consensus case (ave. $1,751 /oz)*[3]
$121 M	**$336 M**

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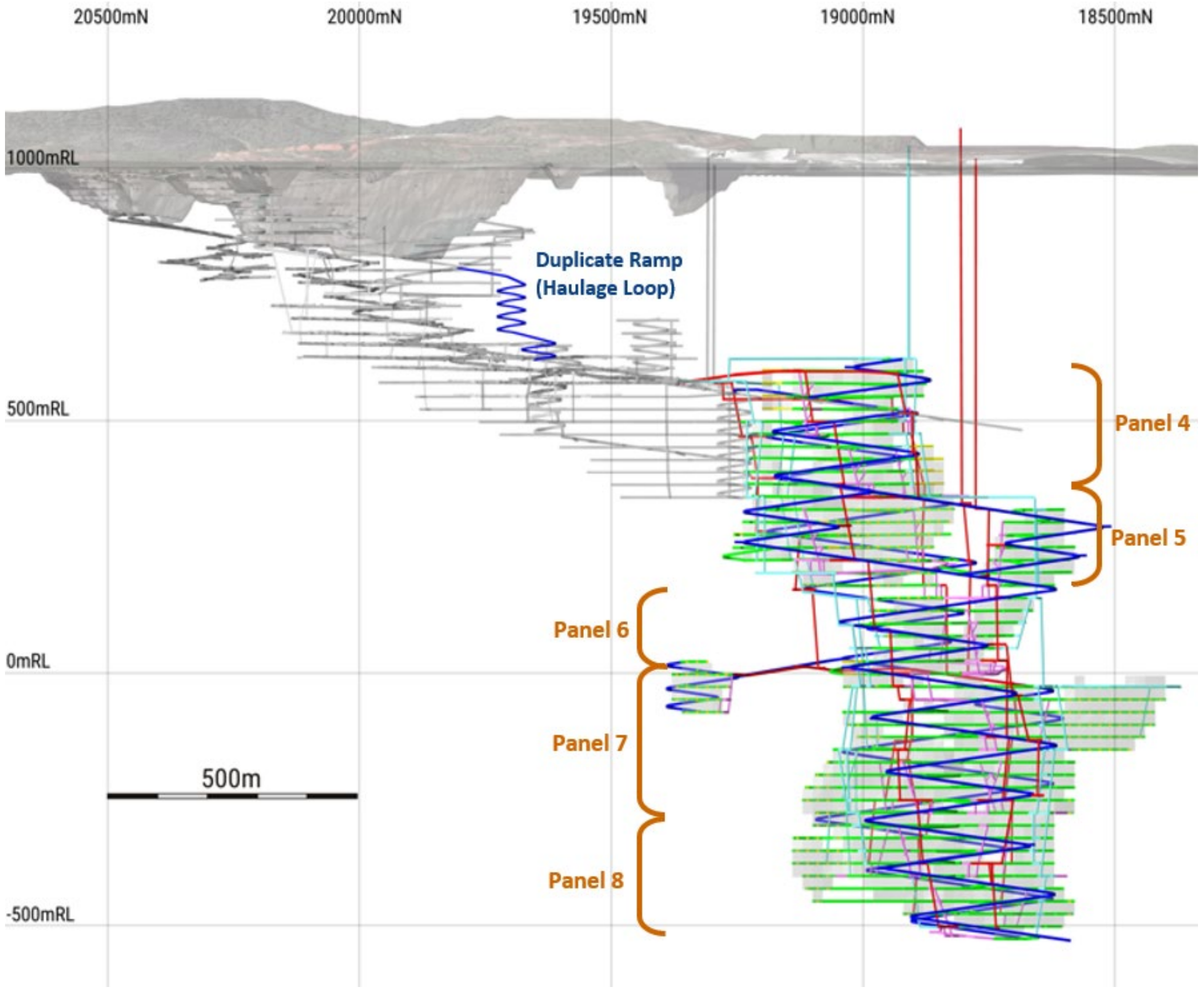
WASSA PEA – Highlights



Production – >70% Production Growth[12]

Ave. Rate	LOM production
294 koz/yr	**3.46 Moz**
11 yr life / 6 yr dev't	

Unit Costs – 13% Reduction AISC[2,12]

Ave. Cash opex/oz	Ave. AISC/oz[2]
$551 /oz	**$778 /oz**

Utilize Installed Capacity – No Additional Permitting

Mining Rate	Processing Capacity
2.4 – 2.7 Mtpa	**2.7 Mtpa**
6,700 – 7,400 t/d	*7,400 t/d*

Valuation

NPV[11] 5%	NPV[11] 5%
Base case ($1,300 /oz)	*Consensus case ($1,585 /oz)[4]*
$452 M	**$783 M**

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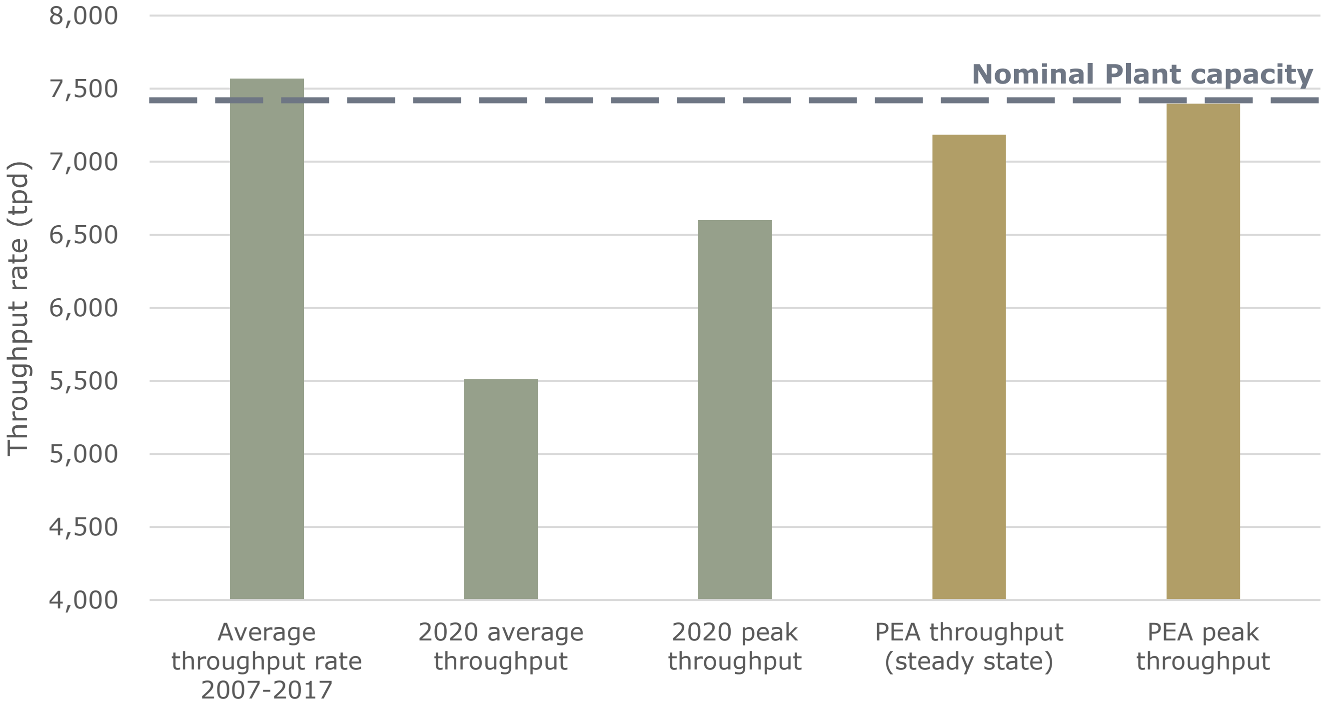
WASSA – Platform of Existing Infrastructure & Permitting

Plant Throughput (tpd) – Operating Within Existing Capacity



Brownfield Expansion – Lower Risk Proposition

Fully Permitted	Grid & Captive Power Supply	Proven Processing Plant	Skilled Workforce in Place

