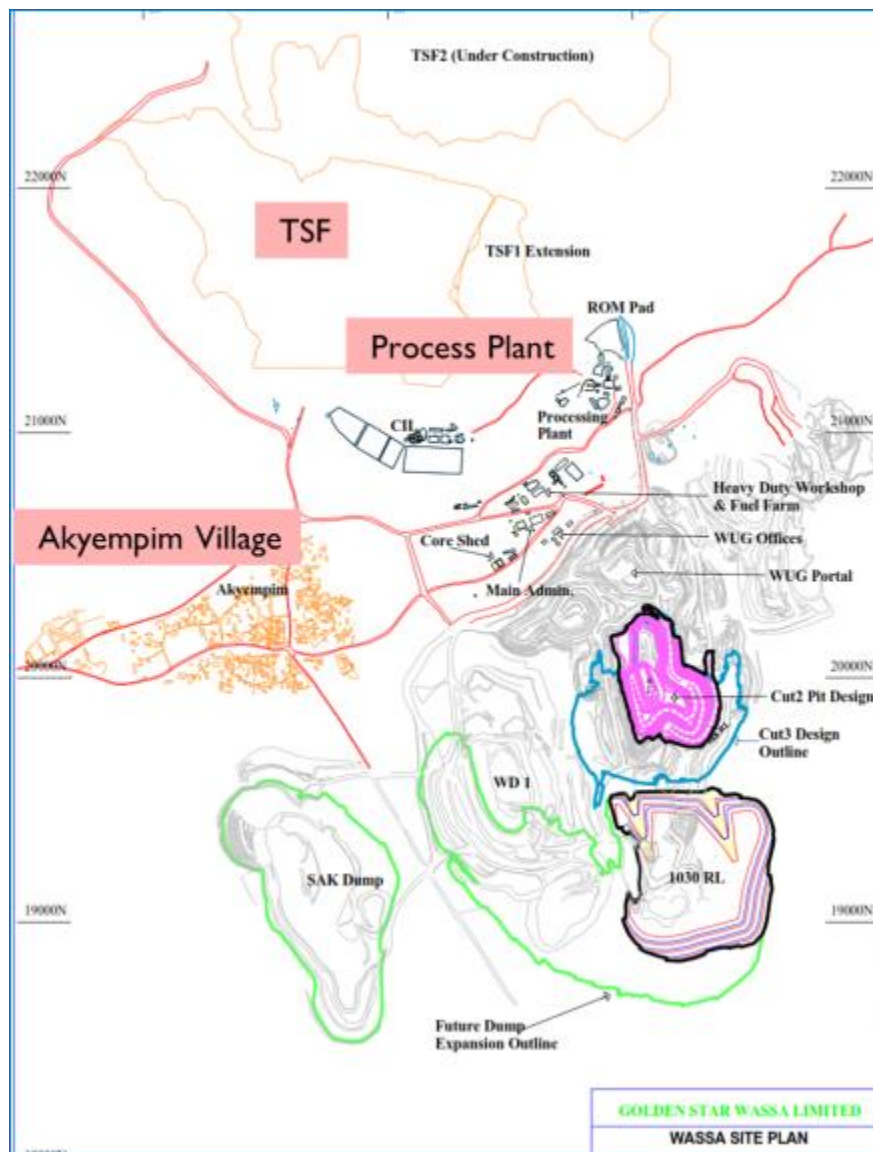


Expanding Production and Reducing Costs

**WASSA
OPERATIONS
SITE VISIT
NOVEMBER 2016**

Site Locality



WUG Portal

Wassa Main Pit

419 Dump Phase-1

419 Dump Phase-2

Safety

- LTI Free Days -100 days
- LTI Free man-hours - 2 million
- Total Injury free days- 32 days
- Won the Zone 1 Safety and First Aid competition for 2016
- A total of 45 near misses have been reported out of which 31 have been corrected

Underground achieved a record of 200 total injury free days

Wassa: A New Man's Perspective

- Mine is well advanced in the transformation from open pit to open pit and underground
- The underground mine is an innovative method of exploiting the depth extension of the B Shoot, accelerating cash flow to extend the life of mine profitably
- Having two totally different mining methods minimizes risk. The underground conditions are particularly, good some of the best I have seen
- The advantage of having a metallurgically innocuous orebody from which the mill is capable of extracting the gold, having been upgraded earlier this year

Wassa: A New Man's Perspective

- The B shoot is particularly interesting having the ability to move from longitudinal stopes to transverse stoping, the latter has the potential to be a tonnage factory
- The team on site is competent and management is strong. They want to achieve but need to focus on the essentials
- Community relations are good

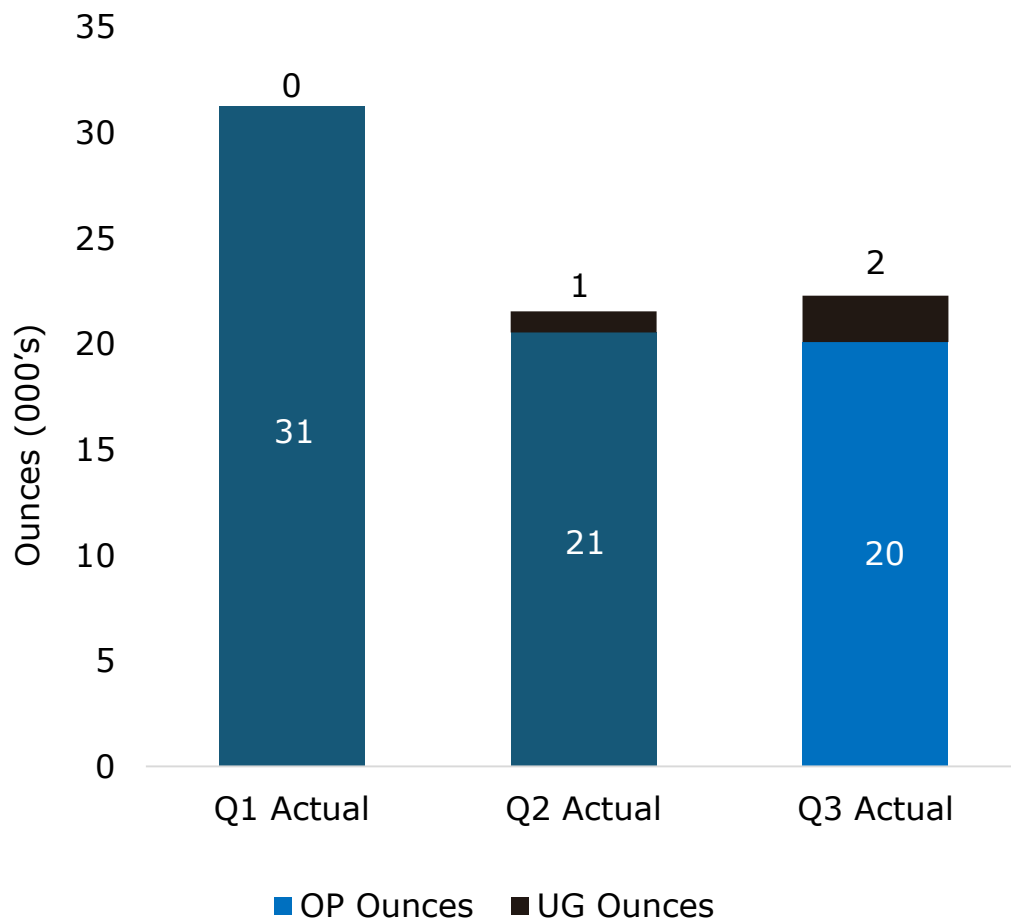
A small mine that has the ability to punch well above its weight

2016 PRODUCTION STATISTICS



2016 Gold Production Per Stream

Wassa Processing By Stream - 2016 Actual/Q4 Forecast



Guidance

Total: 100 – 112 koz

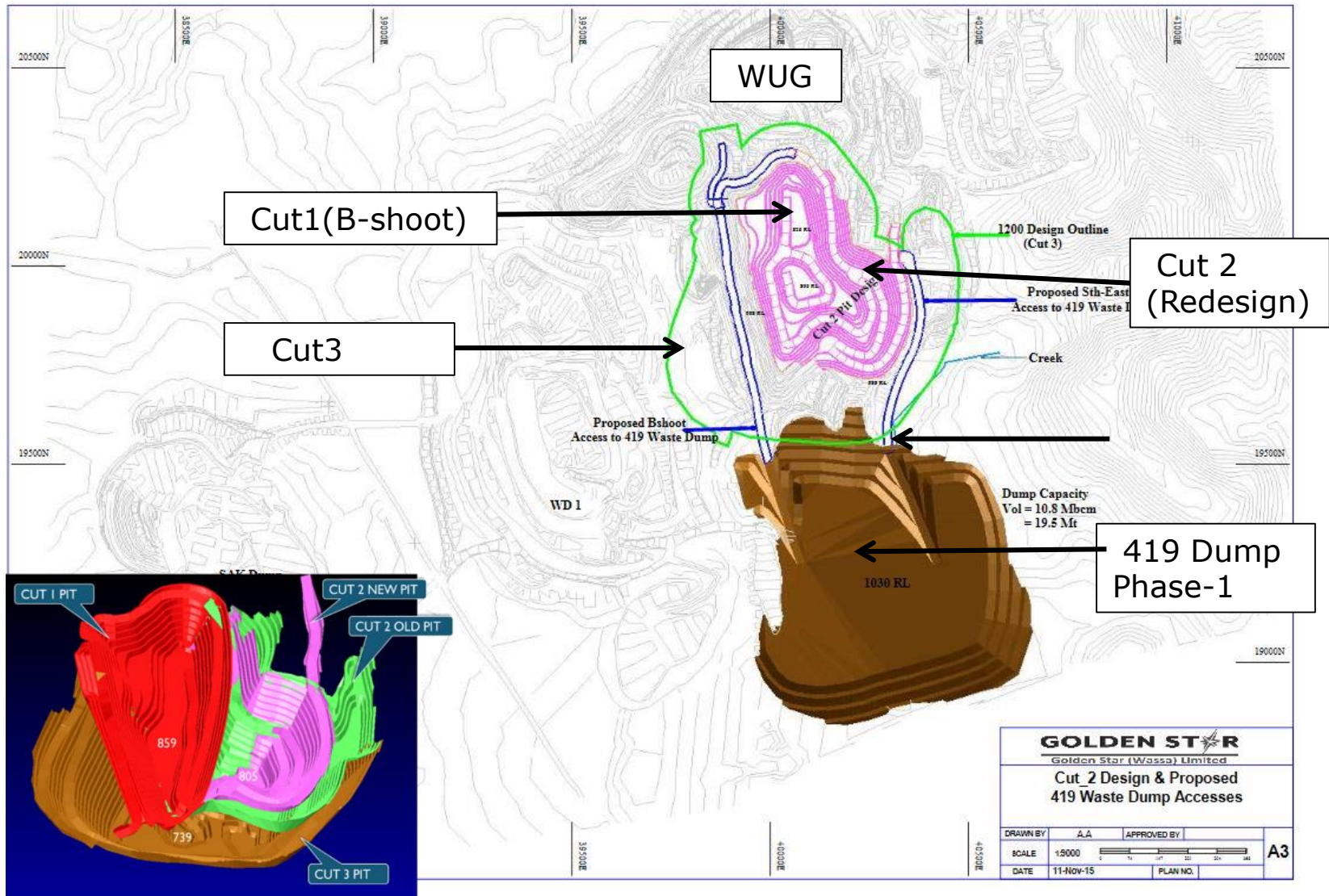
Including

Underground: 11 – 15koz

WASSA OPEN PIT MINING SCHEDULE (CUTS 2 & 3)



Cut 3

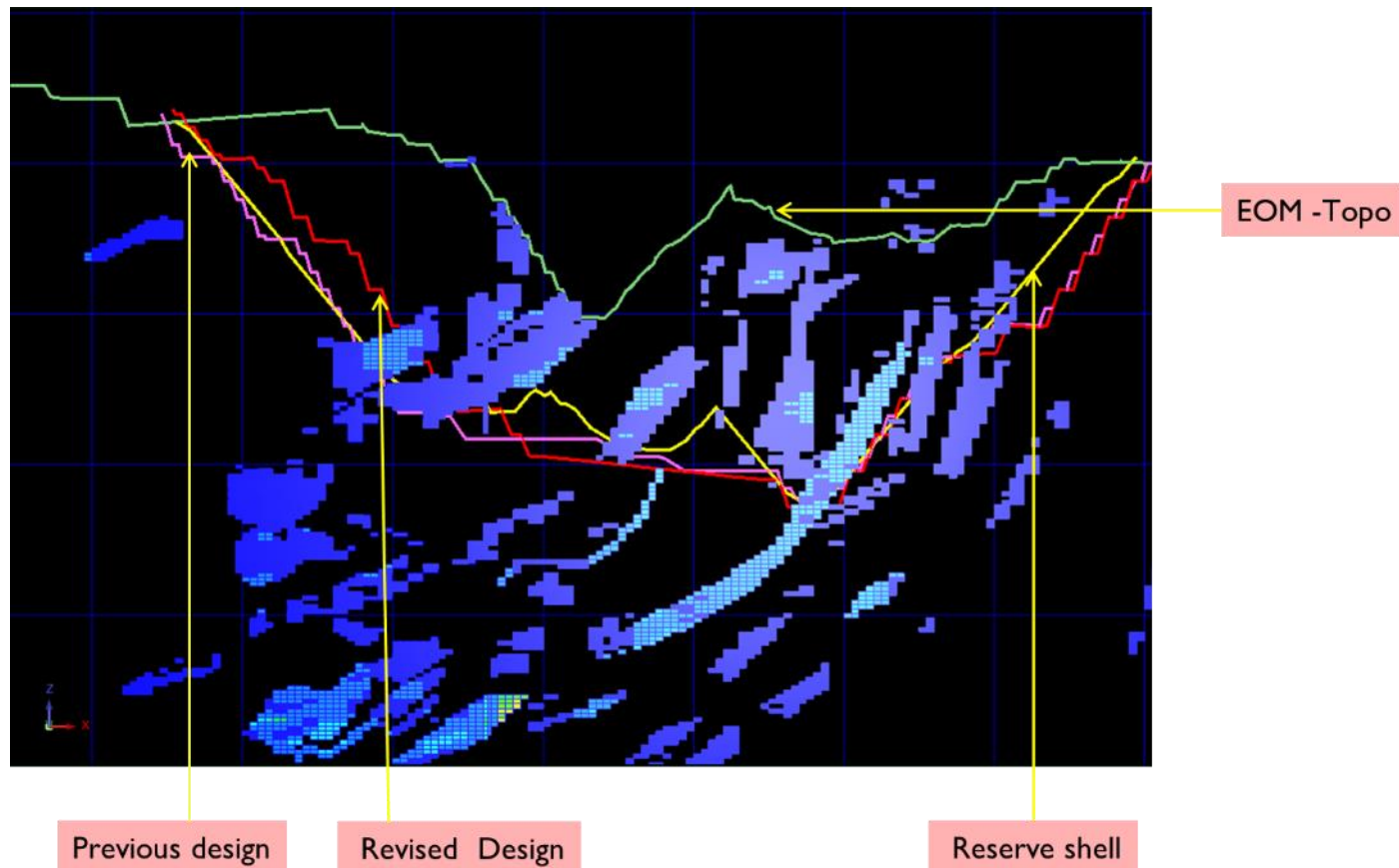


Open Pit Fleet

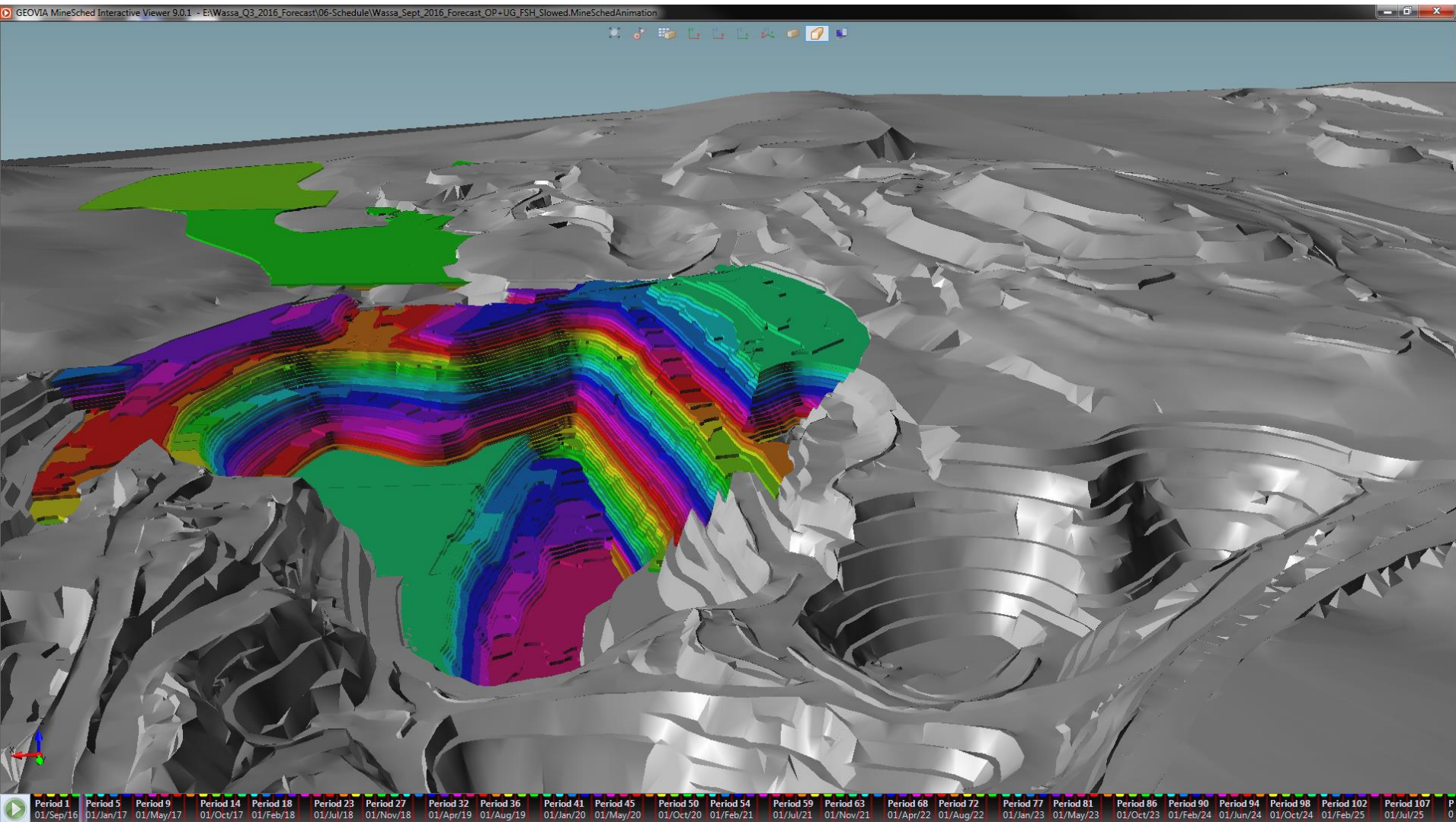
- 4 Liebherr 984 Backhoe excavators
- 15 CAT 777 Trucks
- 1 CAT D10 dozers
- 8 CAT D9 dozers
- 4 Production rigs, 2 Sandvik and 2 Atlas Copco
- Fleet capacity ~1,200,000 tonnes per month

Optimization

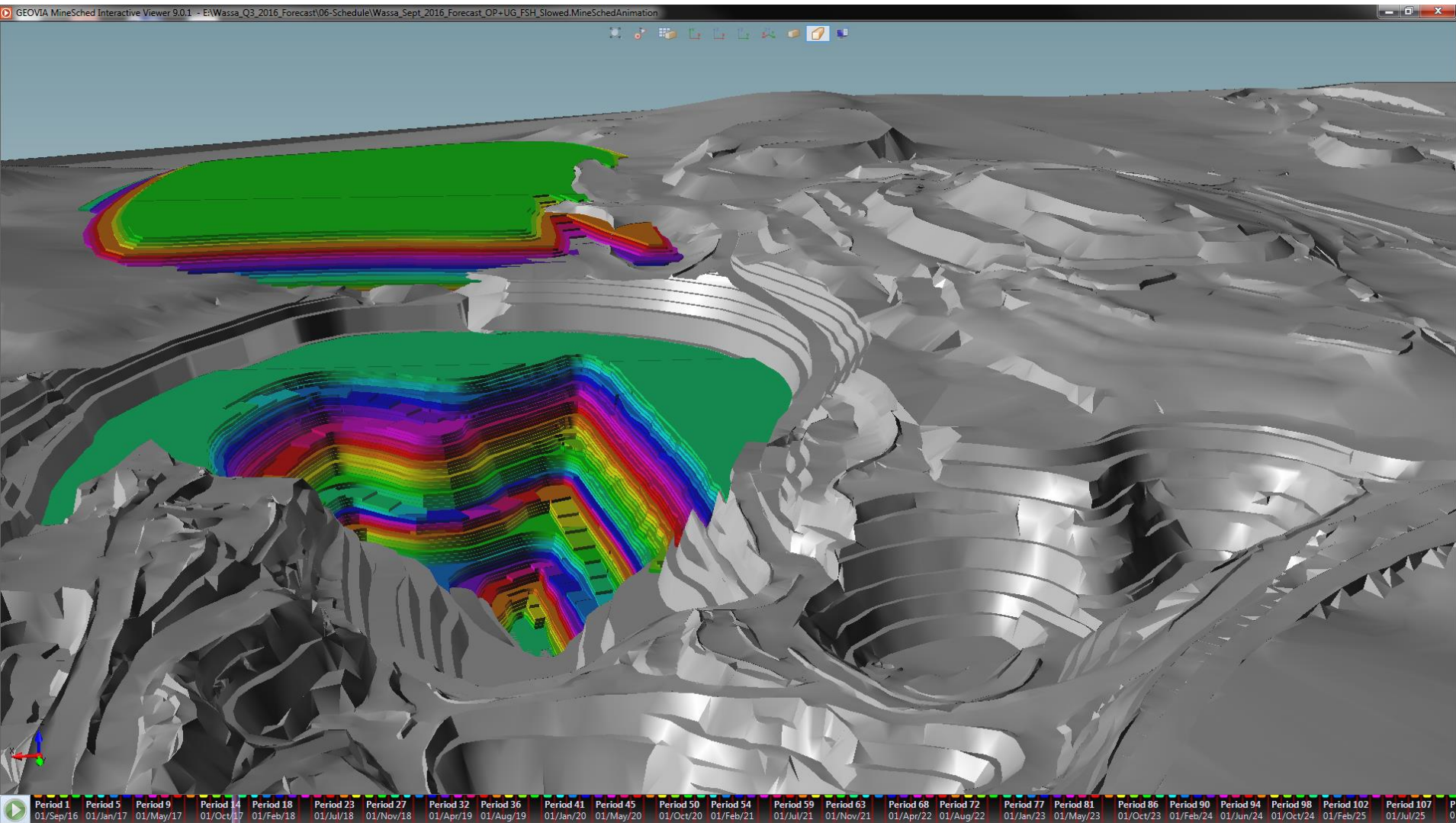
- Cut 3 engineered design has been optimized resulting in a 3% drop in strip and a 2% drop in marginal ounces
- Resulting in a \$6.2 million saving cost



