



28 July 2022

ASX ANNOUNCEMENT  
(ASX:TGM)

## Investor Presentation Feasibility Study for TGME Underground Gold Mine Project

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Theta Gold Mines Limited (“**Theta Gold**” or the “**Company**”) (ASX: TGM| OTC: TGMGF) refers to the Company’s Feasibility Study (“FS”) for the TGME Underground Gold Mine Project announced on 27 July 2022 and attaches an Investor Presentation to summarise the key highlights of the FS for investors and shareholders.

[ENDS]

This announcement was approved for release by Theta Gold Mines Limited’s Board.

For more information, please visit [www.thetagoldmines.com](http://www.thetagoldmines.com) or contact:

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<https://www.linkedin.com/company/thetagoldmines/>



## FIRST GOLD DEFINITIVE FEASIBILITY STUDY



**DFS TO RECOVER 1.08Moz Au OVER 12.9 YEARS LOM INITIALLY  
AT TGME UNDERGROUND MINE**

**6.1Moz GOLD RESOURCE & GROWING**

Definitive Feasibility Study Presentation - July 2022



## FORWARD LOOKING AND CAUTIONARY STATEMENTS

This presentation may refer to the intention of Theta Gold Mines regarding estimates or future events which could be considered forward looking statements. Forward looking statements are typically preceded by words such as “Forecast”, “Planned”, “Expected”, “Intends”, “Potential”, “Conceptual”, “Believes”, “Anticipates”, “Predicted”, “Estimated” or similar expressions. Forward looking statements, opinions and estimates included in this announcement are based on assumptions and contingencies which are subject to change without notice, and may be influenced by such factors including but not limited to funding availability, market-related forces (commodity prices, exchange rates, stock market indices and the like) and political, environmental or economic events (including government or community issues, land owners, global or systemic events). Forward looking statements are provided as a general reflection of the intention of the Company as at the date of release of the document, however are subject to change without notice, and at any time. Future events are subject to risks and uncertainties, and as such results, performance and achievements may in fact differ from those referred to in this announcement. Mining, by its nature, and related activities including mineral exploration, are subject to a large number of variables and risks, many of which cannot be adequately addressed, or be expected to be assessed, in this document. Work contained within or referenced in this report may contain incorrect statements, errors, miscalculations, omissions and other mistakes. For this reason, any conclusions, inferences, judgments, opinions, recommendations or other interpretations either contained in this announcement, or referencing this announcement, cannot be relied upon. There can be no assurance that future results or events will be consistent with any such opinions, forecasts or estimates. The Company believes it has a reasonable basis for making the forward looking statements contained in this document, with respect to any production targets, resource statements or financial estimates, however further work to define Mineral Resources or Reserves, technical studies including feasibilities, and related investigations are required prior to commencement of mining. No liability is accepted for any loss, cost or damage suffered or incurred by the reliance on the sufficiency or completeness of the information, opinions or beliefs contained in this announcement.

The Feasibility Study referred to in this announcement is based on technical and economic assessments to support the estimation of Ore Reserves. There is no assurance that the intended development referred to will proceed as described, and will rely on access to future funding to implement. Theta Gold Mines believes it has reasonable grounds the results of the Feasibility Study. At this stage there is no guarantee that funding will be available, and investors are to be aware of any potential dilution of existing issued capital. The production targets and forward looking statements referred to are based on information available to the Company at the time of release, and should not be solely relied upon by investors when making investment decisions. Theta Gold cautions that mining and exploration are high risk, and subject to change based on new information or interpretation, commodity prices or foreign exchange rates. Actual results may differ materially from the results or production targets contained in this release. Further evaluation is required prior to a decision to conduct mining being made. The estimated Mineral Resources quoted in this release have been prepared by Competent Persons as required under the JORC Code (2012). Material assumptions and other important information are contained in this release.

