



GOLDEN STAR

Focused on Cash Flow Generation

**WASSA
OPERATIONS
SITE VISIT
NOVEMBER 2017**

Disclaimer

SAFE HARBOUR: Some statements contained in this presentation are forward-looking statements or forward-looking information (collectively, "forward-looking statements") within the meaning of the United States Private Securities Litigation Reform Act of 1995 and applicable Canadian securities laws. Investors are cautioned that forward-looking statements are inherently uncertain and involve risks and uncertainties that could cause actual results to differ materially. Such statements include comments regarding: production, cash operating cost, all-in sustaining cost and capital expenditure guidance for 2017; the potential expansion of production at Wassa Underground; the timing for the release of further drilling results from Wassa Underground; the targeted 2017 mining rate at Wassa Underground;; the ability to conduct additional drilling at Wassa Underground and the timing for completion thereof; the impact on grade as mining operations move further into B Shoot; the potential drilling targets in 2017; the impact of Wassa Underground and Prestea Underground on the Company's production profile, cost profile, cash operating cost per ounce and AISC per ounce; the ability to mine via longitudinal stoping and transverse stoping at B Shoot at Wassa Underground and the timing and impact thereof; the achievement of 2017 production; the ability to expand Mineral Reserves and Mineral Resources and extend the life of mine at Prestea Underground and Wassa Underground through exploration; and the timing for incurring 2017 capital expenditures. Factors that could cause actual results to differ materially include timing of and unexpected events at the Prestea and/or the Wassa processing plants; variations in ore grade, tonnes mined, crushed or milled; delay or failure to receive board or government approvals and permits; construction delays; the availability and cost of electrical power; timing and availability of external financing on acceptable terms or at all; technical, permitting, mining or processing issues, including difficulties in establishing the infrastructure for Wassa Underground or Prestea Underground, inconsistent power supplies, plant and/or equipment failures and an inability to obtain supplies and materials on reasonable terms (including pricing) or at all; changes in U.S. and Canadian securities markets; heavy rainfall and flooding of underground mines; and fluctuations in gold price and input costs and general economic conditions. There can be no assurance that future developments affecting the Company will be those anticipated by management. Please refer to the discussion of these and other factors in our Annual Information Form for the year ended December 31, 2016 filed on SEDAR at www.sedar.com. The forecasts contained in this presentation constitute management's current estimates, as of the date of this presentation, with respect to the matters covered thereby. We expect that these estimates will change as new information is received and that actual results will vary from these estimates, possibly by material amounts. While we may elect to update these estimates at any time, we do not undertake to update any estimate at any particular time or in response to any particular event. Investors and others should not assume that any forecasts in this presentation represent management's estimate as of any date other than the date of this presentation.

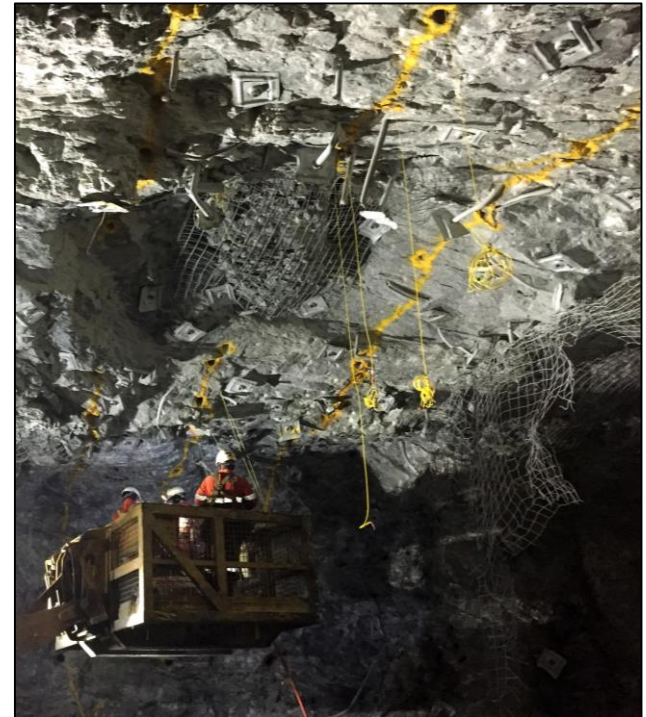
NON-GAAP FINANCIAL MEASURES: In this presentation, we use the terms "cash operating cost per ounce", "All-In Sustaining Cost per ounce", "AISC per ounce", "Adjusted Net Income", "Adjusted Net Income/Share", "Cash operating margin per ounce" and "Cash Flow from operations before working capital changes". 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. 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 Income" and "Adjusted Net Income per share" to supplement the condensed interim consolidated financial statements. "Cash operating margin per ounce" is calculated as gold price minus cash operating cost per ounce. "Cash flow from operations before working capital changes" is calculated by subtracting the "Changes in working capital" from "Net cash provided by operating activities" as found in the statements of cash flows. These measures are not necessarily indicative of operating profit or cash flow from operations as would be determined under IFRS. Changes in numerous factors including, but not limited to, mining rates, milling rates, gold grade, gold recovery, and the costs of labor, consumables and mine site general and administrative activities can cause these measures to increase or decrease. We believe that these measures are the same or similar to the measures of other gold mining companies, but may not be comparable to similarly titled measures in every instance. Please see our "Management's Discussion and Analysis of Financial Condition and Results of Operations for the three and six months ended June 30, 2017" for a reconciliation of these Non-GAAP measures to the nearest IFRS measure.

INFORMATION: The information contained in this presentation has been obtained by Golden Star from its own records and from other sources deemed reliable, however no representation or warranty is made as to its accuracy or completeness. The technical information relating to Golden Star's material properties disclosed herein is based upon technical reports prepared and filed pursuant to National Instrument 43-101 - Standards of Disclosure for Mineral Projects ("NI 43-101") and other publicly available information regarding the Company, including the following: (i) "NI 43-101 Technical Report on a Feasibility Study of the Wassa Open Pit Mine and Underground Project in Ghana" effective December 31, 2014; (ii) "NI 43-101 Technical Report on Resources and Reserves, Golden Star Resources 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 3, 2015. Additional information is included in Golden Star's Annual Information Form for the year ended December 31, 2016 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.

Wassa Gold Mine: Overview

- Open pit and underground mine - GSR commenced pit production in 2005 and underground in Q1 2017
- Mineral Reserves of 1.3Moz - strong Inferred conversion potential
- 2.7 Mtpa carbon-in-leach plant - conventional processing method with robust recovery rate of 94%
- Currently mining and processing 5,200 tonnes per day from Wassa Main pit and 2,200t per day from Wassa Underground
- Underground-only production in 2018 focusing on high margin ounces at 2,700 to 3,000 tonnes per day
- Decision taken to defer Cut 3 of Wassa Main Pit