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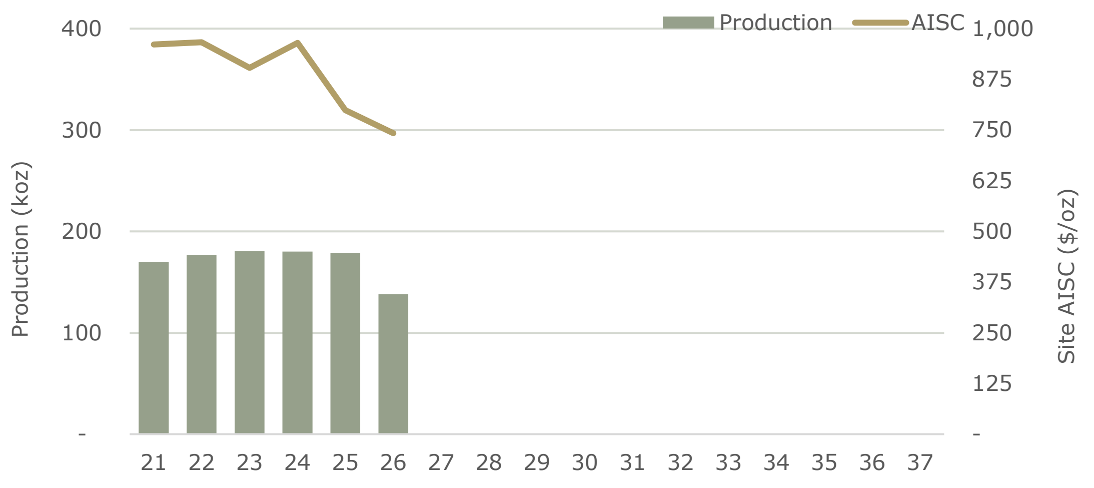
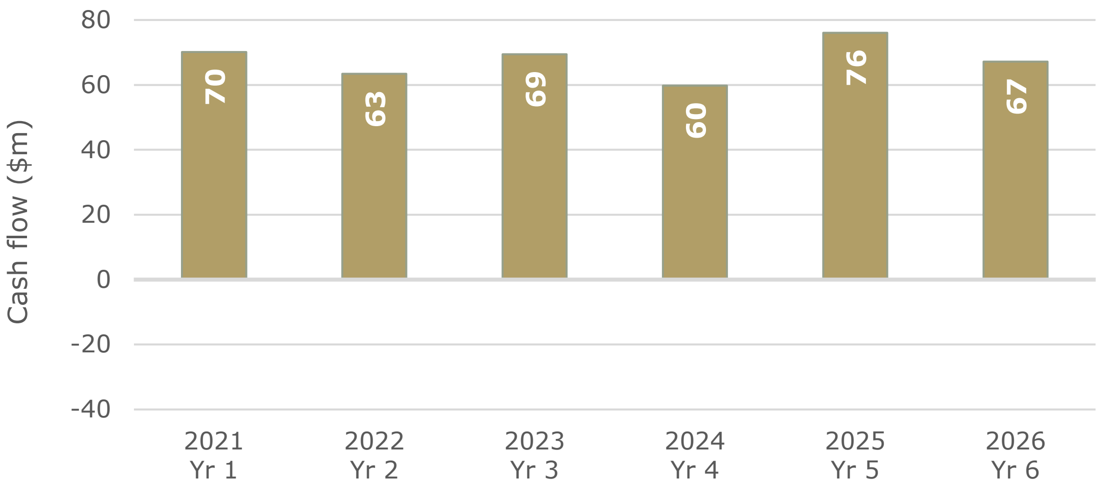
WASSA – Potential for Significant Upside in Mine Life & Production

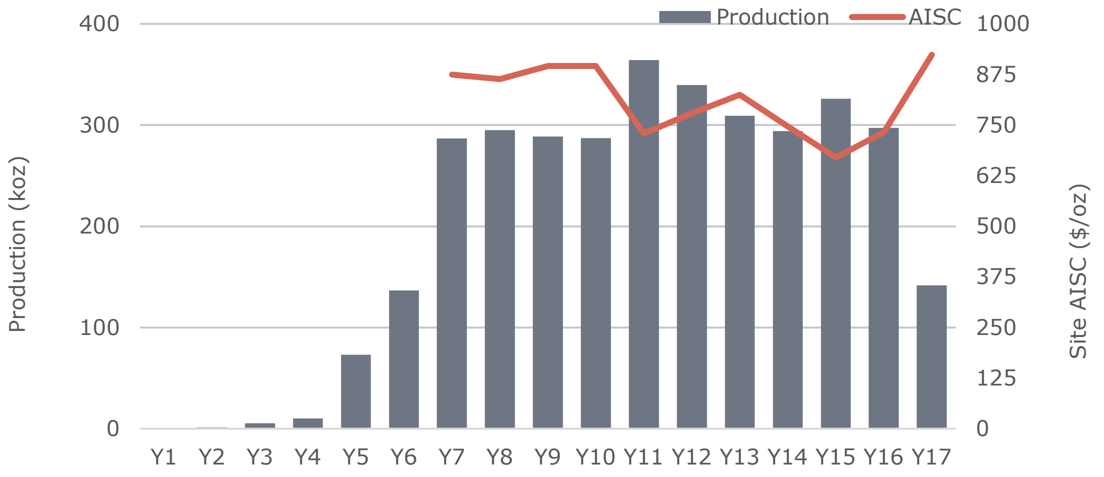
Reserve Mine Plan | 6 year life



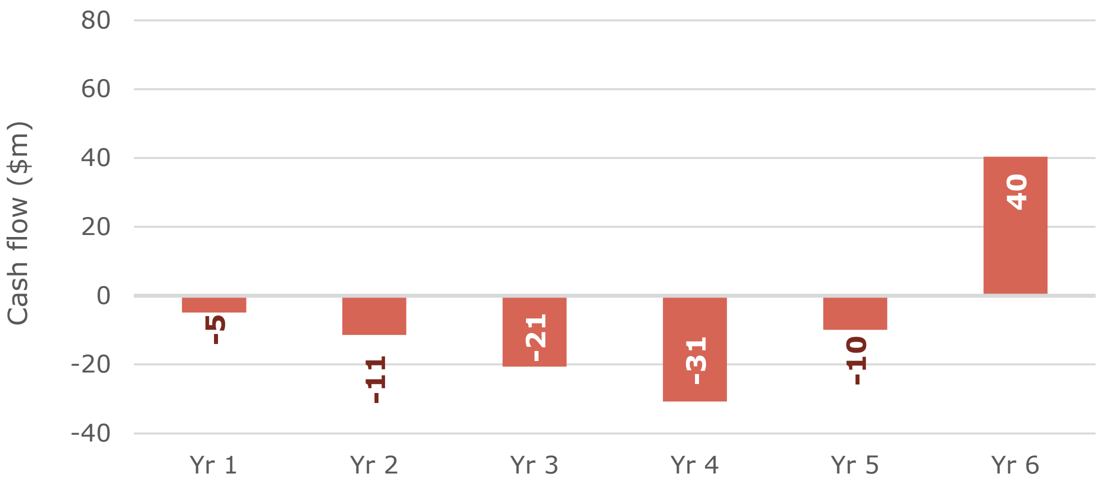
Reserve Mine Plan FCF – Consensus gold forecasts[2,3,7]



PEA | +10 years life & 76% production increase[8,12]



PEA Mine Plan FCF – Consensus gold long term forecast[2,4,7]



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PASTE BACKFILL SYSTEM – Ongoing Commissioning

Overview

- The Paste fill plant commissioning process started in Q1 2021, following the completion of the plant construction in Q4 2020
- As previously announced the commissioning was delayed by some quality assurance testing returning lower than expected fill strengths in the test stope in April 2021

Test Work

- Test work program has been extended in collaboration with Minefill Services and the University of Mines and Technology in Tarkwa, Ghana
- Recent test results, particularly at a higher cement content of 7-10%, have shown results that support progression of the commissioning process onto filling of a second test stope
- The test stope will be filled with a 10% cement blend for maximum fill strength, while off-site mix design optimization and test work continues.

Outlook

Fill Second Test Stope Q3 2021	Testwork Q4 2021	Restart filling schedule Q4 2021	Production from Secondary Stopes 2022	Further process optimisation 2022