### NOTE BUSINESS ARRANGEMENT

Theta Gold Mines holds 100% issued capital of its South African subsidiary Theta Gold SA (Pty) Ltd (“TGSA”). TGSA holds a 74% shareholding in both Transvaal Gold Mining Estates Limited (“TGME”) and Sabie Mines (Pty) Ltd (“Sabie Mines”). TGME holds the various exploration and mining permits. The balance of shareholding is held by Black Economic Empowerment (“BEE”) entities. The South African Mining Charter requires a minimum of 26% meaningful economic participation by the historically disadvantaged South Africans (“HDSAs”). The BEE shareholding in TGME and Sabie Mines is comprised of a combination of local community trusts, an employee trust and a strategic entrepreneurial partner.

## DISCLAIMER AND COMPETENT PERSONS STATEMENT

### DISCLAIMER

This announcement or presentation has been prepared by and issued by Theta Gold Mines Limited (ASX:TGM | OTCQB: TGMGF) to assist in informing interested parties about the Company and should not be considered as an offer or invitation to subscribe for or purchase any securities in the Company or as an inducement to make an offer or invitation with respect to those securities. No agreement to subscribe for securities in the Company will be entered into on the basis of this announcement.

This announcement or presentation may contain forward looking statements. Whilst Theta Gold Mines has no reason to believe that any such statements and projections are either false, misleading or incorrect, it does not warrant or guarantee such statements. Nothing contained in this announcement constitutes investment, legal, tax or other advice. This overview of Theta Gold Mines does not purport to be all inclusive or to contain all information which its recipients may require in order to make an informed assessment of the Company’s prospects. Before making an investment decision, you should consult your professional adviser, and perform your own analysis prior to making any investment decision. To the maximum extent permitted by law, the Company makes no representation and gives no assurance, guarantee or warranty, express or implied, as to, and take no responsibility and assume no liability for, the authenticity, validity, accuracy, suitability or completeness of, or any errors in or omissions, from any information, statement or opinion contained in this announcement. This announcement contains information, ideas and analysis which are proprietary to Theta Gold.

### COMPETENT PERSONS STATEMENT

The information in this report relating to mineral resources and ore reserves is based on, and fairly reflects, the information and supporting documentation compiled by Mr Uwe Engelmann (BSc (Zoo. & Bot.), BSc Hons (Geol.), Pr.Sci.Nat. No. 400058/08, MGSSA), a director of Minxcon (Pty) Ltd and a member of the South African Council for Natural Scientific Professions and Mr Daniel van Heerden (B.Ing (Mining M.Com (Business Management)), member of Engineering Council of South Africa (Pr.Eng. Reg. No. 20050318)), a director of Minxcon (Pty) Ltd and a fellow of the South African Institute of Mining and Metallurgy (FSAIMM Reg. No. 37309).

The original reports titled “Theta Gold Increases Mineral Resource to over 6Moz” dated 16 May 2019, “Optimised Mine Schedule for Theta Open Pit Starter Project Delivers Significant Improvements” dated 20 April 2020 and “Initial Maiden Underground Mining Reserve 419,000 oz Gold” dated 8 April 2021 were released to the Australian Securities Exchange (ASX) on those dates. The Company confirms that:

- it is not aware of any new information or data that materially affects the information included in the ASX announcements; and
- all material assumptions and technical parameters underpinning the estimates in the ASX announcements continue to apply and have not materially changed.

### AUTHORISATION

This announcement was authorised for release by the Board of Theta Gold Mines Limited.



## Reviving South Africa's first gold rush

### Slide No. & Description:

- 4 Theta Gold Highlights
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**This is where South Africa's gold mining industry began 130 years ago, and we're bringing this large, rich, shallow, predeveloped goldfield back to life.**



# Theta Gold Highlights



## HIGH GROWTH GOLD INVESTMENT OPPORTUNITY

**Existing Historic Goldfield** - Multiple pre-developed, shallow, high grade historic gold mines – ready to be brought back into production

**Large, Growing Resource** - 6.1Moz gold resource @4.17g/t and continuously growing, with more than 40 other existing pre-developed shallow underground mines not yet reflected in the stated resource

**Low Capital Start-up** - < US\$100m capital required to reach >90koz/a within 2 years

**Organic Growth** - Self-funded expansion to >160koz within 5 years

**Low-Cost Producer** - Forecasted operating cost half the current gold price (<US\$900/oz) to become the lowest cost producer in South Africa