Reducing risk and fast-tracking cash flow

Wassa: Q3 2017 Highlights



**42% increase in gold
production compared to
Q3 2016**

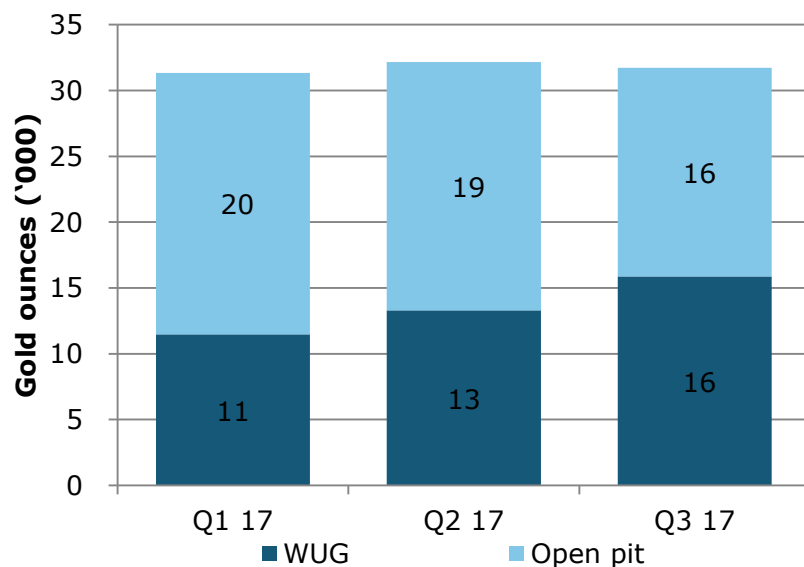


**23% decrease in cash
operating cost per ounce¹
compared to Q3 2016**

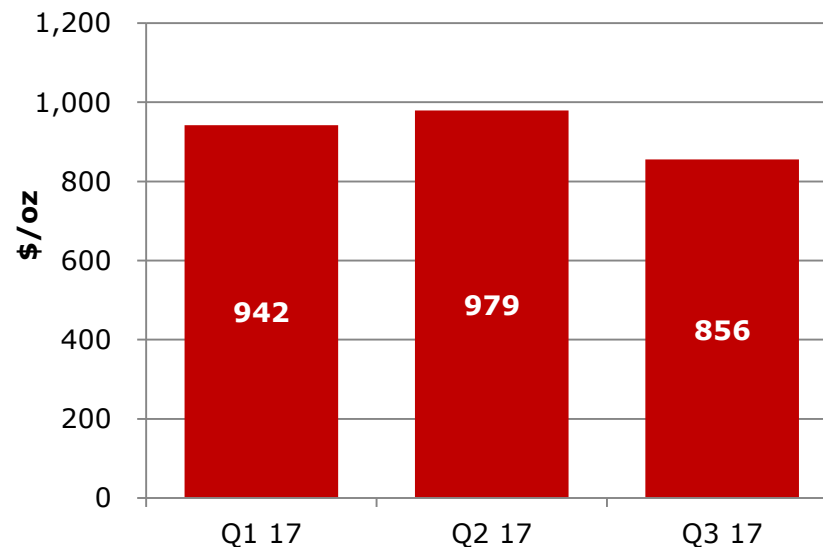
- Total production from Wassa of 31,724oz in Q3 2017 and 95,233oz in first 9 months of 2017
- Wassa's cash operating cost¹ in Q3 2017 was \$856/oz, a 13% decrease compared to Q2 2017 (\$979/oz)
- Production from Wassa Underground of 15,877oz in Q3 2017, a 19% increase compared to Q2 2017
- Wassa Underground's production accounted for 50% of Wassa's gold production in Q3, compared to 41% in Q2 2017 – underground continued to ramp up
- Wassa Underground's mining efficiency has increased by 38% from a rate of 1,600 tpd in Q2 2017 to over 2,200tpd in Q3 2017

First 9 Months of 2017: Operating Results

Wassa 2017 Gold Production



Wassa 2017 Cash Operating Cost Per Ounce¹



Production

First 9 months of 2017: 95Koz
2017 Guidance: 135-150Koz

Cash Operating Cost¹

First 9 months of 2017: \$926/oz
2017 Guidance: \$880-935/oz

Wassa: Mineral Reserves and Resources

MINERAL RESERVES	Dec 31, 2016 Proven and Probable Mineral Reserve		
	Tonnes	Grade	Ounces
Wassa Main Pit	11,264,000	1.56	565,000
Wassa Underground	5,477,000	4.21	742,000
Stockpiles	695,000	0.96	21,000
WASSA TOTAL	17,436,000	2.37	1,328,000

MINERAL RESOURCES	Dec 31, 2016 Measured and Indicated Resources		
	Tonnes	Grade	Ounces
Wassa Main Pit	27,500,000	1.43	1,265,000
Wassa Underground	13,499,000	3.82	1,656,000
Wassa Other	3,348,000	3.78	407,000
WASSA TOTAL	44,347,000	2.33	3,328,000

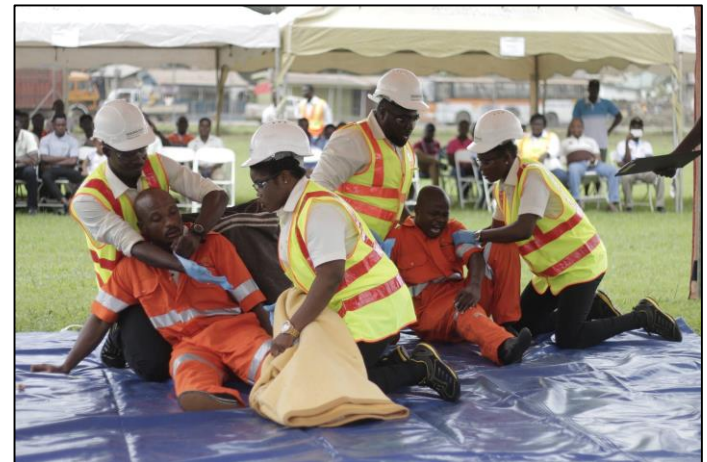
Operational Successes

- Production from Wassa Underground is stabilizing and will improve as the new fleet becomes available early in 2018
- The “Continuous Improvement Programme” has been implemented encompassing the entire mine staff
- Decision has been taken to defer Cut 3 of Wassa Main Pit and to focus on higher margin, underground production from early 2018 onwards



A Strong Safety Culture

- LTI Free Days: 150 days
- LTI Free man-hours: 2.8 million
- Won the following awards at 2017 Safety and First Aid competition:
 - Best Mine team at the Zone 1 Safety & First Aid Competition
 - Best community team at the Zone 1 Safety & First Aid Competition
- Weekly “Walk the Talk” intervention by management; out of 740 issues identified during the year-to-date, 520 have been addressed with proposed actions completed
- Mine rescue training gallery, with design considerations based on Wassa and Prestea Underground settings, is complete and will serve both mine rescue teams



Wassa's award winning safety and first aid team

GEOLOGY

BSD295D1 BOX 55

BSD295D1 BOX 53

BSD295D1 BOX 51

SD295D1 BOX 37

SD295D1 BOX 38

BSD295

BSD295

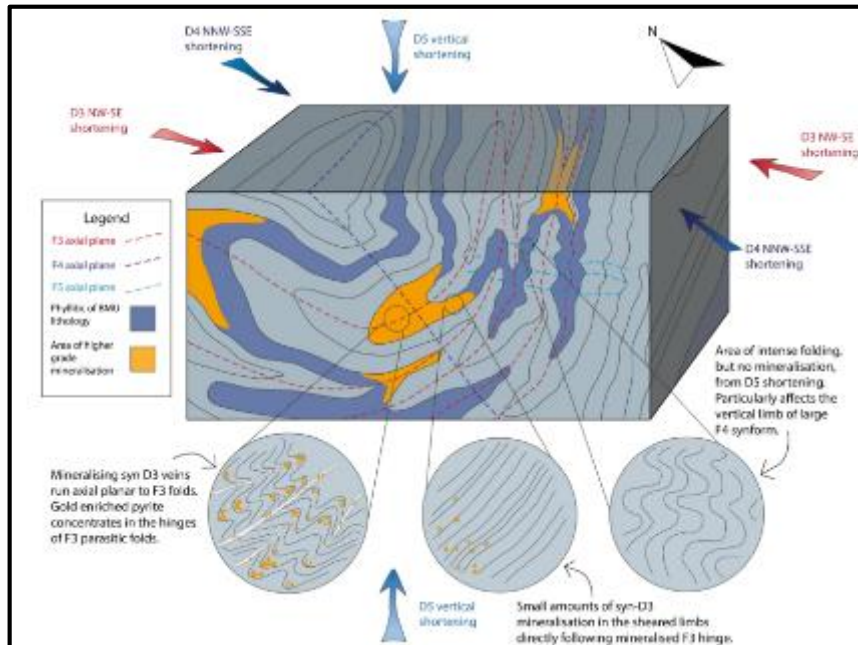
BSD295

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Wassa Geology



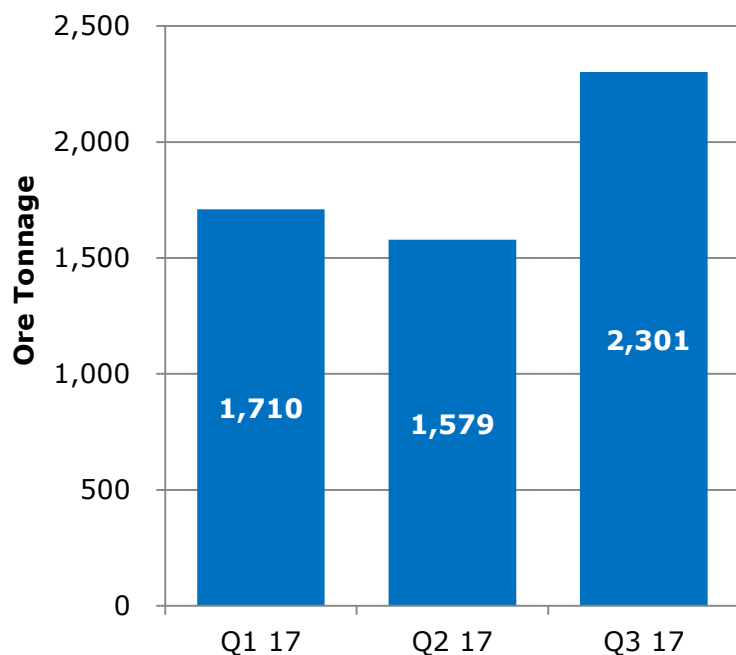
- The Wassa Gold deposit is hosted in Birimian meta sedimentary and volcanic rocks
- Dating has shown it is the oldest deposit in the Ashanti Belt
- Initial gold mineralization has been affected by two major folding events which controls current geometry of ore bodies
- Gold has been remobilized during the first tight folding event and it is these higher grade fold closures which are being mined underground