SUSTAINABLE DEVELOPMENT GOALS

6 CLEAN WATER AND SANITATION

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

13 CLIMATE ACTION

WORLD GOLD COUNCIL

2. Understanding our impacts

8. Environmental stewardship

10. Water, energy and climate change

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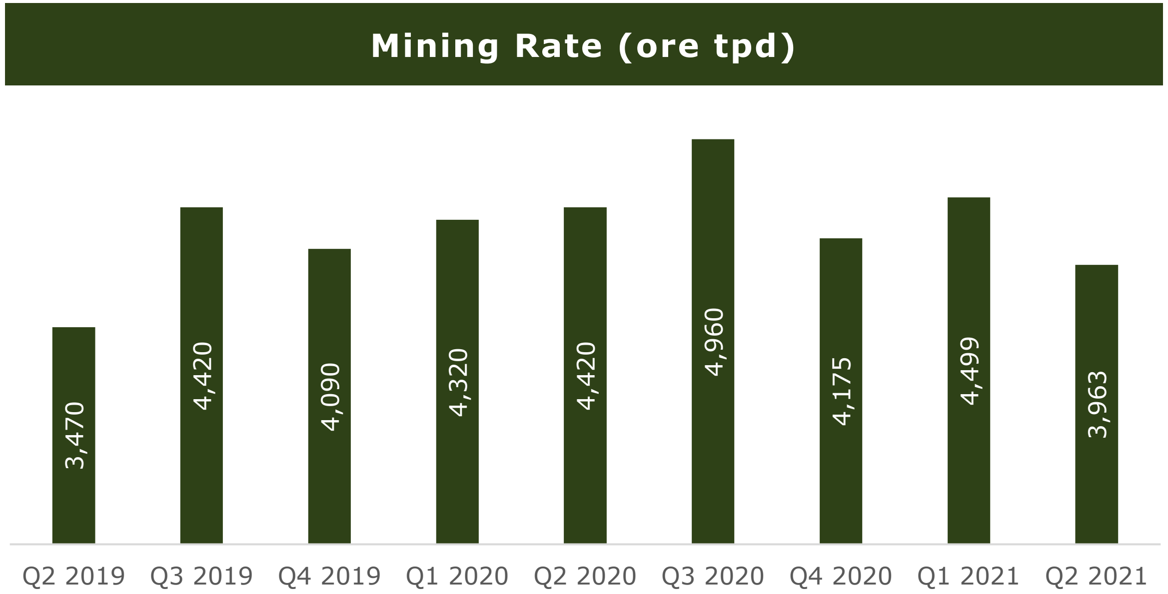
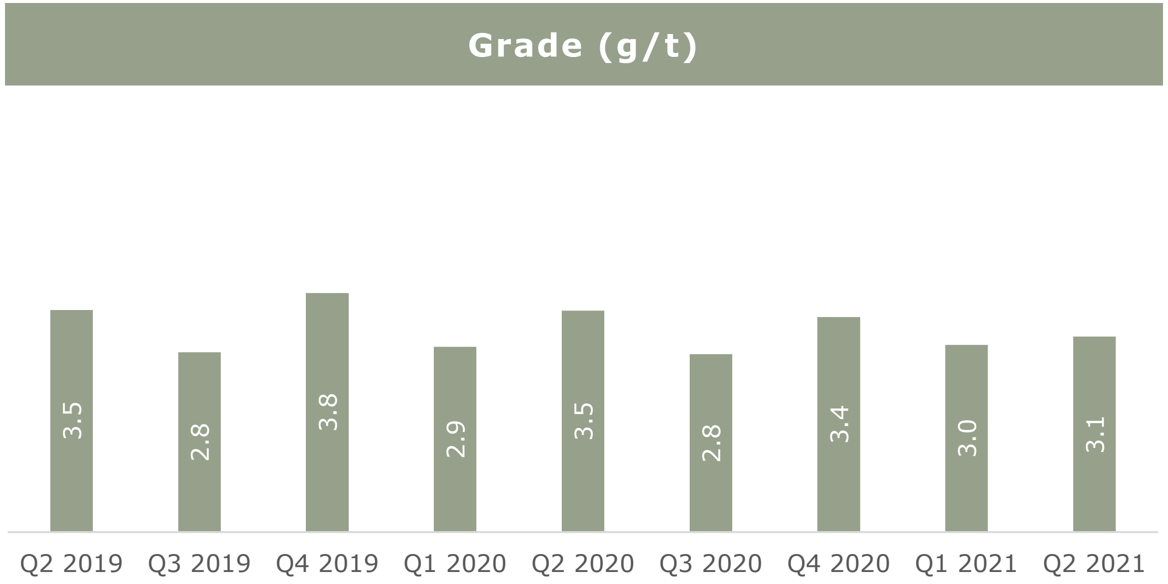
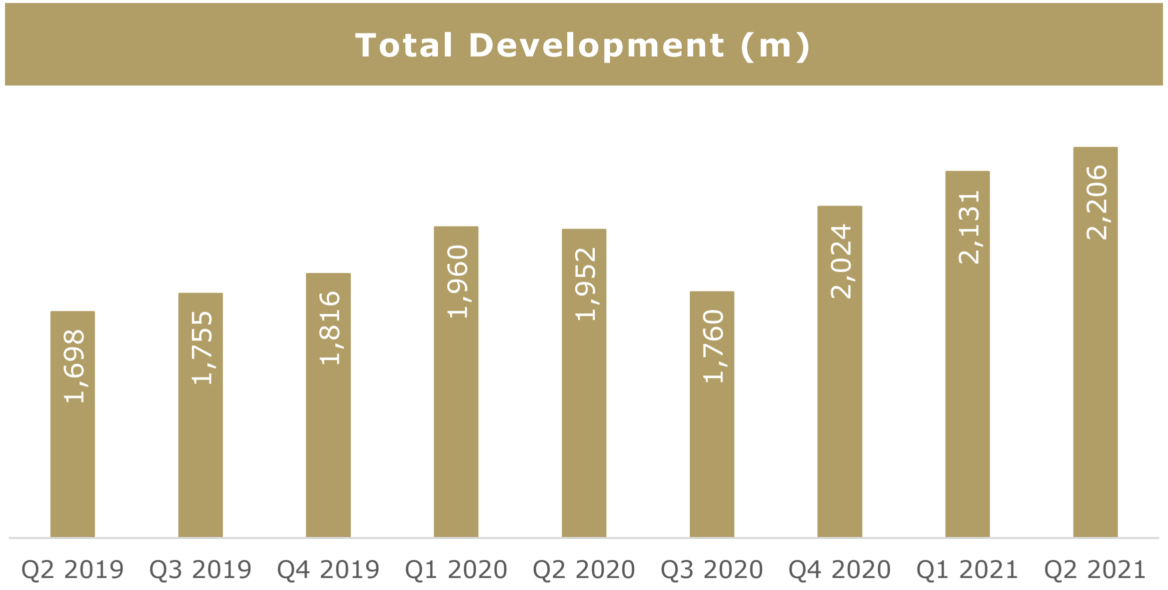
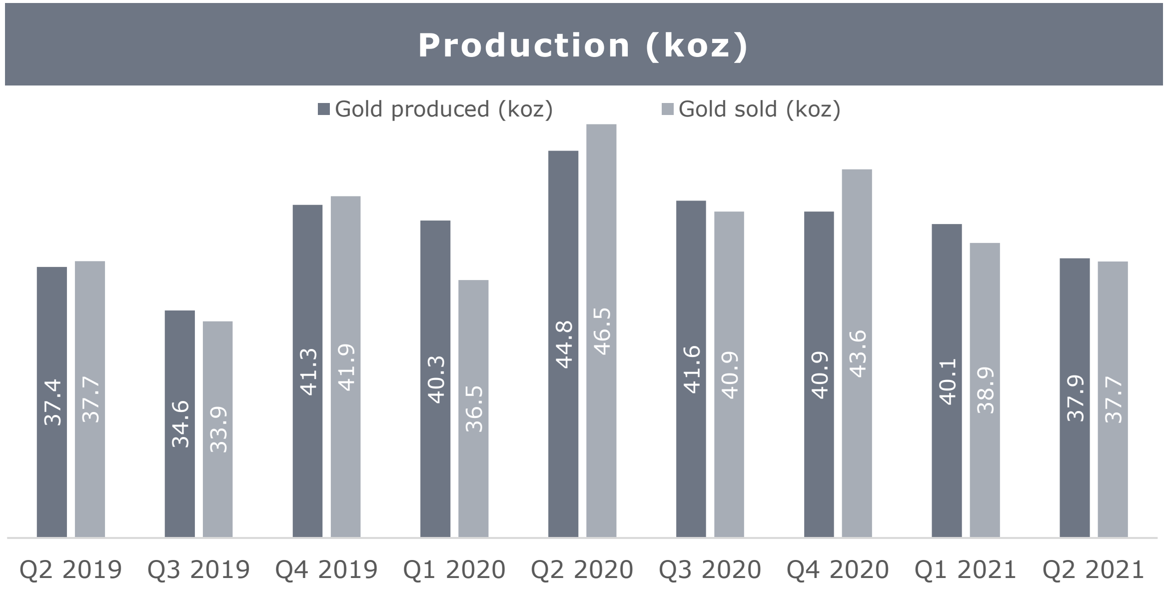
WASSA PRODUCTION SCORECARD – Performance Tracking