**Competent Execution Team** - Executive team that have successfully developed and optimised many mines in South Africa and other developing countries

**Execution-Ready** - FS completed with full front-end engineering designs (FEED)<sup>1</sup> – ready for execution

1. Refer to ASX Released dated 20 June 2022 "TGME Underground Gold Update"

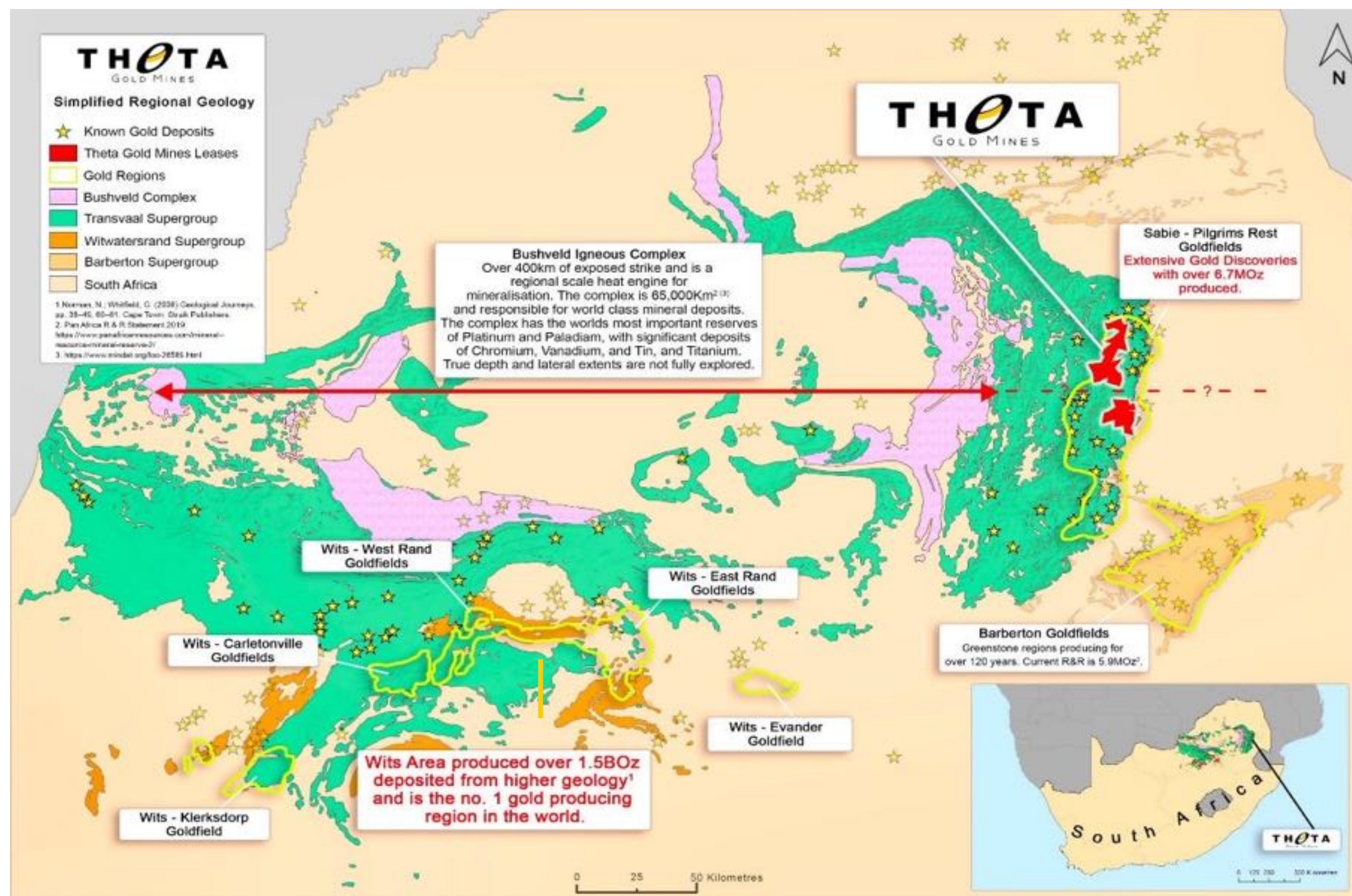




# South Africa's "Golden Triangle"



**SA host the 3rd largest gold reserves in the world (~6,000T Au)**



The Transvaal Gold System sits geological on the eastern side of Bushveld Complex the largest layered igneous intrusion on earth. We have already generated and delivered one of the largest undeveloped gold resources on the ASX not controlled by major mining houses.