WASSA UNDERGROUND



Wassa Underground: Current Status

Wassa Underground: Average mining rate per day achieved



- Commercial production commenced on January 1, 2017
- Total development advance: 4,309m (2017 YTD plus Q4 2017 forecast)
- 2017 production guidance: 70-80,000oz
- Production from F Shoot completed
- Mining rates have been better than expected - target of 1,400 tpd for 2017 but actual rate of over 1,800 tpd in first 9 months of the year
- Targeting 2,700-3,000tpd in 2018 as an underground-only operation
- The upper portion of the B Shoot is being mined and definition drilling for next phase is in progress

Wassa Underground Growth Opportunities

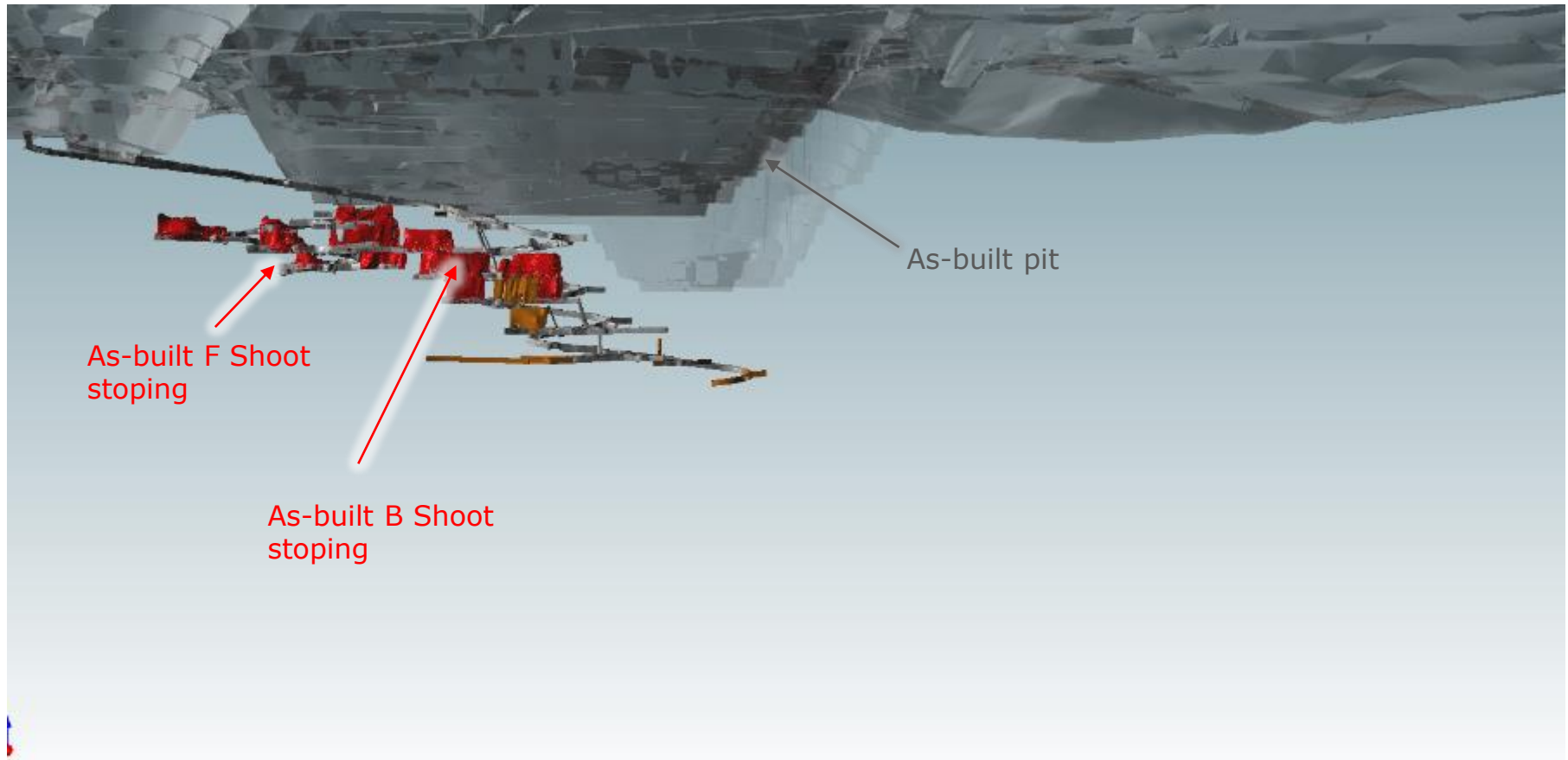
- Higher grade ore in the underground mine (B Shoot) is now being exposed and will be realized in production results in Q4 2017
- Potential to expand production further through:
 - Exploration upside – Inferred Mineral Resources of 1.9Moz (14.5Mt at 4.16 g/t Au)
 - Encouraging results down dip of the current underground workings and the ore body remains open at depth
 - Fully utilizing capacity of infrastructure – excess plant capacity and decline capacity



Potential to optimize production and reduce costs through the transition to a higher grade, underground-only operation