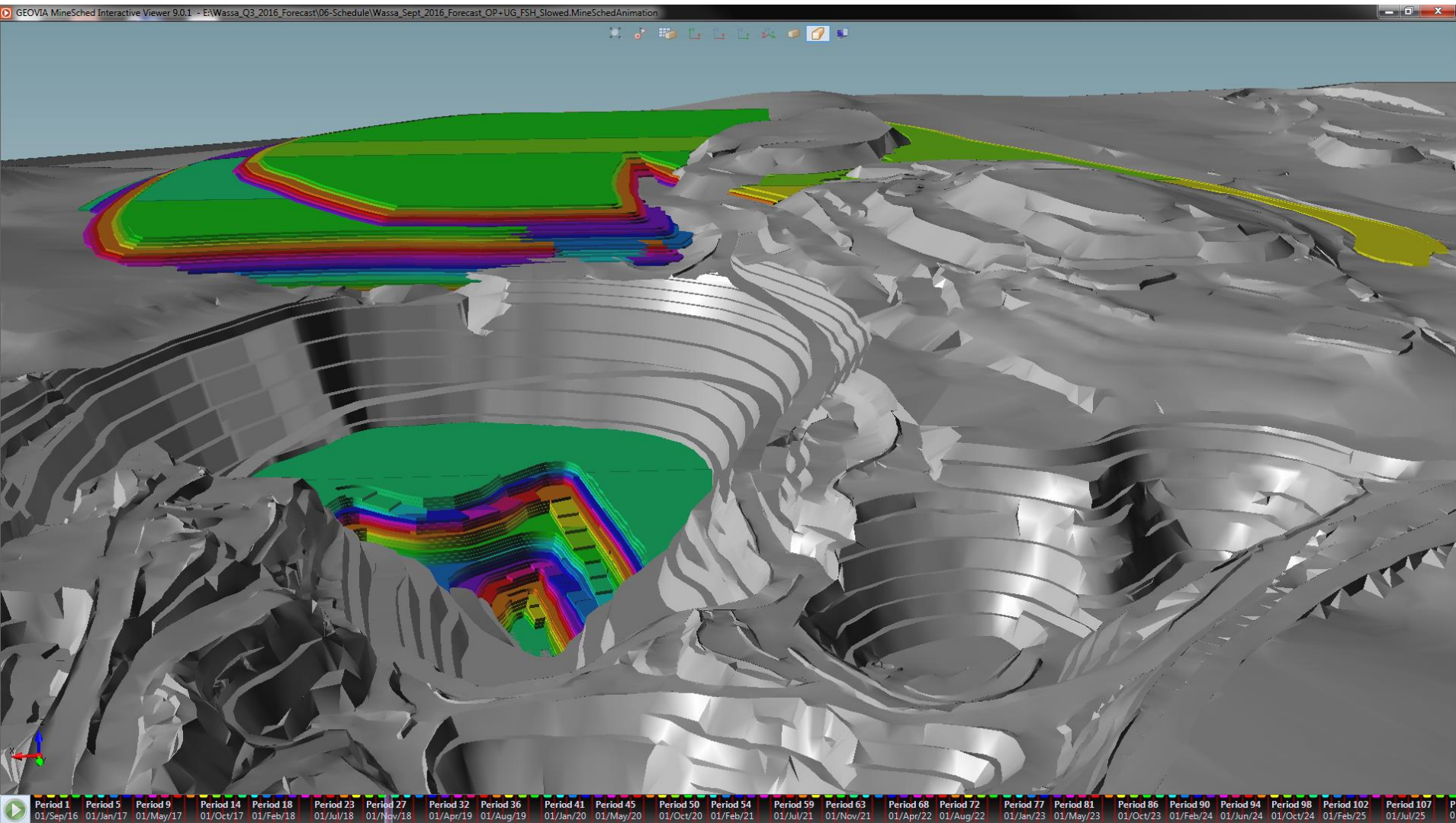
Cut 3 Forecast Dec 2016



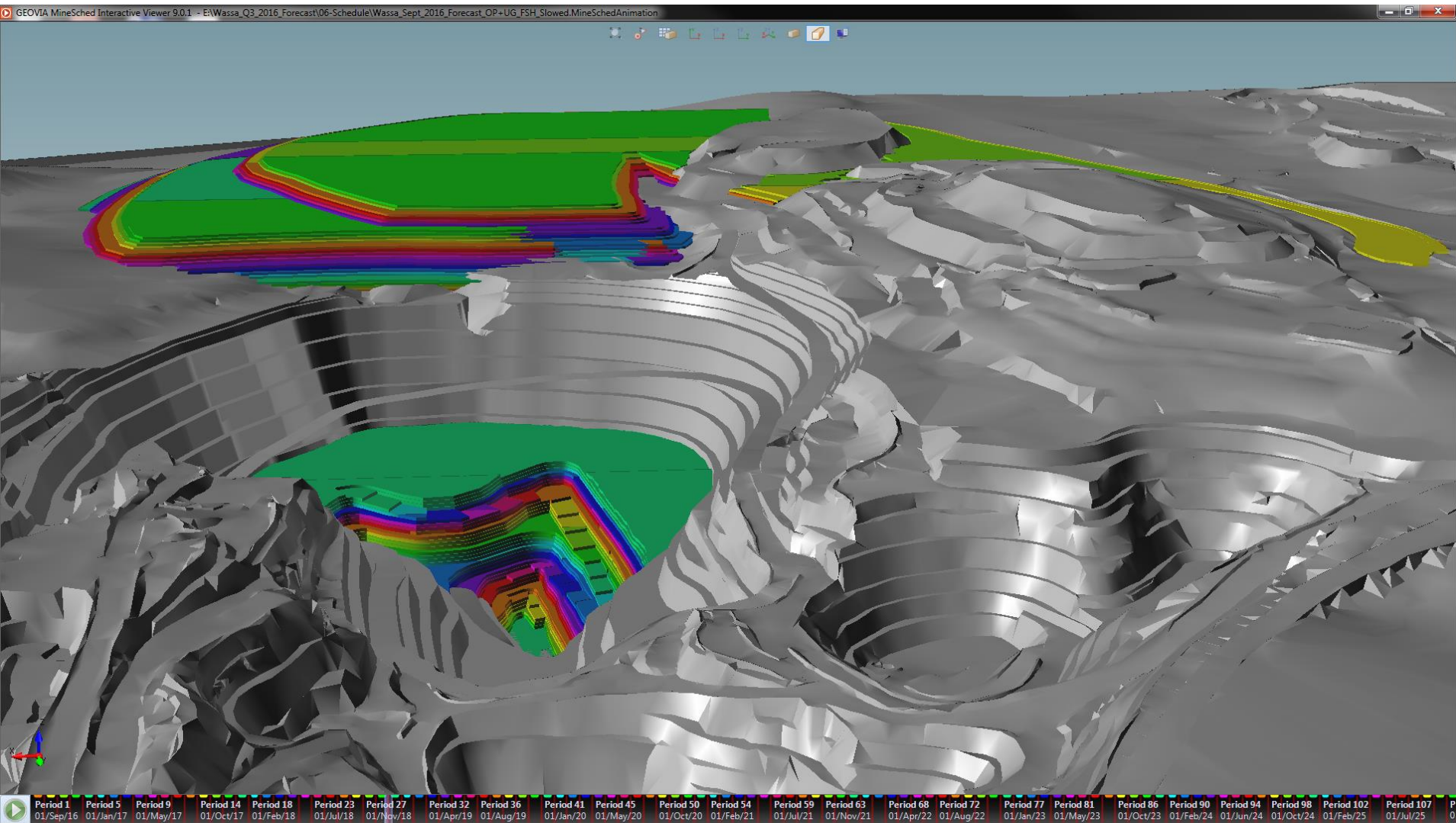
Cut 3 Forecast Dec 2017



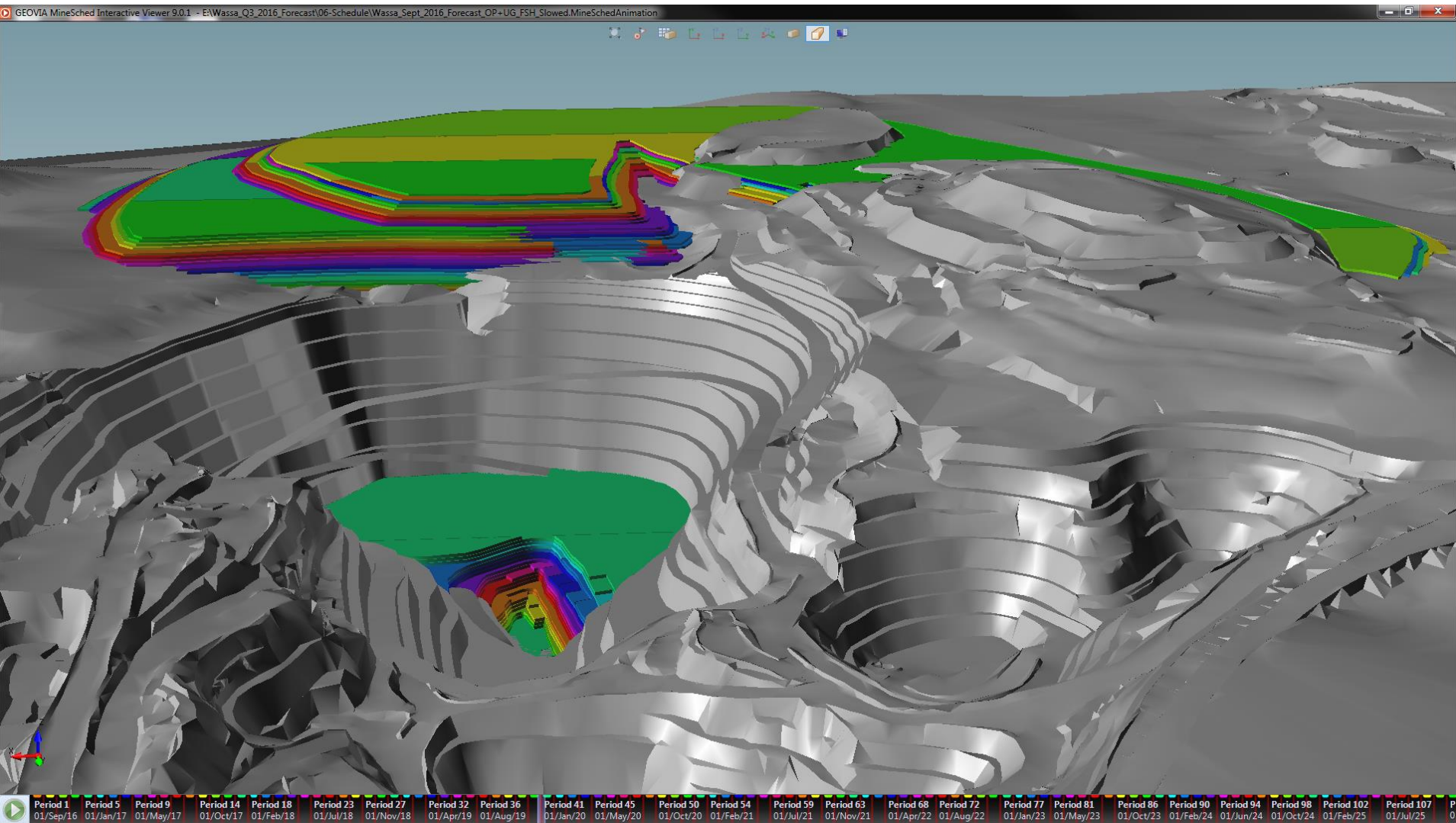
Cut 3 Forecast Dec 2017



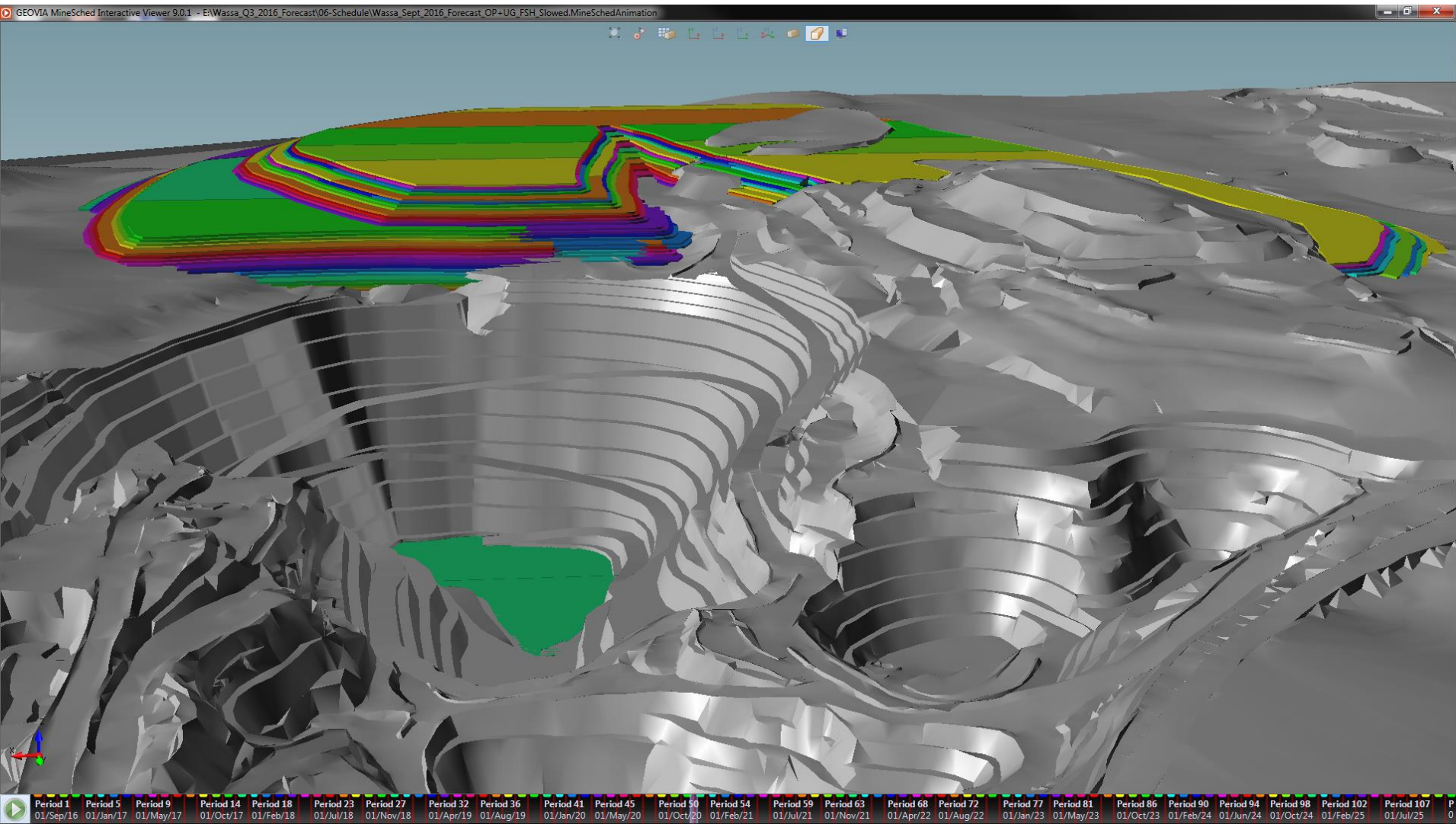
Cut 3 Forecast 2018



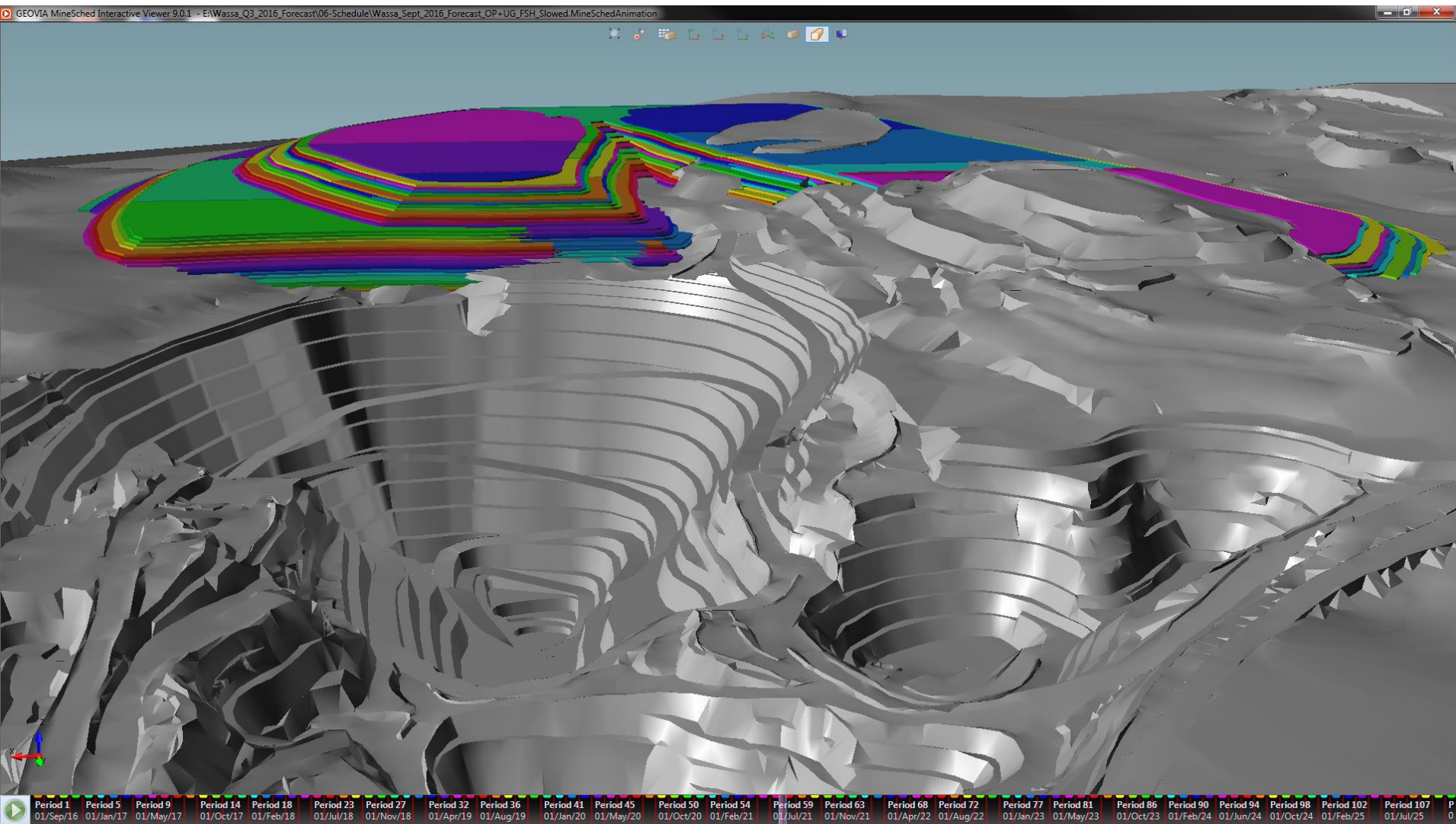
Cut 3 Forecast 2019



Cut 3 Forecast 2020



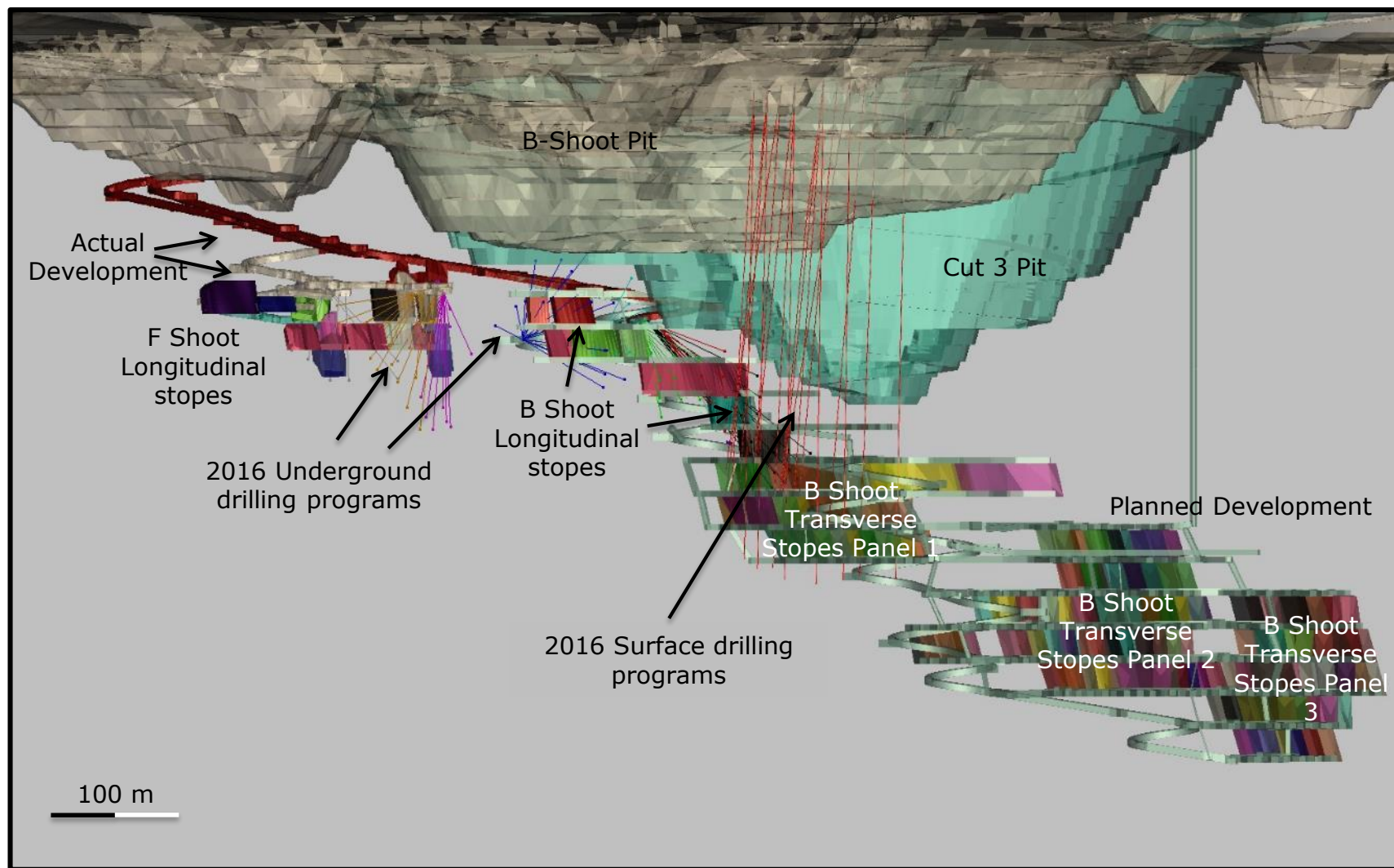
Cut 3 Forecast 2021



**WASSA
UNDERGROUND
MINING SCHEDULE**



Wassa Underground & Open Pit LOM Design



Project Optimization

- Revised drill definition program. Focus on high grade tonnes
- Limited number of active headings available

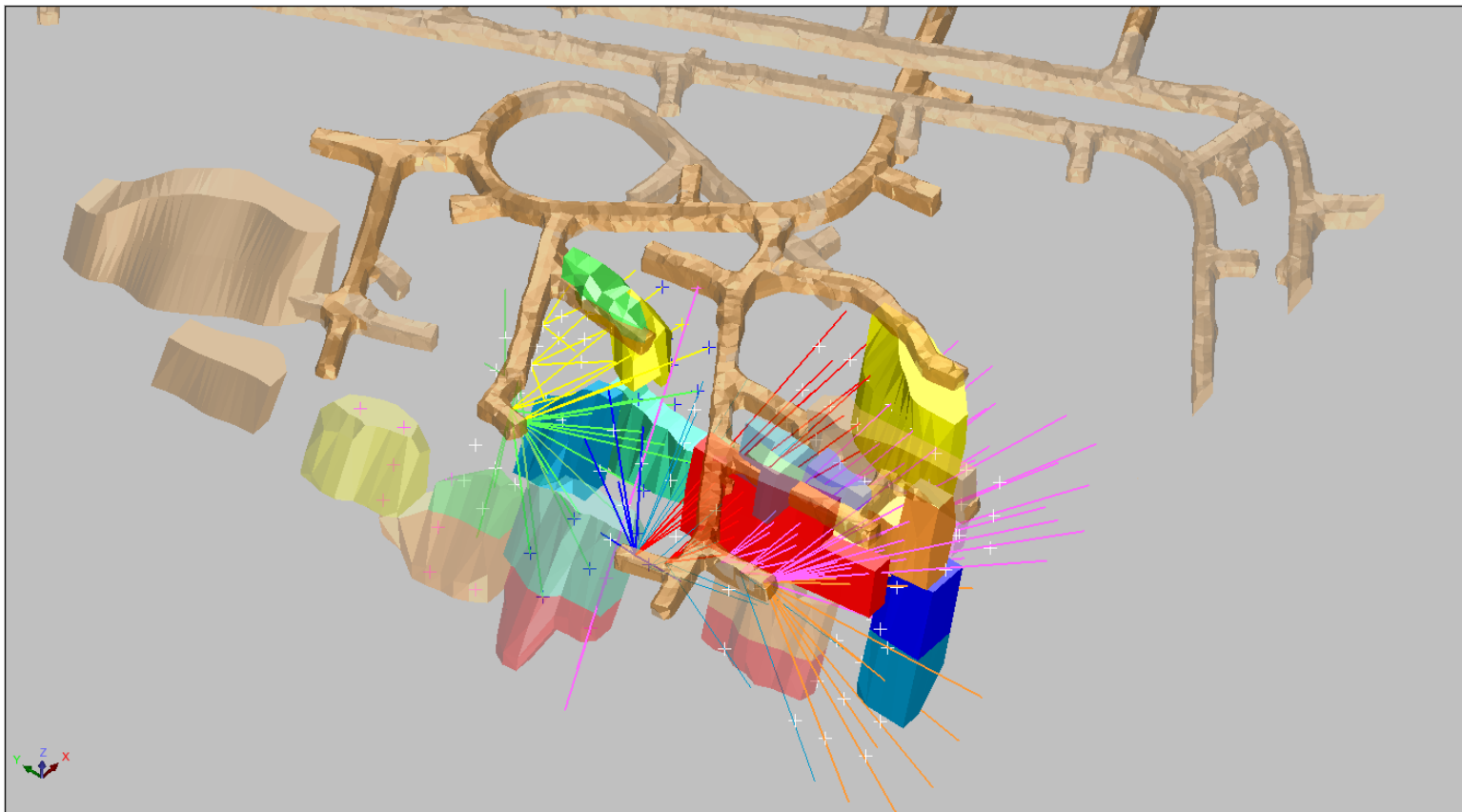
Solutions To Enhance Project

- F Shoot major drilling program completed
- B Shoot Longhole Stope area drilling program underway
- Change of focus from F Shoot development to B Shoot decline development. This will allow for the establishment of multiple headings in 2017, increasing the number of active ore headings available
- Long term drilling strategy in place to define new mining horizons three sub-levels below current mining levels
- Sludge drilling program implemented to optimize final stope designs