## Key FS Takeaways<sup>1</sup>

**THETA**  
GOLD MINES



**Project Life**  
12.9 years



**Underground ore  
mined**  
6.46Mt @ 5.95g/t  
Au for 1.24Moz of  
contained gold



**Peak Funding  
Requirements**  
US\$ 77M<sup>2</sup>



**Metallurgical  
Recovery**  
87%



**Payback Period**  
Start of Project –  
31 Months  
Start of Mining –  
18 Months



**Pre-Tax  
NPV 10%**  
US\$324m @ Avg  
USD/oz \$1,642  
IRR of 65%



**AISC**  
US\$788oz  
(Year 1-4)  
US\$847/oz  
(LOM)



**First Gold Pour**  
2<sup>nd</sup> Quarter 2024<sup>3</sup>

Theta Gold Mines Limited controls the Eastern Transvaal Gold Fields, where South Africa's gold mining industry began almost 130 years ago.

<sup>1</sup>Feasibility figures to refer to ASX Release dated 27 August "FS Confirms NPV<sub>10%</sub> of A\$432 million at US\$1642/oz Gold Price

<sup>2</sup>TGM is currently in discussion with debt financiers and has engaged an experienced debt advisory to assist in the negotiation of term-sheets for funding of the Project. Further equity raises are also planned to fund working capital and part of the project capital if required, which may lead to dilution to existing shareholders.

<sup>3</sup>First gold produced timing will be subject to securing funding

**Incorporating only 4 of more than 40 previously  
developed mines**



# FS – Key Metrics Base/Ore Reserve Cases

Description	Units	Base Case	Ore Reserve Case
Project Targeted Start Date	Quarter-yyyy	Q1 2023	Q1 2023
Commercial Production Start Date	Quarter-yyyy	Q2 2024	Q2 2024
Production build up period	Months	14	14
Life of mine	years	12.9	7.3
Underground ore mined (LOM)	Mt	6.46	2.85
Mined Grade	g/t	5.95	6.09
Gold Mined (LOM)	Moz	1.24	0.56
Production Rate	Kt/a	540	540
Production Rate	Kt/m	45	45
Grind size	μ	106	106
Gold recovered (average LOM)	%	87	87
Gold recovered (LOM)	Moz	1.08	0.49

Cautionary Statement for the LOM Base Case – The Base Case is presented as potential upside to the Project. However, the Base Case is supported by a significant portion of Inferred Mineral Resources. Inferred Mineral Resources inherently have a lower level of confidence and although it would be reasonable to expect that the majority of Inferred Mineral Resources would upgrade to Indicated Mineral Resources with continued exploration, it should not be assumed that such upgrading will occur. The realization of the full potential of the Base Case as presented thus cannot be guaranteed.

Start date will be subject too securing necessary funding and approval of regulatory permits.



# Project Economics at Various Gold Prices – Base Case (USD)



Project Economics at gold price	Unit	Base Forecast (USD1,642/oz LoM Avg)	USD1,500/oz	USD1,600/oz	USD1,800/oz	USD2,000/oz	USD2,200/oz
NPV @ 10% (Pre-tax)	USDm	324	255	304	402	501	601
NPV @ 10% (Post-tax)	USDm	219	174	206	269	335	400
IRR (Pre-tax)	%	65%	57%	64%	77%	90%	102%
IRR (Post-tax)	%	57%	50%	56%	67%	78%	87%
All-in Sustaining Costs (AISC)	USD/oz	834	822	831	847	862	876
EBITDA annual average	USDm	69	58	66	81	96	111
EBIT annual average	USDm	60	49	57	72	87	102
Free Cash Flow (Pre-tax)	USDm	717	576	673	869	1 066	1 264
Free Cash Flow (Post-tax)	USDm	508	412	478	611	747	881
Average Payback Period (from Start of Mining)	Months	31	33	31	28	25	24
Peak Funding Requirement	USDm	77	77	77	77	77	77
Sustaining Capital	USDm	37	37	37	37	37	37
Capital Efficiency (Pre-Tax NPV/Dev Capital*)	%	422%	332%	395%	524%	653%	783%
Capital Efficiency (Post-Tax NPV/Dev Capital*)	%	285%	226%	268%	351%	437%	521%