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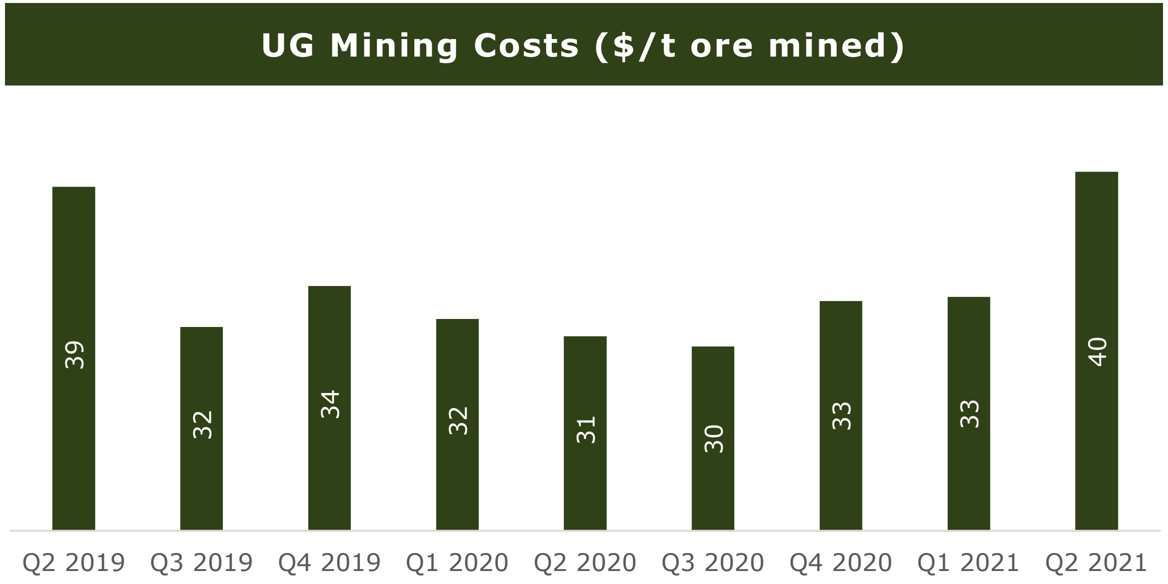
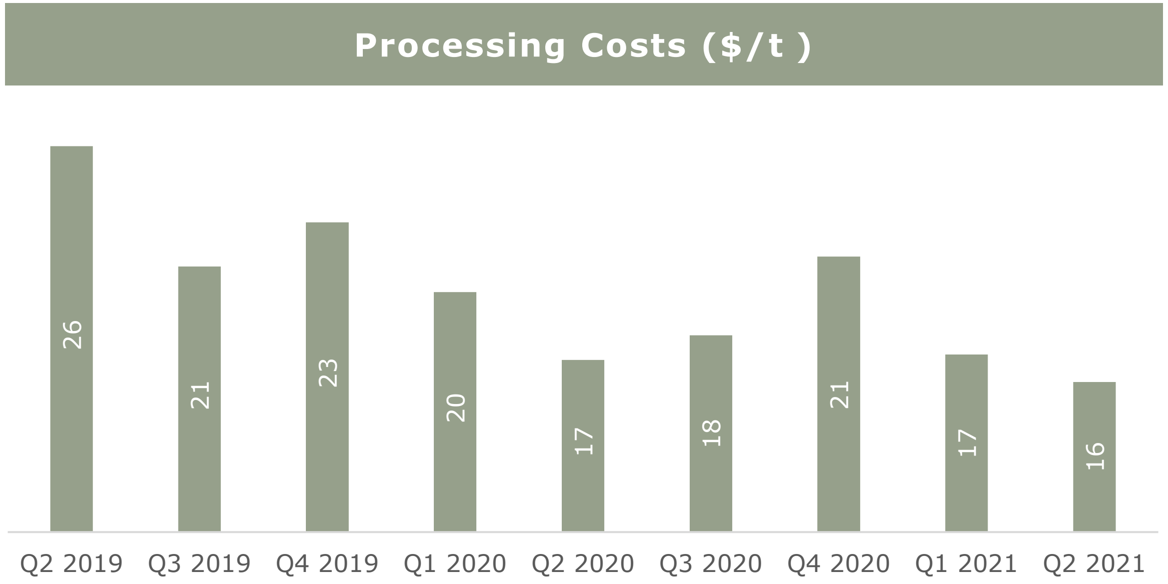
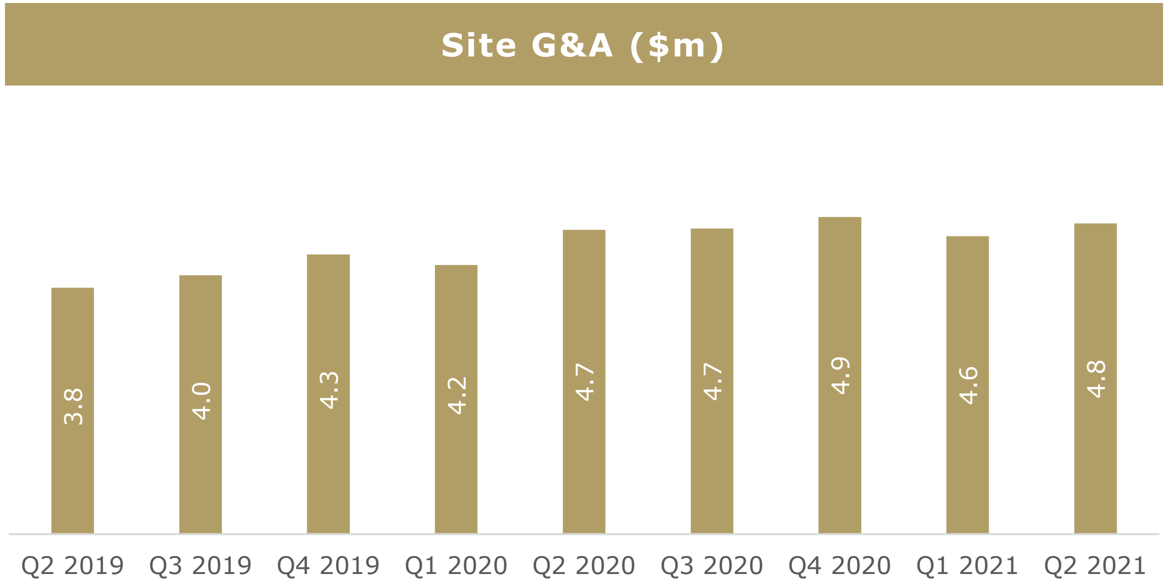
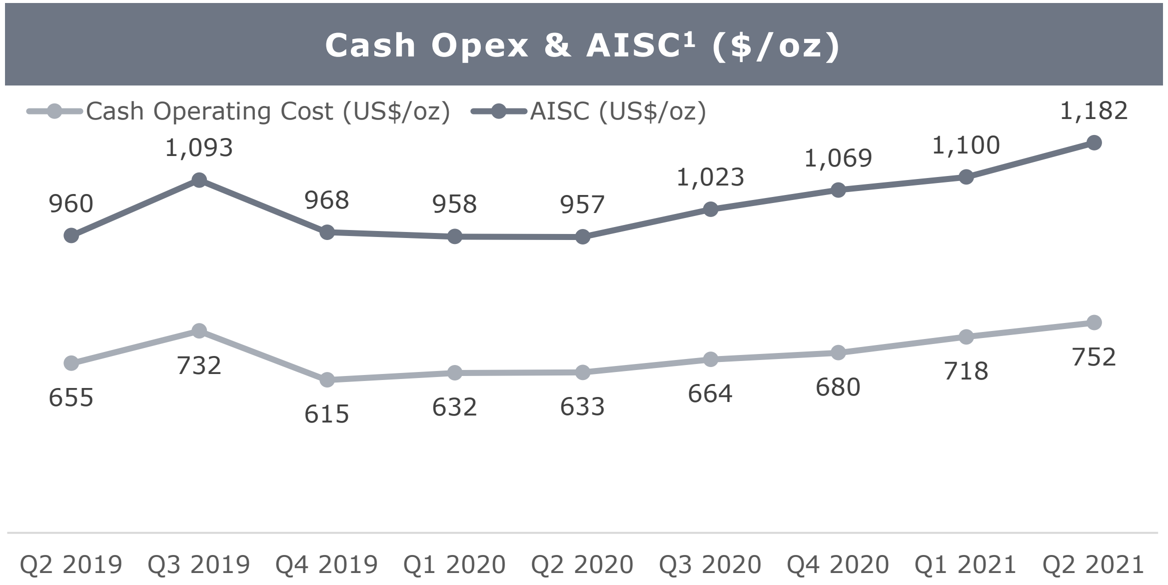
WASSA COST SCORECARD – Performance Tracking









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

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SUSTAINABLE GOLD MINING

Risk Management and Creating Lasting Value

SUSTAINABILITY – Our Approach

GOLDEN STAR

Our Approach to Sustainability

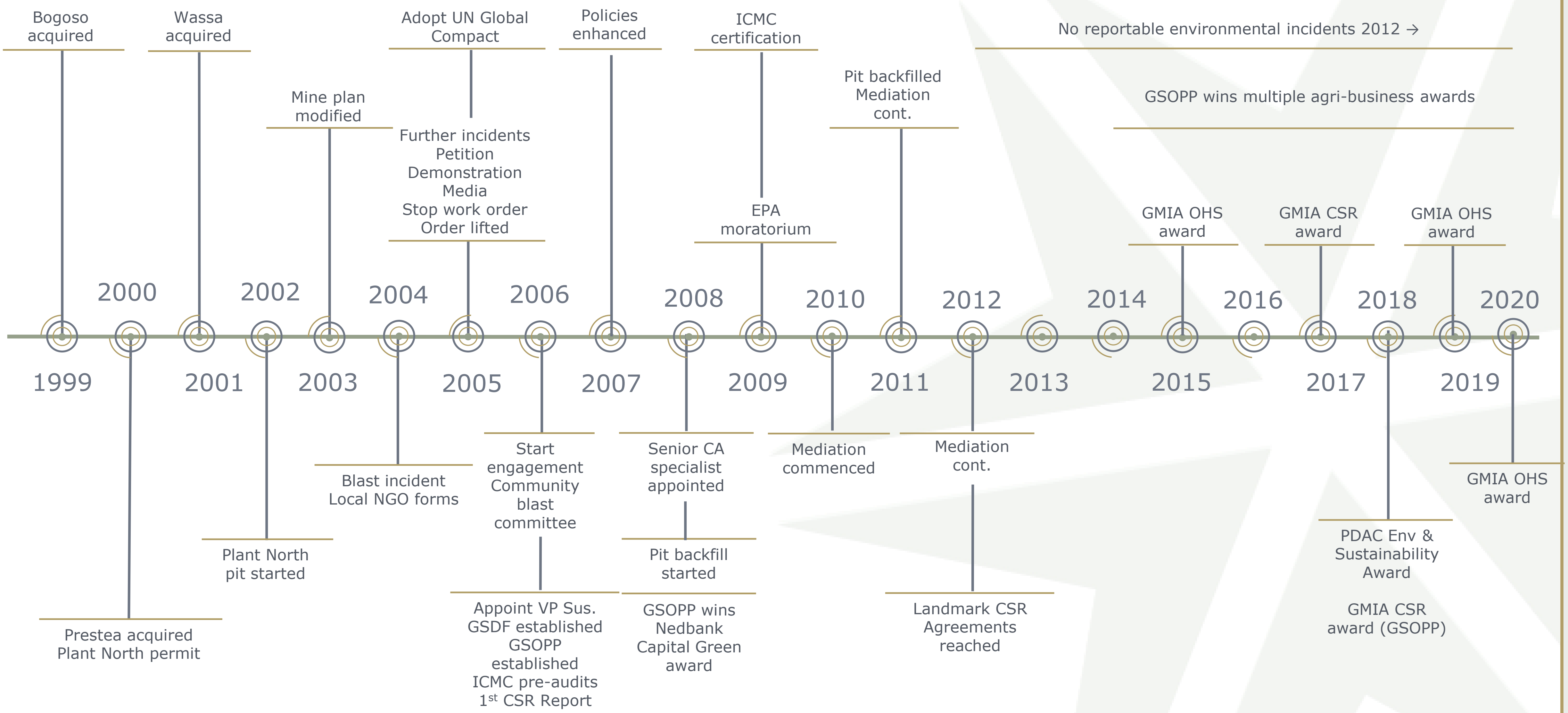
Risk Management

Liability Reduction
Actively Managing Rehabilitation Liabilities
-
Risk Avoidance
Tailings Dam Management
-
Risk Reduction
COVID-19 Business continuity
Health & Safety – Cultural Change
-
Impact Reduction
Environmental Management & GHG Offset

Lasting Value

Alternative Livelihoods
Golden Star Palm Oil Plantations Development Foundation
-
Local Content
99% of workforce Ghanaian
61% from local communities
Promoting local procurement
-
Values Driven
Integrated engagement structures
Host community interdependence
Inclusion and diversity