**2016, 2017 AND 2018
DRILLING PROGRAMS**

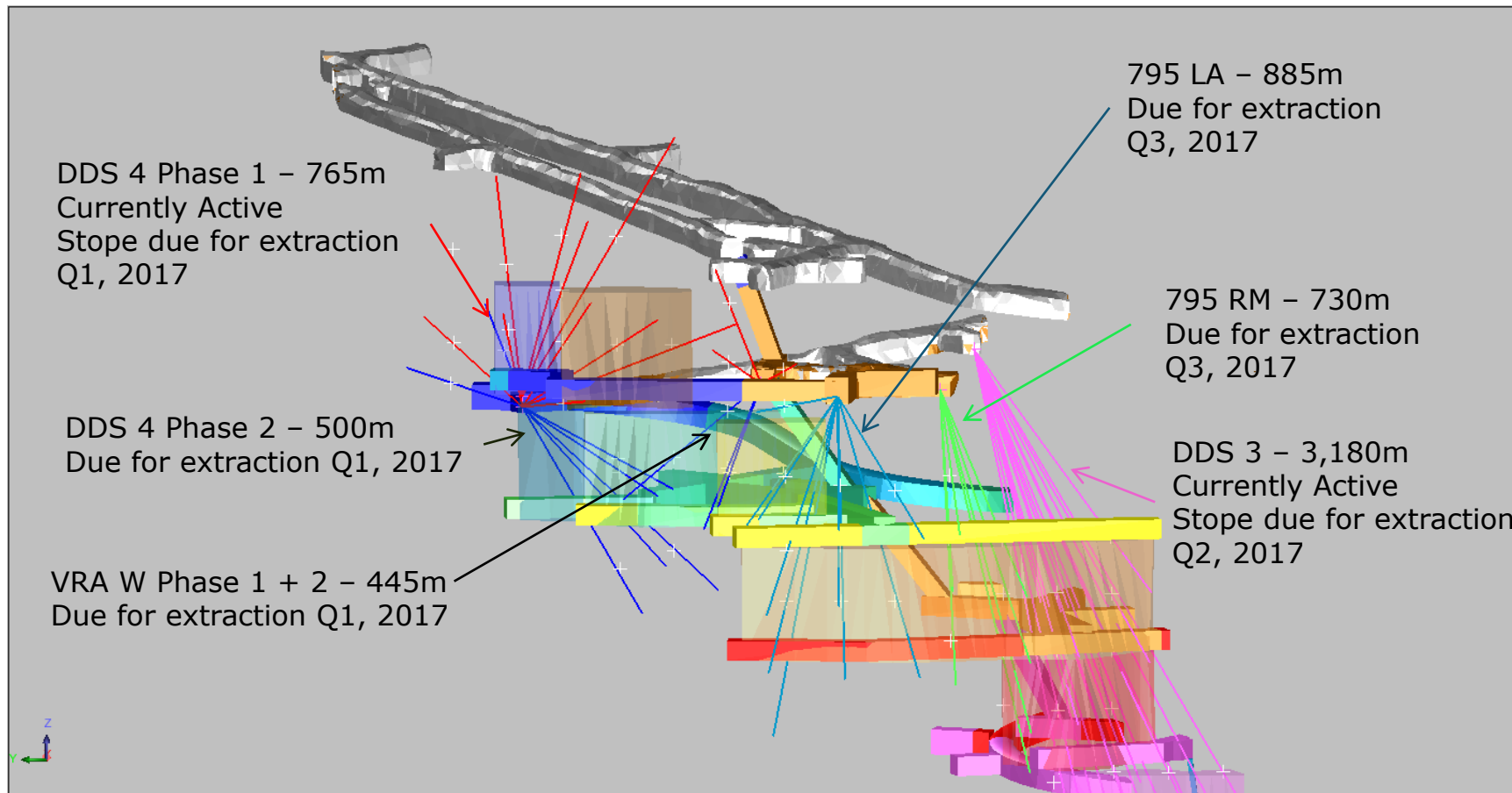


F Shoot Delineation Drilling – COMPLETED



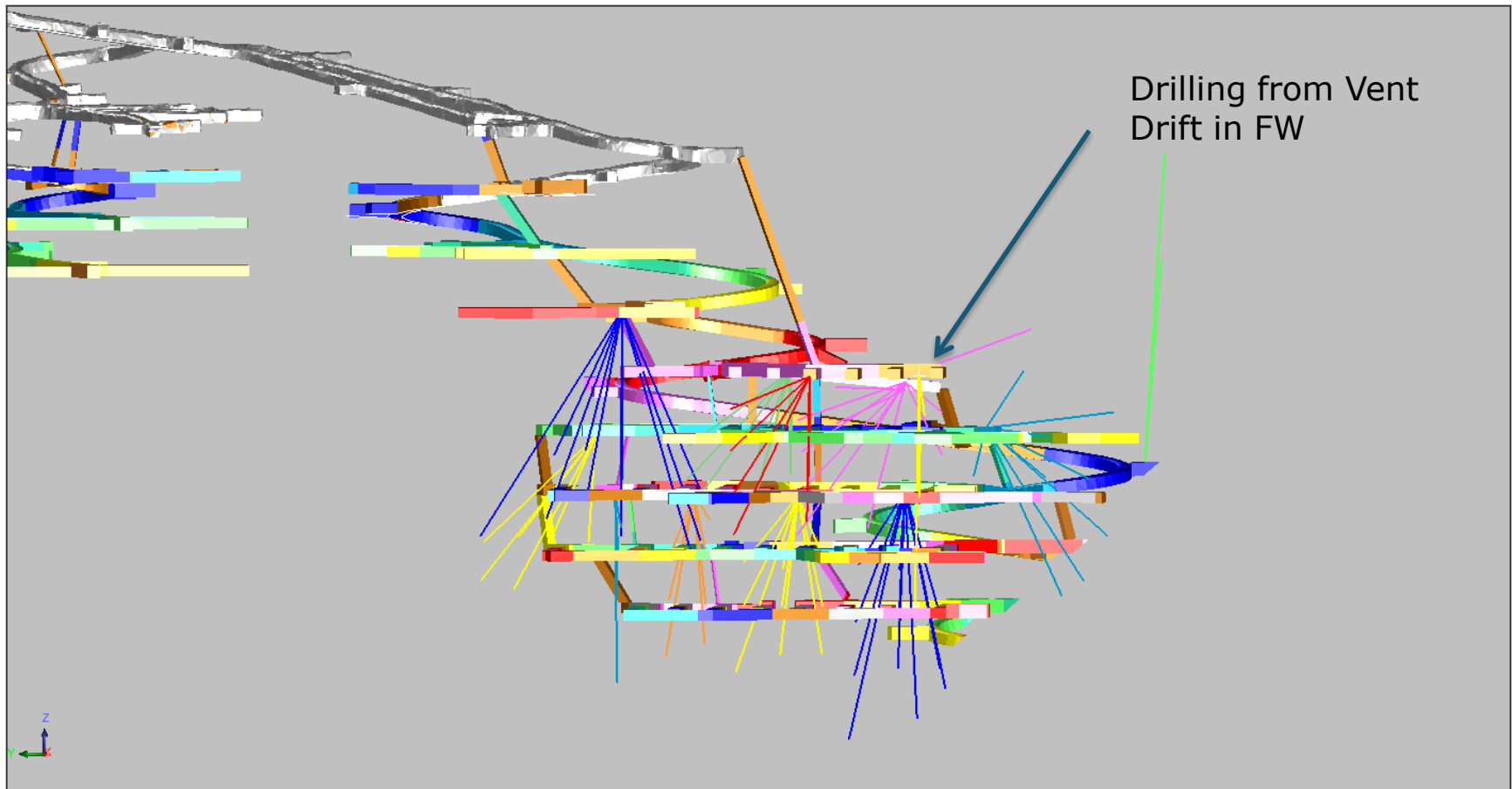
- ~ 8,000m Program, 95 NQ sized holes
- Drilling completed Nov 4, 2016. Awaiting final assays and subsequent modelling
- Program focused on delineating stopes to 780 Level and testing of mineralized targets down to 745 Level
- Stopping to end of Q4 drill tested

B Shoot Longitudinal Stope Delineation Drilling - ACTIVE



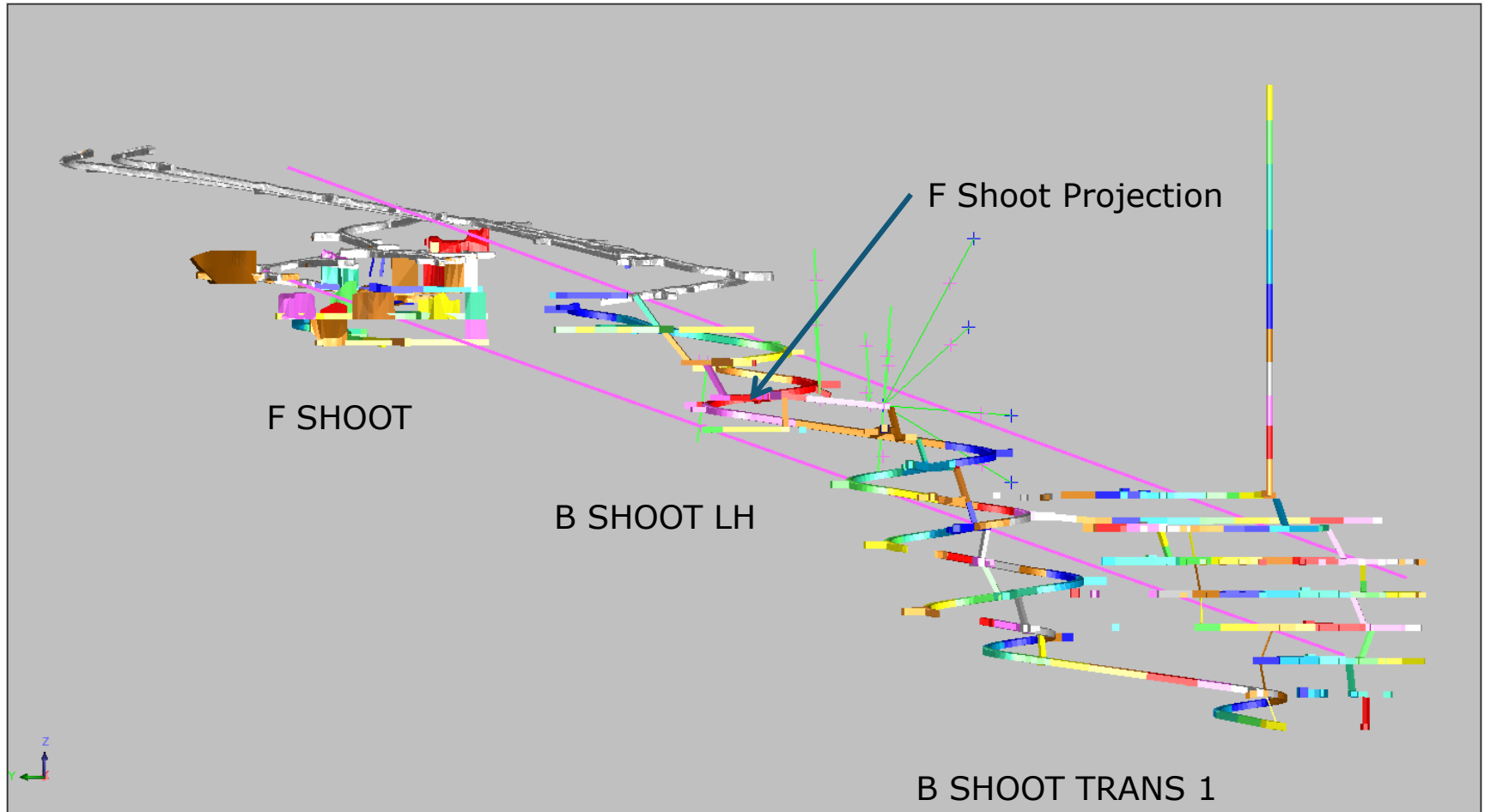
- ~ \6,500m, Program, 61 NQ sized holes: **Most of this meterage will be completed in 2016**
- Drilling commenced October 12, 2016
- Program focused on delineating stopes in the B-Shoot Longhole Stopping area

B Shoot Transverse Panel 1 Delineation Drilling – PLANNED 2017/2018



- 11,640m program; 92 holes
- Anticipated start date: Q3 2017
- Drilling utilizes existing infrastructure development

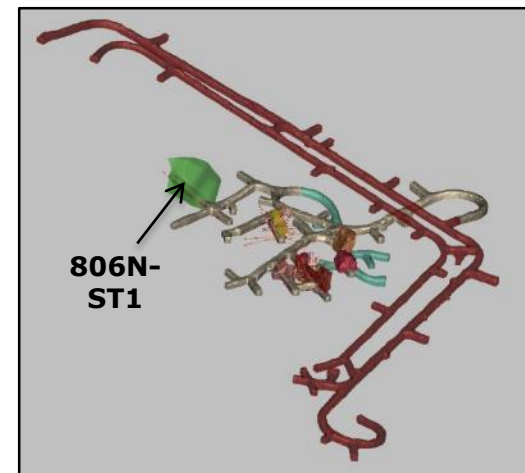
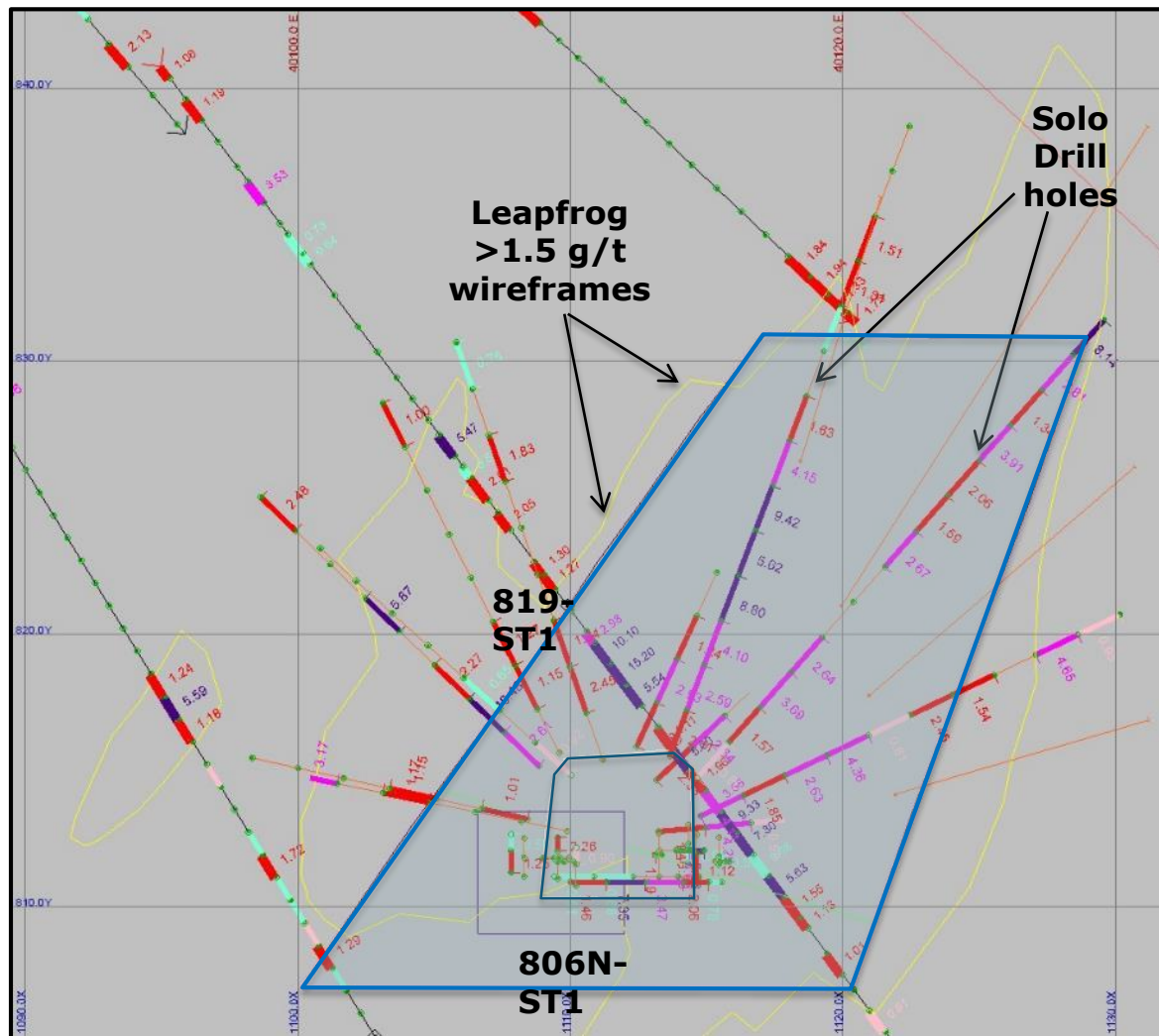
Additional Near Mine Potential: F Shoot Extension - PLANNED



Results From Recent F Shoot Drilling Programs

- Recent drilling in F Shoot has been used to better delineate the F Shoot resources ahead of stoping
- When needed, an additional sludge hole sampling program has been implemented inside the stoping blocks, by using the spare capacity in our solo longhole drill.
- This has allowed us to better define the stope boundaries and optimize the stope designs.

806N – Stope 1 X Section 20387.5 N F Shoot North

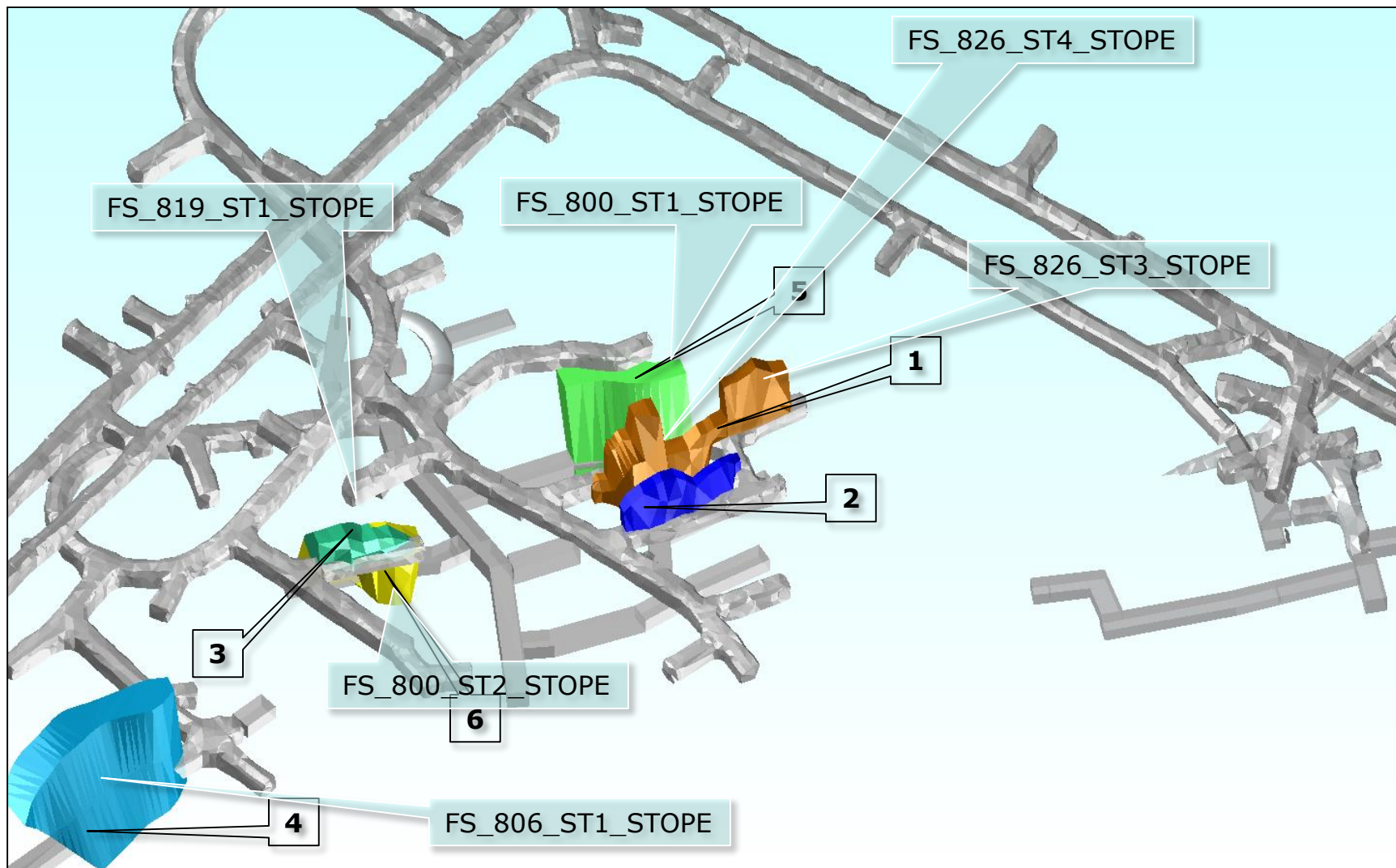


- F Shoot North
- Ore definition optimization
- After initial modelling:
36,768t at 3.13g/t
(3,700oz)
- After sludge sampling:
43,897t at 2.98g/t
(4,205oz)

2016 Q4 STOPPING SEQUENCE



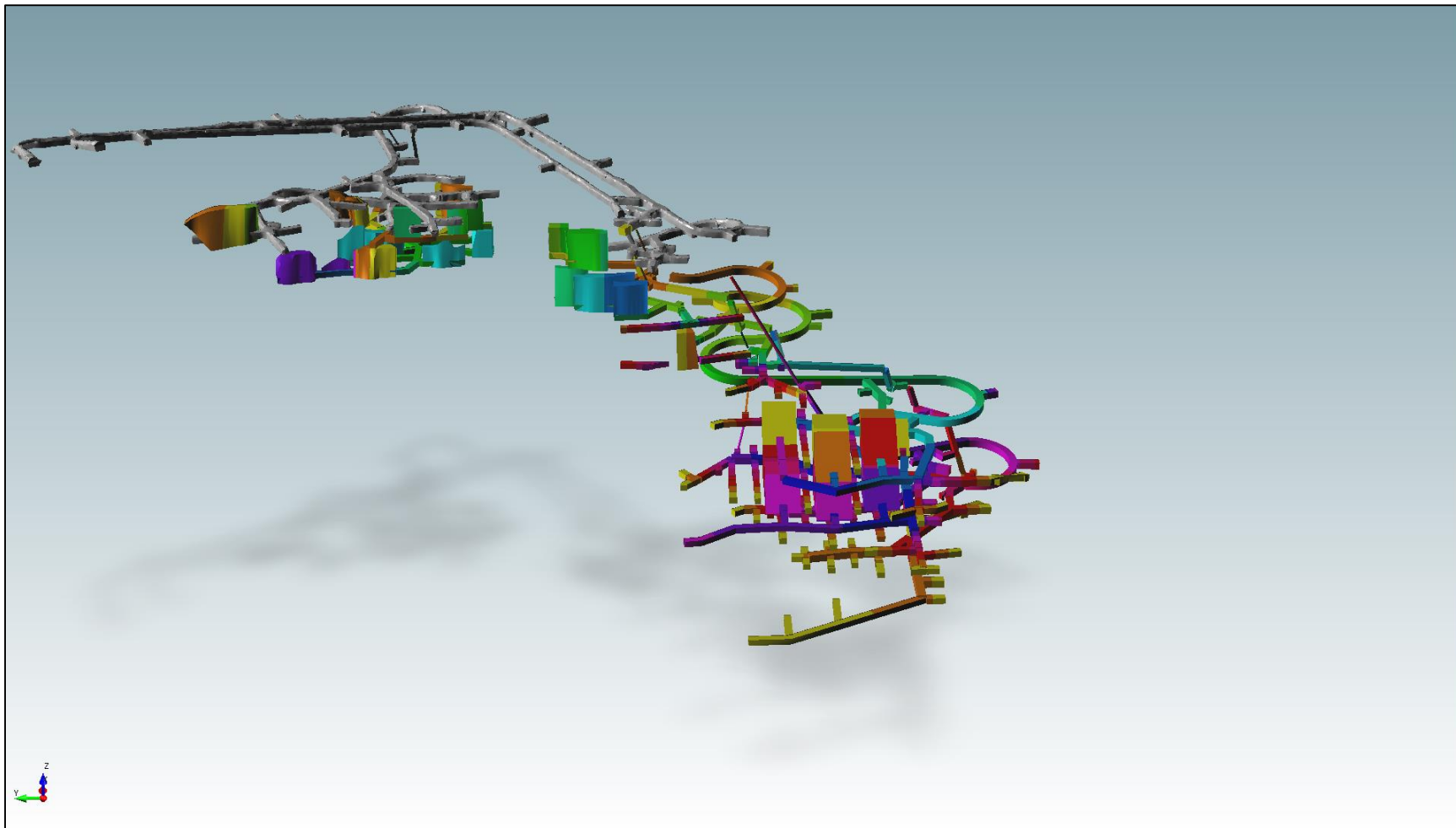
WUG 2016 Target Stopes & Stope Sequence (Contained Ounces)