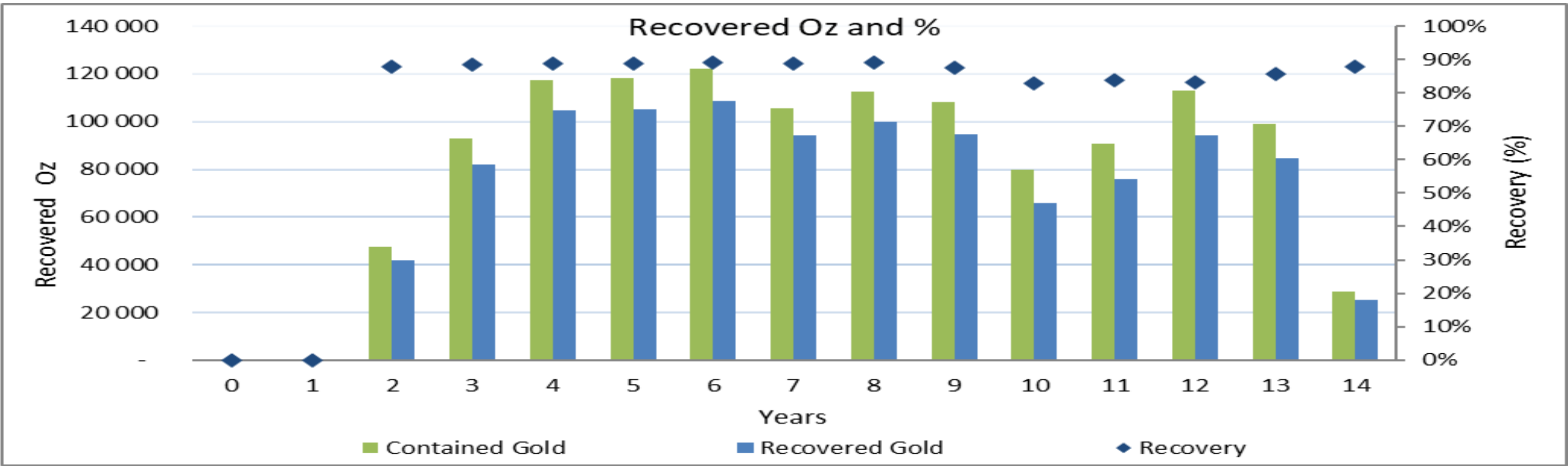
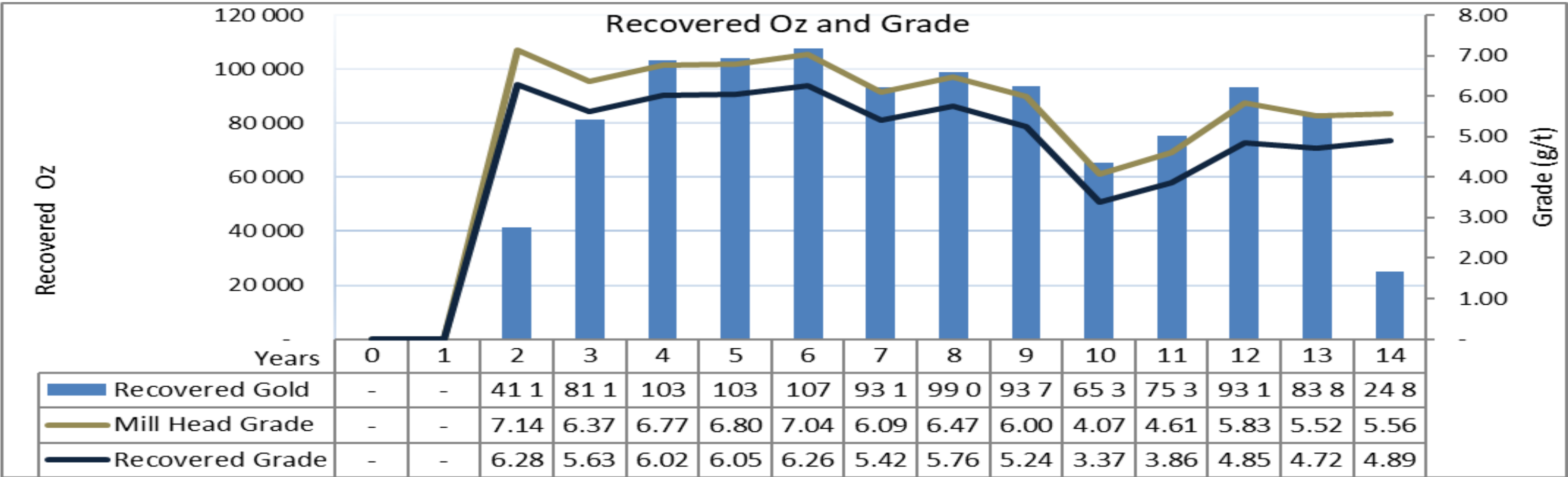
# Project Economics at Various Gold Prices – Base Case (AUD)