GOLDEN STAR RESOURCES – Sustainability Journey



In the beginning…
Good intentions not always well executed

then…
Listening, learning and re-earning trust

Now
Integrated sustainability focus

ALTERNATIVE LIVELIHOODS – Golden Star Oil Palm Plantations

Overview

- Flagship sustainability and social enterprise initiative
- Zero deforestation, endemic oil palm plantation over 1,500 hectares
- Multiple award winning project – mining and agribusiness awards
- Roundtable for Sustainable Palm Oil (RSPO) certified buyer

Integrated Sustainability

- High value agribusiness
- Commercial enterprise providing valued livelihoods
- Farmer business units operate over 1,500 Ha of plantation
- Buffer zone protection – avoids encroachment
- Roundtable for Sustainable Palm Oil (RSPO) certified buyer
- Plantation business in first phase of scheme smallholder RSPO certification
- Growth plan incorporates downstream processing
- Subsistence farms or former mined lands – no displacement
- A third of workforce are female

Value Retention

- Supports over 700 families
- Self-funding revegetation / post-mining land use
- Oil palm biomass recognized as carbon sink
- Revolving fund as savings model for re-planting

SUSTAINABLE DEVELOPMENT GOALS
1 NO POVERTY
5 GENDER EQUALITY
8 DECENT WORK AND ECONOMIC GROWTH
13 CLIMATE ACTION
15 LIFE ON LAND
17 PARTNERSHIPS FOR THE GOALS

WORLD GOLD COUNCIL
2. Understanding our impacts
5. Human rights & conflict
7. Working with communities
9. Biodiversity, land use & mine closure
10. Water, energy and climate change

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SOCIAL IMPACT – A Positive and Lasting Impact

Leading Practices

- High local content: workforce 99% Ghanaian and 61% local
- High local procurement spend: >80% of spend in Ghana
- Providing national health insurance scheme for all employees
- Community MOUs institutionalised into operations

Social Licence Secured

- Established community development support – >55 safe water systems in over 12k households
- Partnerships: health outcomes and national systems
- COVID-19 leadership and support to host communities
- Education: schools, scholarships, girl child programs, education support for >2,500 dependents of employees
- Partner with Ghana Education Service on model school

Integral Value Being Realised

- Workforce productivity – leading practice malaria prevention program, case rates <0.3 cases per capita
- Low turnover
- Engagement structure enhancement: > women and youth

Even More Value To Be Created

- Increase gender diversity +20% over next 5 years from 7%
- Ladies group promotes opportunities for local women
- WIM UK partnership - intern & graduate entry to industry

SUSTAINABLE DEVELOPMENT GOALS

1 NO POVERTY
3 GOOD HEALTH AND WELL-BEING
5 GENDER EQUALITY
8 DECENT WORK AND ECONOMIC GROWTH
10 REDUCED INEQUALITIES
16 PEACE, JUSTICE AND STRONG INSTITUTIONS
17 PARTNERSHIPS FOR THE GOALS

WORLD GOLD COUNCIL

2. Understanding our impacts
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GOLDEN STAR

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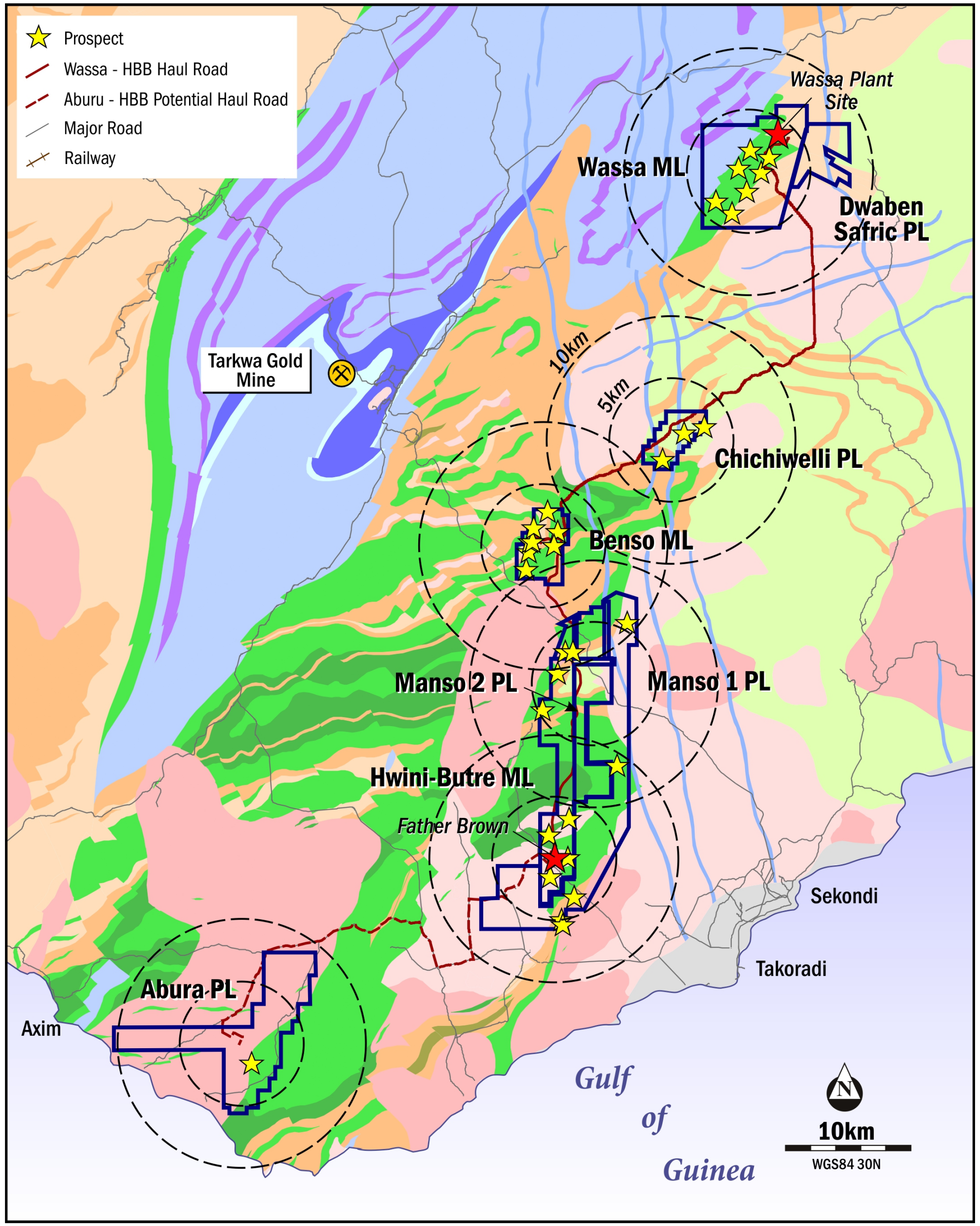
EXPLORATION & GEOLOGY

Re-evaluating a Prospective Land Package

EXPLORATION – Redefining the Exploration Strategy



History of Discovery through Exploration

In last 10 years, added 2.5 Moz M&I and 8 Moz inferred at c.$7.30 /oz

Exploration Focus – Accelerating Activity in 2021

Exploration Guidance

$

$14 M

2021 Exploration budget

Q2 2021

- $3.3m invested in exploration at Wassa & the regional HBB licences
- Of which $1.9m of Wassa in-mine exploration was capitalized & the balance was expensed