LIFE OF MINE STOPE SCHEDULE

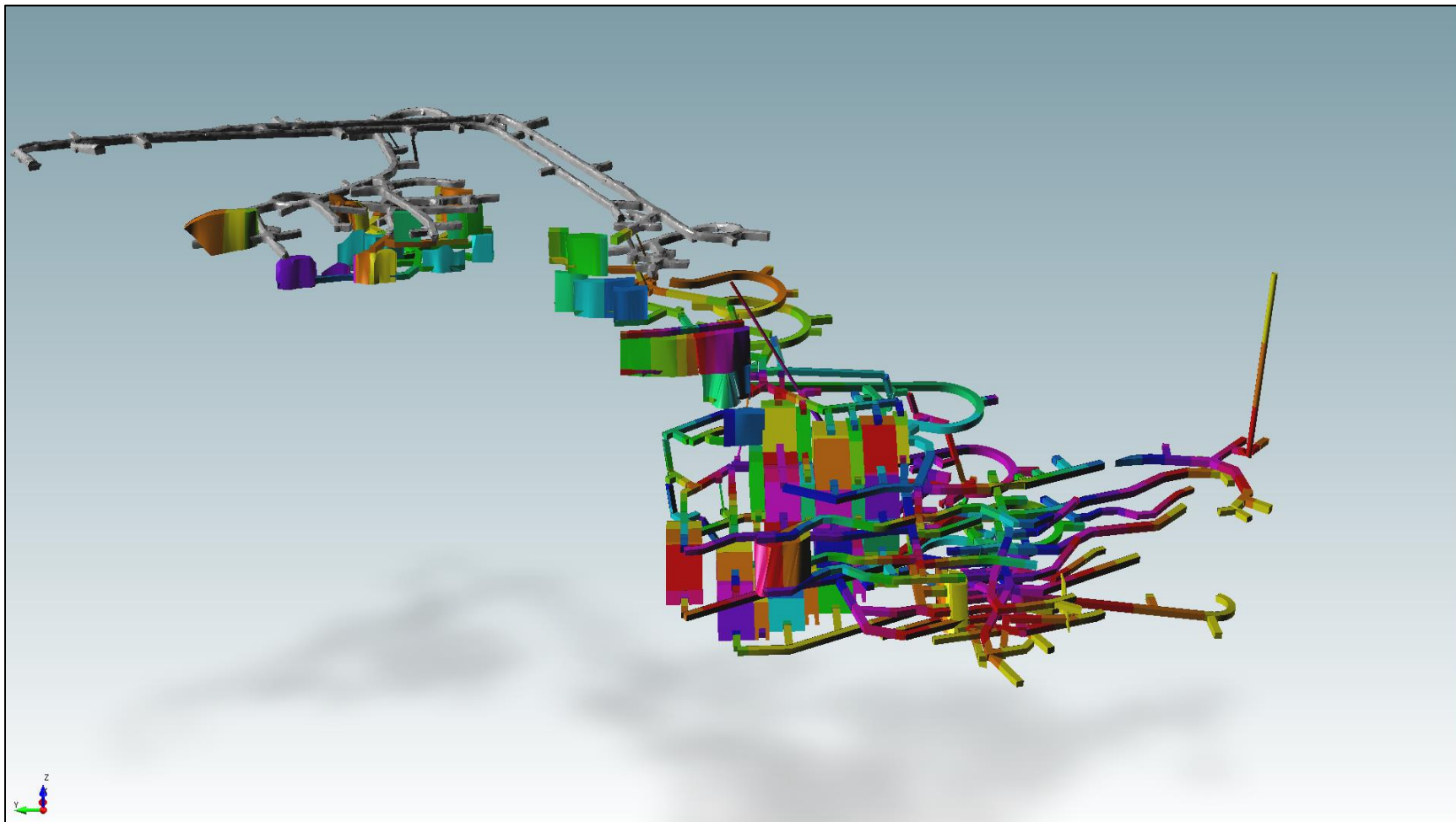


2017



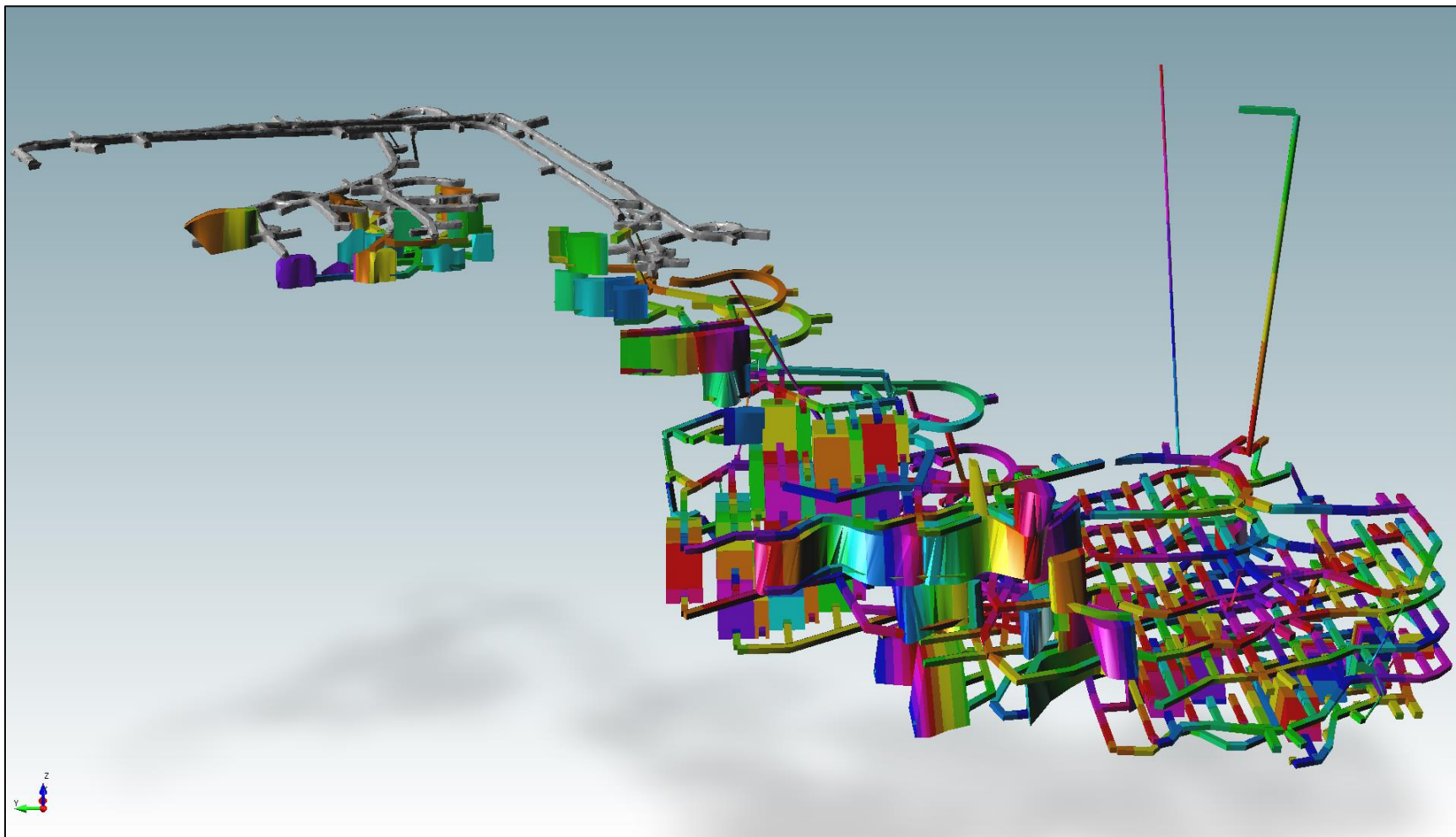
**Targeting 1,400 tonnes per day on average
Commercial production in Q1**

2018

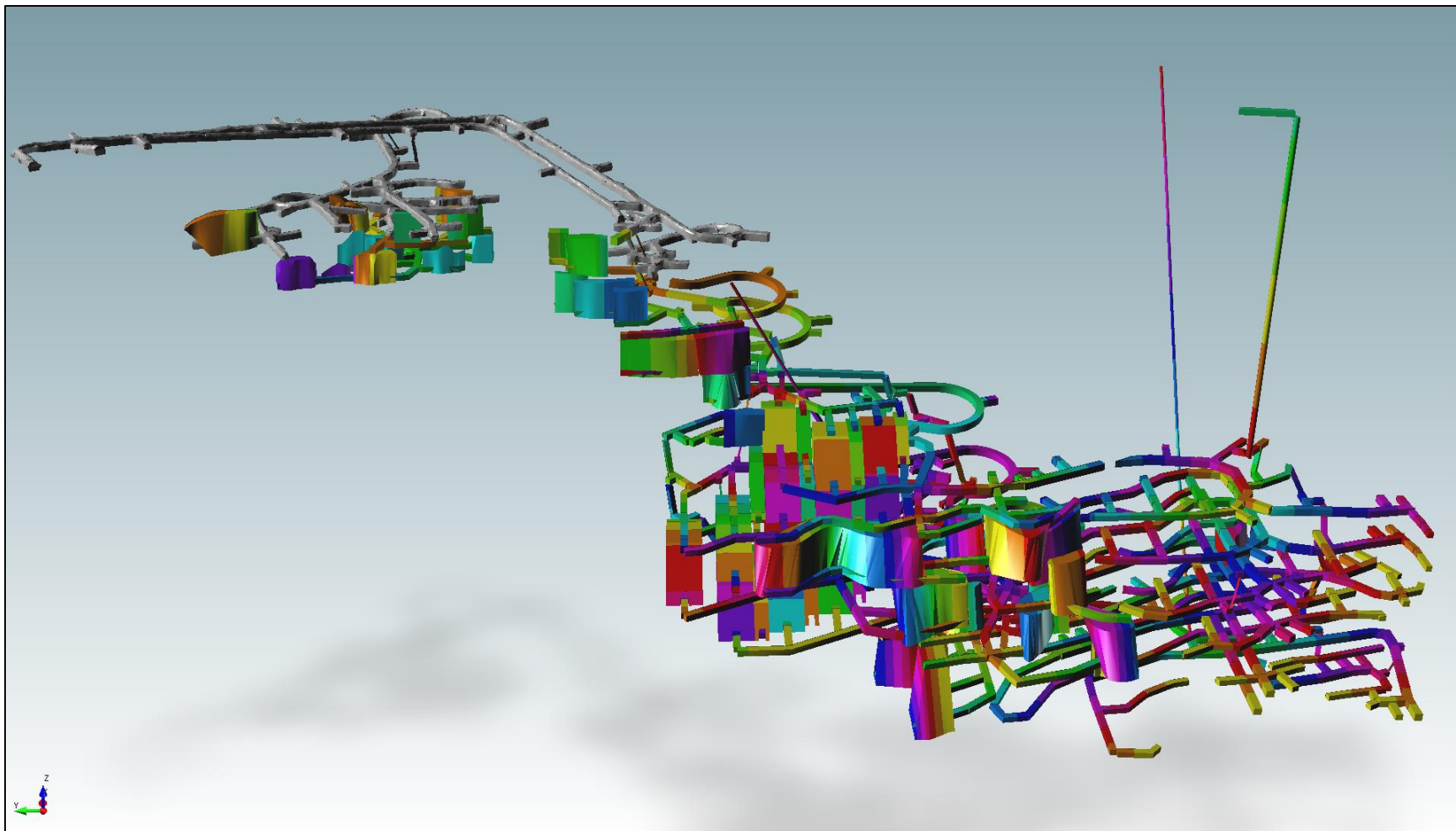


Targeting 2,200 tonnes per day as the transverse stopes begin to perform

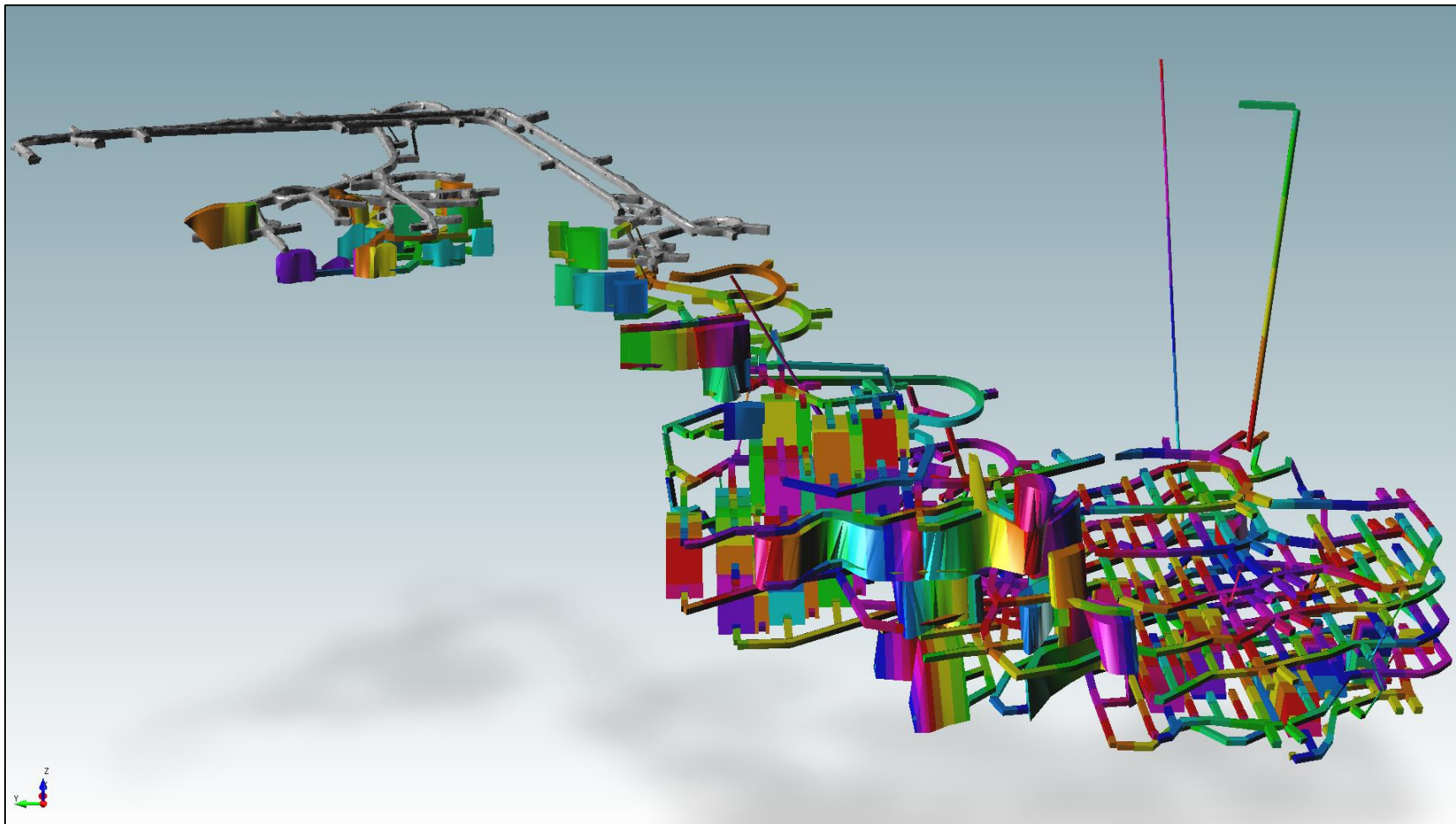
2019



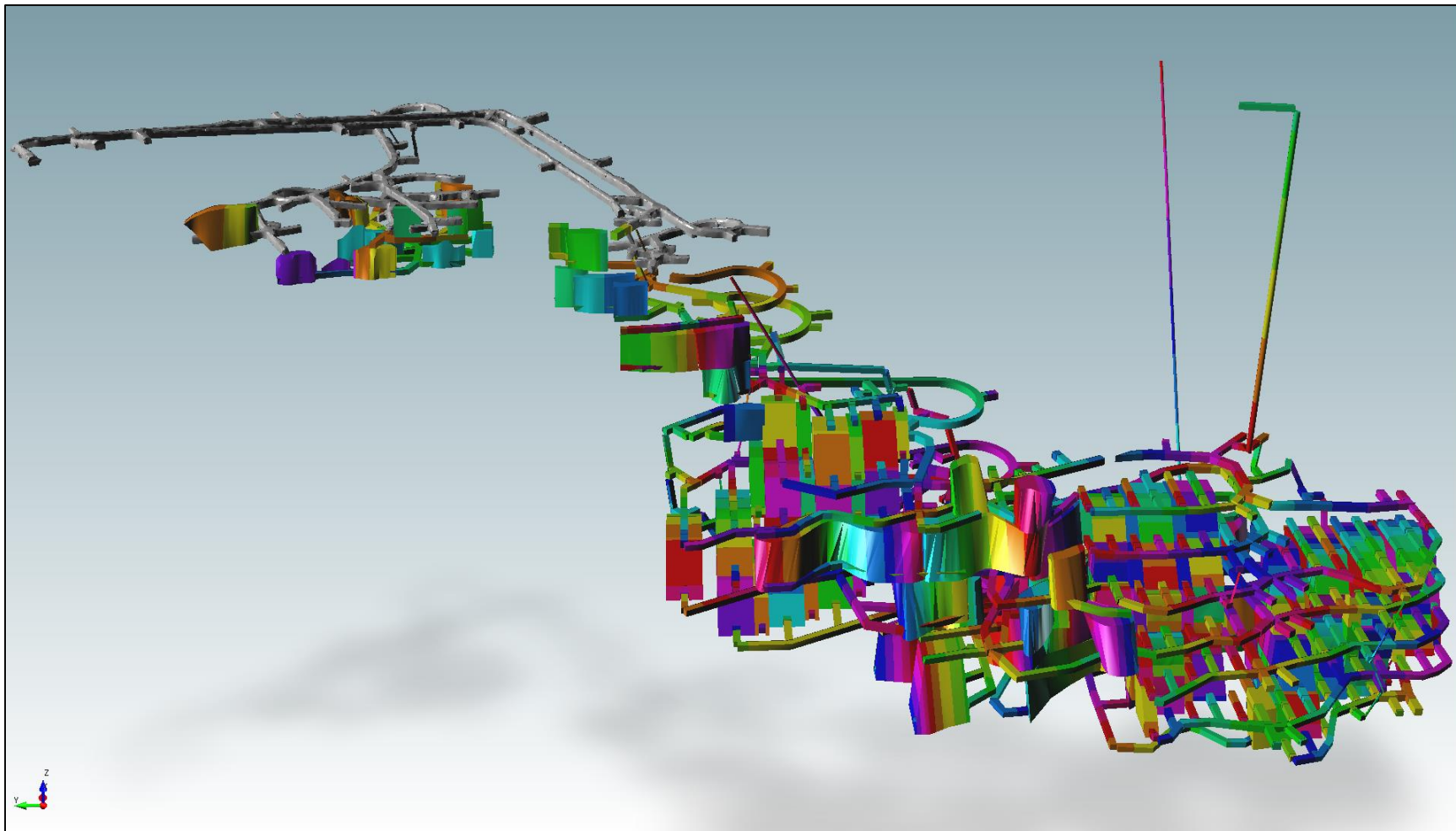
2020



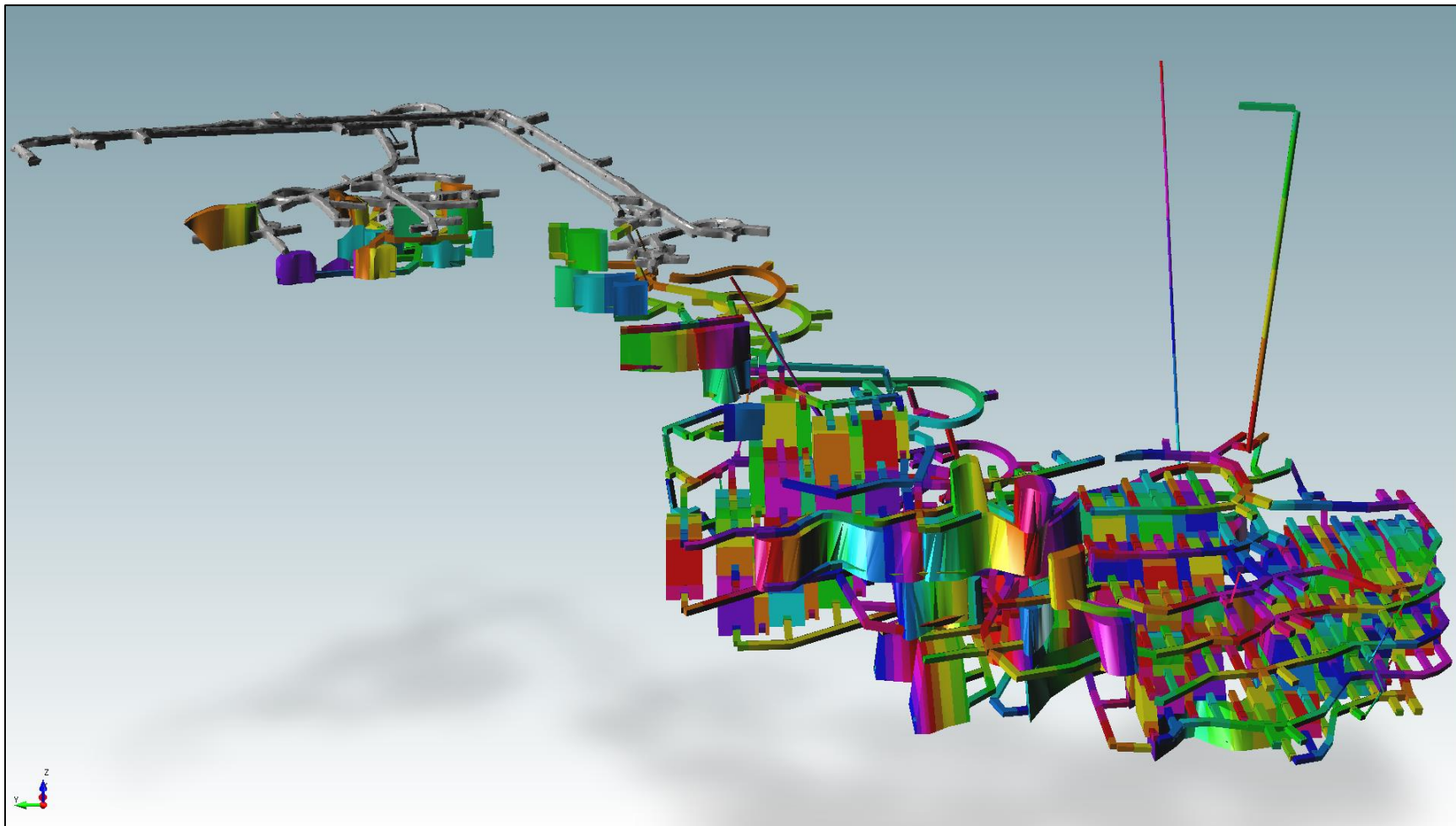
2021



2022



2023



CIL PLANT



CONTINUOUS IMPROVEMENT

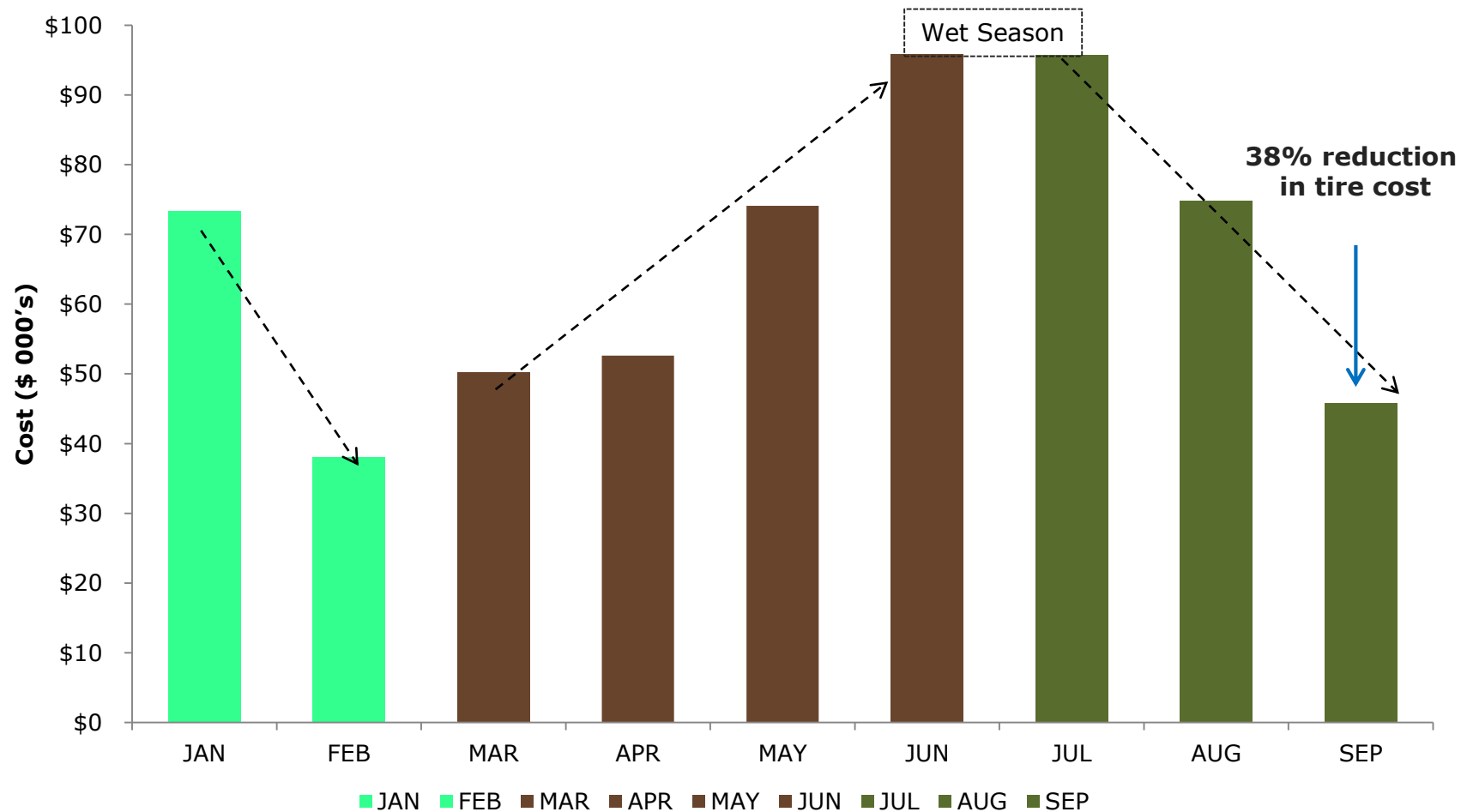


Continuous Improvement

- Implementing a Lean Six Sigma program with Keizan interventions as applicable
- Projects:
 - Open Pit Mine to Mill
 - Plant consumables, throughput and recovery
 - HME Maintenance
 - Underground
- Currently in the Define stage of the DMAIC process, initial potential estimated at 10% in the Mine to Mill project (5% improvement built into the current mining plan)