Project Economics at gold price	Unit	Forecast (USD1,642/ oz Avg)	USD1,500/oz	USD1,600/oz	USD1,800/oz	USD2,000/oz	USD2,200/oz
NPV @ 10% (real) Pre-tax	AUDm	432	339	405	536	669	802
NPV @ 10% (real) Post-tax	AUDm	292	232	274	359	447	533
IRR (%) Pre-tax	%	65%	57%	64%	77%	90%	102%
IRR (%) Post-tax	%	57%	50%	56%	67%	78%	87%
AISC	AUD/oz	1,112	1,096	1,107	1,129	1,149	1,167
EBITDA annual average	AUDm	92	77	87	107	128	148
EBIT annual average	AUDm	80	66	76	96	116	136
Free Cash Flow (Pre-tax)	AUDm	956	768	897	1,158	1,421	1,686
Free Cash Flow (Post-tax)	AUDm	678	550	638	814	996	1,175
Development Capital – Peak Funding	AUDm	102	102	102	102	102	102
Capital Sustaining	AUDm	49	49	49	49	49	49
Payback post-tax	Months	31	33	31	28	25	24
Capital Efficiency (Pre-Tax NPV/Dev Capital)	%	422%	332%	395%	524%	653%	783%
Capital Efficiency (Post-Tax NPV/Dev Capital)	%	285%	226%	268%	351%	437%	521%