Exploration Opportunities

In-mine

Target extensions of mineralization around current mining areas

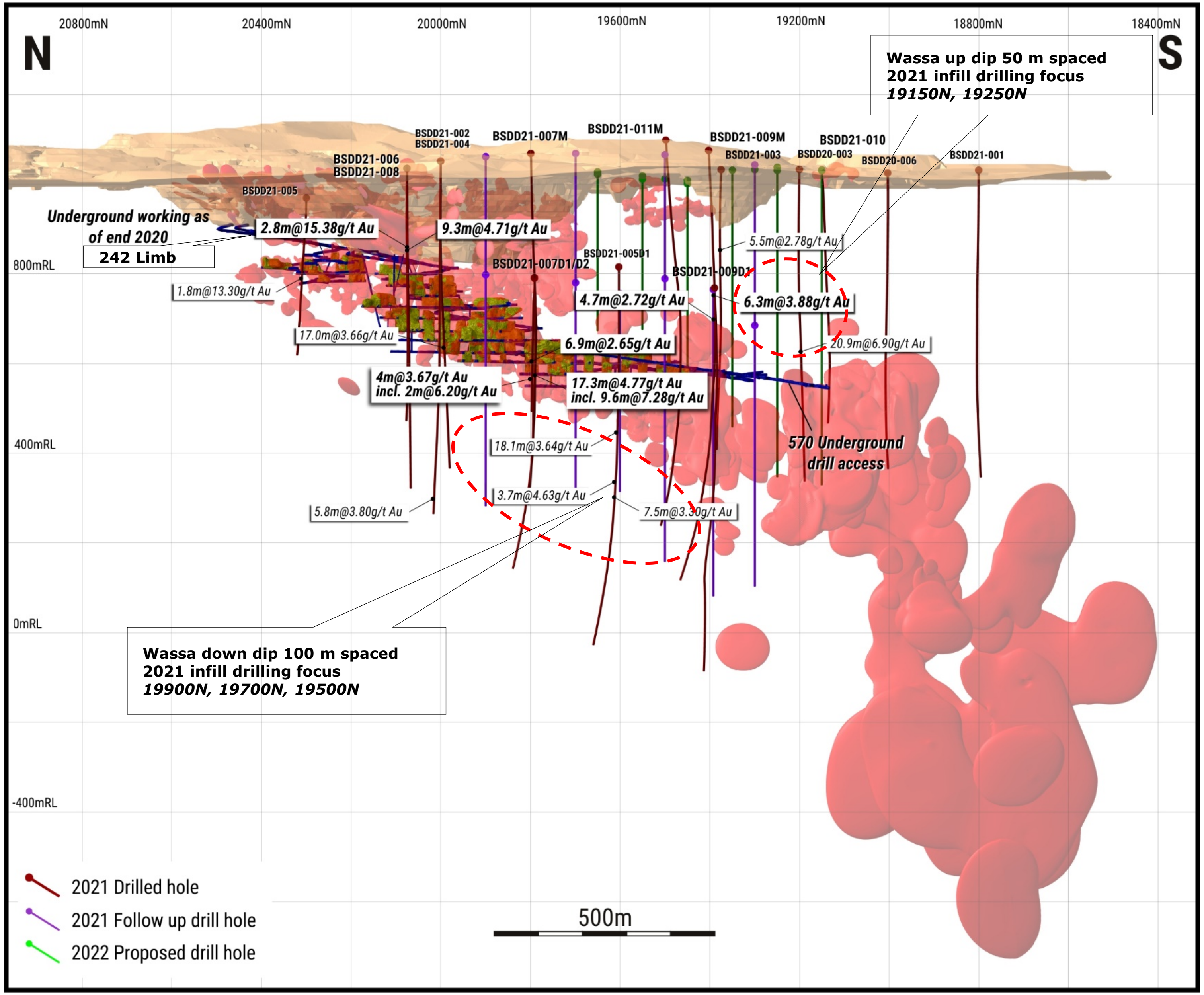
Near-mine

Target below historical open pits outside of the Main Wassa trend

Regional

Target below historical HBB pits and geochemical/geophysical anomalies

EXPLORATION – In-mine Extension Opportunities



During the quarter 3 surface drill rigs continued the testing of targets down-dip of the existing reserve

A total of five holes were completed for 4,827m during Q2 2021

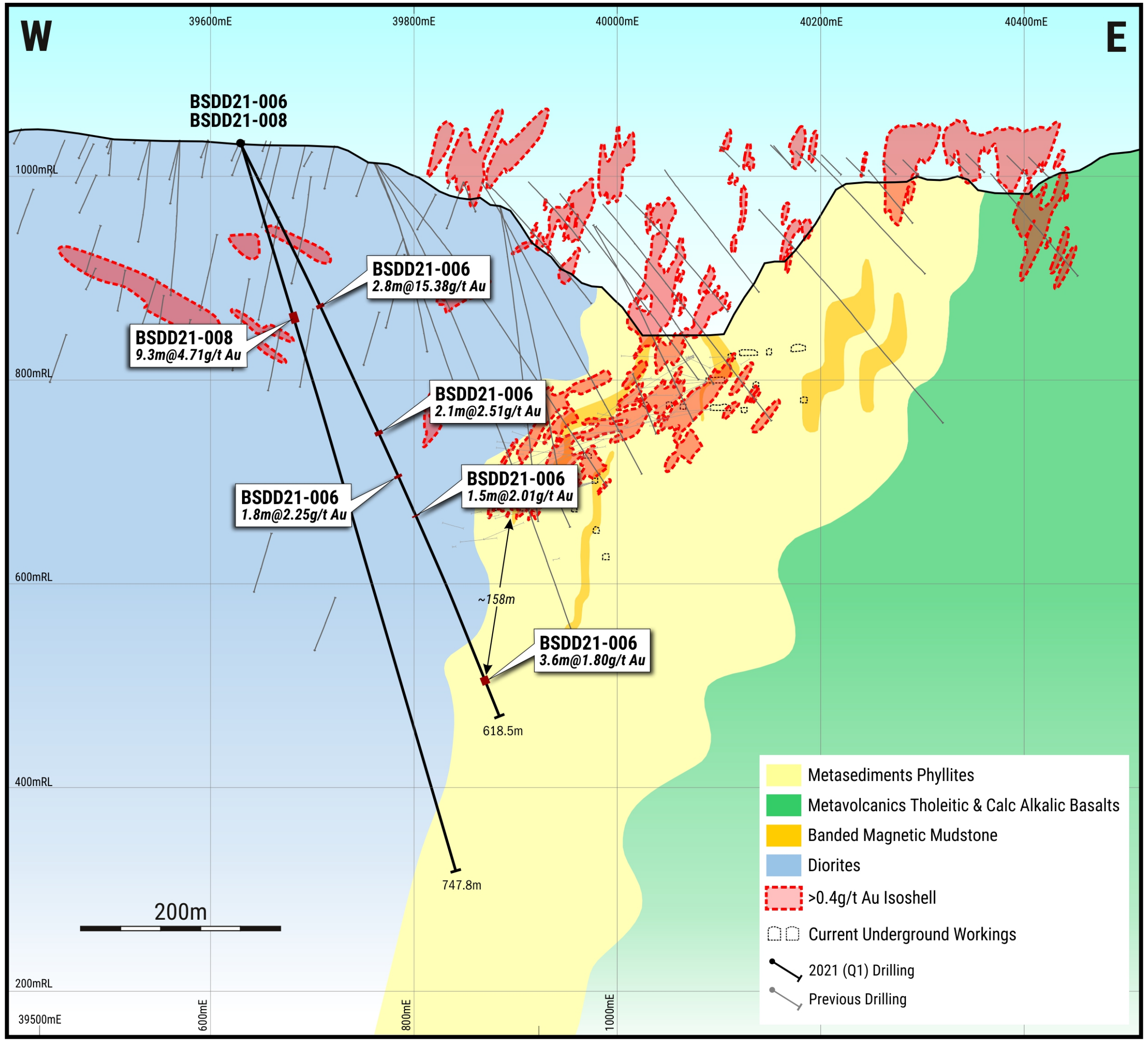
Phase One (200m spacing) up-dip & down-dip program was expected to total 10,000m in 2021

Year to date drilling total 11,175m

Phase one in-mine drilling was completed during the quarter

Funds now reallocated to infill drilling aimed at identifying mineral resources by the year end