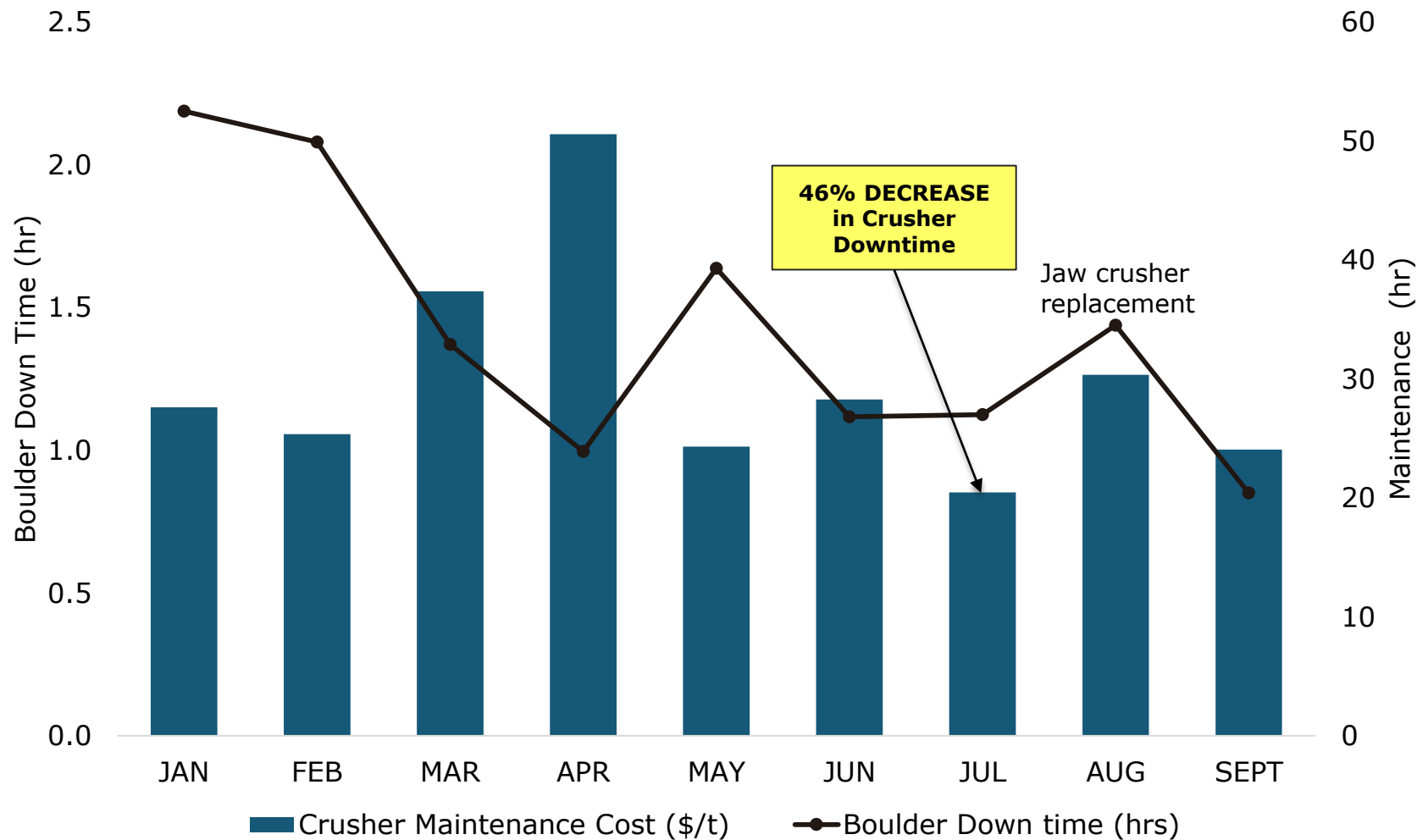
CI Examples

Truck Tires Consumption Cost(\$) Improvement



CI Examples

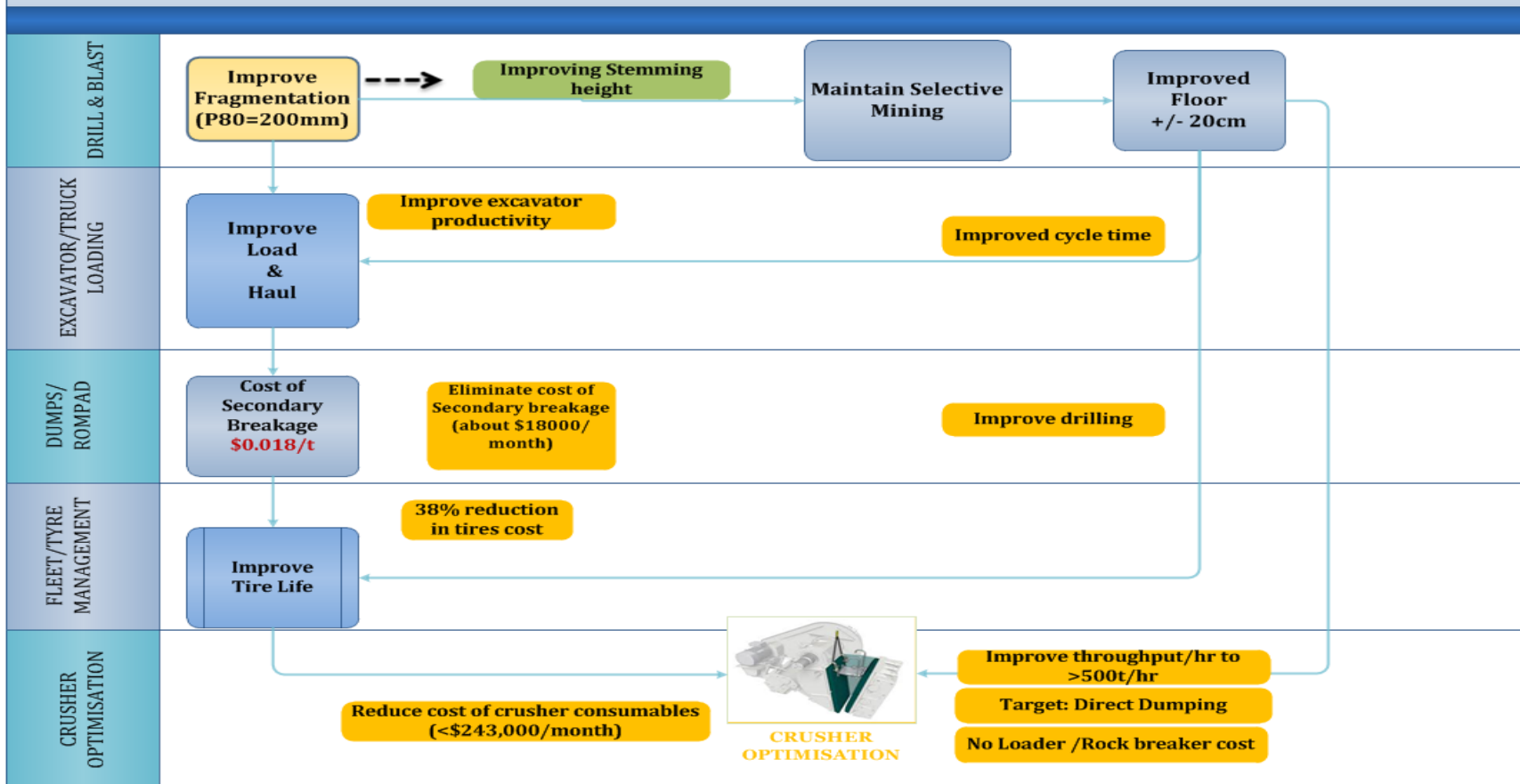
Crusher Maintenance Cost vs Boulder Downtime



Mine To Mill

GSR WASSA LTD CONTINUOUS IMPROVEMENT

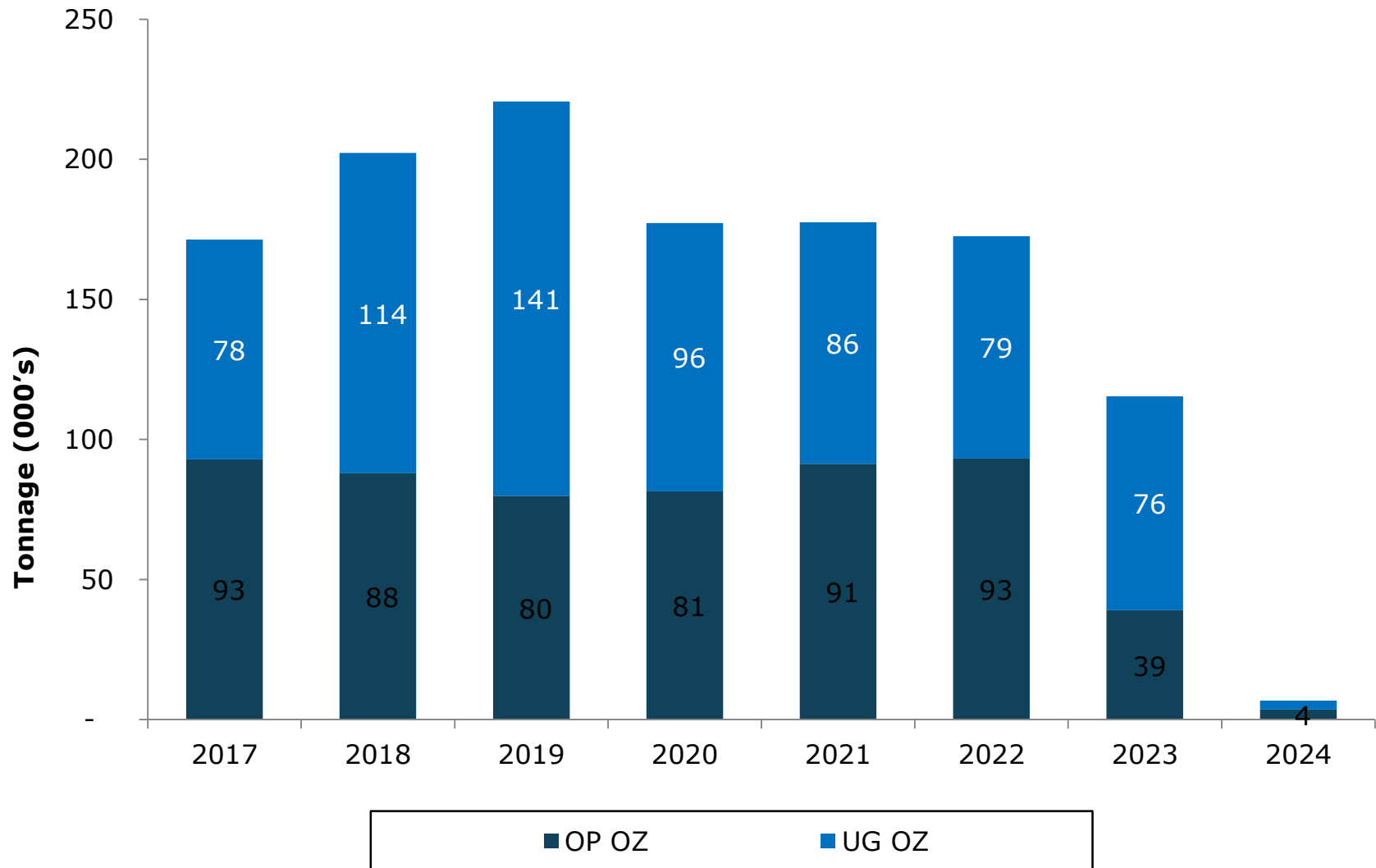
Process Improvement Project: Mine to Mill Optimisation (Road Map)



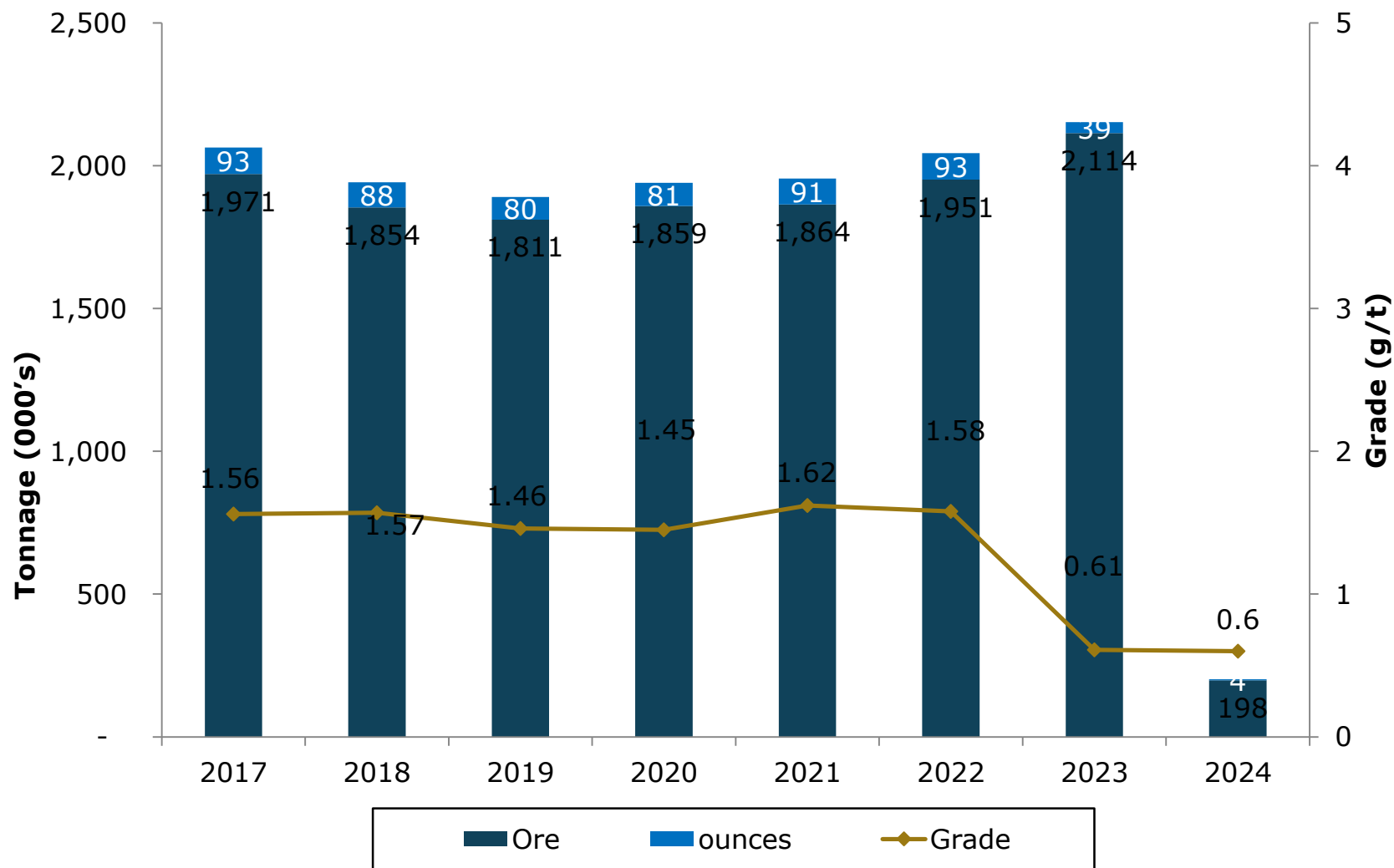
LOM PHYSICALS



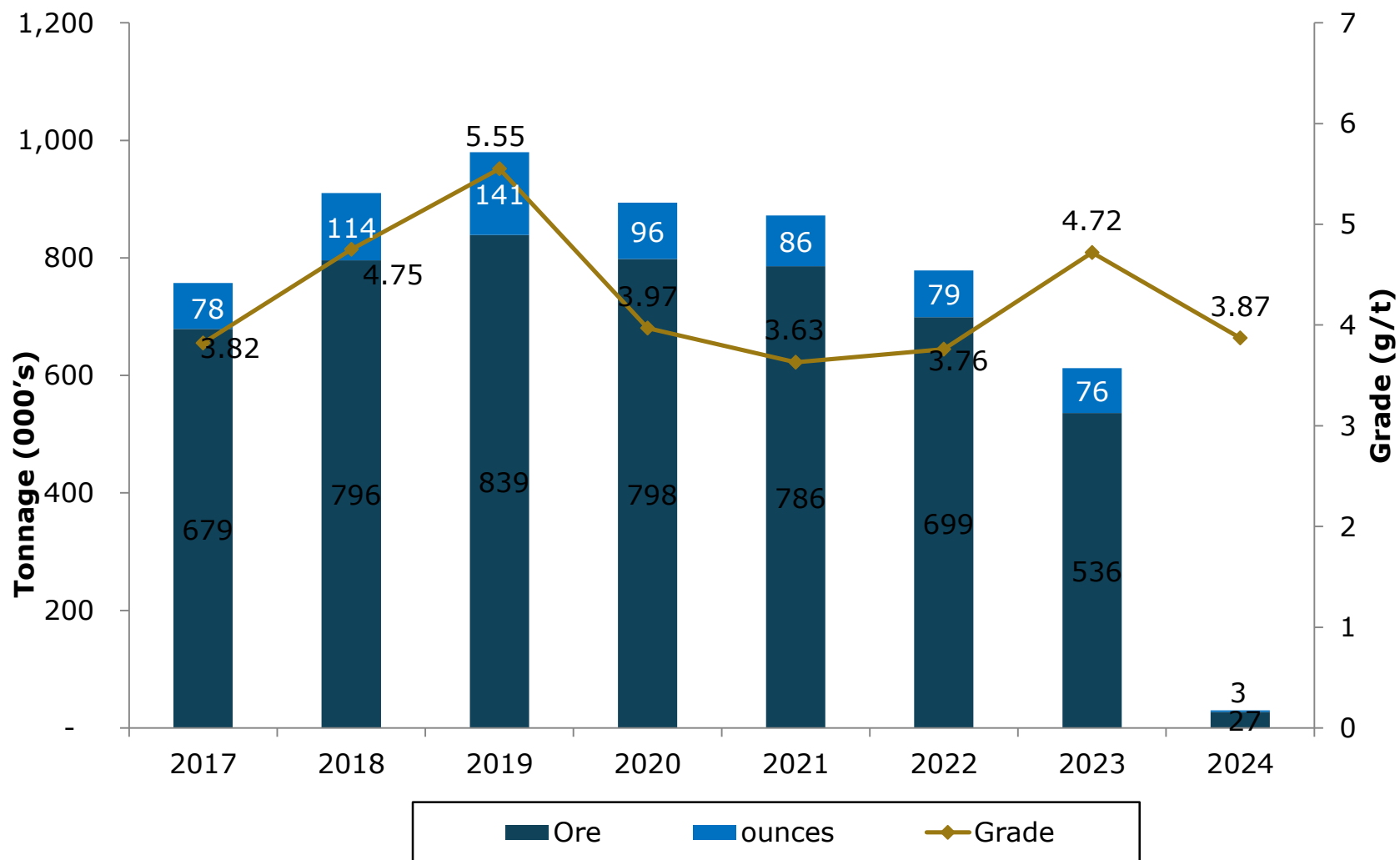
Wassa(Feasibility) LOM By Stream



Open Pit LOM Feasibility Ounces



Underground LOM Feasibility Ounces



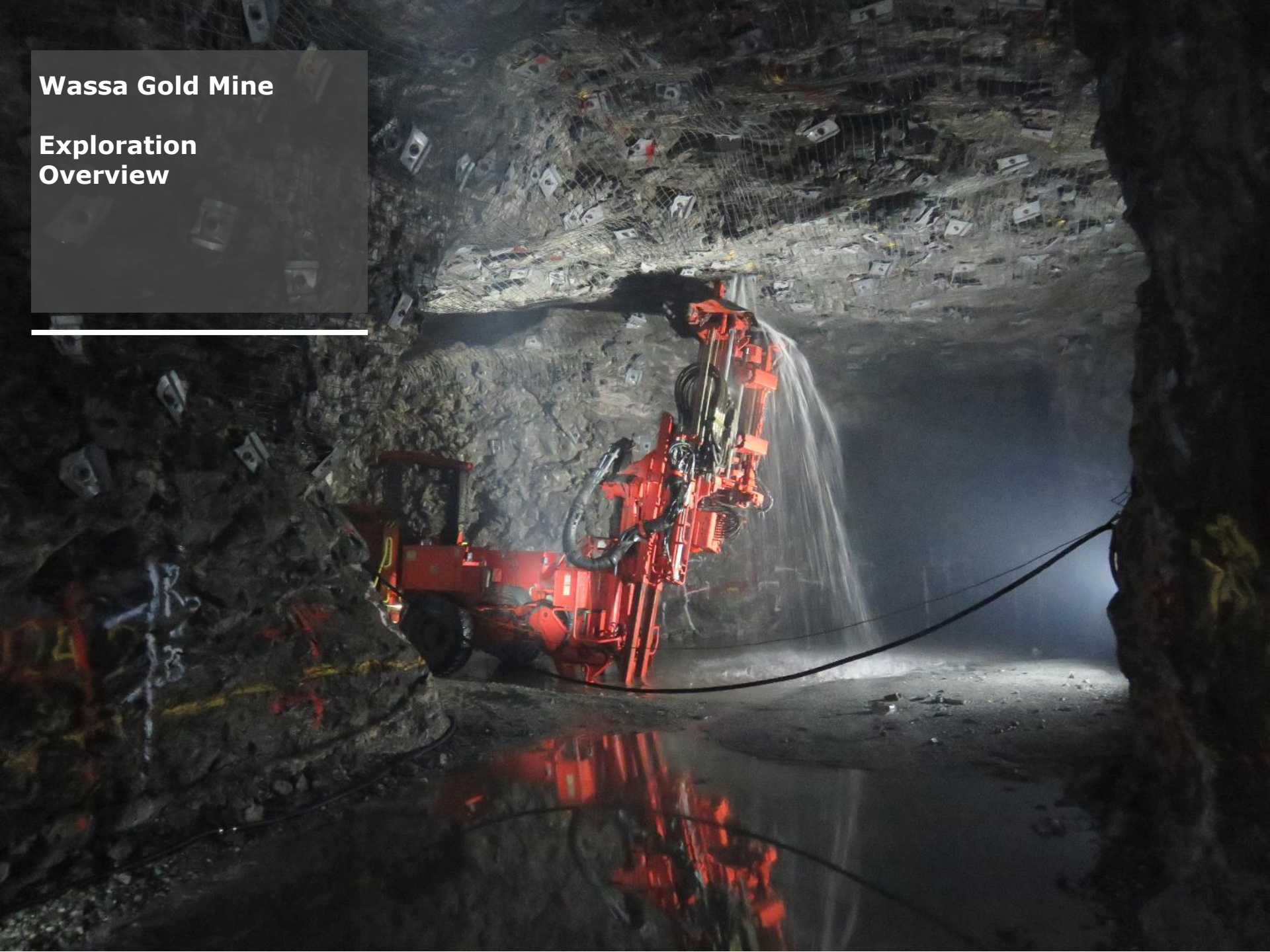
Wassa: Creating the Future

Current	End 2017	Future
Erratic production record	Production stabilized	Organic production growth against defined targets
Challenges with work culture	Culture of delivery on plan established	Maintain culture of delivery
Mine not optimized	Mine optimized, profitable and sustainable	Grow profit
Opportunities not fully understood	Project pipeline developed and prioritized	Projects brought on stream on time and on budget
High potential people not fully identified	High potential people identified and are being coached	Talent pipeline in place.
People are trained	Focused supervisor training	Upskill all skills levels