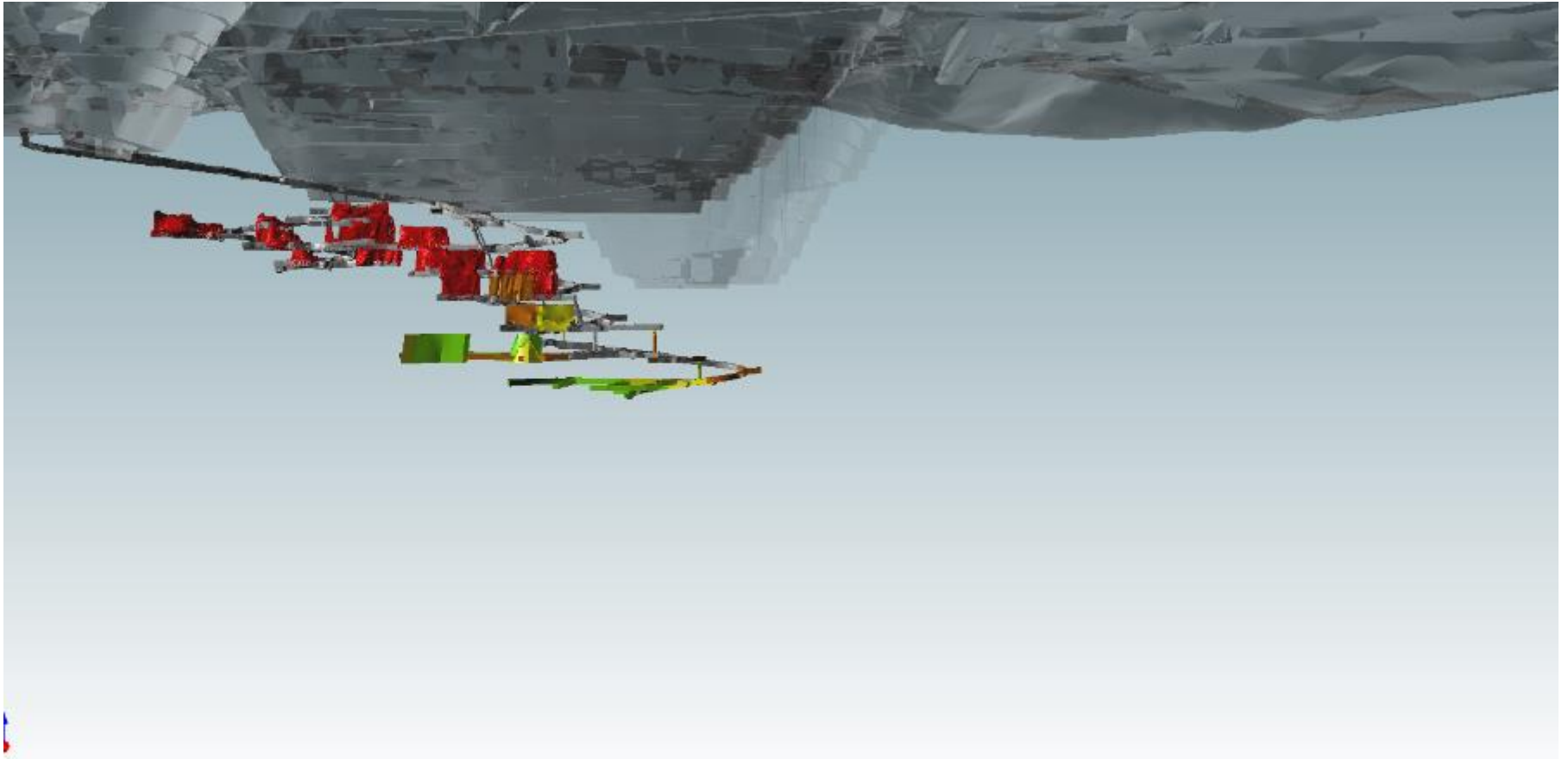
Wassa Underground Mine

Current development and stoping



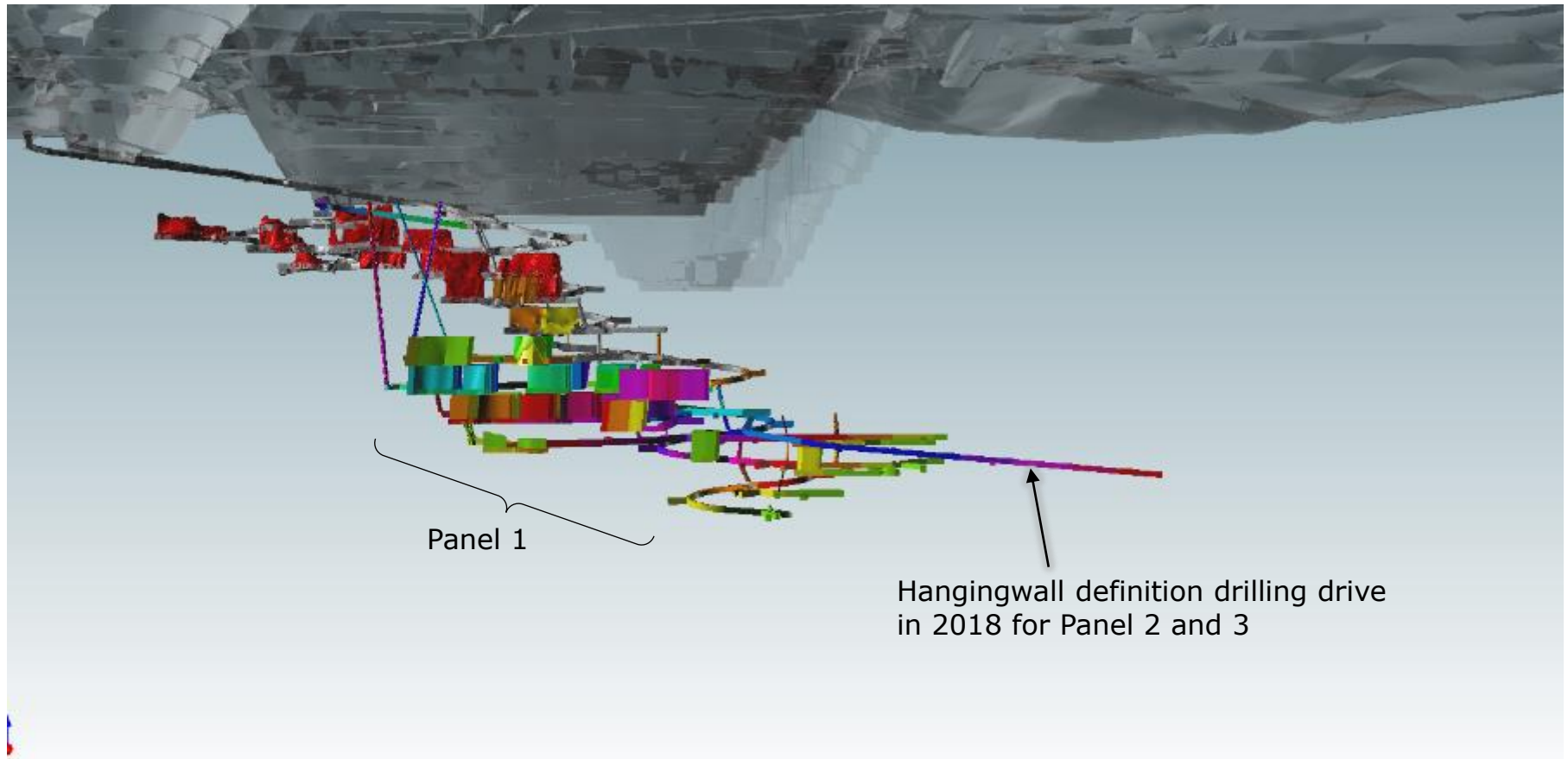
Wassa Underground Mine

Dec 2017



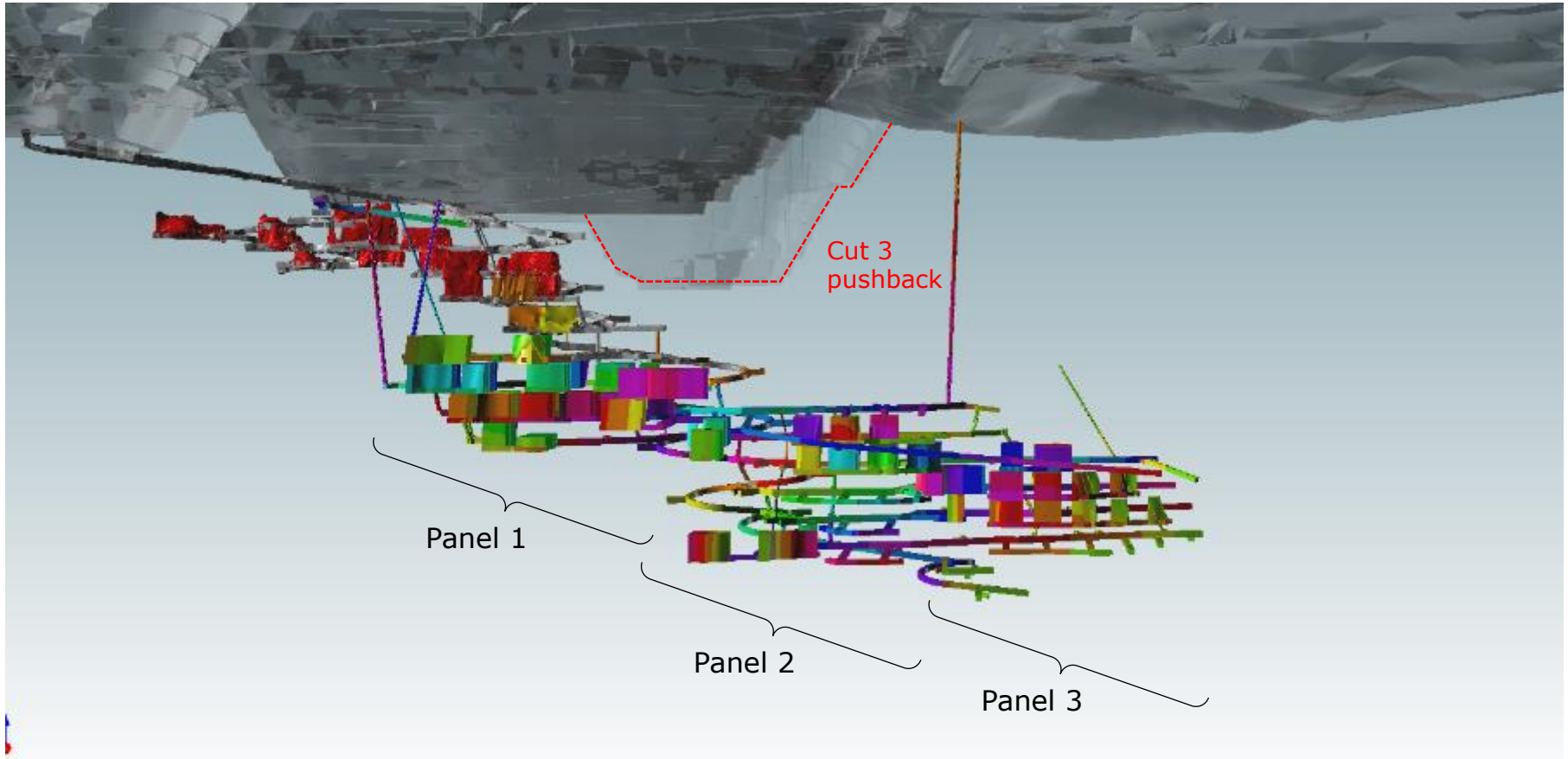
Wassa Underground Mine

Dec 2018



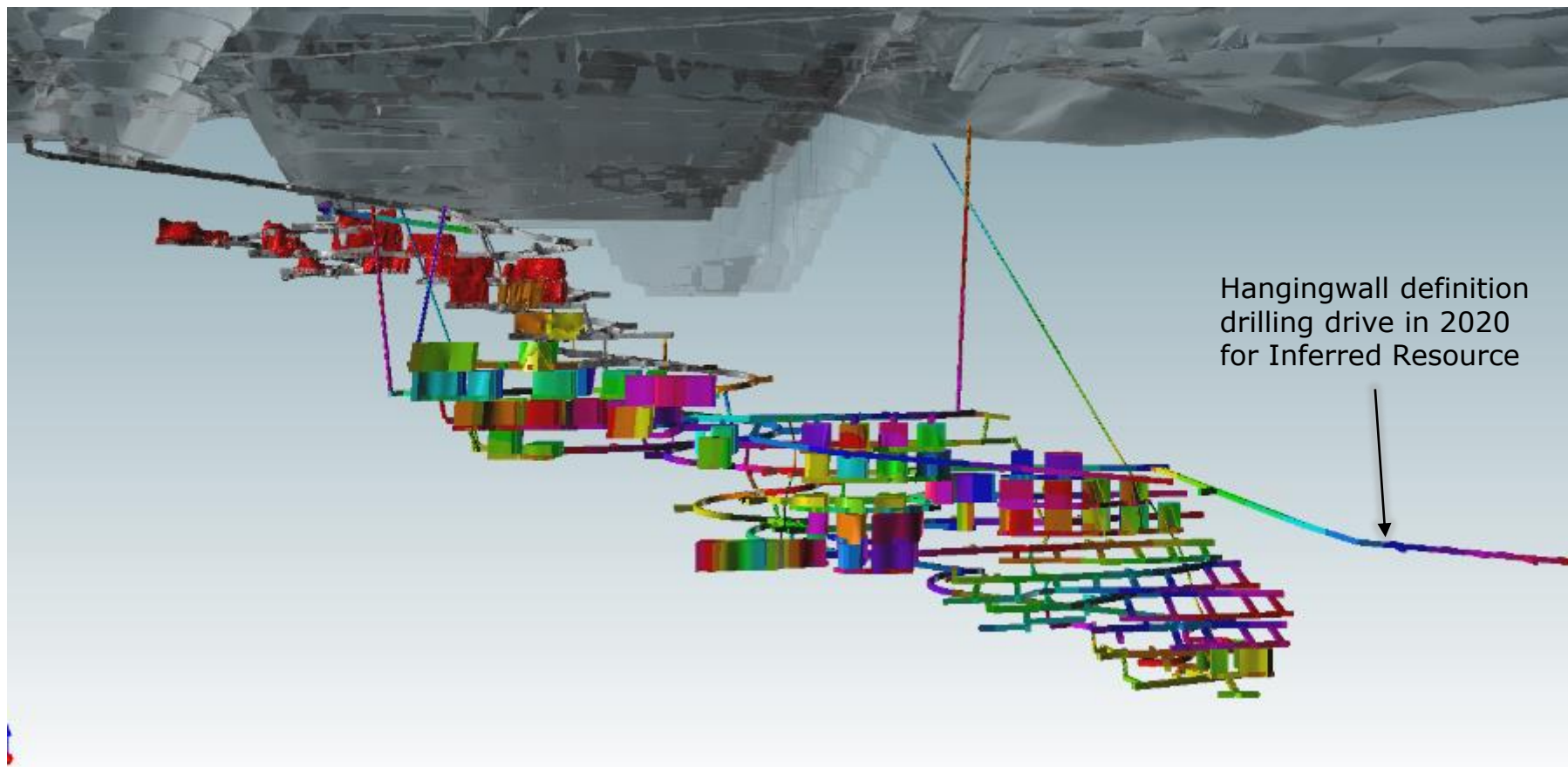
Wassa Underground Mine

Dec 2019



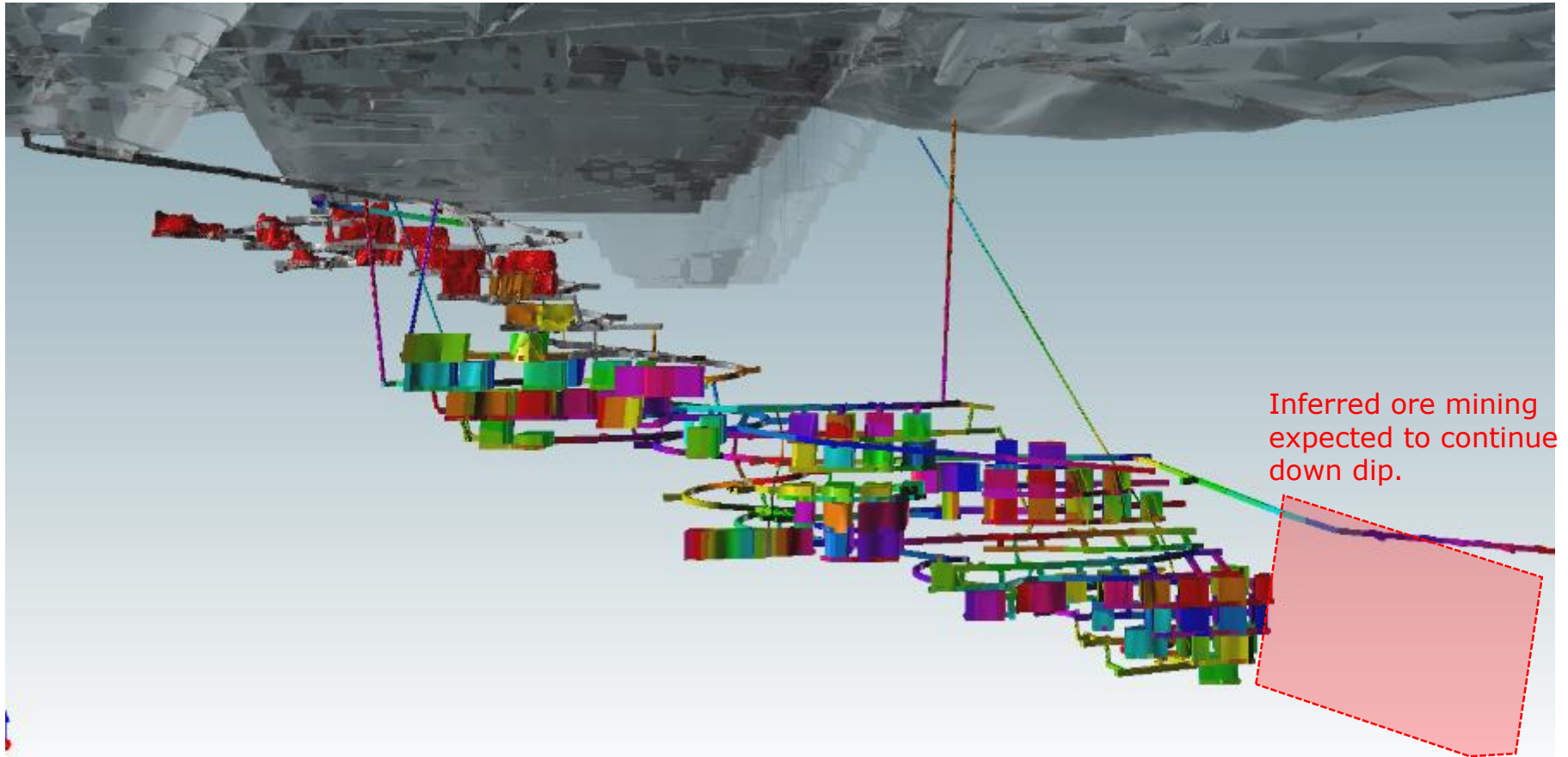
Wassa Underground Mine

Dec 2020



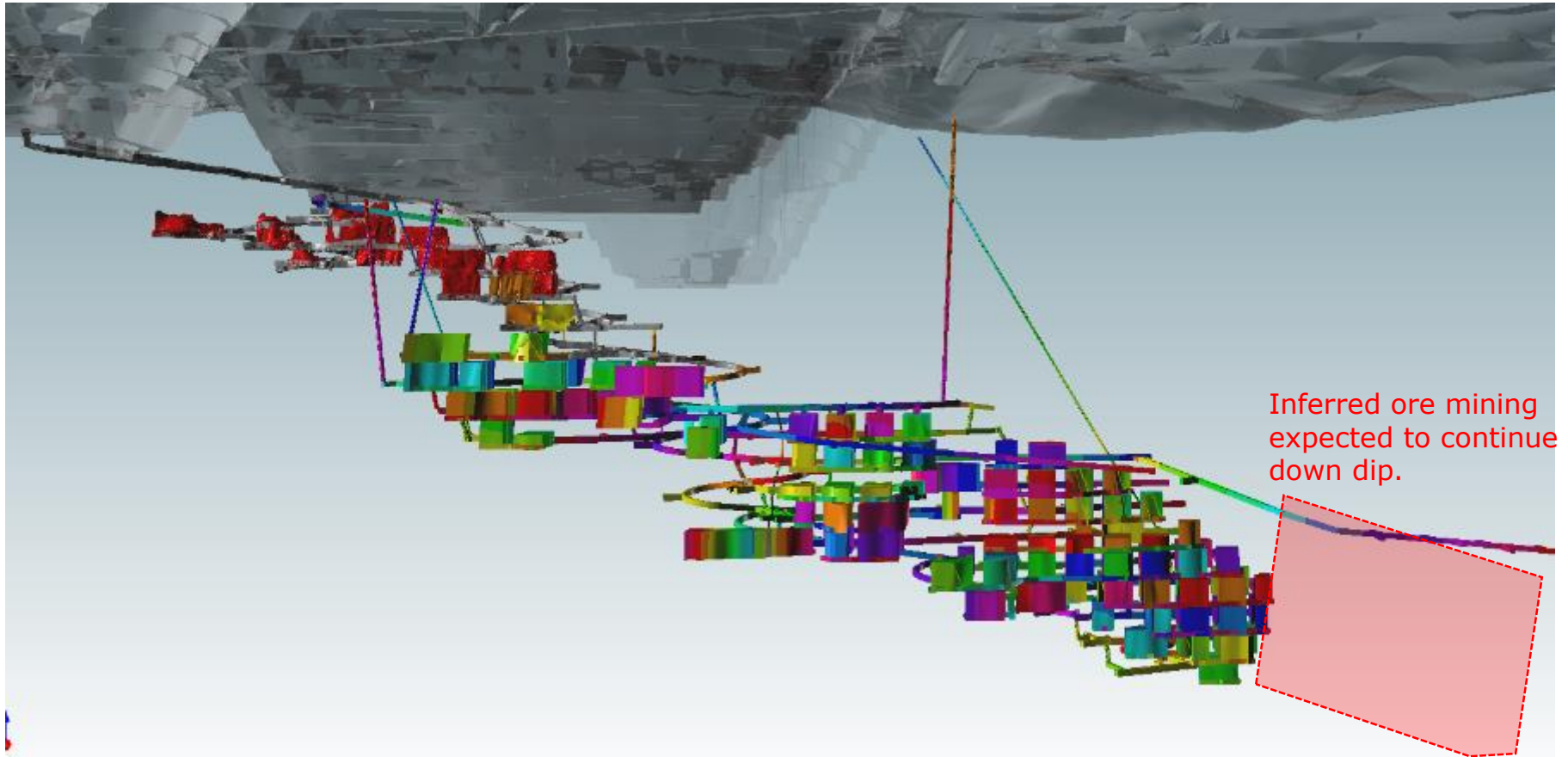
Wassa Underground Mine

Dec 2021



Wassa Underground Mine

Dec 2022



Planned Expansion of Mining Fleet