EXPLORATION – Wassa Q2 2021 In-mine Drilling

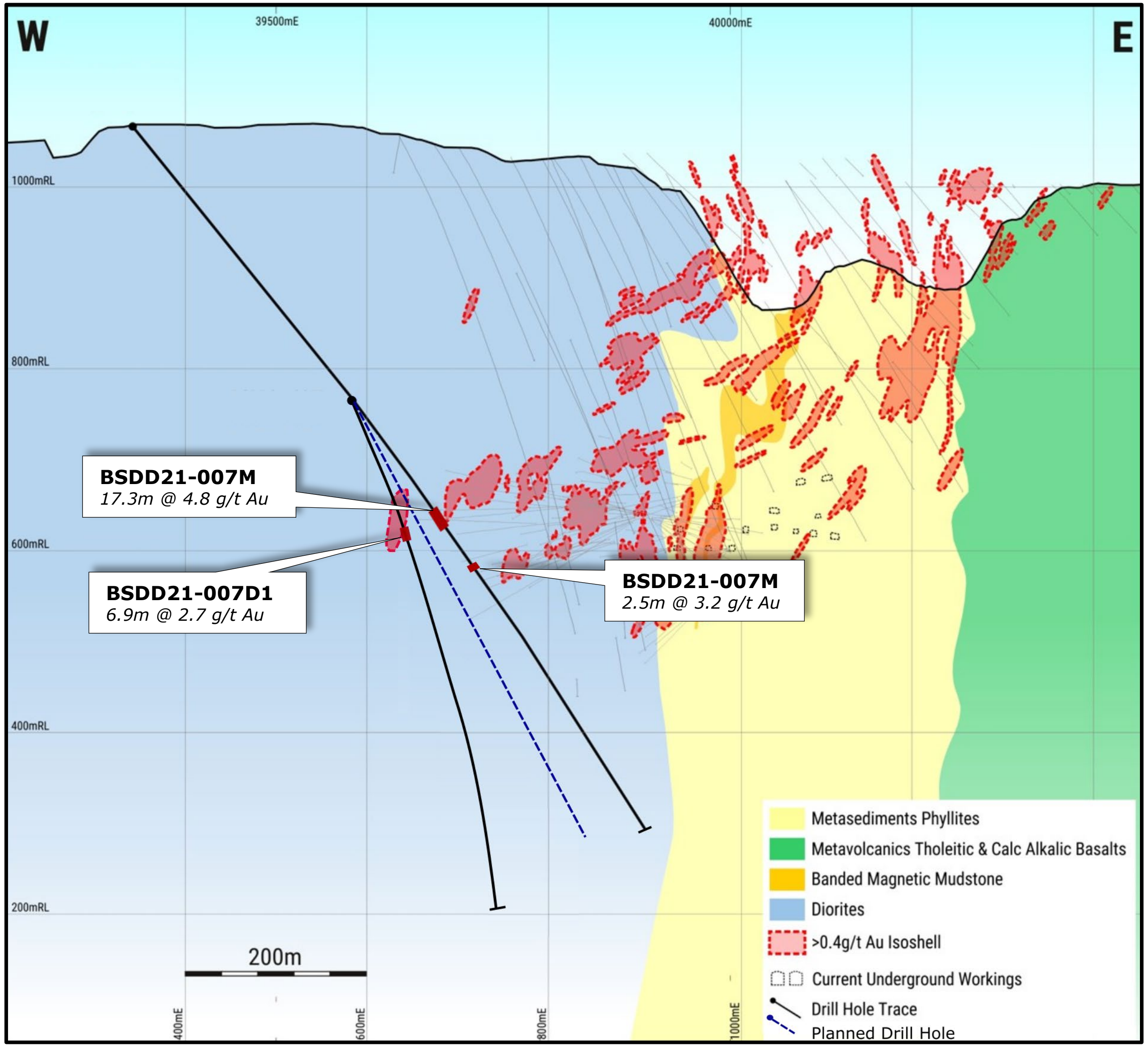


Hole ID	From (m)	To (m)	Drilled Width (m)	Estimated True Width (m)	Grade Au (g/t)	Drilling target
BSDD20-006	101.7	104.7	3	3	6.3	Down-dip
BSDD20-006	176.0	179.0	3	2.8	15.4	Down-dip
BSDD20-006	215.8	319.8	4	2.1	2.5	Down-dip
BSDD20-006	364.5	368.0	3.5	1.8	2.3	Down-dip
BSDD20-006	406.1	409.0	2.9	1.5	2.0	Down-dip
BSDD20-007M	535.0	553.0	18	17.3	4.8	Down-dip
including	536.0	546.0	10	9.6	7.3	Down-dip
BSDD21-007M	629.0	631.5	2.5	2.4	3.2	Down-dip
BSDD21-008	176.3	185.7	9.4	9.3	4.7	Down-dip
BSDD21-007D1	183.0	190.0	7	6.9	2.7	Down-dip
BSDD21-009	299.0	307.0	8	6.8	1.5	Down-dip
BSDD21-009	374.0	383.0	9	4.7	2.7	Down-dip
BSDD21-009	741.0	746.0	5	3.8	1.2	Down-dip
BSDD21-009	786.0	788.0	2	1.5	2.0	Down-dip
BSDD21-009	833.8	838.8	5	3.7	2.0	Down-dip

BSDD21-008 – 242 (upper mine) target

- Intercepting 9.3m at 4.7g/t
- This is in line with the western limb extension of the 242 zone which forms part of the Upper Mine target

EXPLORATION – Wassa Q2 2021 In-mine Drilling



BSDD21-007M – Down-dip target

- Intersected 17.3m at 4.8g/t

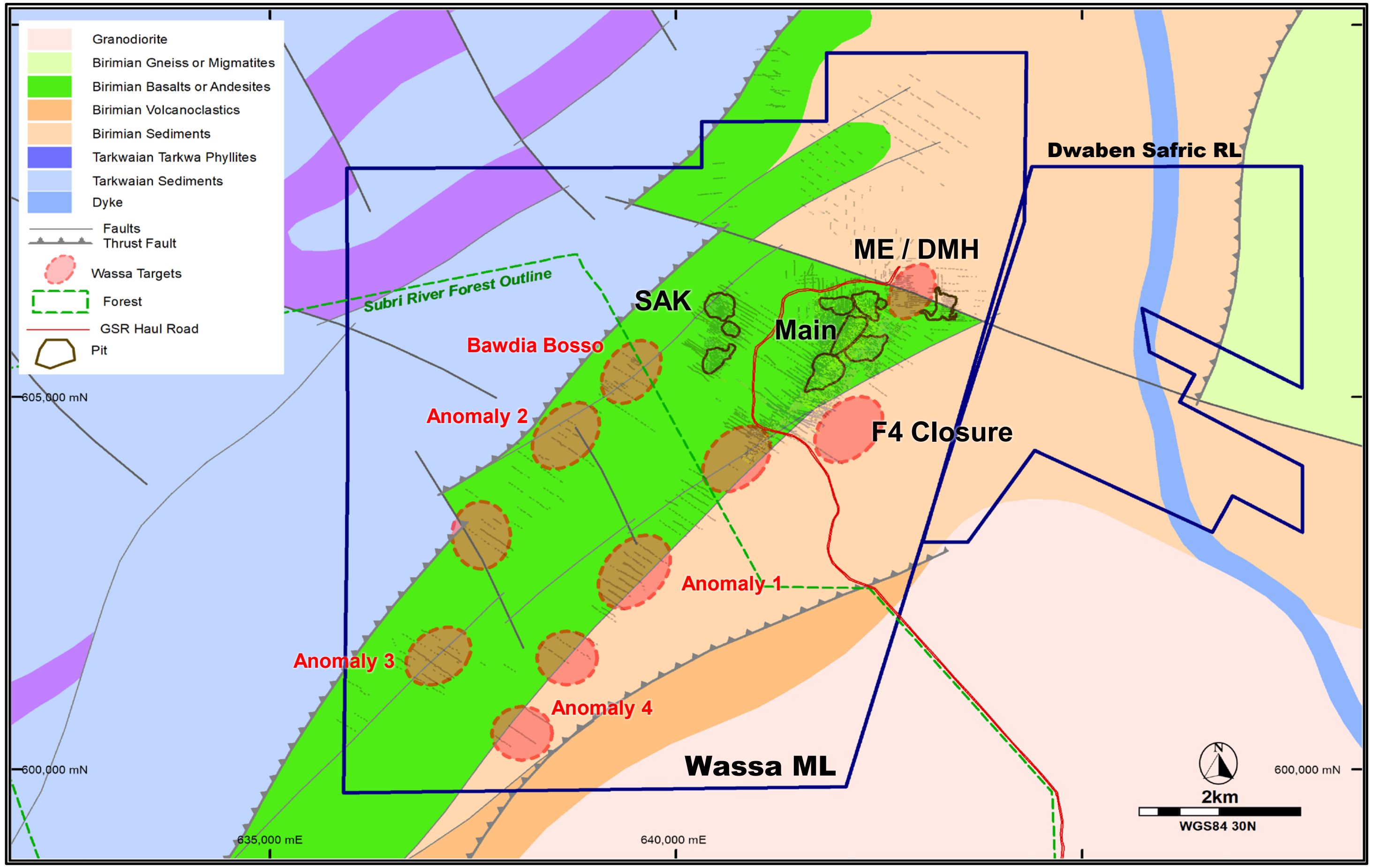
BSDD21-007D1 – Down-dip target

- Intersected 6.9m at 2.7g/t
- C.50m down-dip of hole DSDD21-007M (see above)
- This hole represents further confirmation that the B-Shoot hanging wall zone extends below the current reserve, warranting further down-dip drilling to the west

Q3 2021 Exploration Program

- Follow-up drilling of the up-dip and down-dip extensions to mineralization
- Aimed at reducing the initial 200m spacing to 100m for the down-dip program and 50m for the up-dip program

EXPLORATION – Wassa Near-Mine Exploration



Hole ID	From (m)	To (m)	Drilled Width (m)	Estimated True Width (m)	Grade Au (g/t)
SAKDD21-001	318.0	321.0	3.0	2.1	2.64
SAKDD21-002	250.0	253.0	3.0	2.1	1.64
SAKDD21-002	256.7	257.4	0.7	0.5	5.26
SAKDD21-002	266.0	268.0	2.0	2.0	2.52
MEDD21-001	57.0	60.0	3.0	2.9	2.76
MEDD21-001	198.0	204.0	6.0	5.9	2.37
MEDD21-001	210.4	218.4	8.0	7.8	2.07
MEDD21-002	110.0	112.0	2.0	2.0	2.40
MEDD21-002	258.3	260.5	2.2	1.9	1.45
MEDD21-002	267.0	270.0	3.0	2.6	1.26
MEDD21-002	272.4	275.4	3.0	2.6	2.78

Program focussed on the drill testing of mineralization beneath mined and back-filled open pits at SAK, Mid East and Dead Man Hill

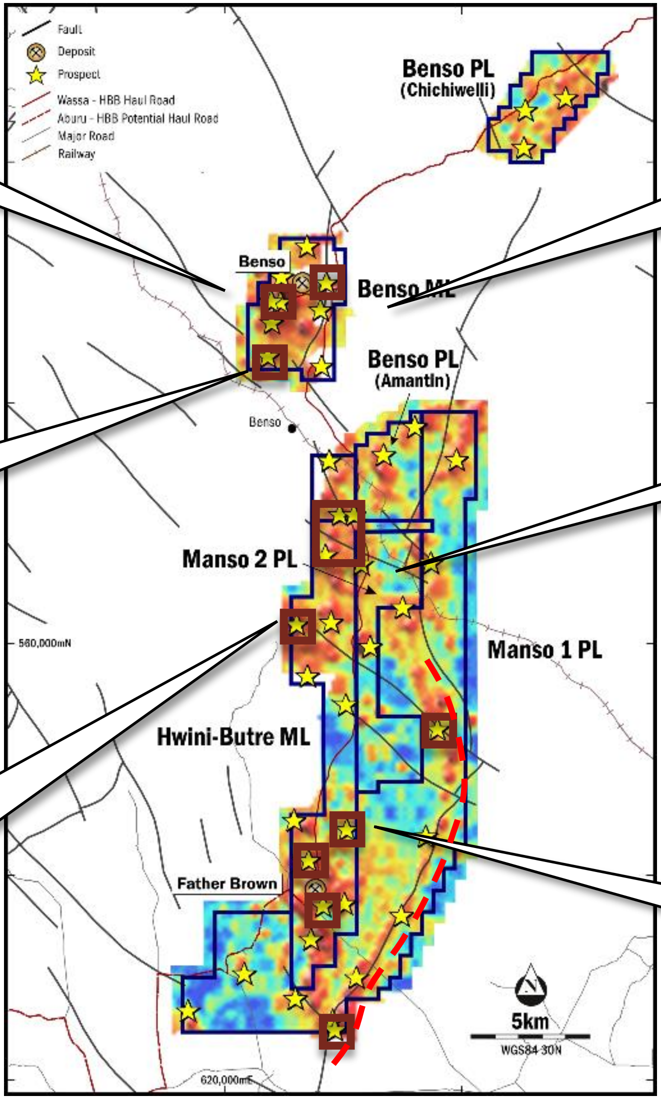
A total of seven RC and diamond drilling holes were completed for 2,394m during Q2 2021

Air core drilling of a soil anomaly south east of the Wassa trend was completed with 59 holes totalling 2,365m

The planned first phase of drilling at Mid East and Dead Man Hill has been completed

Drilling ongoing at SAK

EXPLORATION – Wassa Regional Exploration



Subriso West Zone
8 RCDD Holes for 3,250 metres

Kwahu Hill
40 AC Holes for 1,725 metres

Abada Area
108 AC Holes for 5,025 metres
200 Line km IP Survey

Subriso East Zone
6 RCDD Holes for 1,550 metres

Manso 2
103 AC Holes for 5,150 metres

Seikrom
38 AC Holes for 1,900 metres

Seikrom AC Program
100/200 metre spaced fences, 23 out of 38 holes completed.