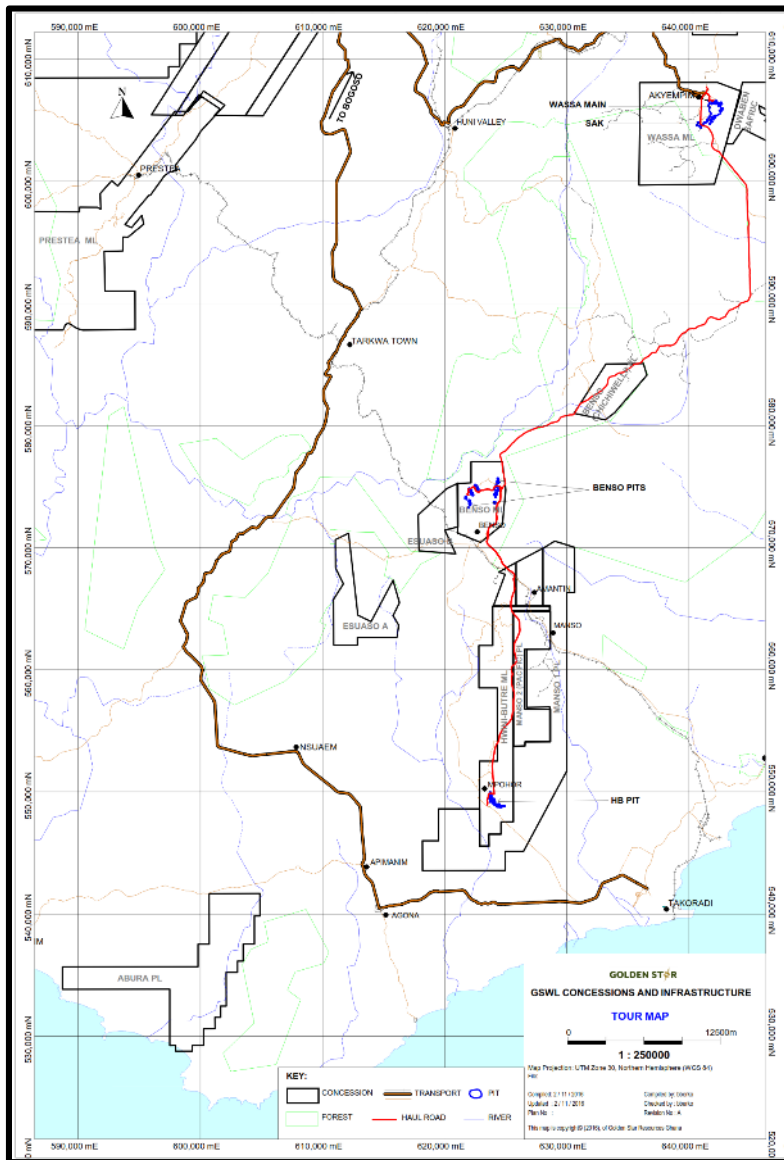
“Aha ye ye adwuma”

Wassa Gold Mine

Exploration Overview

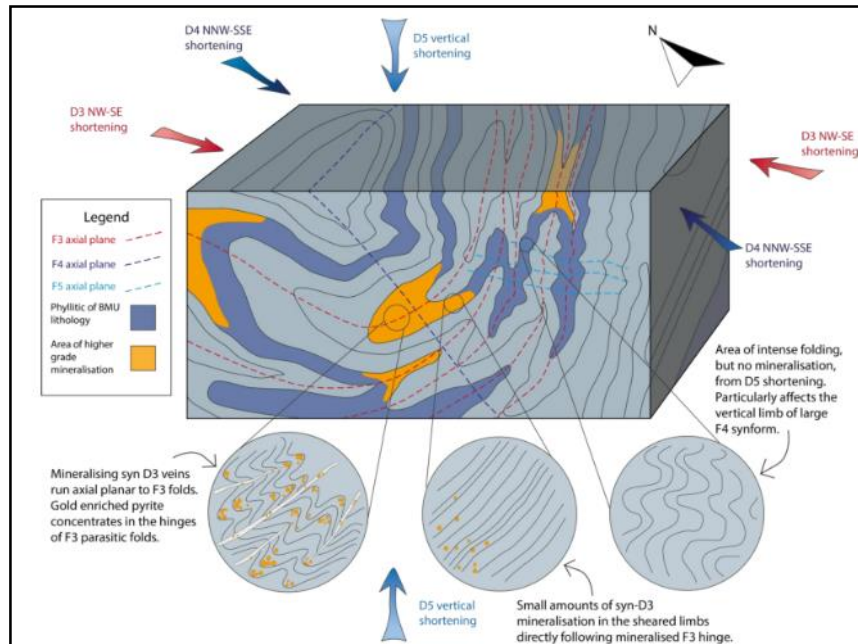


Wassa and HBB Location Map



- The Wassa complex is located near the village of Akyempim in the Wassa East District in the Western Region of Ghana
- 62km north of the district capital, Daboase, and 40 km east of Bogoso
- 80km north of Cape Coast and 150km west of the capital Accra
- The Wassa/Huini Butre and Benso concessions include 12 individual licenses which total ~490km²

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 1st tight folding event and it is these higher grade fold closures which are being mined underground

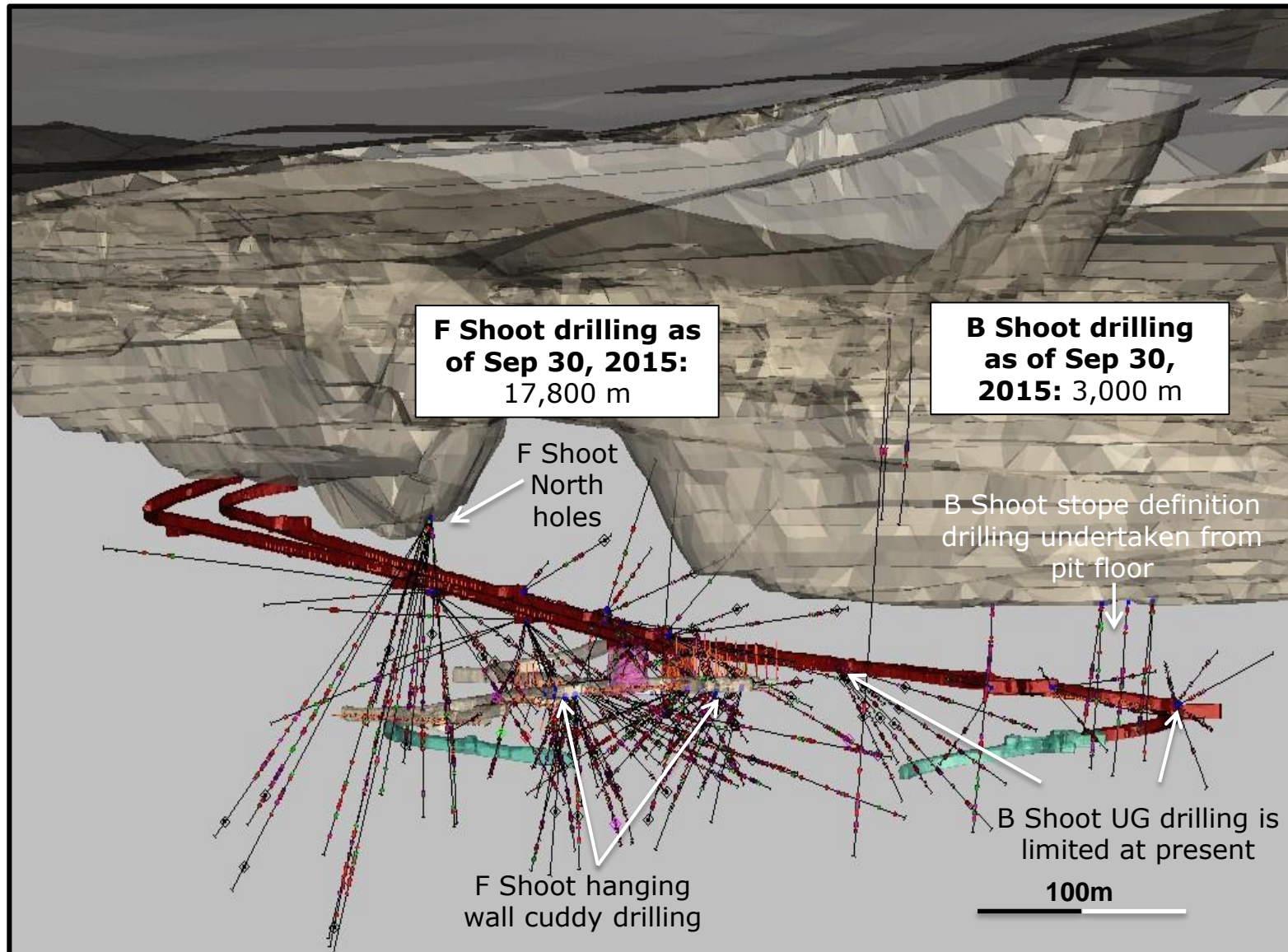
Wassa: Reserves and Resources¹

Mineral Reserves	Dec 31, 2015 Proven Mineral Reserve			Dec 31, 2015 Probable Mineral Reserve			Dec 31, 2015 Proven and Probable Mineral Reserve		
	tonnes (000)	grade g/t Au	ounces (000)	tonnes (000)	grade g/t Au	ounces (000)	tonnes (000)	grade g/t Au	ounces (000)
Wassa Open Pit	257	1.56	13	13,922	1.46	654	14,179	1.46	667
Wassa Underground	-	-	-	5,397	4.59	796	5,397	4.59	796
Stockpiles	789	0.93	24	-	-	-	789	0.93	24
Subtotal Wassa	1,046	1.09	37	19,319	2.33	1,450	20,365	2.27	1,486

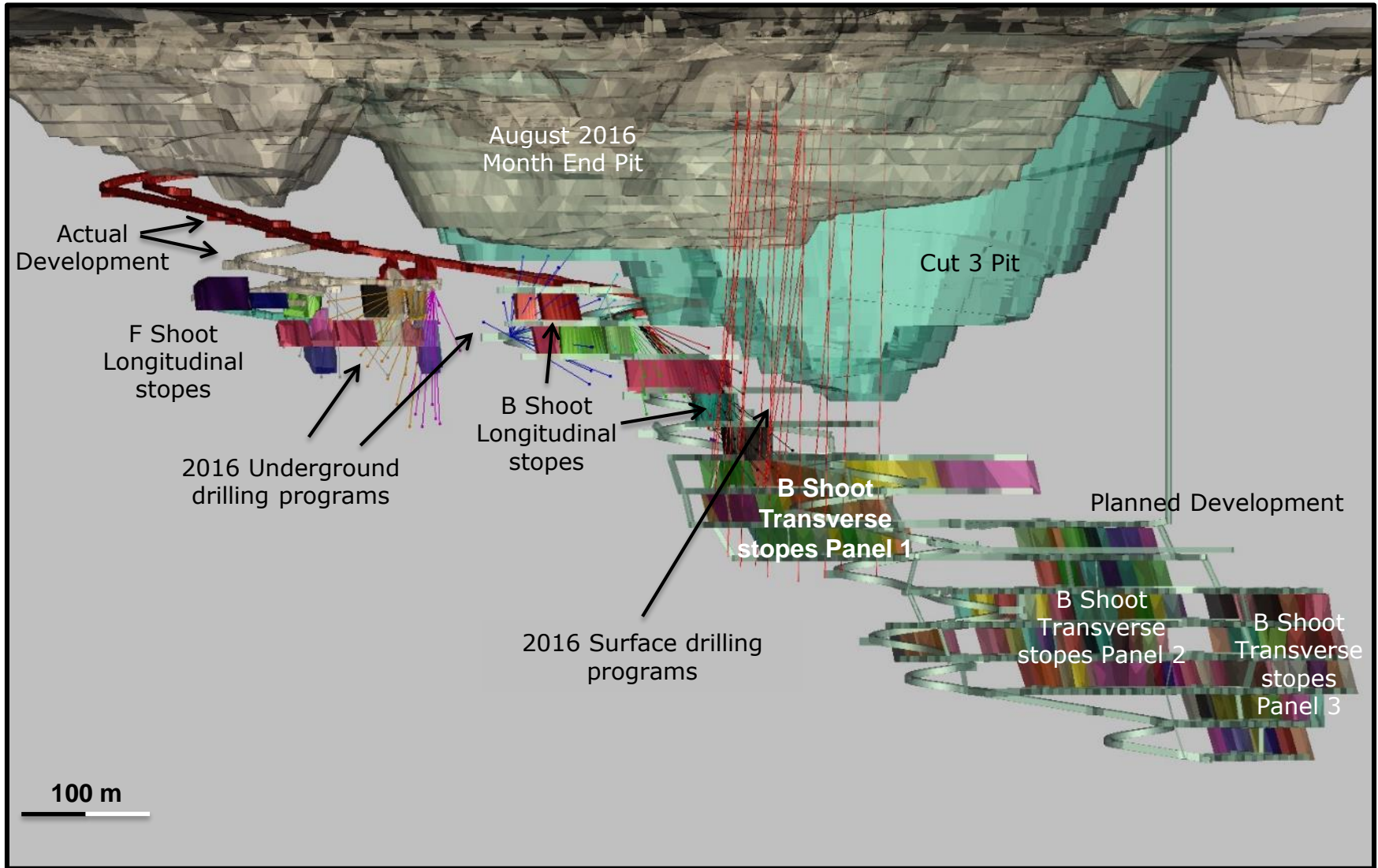
Measured & Indicated Mineral Resources	Dec 31, 2015 Measured Mineral Resource			Dec 31, 2015 Indicated Mineral Resource			Dec 31, 2015 Meas & Ind Mineral Resource		
	tonnes (000)	grade g/t Au	ounces (000)	tonnes (000)	grade g/t Au	ounces (000)	tonnes (000)	grade g/t Au	ounces (000)
Wassa Open Pit	243	1.72	13	37,731	1.23	1,488	37,974	1.23	1,501
Wassa Underground	-	-	-	13,090	3.85	1,621	13,090	3.85	1,621
Wassa Other	-	-	-	3,583	3.76	434	3,583	3.76	434
Subtotal Wassa	243	1.72	13	54,404	2.03	3,543	54,647	2.02	3,556

Inferred Mineral Resources	Dec 31, 2015 Inferred Mineral Resource		
	tonnes (000)	grade g/t Au	ounces (000)
Wassa Open Pit	286	1.37	13
Wassa Underground	14,442	4.16	1,930
Wassa Other	1,764	4.53	257
Subtotal Wassa	16,492	4.15	2,200

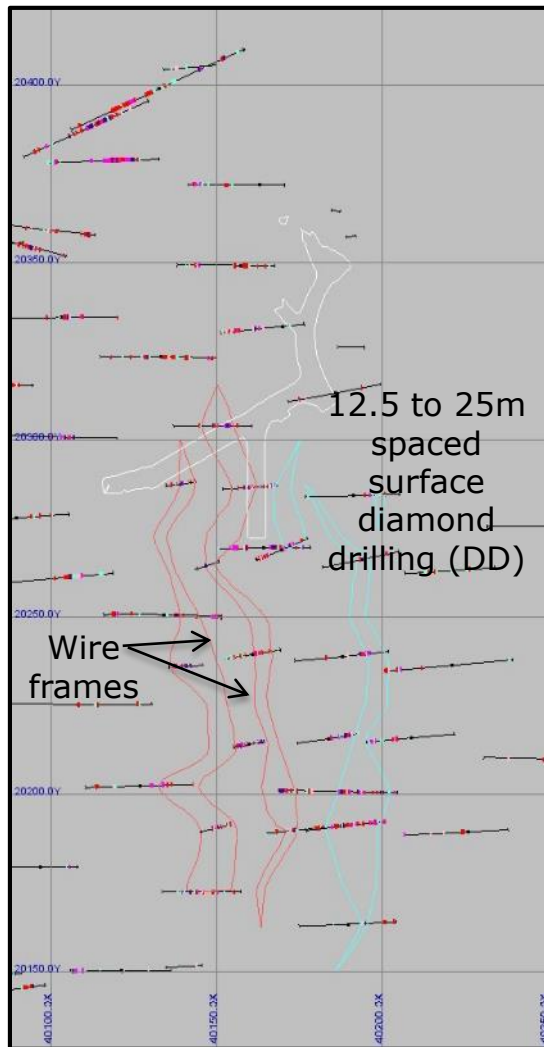
Wassa Underground Drilling¹



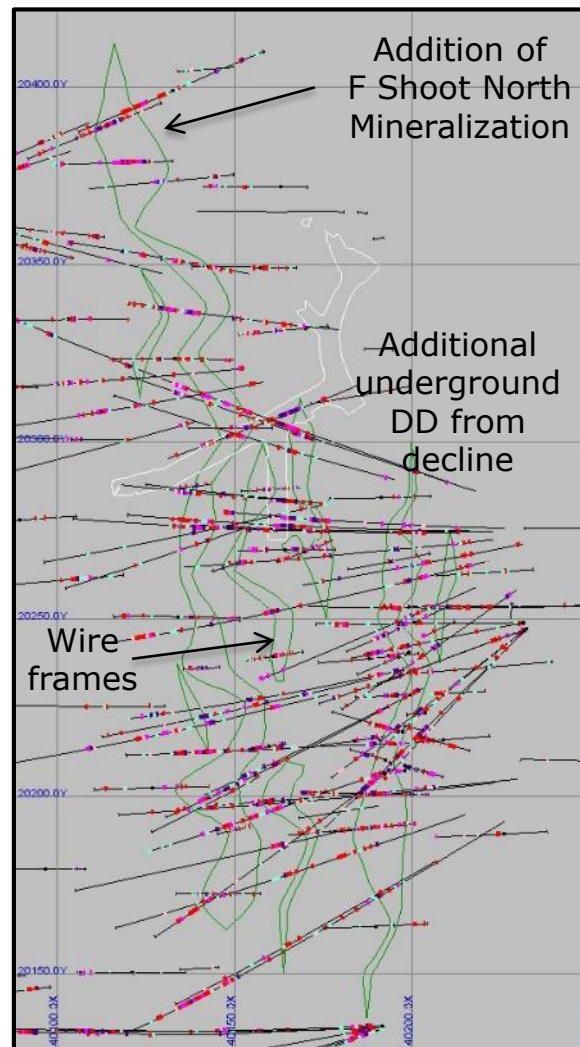
Wassa Underground & Open Pit LOM design



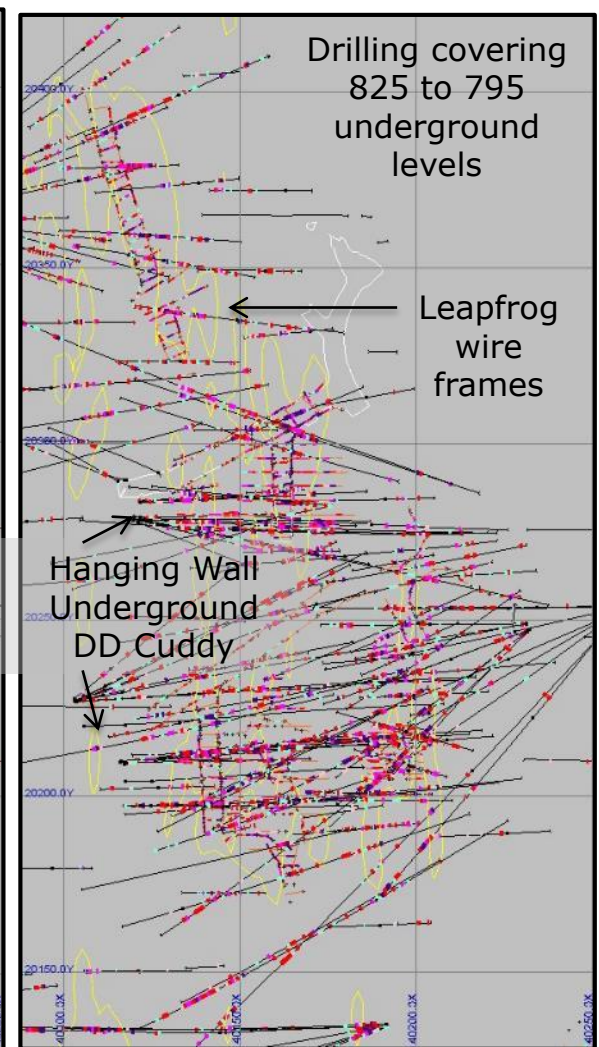
F Shoot 820 Level – Progression of Drilling