Larger mining fleet is expected to allow 2,700-3,000 tpd to be achieved consistently

- 4 Volvo Trucks have arrived in Ghana and are on site being commissioned by Volvo Specialist
- Additional Solo longhole stope drill on site and being commissioned
- Additional Loader R2900G expected on site in mid-January 2018



Planned Infrastructure Upgrades

Upgrades being implemented to allow for a future mining rate of 4,000 tpd from existing decline

- Raise bore ventilation holing in B Shoot pit is expected to be implemented in Q1 2018
- Raise bore waste passes to supply waste for stope support are expected to be put in place in Q1 2018
- Second portal expected to be completed by Q2 2018
- Paste fill being evaluated as the preferred stope support for Panel 2 and below - this will enable 4,000 tpd to be mined from underground



WASSA MAIN PIT



Wassa Main Pit

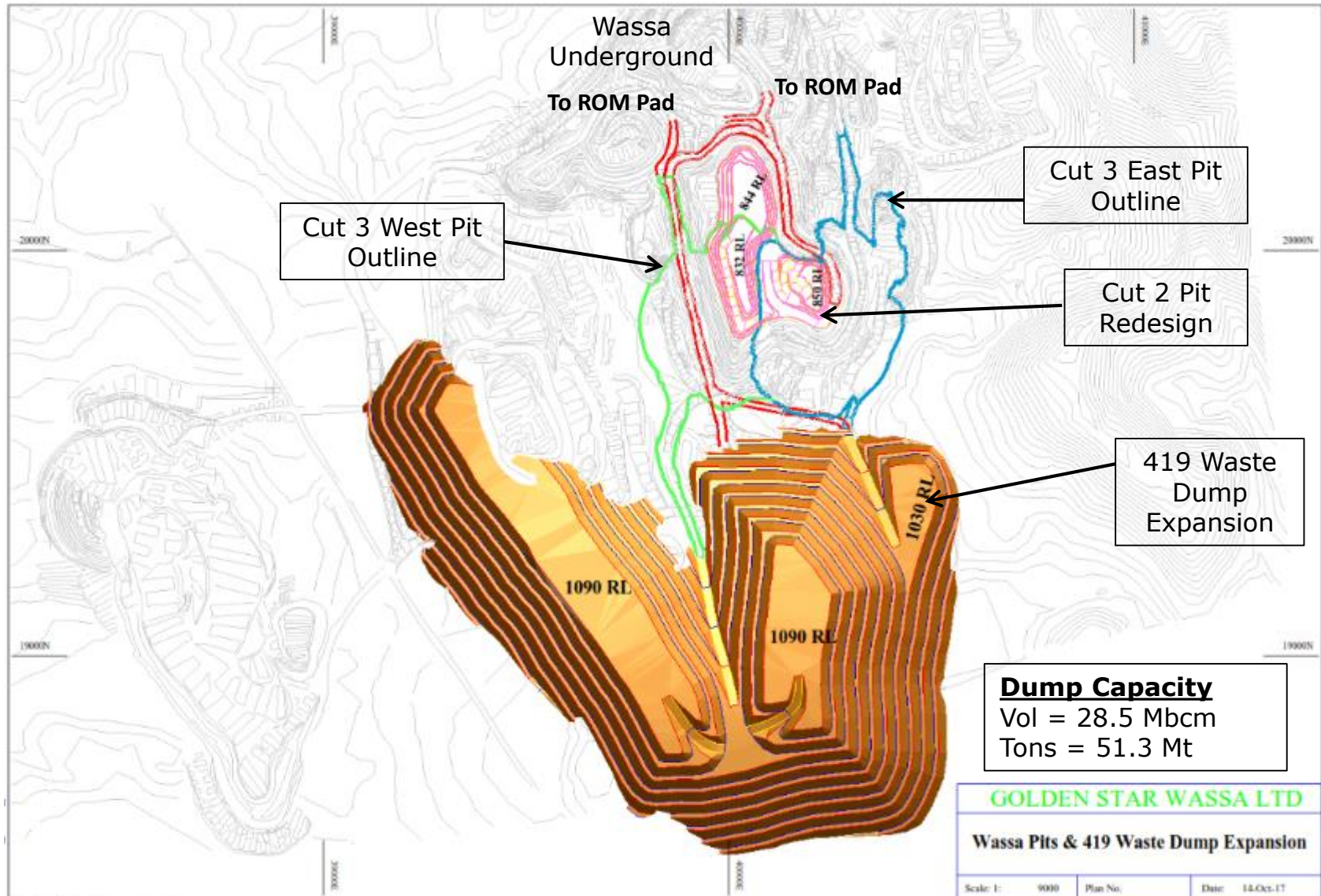
- Conventional bench mining
- Production of 55Koz from Wassa Main Pit in first 9 months of 2017
- Cut 2 will finish in December 2017 and Cut has been deferred