Note: Converted to AUD from using AUD:USD exchange rate of 1.333

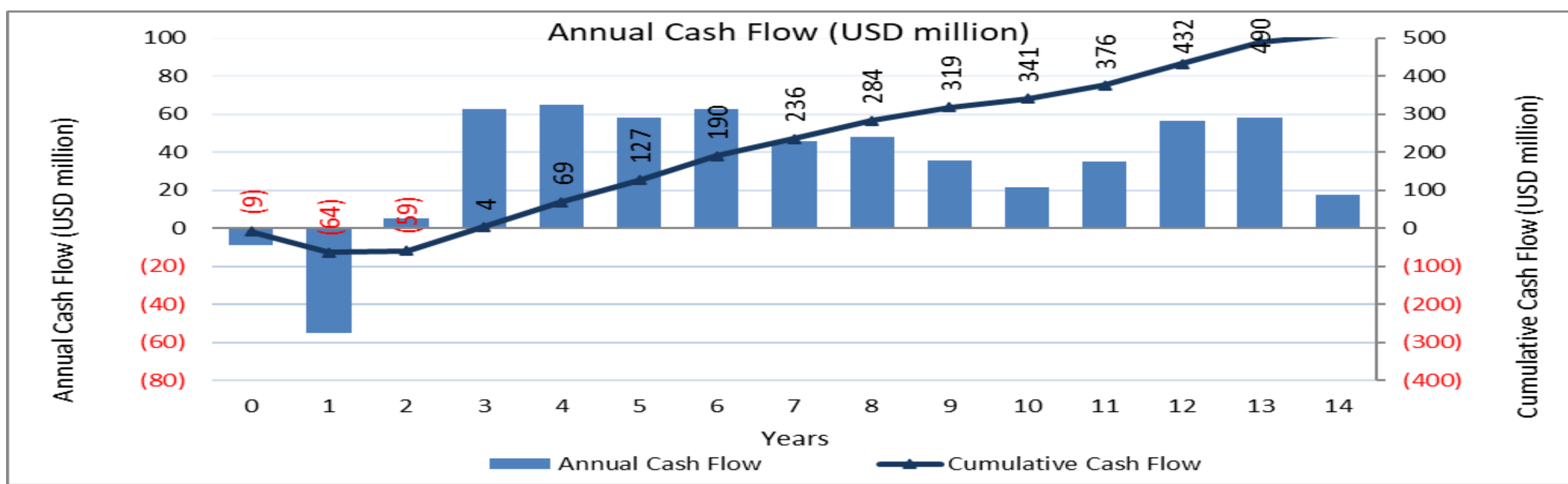
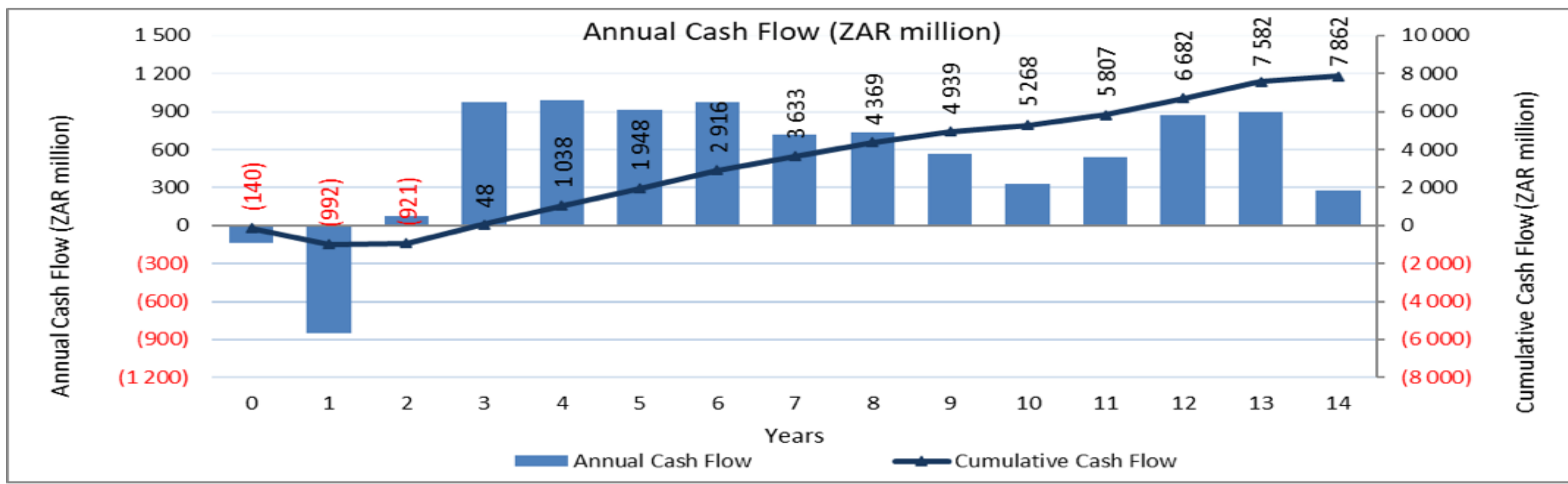