Feasibility Study Model

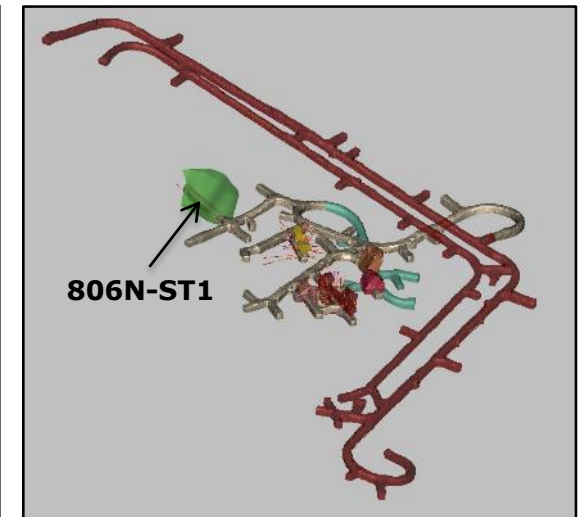
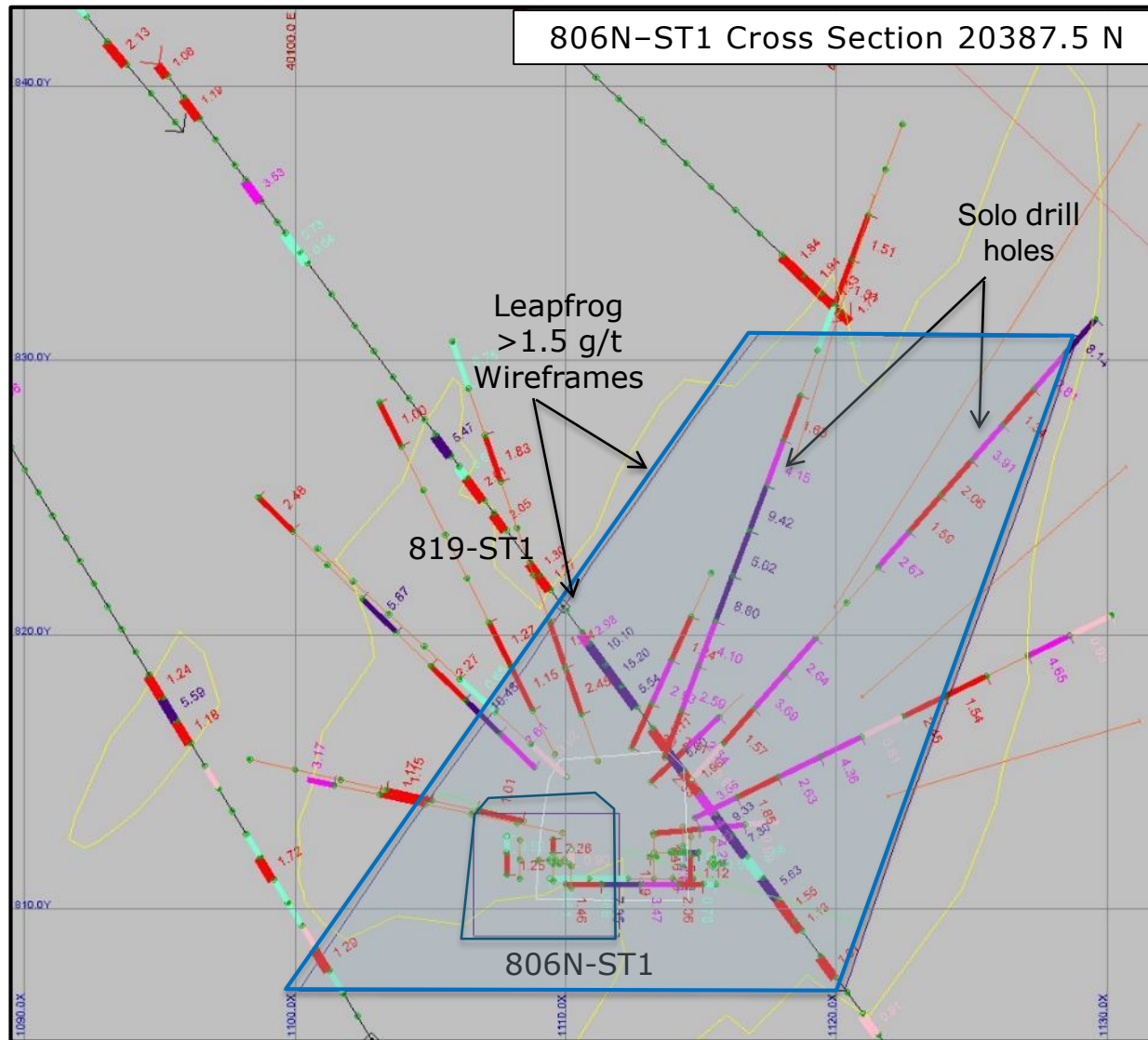


May Version 10 Model



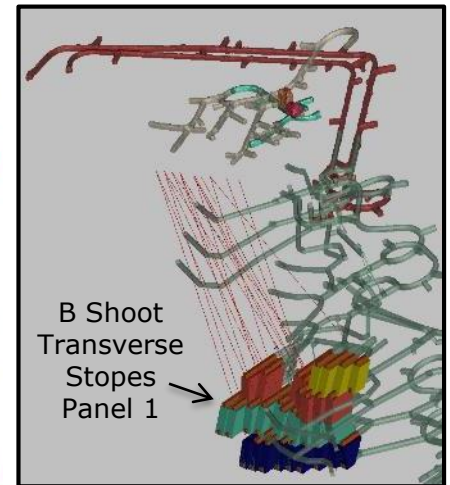
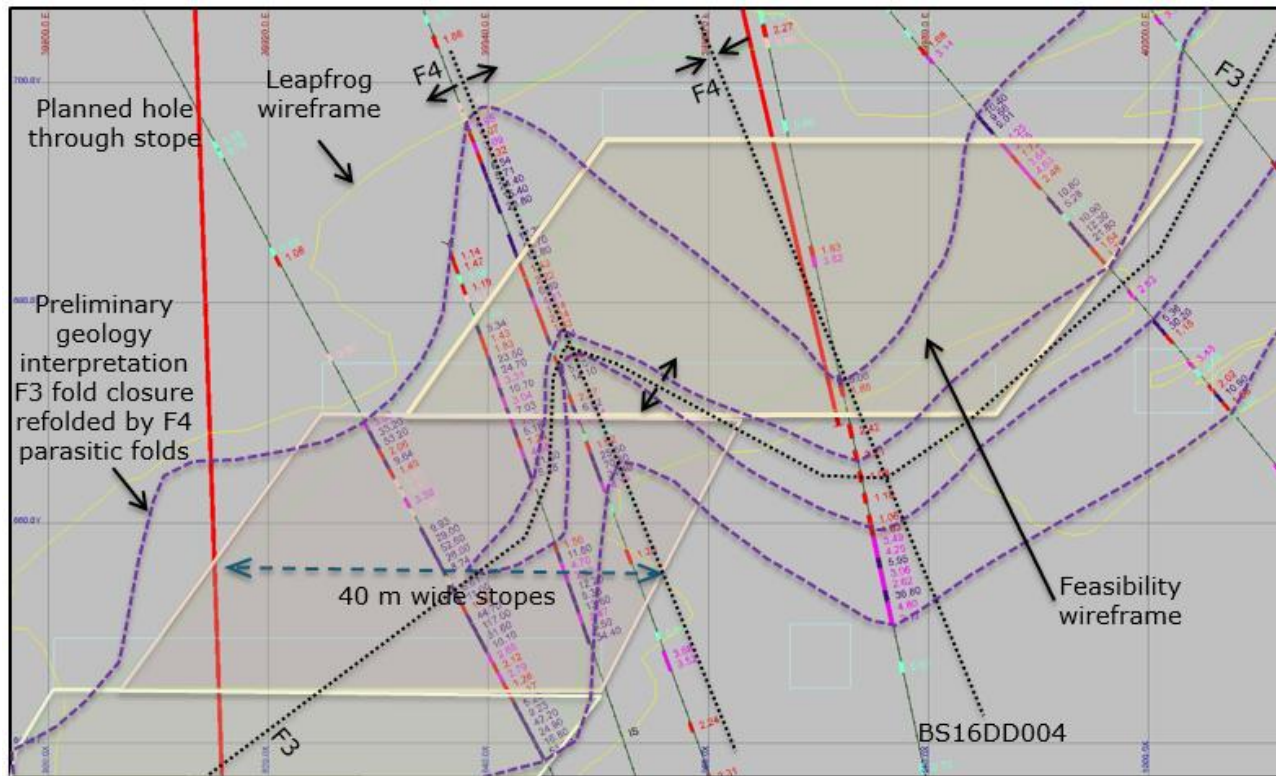
Sept 22 Leapfrog Model

F Shoot North Stope Cross Section



- Solo drill sludge sampling used for final grade control
- Leapfrog software is being utilized to model ore body geometry and these shapes are then used for final stope design
- 806N Stope is currently being production drilled and is expected to be mined in Q4 2016

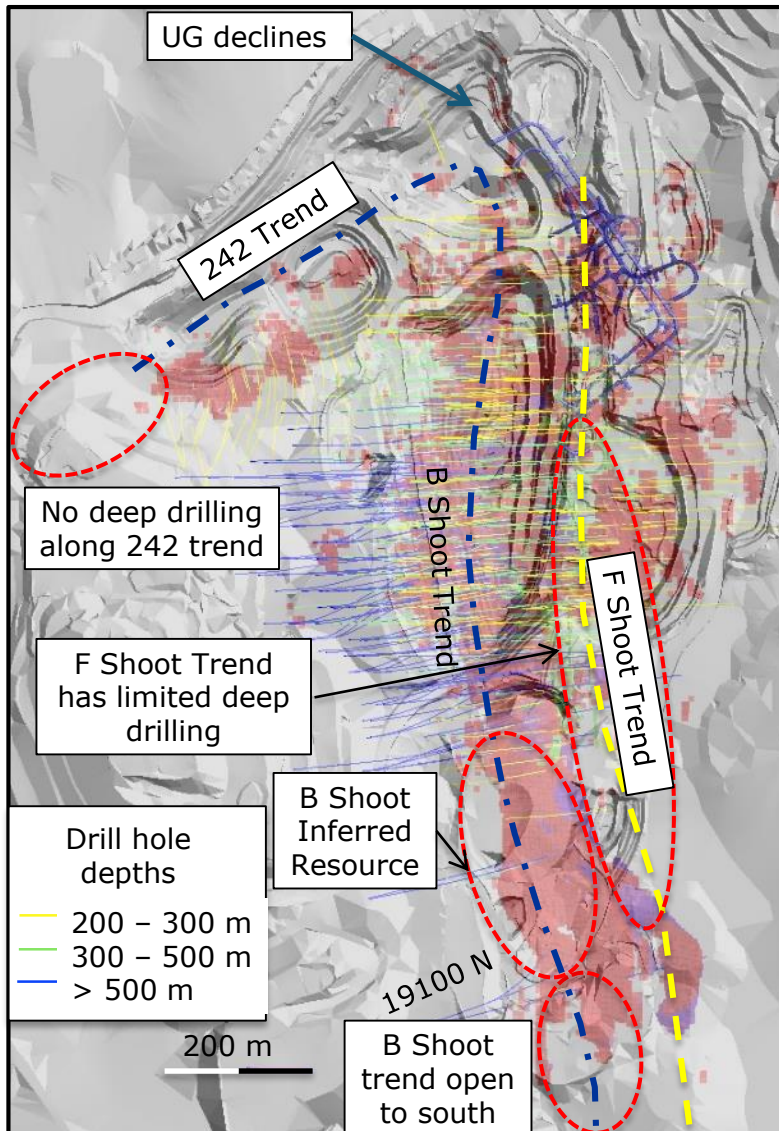
B Shoot Transverse Stope Cross Section



Cross Section of Stope 19950 N

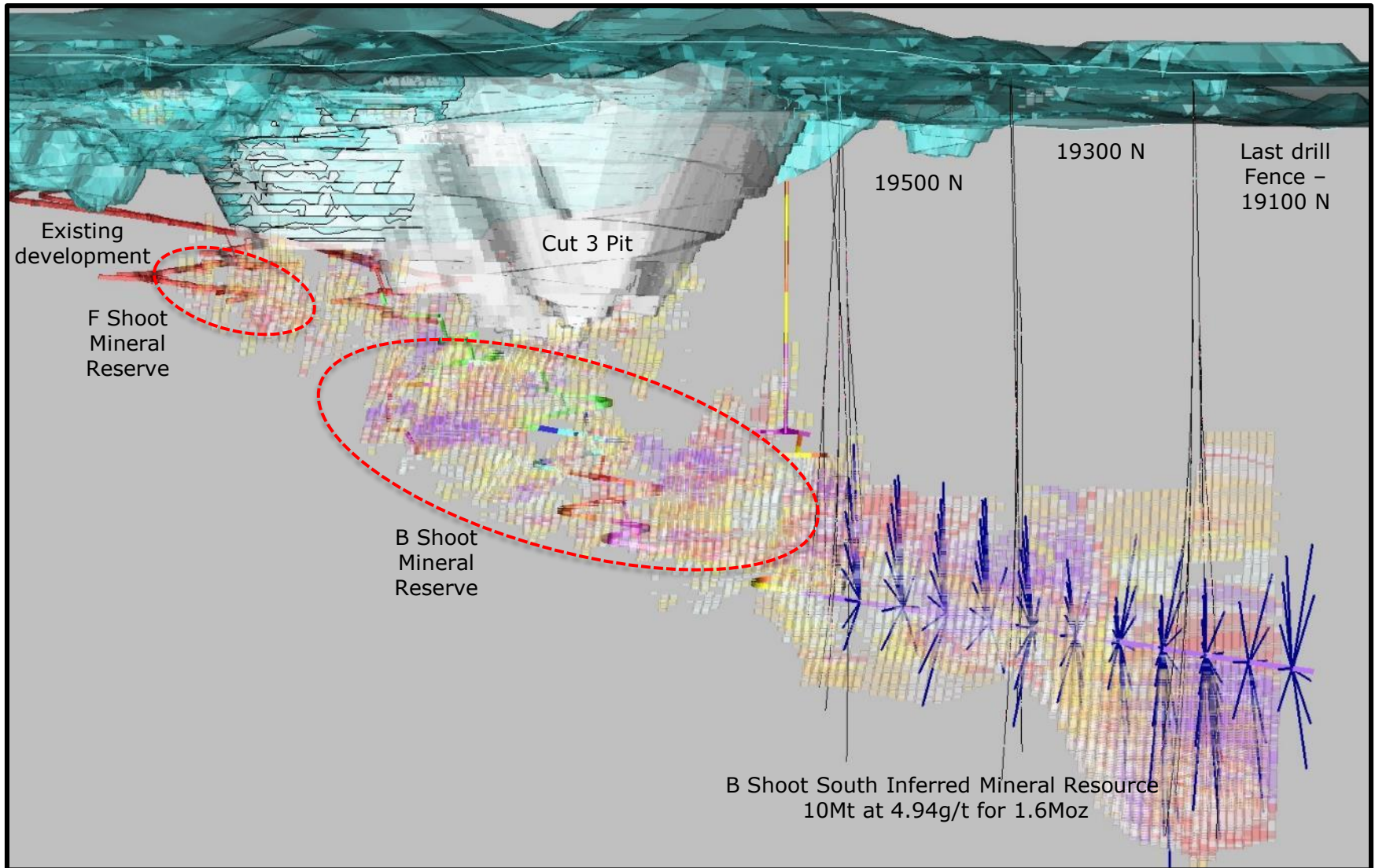
- 86% of the Wassa Underground Reserve tonnes and 89% of the Reserve ounces are contained within the deeper transverse stopes
- Currently 3 surface DD rigs are drilling the first transverse stopes, which are expected to be mined in H2 2017 – drilling expected to be completed by the end of 2016
- Thicker zones interpreted to be F3 fold closure and F4 folds affect overall geometry

Wassa Underground Additional Resource Potential

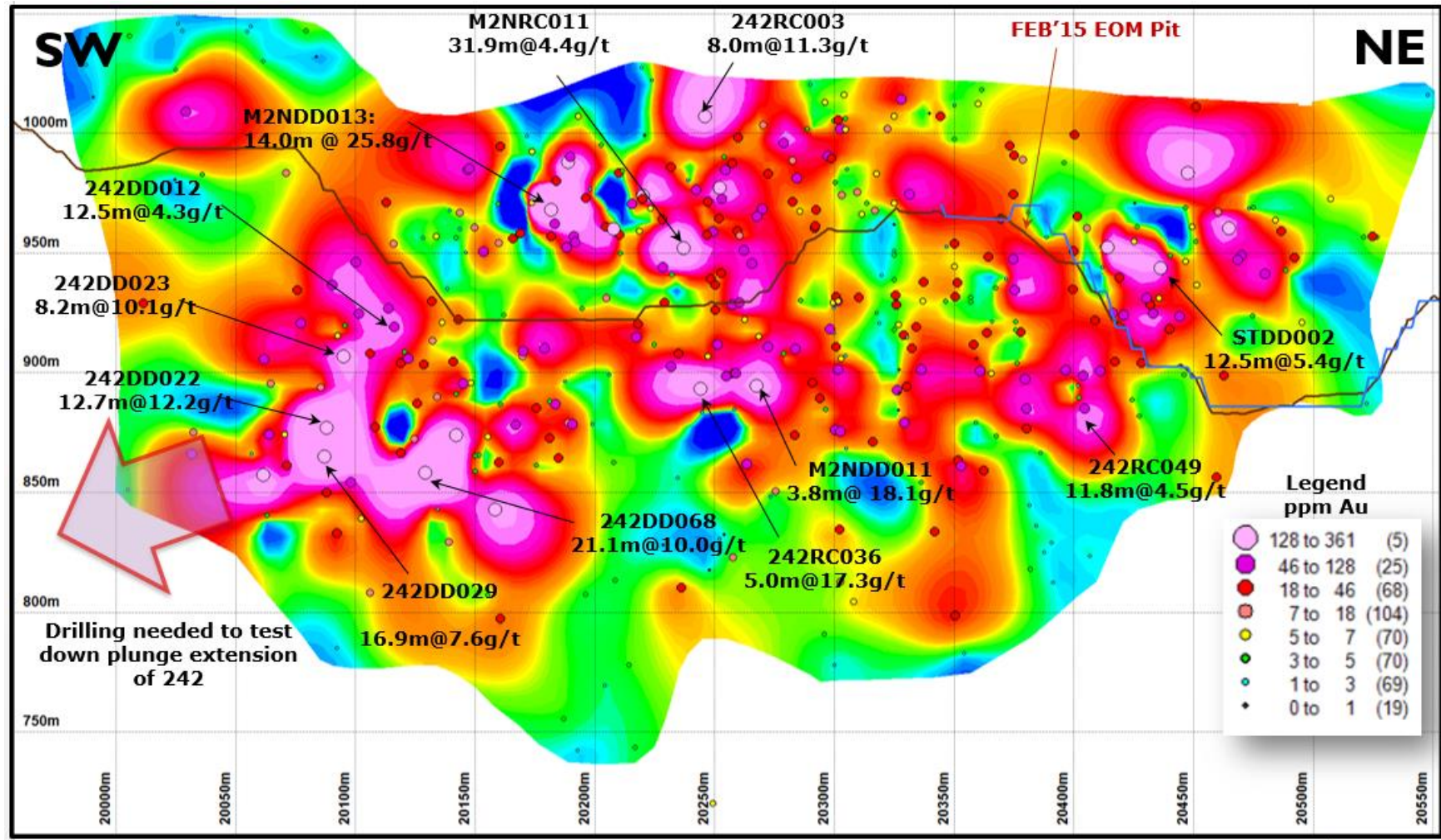


- Numerous extensions of known mineralization exhibit great potential to grow Wassa's resources in the short and medium term
- F shoot mineralization south of the current workings is a short term target which will be tested from underground in 2017
- The 242 trend has been mined at surface and grade control and exploration drilling show grades and thicknesses amenable to underground mining - the 242 trend is interpreted to be the B shoot trend folded around the deposit scale fold
- B Shoot South has a large Inferred resource which has the potential to double the current Wassa Underground reserve - this is a medium term target which will be drilled from underground once the development has advanced to these levels
- The southern extension of the B Shoot trend remains untested

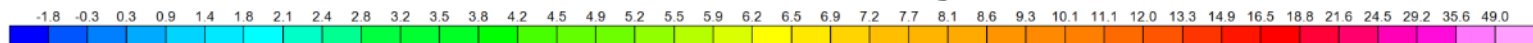
B Shoot Inferred Resource Potential



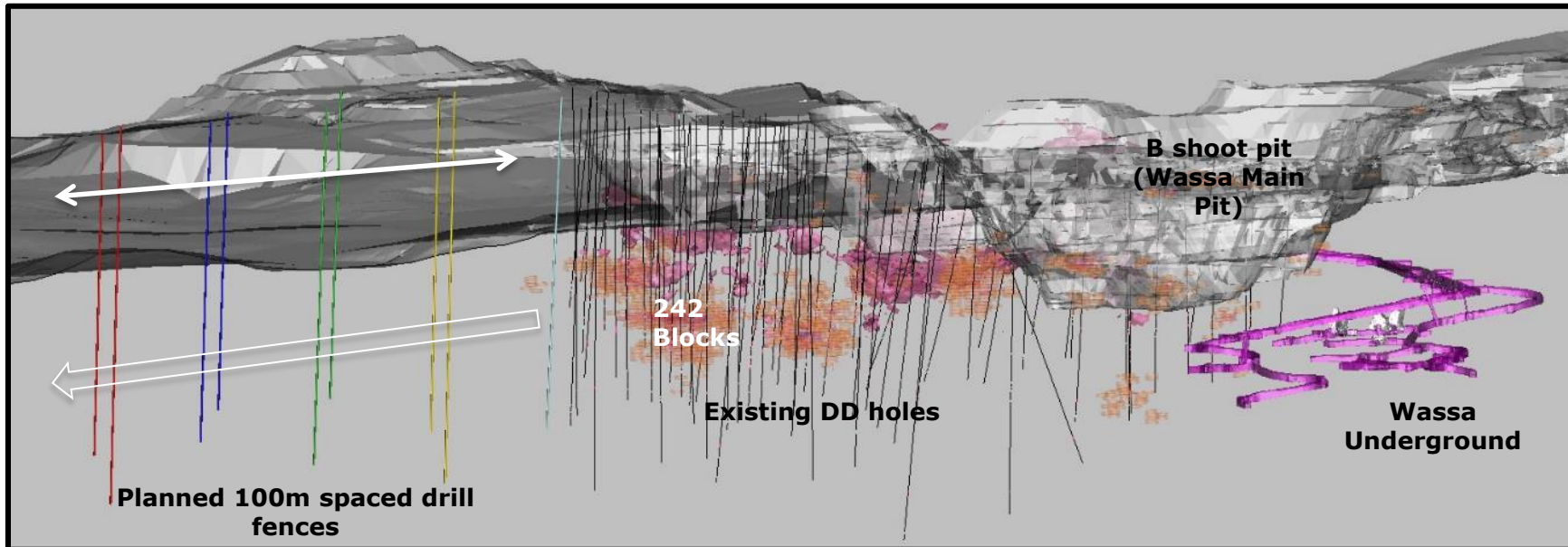
Wassa 242 Trend Grade Thickness Long Section



Wassa Main Grade Thickness Image Gram Metres

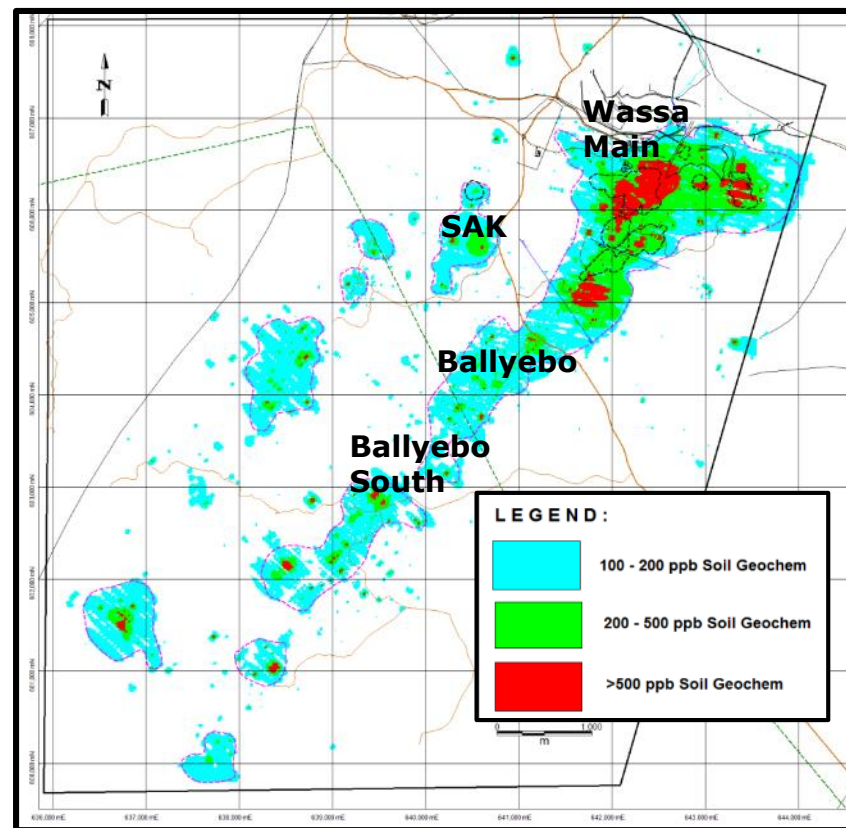
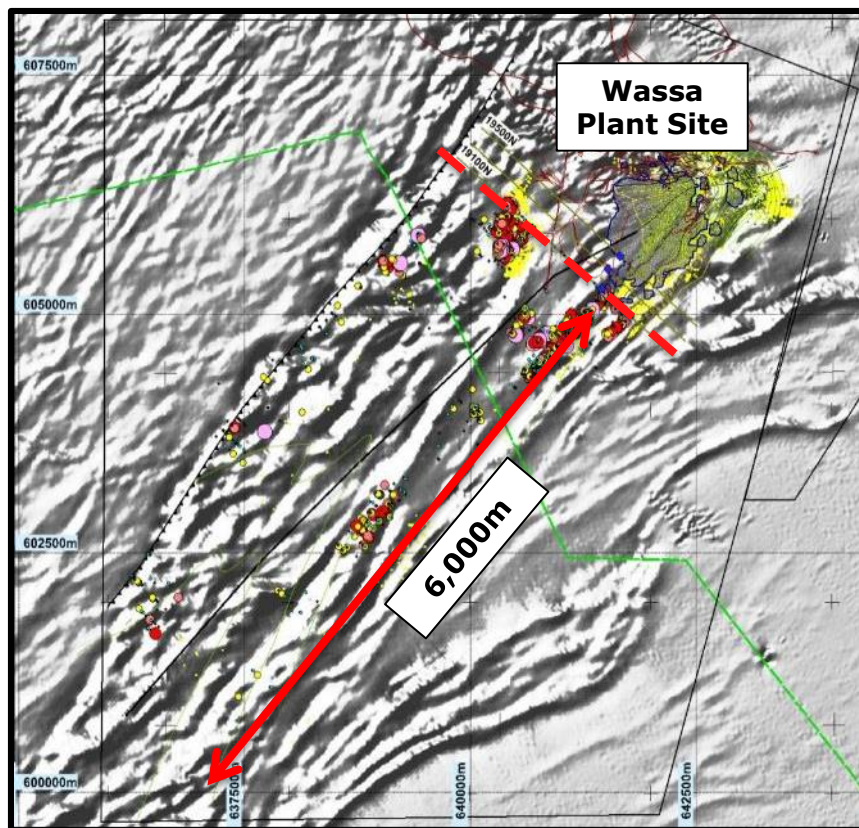