Abada Area AC Program
Drilling partly completed. Positive AC result from Abada-Guadium and Abada South to be evaluated with IP and Mag survey data.

Benso-Subriso RC/DD drilling
Drill testing beneath the previously mined pits (GZ deferred to 2022) SE drilling to South of Pit testing plunge of HG shoot, defined in OP GC commenced in July, two holes completed. SW drilling of HG shoot to commence in August

IP and Magnetic survey
133km line cutting completed at Abada. Program expected to run through Q4 2021.

Q2 2021 RESULTS

Creating Financial Flexibility

Q2 2021 CONSOLIDATED FINANCIAL RESULTS

Continuing operations		Q2 2021	Q2 2020	% change
Gold produced - Wassa	Koz	37.9	44.8	(15%)
Gold sold - Wassa	Koz	37.7	46.5	(19%)
Realized gold price – spot sales	$/oz	1,807	1,713	5%
Realized gold price – Streaming agreement	$/oz	792	836	(5%)
Realized gold price - Consolidated	**$/oz**	**1,709**	**1,621**	**5%**
Gold revenues	$m	64.4	75.4	(15%)
Cost of sales	$m	31.9	33.6	(5%)
Depreciation and amortization	$m	7.1	6.3	13%
Mine operating profit	**$m**	**25.5**	**35.5**	**(28%)**
Corporate general and administrative expense	$m	4.2	4.3	(2%)
Exploration expense	$m	1.4	0.4	250%
Share based compensation expense	$m	0.9	0.7	29%
Loss on fair value of derivative financial instruments, net	$m	0.7	1.8	(61%)
Other expense/(income), Net	$m	17.7	(0.6)	3050%
Income before finance and tax	**$m**	**0.5**	**29.0**	**(98%)**
EDITDA[1]	$m	7.6	35.2	(78%)
Adj. EDITDA[1]	**$m**	**26.0**	**36.4**	**(29%)**
Finance expense	$m	1.0	3.3	(70%)
Tax expense	$m	10.0	14.0	(29%)
Net (loss)/income from continuing operations attributable to shareholders	$m	(12.1)	9.3	(230%)
Net (loss)/income per share from continuing operations	$/share	(0.11)	0.08	(238%)
Adj. income per share attributable to shareholders – basic[1]	**$/share**	**0.05**	**0.10**	**(50%)**

Mine Operating Profit – $26m

- Strong realized gold price for spot sales of $1,807/oz
- Including the impact of the Royal Gold stream the realized gold price averaged $1,709/oz
- Q2 2020 was a strong comparative period for production
- Gold sold was in in-line with production but did not catch up the 1.2koz sales lag from Q1 2021
- Revenue totaled $64.4m in Q2 2021, 15% lower than $75.4m in Q2 2020 due to lower gold sales

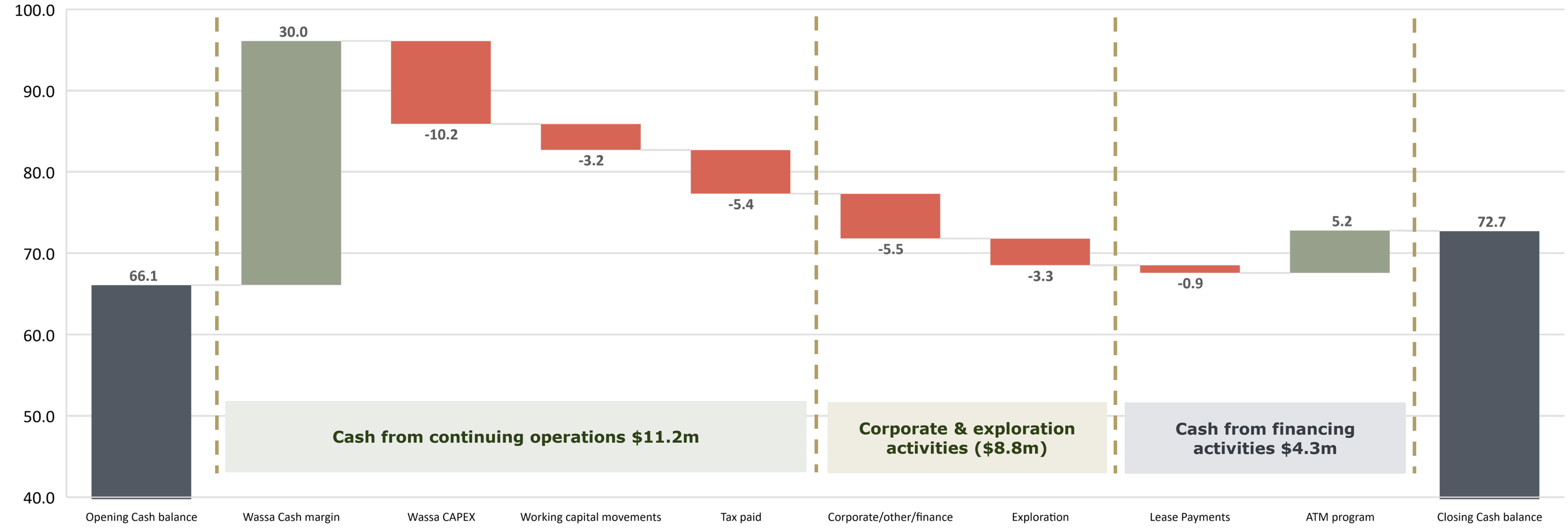
Adjusted EBITDA[1] - $26m

- EBITDA $7.6m
- Adjustments include:
  - non-cash loss recognized on the deferred consideration for the sale of Prestea of $17.4 million
  - Gain on fair value of financial instruments $0.7m (gold hedges and convertible debenture)
- Adjusted EBITDA $26m, 29% lower than Q2 2020 due to lower production volumes, increased mine operating costs and increased exploration expenses

Adjusted Earnings Per Share[1] - $0.05

- Adjusted net income attributable to Golden Star shareholders was $6.1m or $0.05 basic income per share
- This was impacted by the lower gold sales and a higher depreciation charge during the quarter

NET CASH FLOW BRIDGE – Q2 2021 Cash Movement



$6.6m increase in cash during Q2 2021

Cash from continuing operations

- Strong Wassa operating cashflow of $30.0m (before working capital movements and tax)
- Income tax payment of $5.4m for Wassa, relating to Q1 2021
- Reduction in accounts payable resulted in a working capital outflow of $3.2m

Corporate and exploration activities

- Corporate general and administrative cash outflows of $4.2m
- $3.3m invested in exploration, of which $1.4m was expensed and $1.9m capitalized
- Interest payments of $0.7m related to the quarterly interest for the Macquarie credit facility

Cash from financing activities

- Net proceeds from the ATM program of $5.2m during the quarter
- Principal payments on leases totalled $0.9m

SUMMARY – PEA Indicates Significant Growth of Production and Mine Life

Wassa Growth Opportunity

Reserve Mine Plan

Ave. Production	Average AISC[1,2]	Mine life	NPV[3,7]
177koz/year	$881/oz	6 years	$336m

PEA Life of Mine Extension (excludes Reserve plan)

Ave. Production	Average AISC[1,2]	Mine life	NPV[4,7]
294koz/year	$778/oz	11 years	$783m

Exploration

2021 - The first extensive investment in systematic exploration

- Delineate extensions of underground mineralization
- Delineate surface targets within 5-10km of Wassa mill
- Test 90km gold belt for standalone targets

Balance Sheet

- Address 7% convertible debentures Repaid August 2021
- New Revolving Credit Facility Drawn $90m

Catalysts - Next 12 months

Infrastructure

Paste fill plant - Production from secondary stopes planned for 2022

Definition Drilling

Increased investment in infill drilling at Wassa Underground aimed at resource to reserve conversion

Exploration

Exploration spend accelerating in 2021

Systematic program testing of in mine, near mine and regional targets

THANK YOU – Q&A

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VALUES

Respect | Caring | Collaboration | Fairness | Honesty

FOOTNOTES & ASSUMPTIONS

Footnotes

1. See note on slide 2 regarding Non-GAAP Financial Measures
2. Mine site only - excludes corporate G&A
3. Based on analyst consensus short term forecasts (January 2021)
4. Based on analyst consensus long term forecast $1,585/oz (January 2021)
5. Operating cash flow before working capital changes and taxes (including discontinued operations).
6. Repayment profile based on the drawn amount at June 30, 2021
7. After tax, 100% basis
8. AISC in pre-production years not included
9. Wassa Underground resource estimate excludes open pit and regional resources
10. Based on reserve estimate, December 2020 (excludes stockpiles)
11. Based on inferred resource estimate, December 2020
12. Relative to FY 2020 performance

Gold Price Assumptions

	2021	2022	2023	2024	Flat Long Term
Gold Price - Analyst Consensus	1,944	1,880	1,773	1,716	1,585
Gold Price - Base Case					1,300