Open Pit Fleet

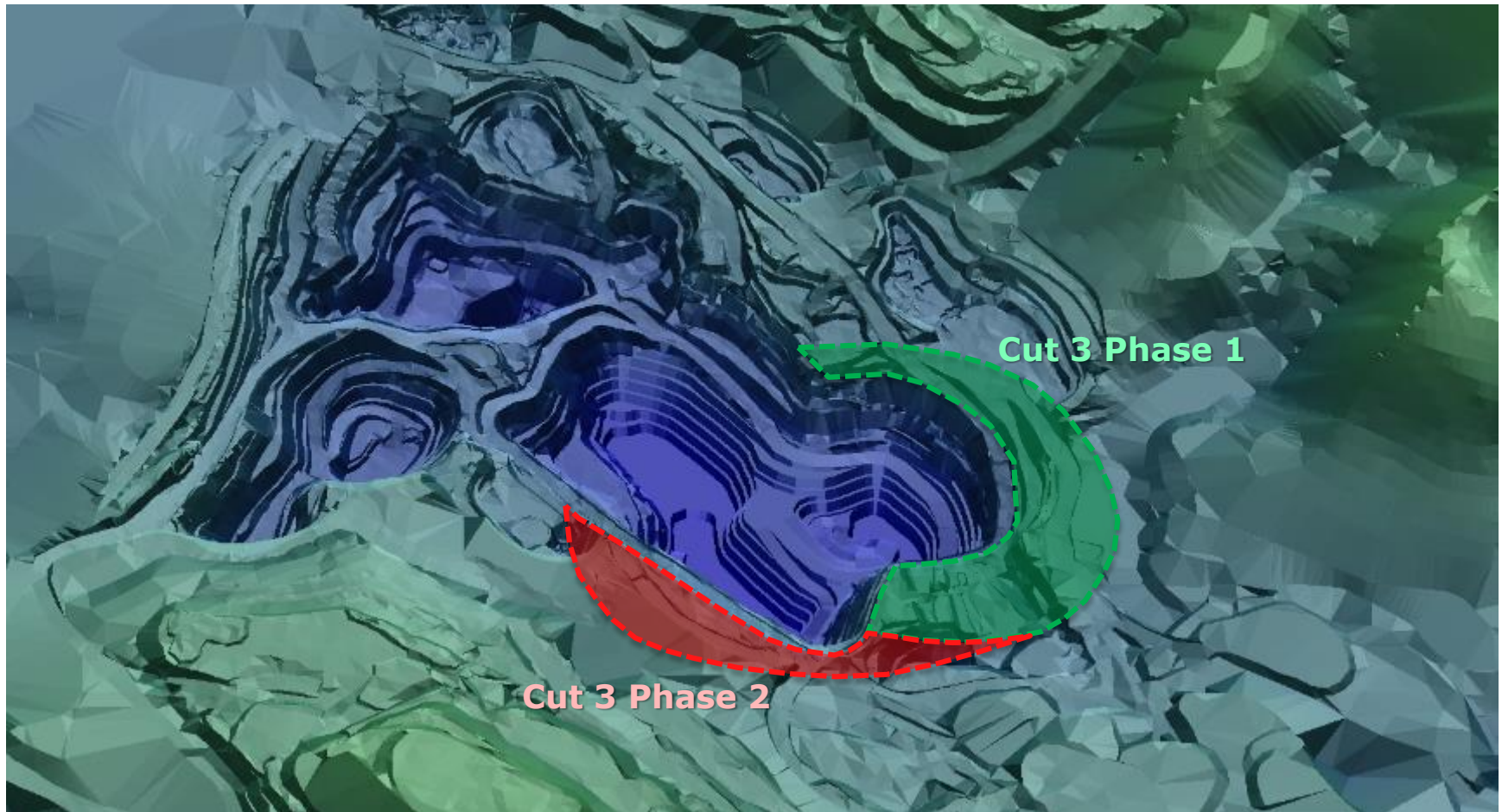
- 3 Liebherr 984 Backhoe excavators
- 10 CAT 777 Trucks
- 3 CAT D9 dozers
- 4 Production rigs, 2 Sandvik and 2 Atlas Copco
- Fleet capacity ~650,000 tonnes per month



Wassa Main Pit & Waste Dump



Wassa Main Pit: Deferred Cut 3 Pushback



Decision taken to defer the Cut 3 pushback until a time when the gold price is higher

PROCESSING PLANT



Recovery: 94%
Throughput: 7,600t/day
Mill availability: 95%

The diagram illustrates the material flow from raw ore to final products. Key components include:

- Raw Material Handling:** ROM Bin, Apron feeder, Vibrating Grizzly, Single toggle Jaw Crusher.
- Crushing & Screening:** Secondary Screen, Secondary cone Crusher, Tertiary bin, Tertiary cone Crushers X2, Tertiary Screens X2, Quaternary bin, Quaternary cone Crushers X4.
- Grinding & Classification:** Ball mill 1, Ball mill 2, Sump 1, Sump 2, Primary Cyclone cluster 1, Primary Cyclone cluster 2, Secondary Cyclone cluster 1, Secondary Cyclone cluster 2.
- Thickening & Filtration:** Pre-leach High rate Thickener, Thickener overflow tank, Shaking table, Splitter box, Knelson conc 1, Knelson conc 2.
- Carbon Processing:** Carbon Safety Screen, Tails Autosampler, Sump 6, Carbon basket, CIL tanks, Regeneration Kiln, Barren carbon hopper, Quench carbon screen.
- Electrowinning & Refining:** Elution column, Strip solution tank, Electrowinning cell (3x), Caline oven (2x), Induction furnace, Bullion bars.
- Waste Management:** Trash screen, Trash material, Storage facility.

The flow is controlled by various valves (CV01 to CV17) and weightometers (CV12, CV13, CV10).