Wassa 242 Extension – Exploration Upside Potential



- 242 Trend open pit historical grade control drilling at a >2.0 g/t cut-off yielded $\sim 800,000$ t at an average grade of 3.6g/t
- Current open pit Mineral Resource estimate below the mined out 242 pit at a >2.0 g/t cut-off is 2.7Mt at 2.64g/t for 229Koz
- ~ 300 Koz delineated over 400 metres of strike, which has been previously mined and is covered by the existing resource models
- 400 metres of step out drilling has been planned to test the down plunge extension of this target

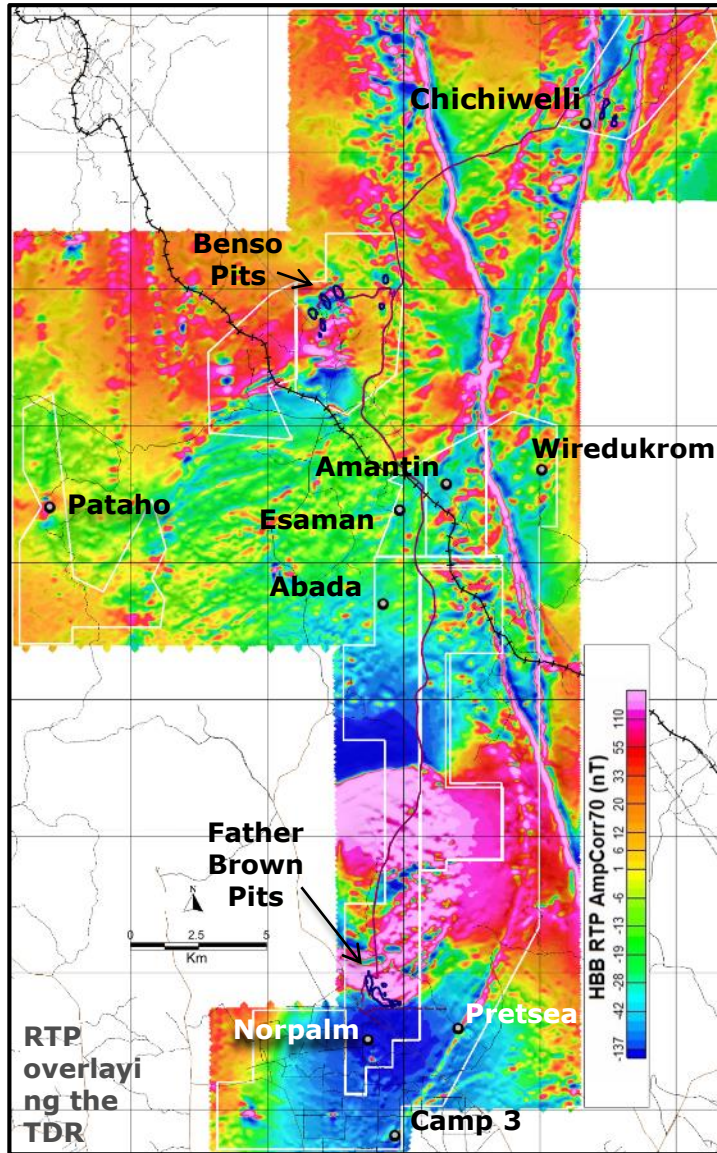
Wassa Exploration Potential Along Strike



- Geophysical and geochemical anomalies delineate the Wassa mineralized trend 6,000m south of the last step out deep drilling fence (19100 N)
- Deeper drilling or deep penetrating geophysics are expected to be conducted south of the known high grade mineralization in the longer term as this is a highly prospective area

Hwini Butre–Benso Airborne Geophysics Interpretation

- Airborne Magnetic & Radiometric survey completed in 2010 was processed and interpreted in 2016 to assist with target generation and ranking
- Initial follow up drilling will be planned for testing highest ranked targets
- Deeper drilling beneath several of the mined out HBB pits at Benso and Father Brown is planned to test the higher grade shoots mined in the open pits



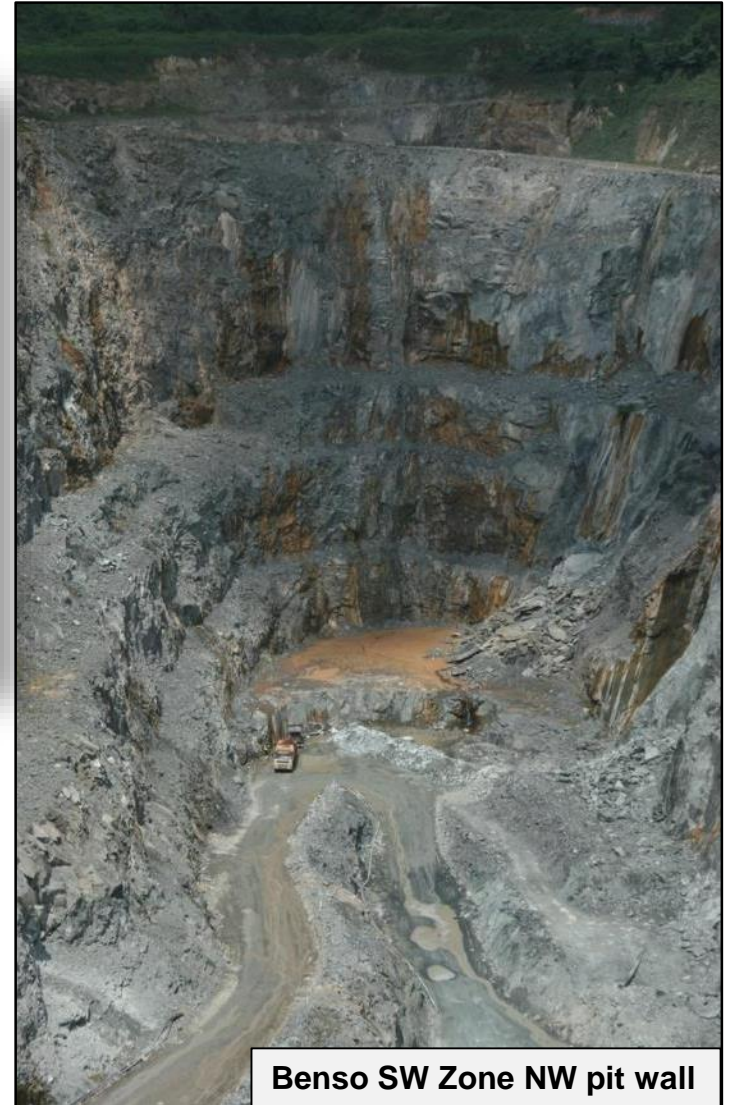
Hwini Butre–Benso High Grade Exploration Targets



Father Brown High Grade Vein

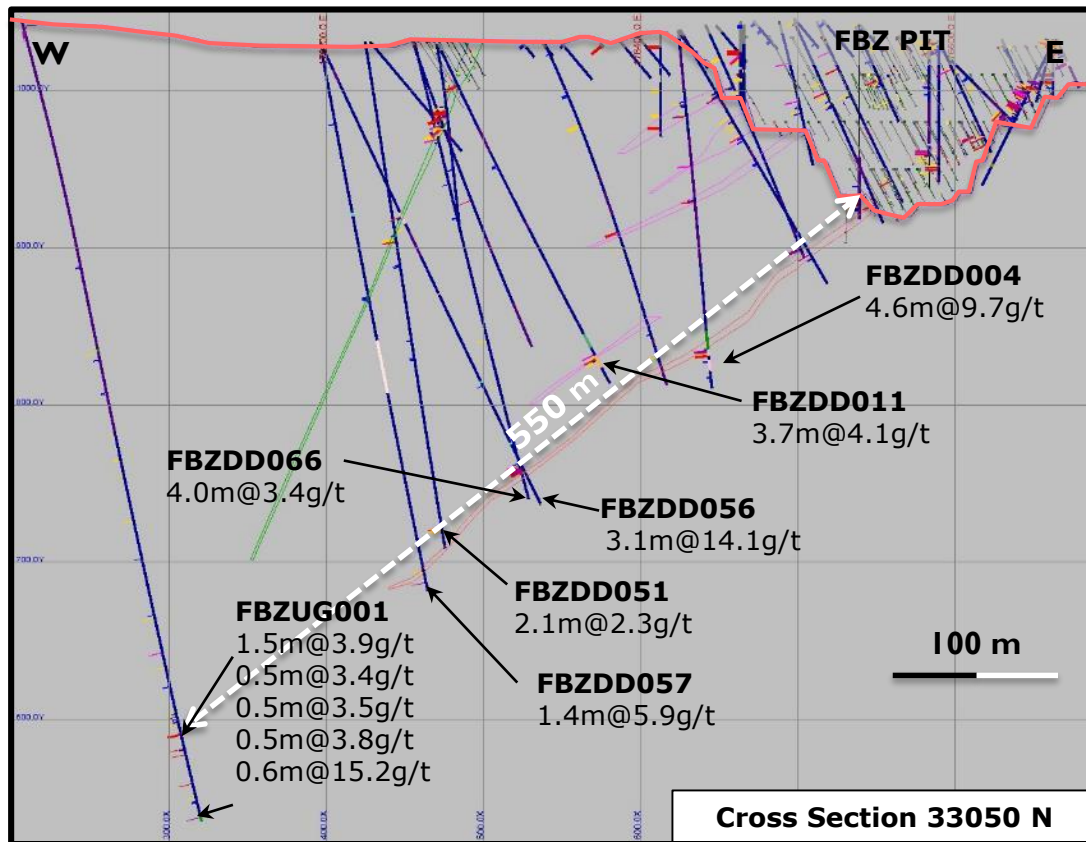


Gold in FBZ vein

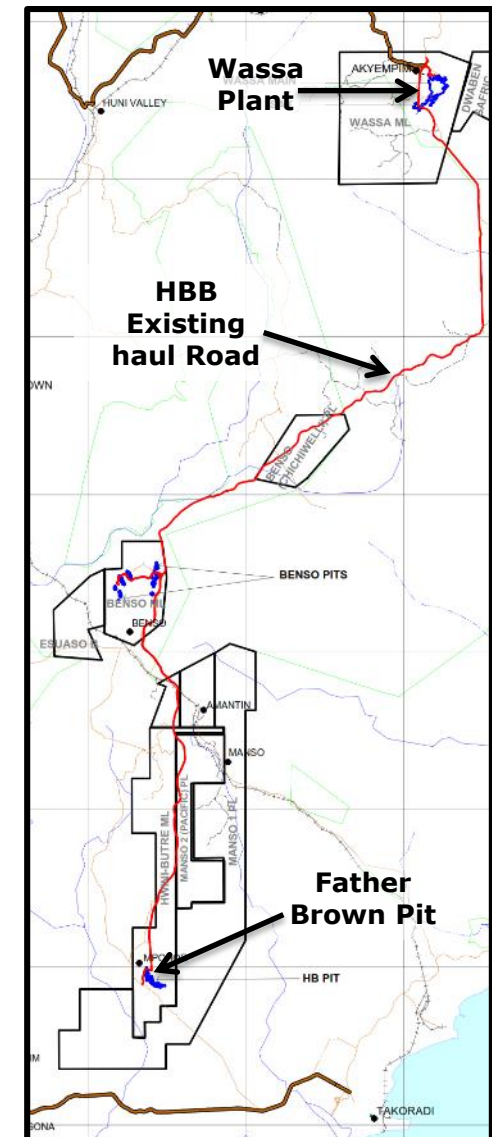


Benso SW Zone NW pit wall

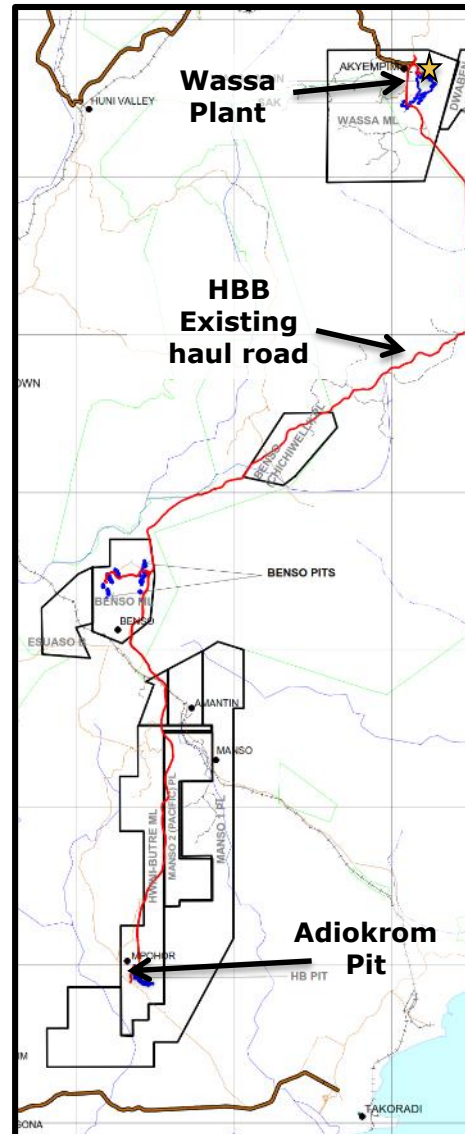
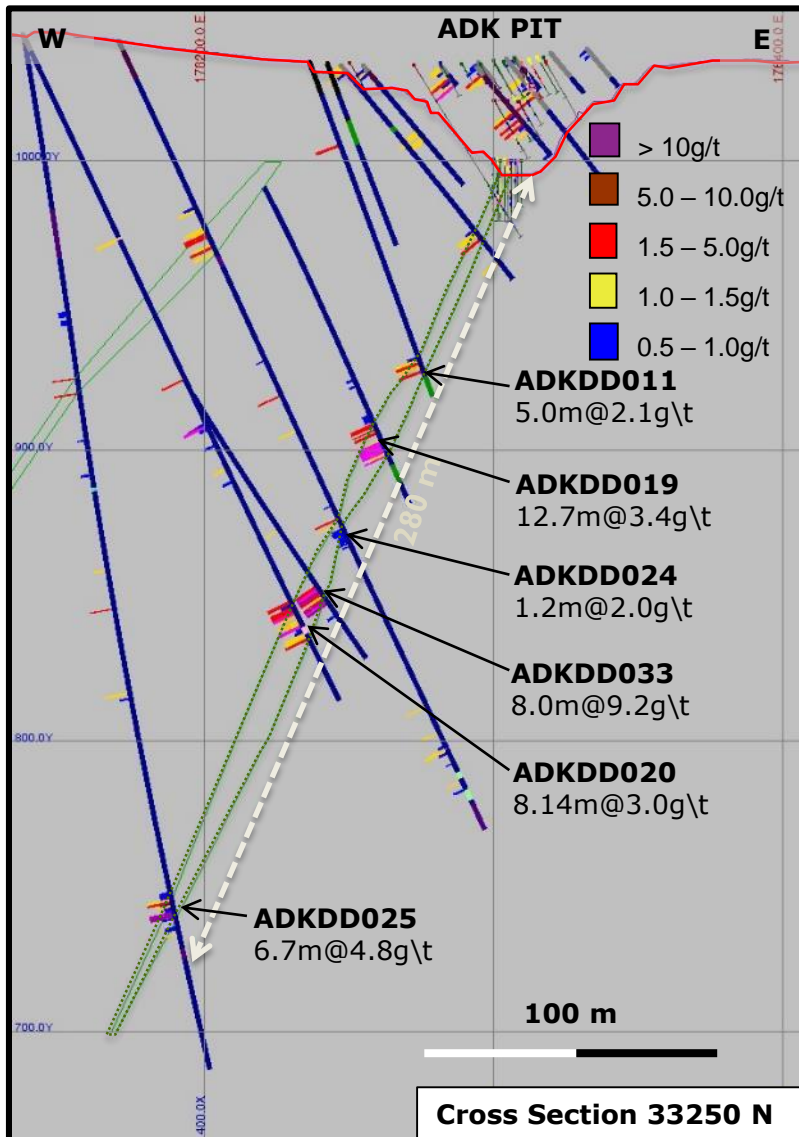
Hwini Butre Father Brown Exploration Target



- Father Brown pit is located 85km from Wassa plant
- Active mining lease
- GSR mined from Aug 2011 to Feb 2015 – yielded open pit production of 1.18Mt at 5.2g/t
- Grades and thickness are favorable for underground mining
- Further drilling planned

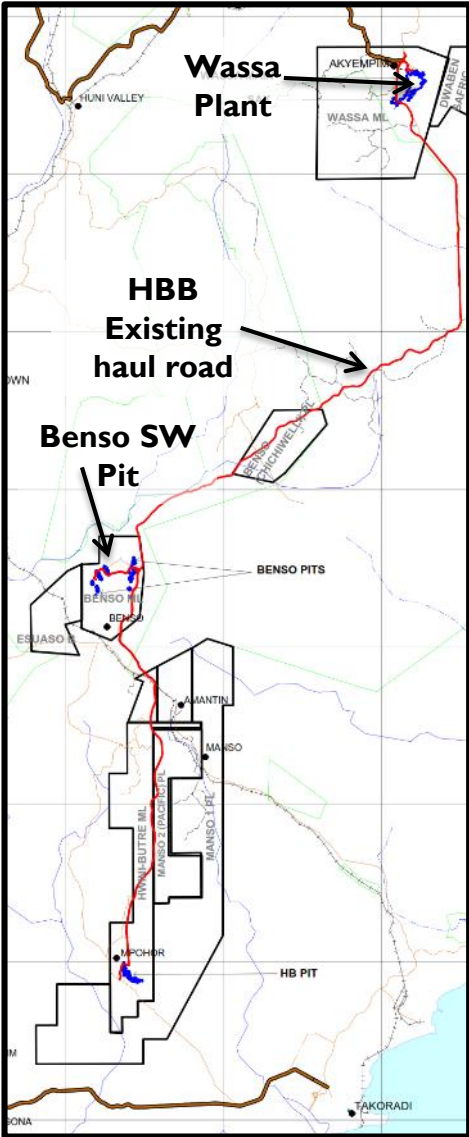
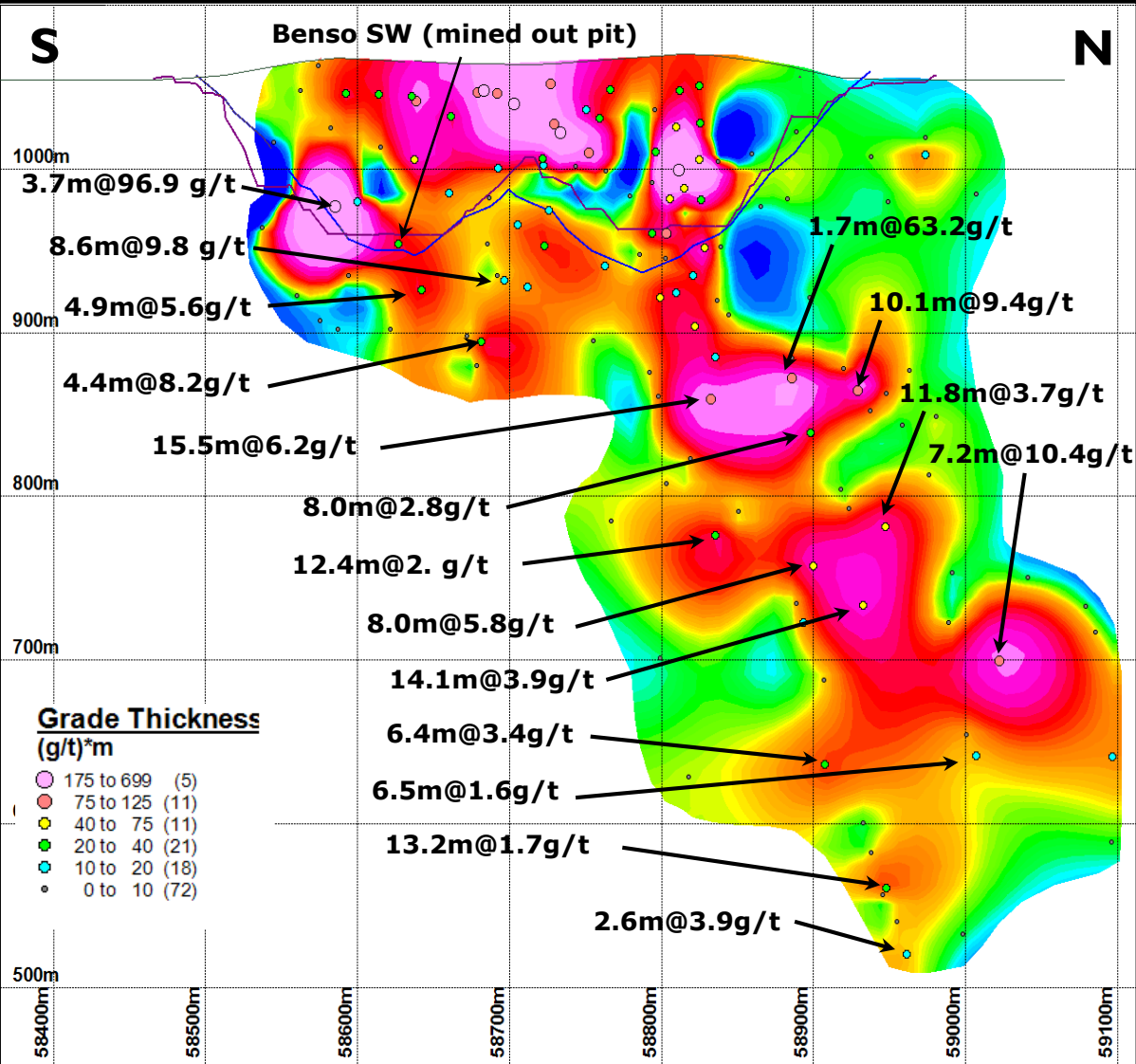


Hwini Butre Adiokrom Exploration Target



- Adiokrom pit located 85km from Wassa plant
- Active Mining lease
- 2011 GSR reconciled open pit production of 380Kt at 3.6g/t
- Grades and thickness favorable for underground mining
- Further drilling planned
- Mineral Resource at >3.2 g/t cut-off, below pit shells at Adiokrom and Father Brown:
 - Indicated: 1.2Mt at 6.0 g/t
 - Inferred: 1.3Mt at 5.5 g/t

BENSO - Subriso West High Grade Exploration Target





Contact Us

Katharine Sutton, Investor Relations
+1 416 538 3800
investor@gsr.com

NYSE MKT: GSS
TSX: GSC

Mineral Reserves and Resources

Mineral Reserves ^{1,2,3}	Tonnes ('000)	Grade (Au g/t)	Content (Koz)
Proven Reserves			
Wassa	1,046	1.09	37
Prestea	25	2.69	2
Total	1,071	1.12	39
Probable Reserves			
Wassa	19,319	2.33	1,450
Prestea	3,237	6.29	654
Total	22,556	2.90	2,104
Total Proven & Probable	23,626	2.82	2,143

Mineral Resources ^{1,2,3}	Tonnes ('000)	Grade (Au g/t)	Content (Koz)
Measured & Indicated Mineral Resources			
Wassa	54,647	2.02	3,556
Prestea	6,712	5.30	1,144
Total	61,360	2.38	4,700
Inferred Mineral Resources			
Wassa	16,462	4.15	2,200
Prestea	3,813	7.70	944
Total	20,305	4.82	3,144

1. For Wassa's Mineral Reserves and Resources please refer to 'NI 43-101 Technical Report on a Feasibility Study of the Wassa Open Pit and Underground Project in Ghana', dated December 31, 2014, which is filed on SEDAR and at www.gsr.com
2. For Prestea's Mineral Reserves and Resources please refer to 'NI 43-101 Technical Report on a Feasibility Study of the Prestea Underground Gold Project in Ghana', dated November 03, 2015, which is filed on SEDAR and at www.gsr.com
3. All numbers exclude refractory ore.