2017 EXPLORATION



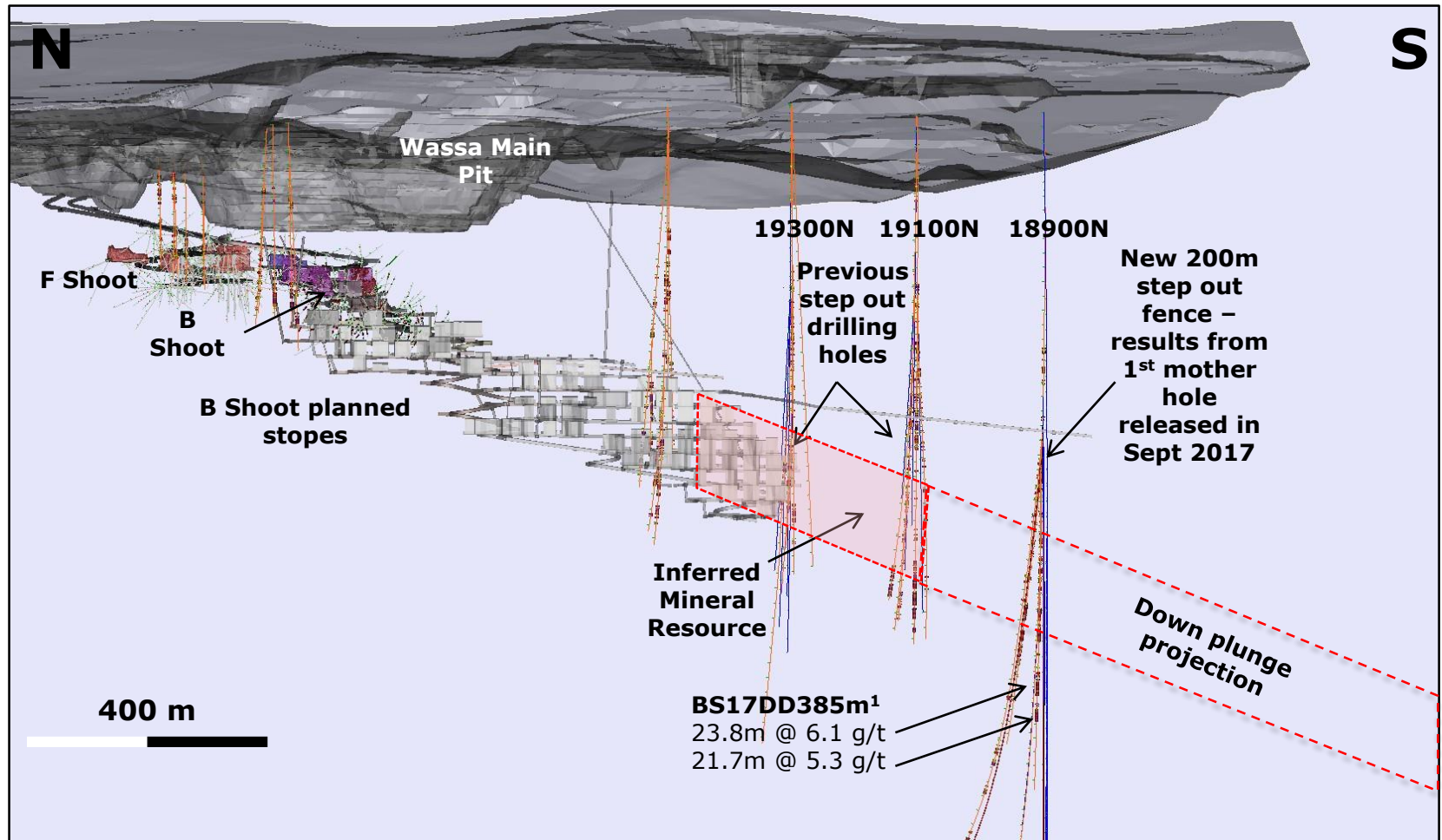
Wassa Underground Extended Through Step Out Drilling

Latest drilling results confirm high grade B Shoot extends to the north and south and remains open in both directions

WASSA UNDERGROUND				
HOLE ID	From (m)	To (m)	Drilled Width (m)	Grade Au (g/t)
B Shoot North				
BS17DD002	294.0	309.0	15.0	18.9
BS17DD002	300.0	302.0	2.0	91.8
BS17DD003	289.9	314.0	24.1	7.3
B Shoot South				
BS17DD385M	1001.0	1024.8	23.8	6.1
BS17DD385M	1018.0	1020.0	2.0	20.2
BS17DD385M	1049.3	1071.0	21.7	5.3

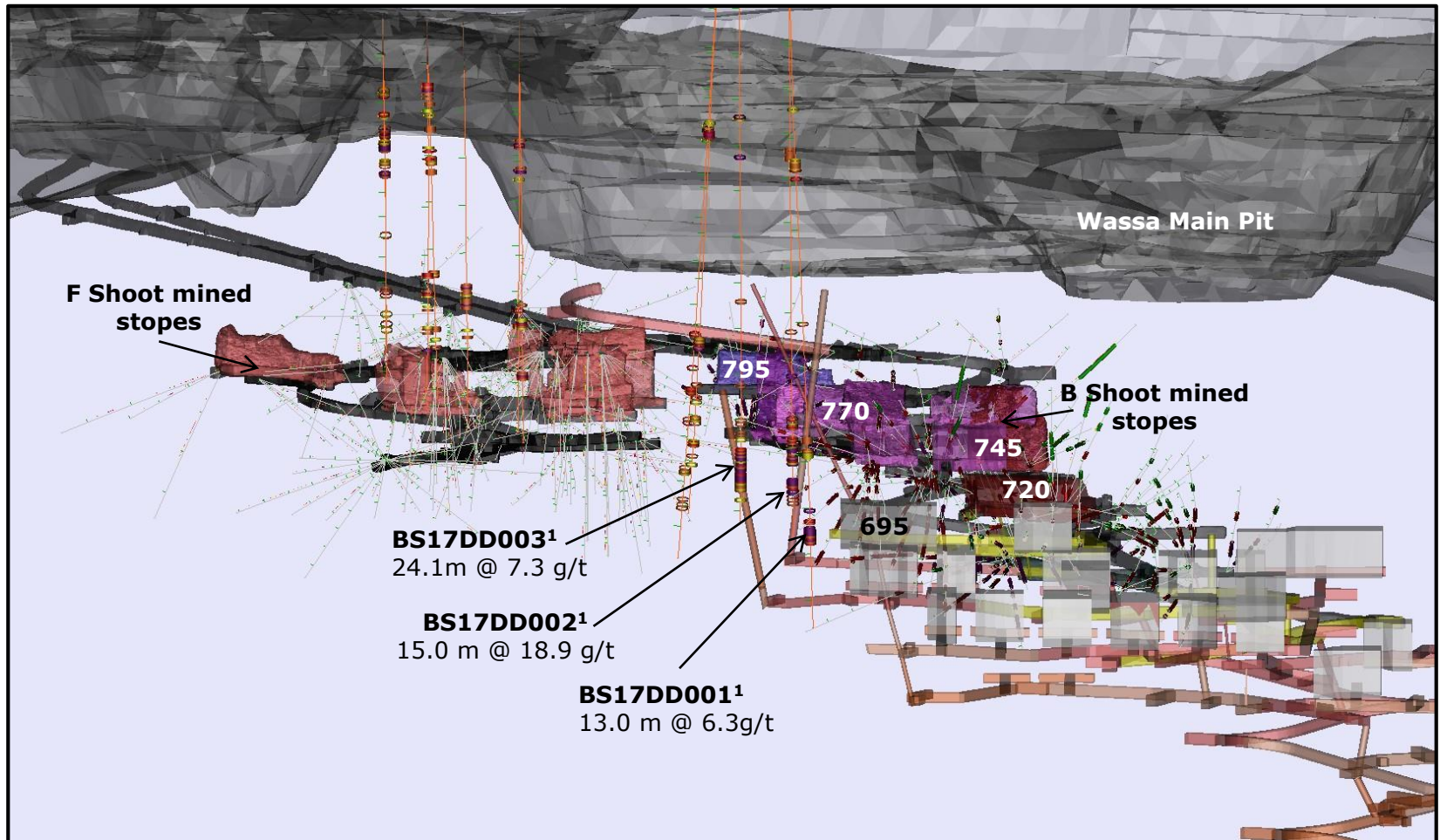
- Results confirm B Shoot extends approximately 50m to the north of current planned stoping area and 200m to the south of Wassa's Inferred Mineral Resources
- Indicates that Wassa is a larger deposit than previously estimated - potential to expand production in the short term and longer term
- B Shoot South drilling will comprise 7,000m in total and B Shoot North comprised 4,164m
- Further drilling results expected from Wassa Underground during Q4 2017
- First exploration program at Wassa Underground since 2014

B Shoot South: Ore Body Remains Open Down Plunge



- Encouraging results from first mother hole of B Shoot South step out hole; however further results needed to gain comprehensive understanding of the ore body's extension

B Shoot North: Potential To Increase Near-Term Production




- 2017 surface drilling has identified further near term, potential stopes directly to the north of the 720 and 695 Levels - possibility to extend stopes 20-30 metres in this direction

Conclusion



Wassa Gold Mine: Summary

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- Focusing on optimizing the mine to maximize margin and cash flow generation
 - Continuing to improve the understanding of the ore body with increasing depth
 - Cut 3 delayed to focus on higher grade, higher margin underground ounces
 - Driving continuous improvement
 - Ensuring that the upgraded underground fleet is fully utilized to achieve a mining rate of 2,700-3,000 tpd in 2018
 - Higher grade underground production ensures mine remains robust to sensitivities of gold price, grade and tonnage