# FS – Annual Gold Production





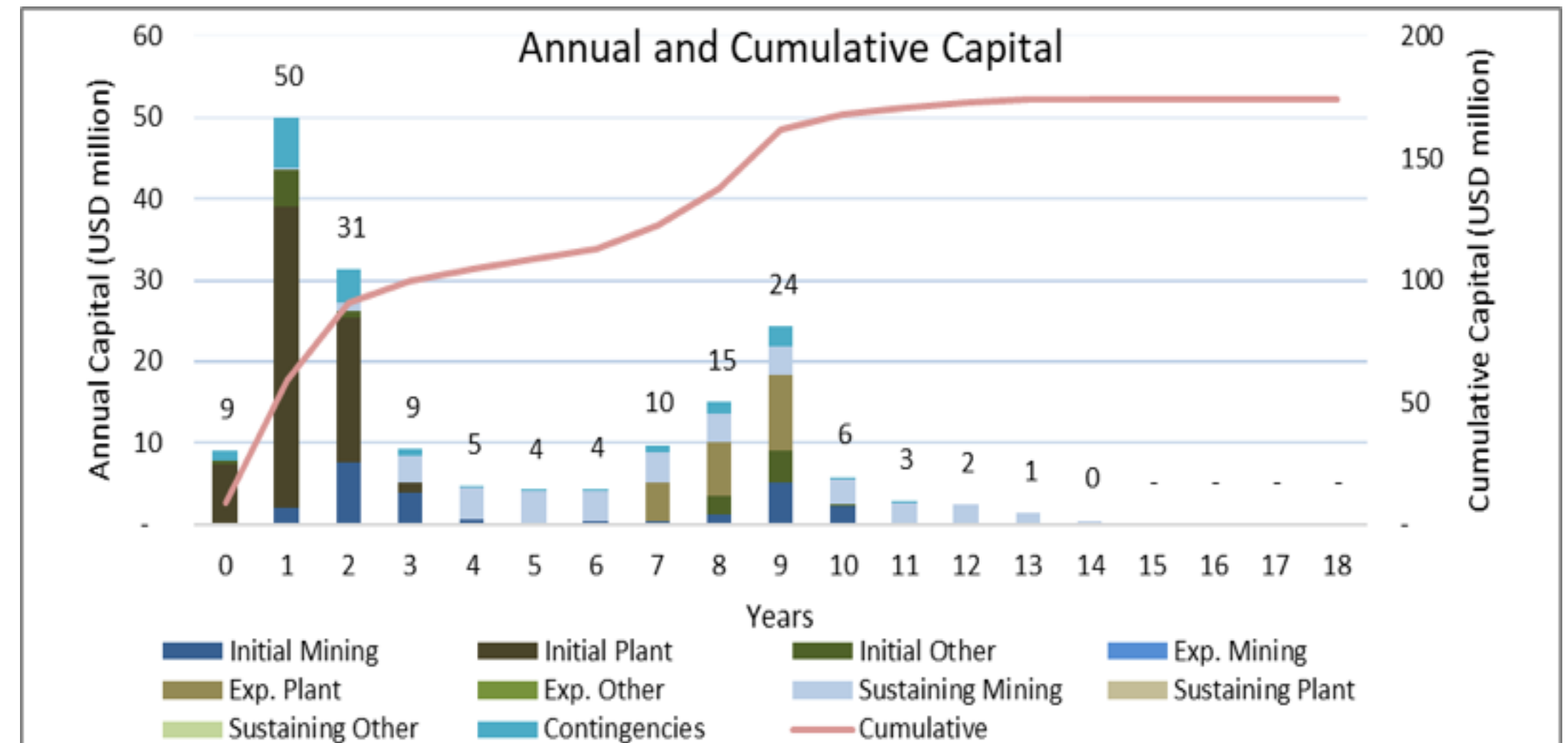
# FS – Annual Cashflow Post-tax at US\$1,642/oz (Base Forecast) Au





# FS - Capital Costs (Project over LOM)

Description	CAPEX Cost	
Mining Capital	ZAR m	USD m
Sub-Total Initial Mining Capital	358	23.1
Sub-Total Sustaining Mining Capital	573	37.0
Mining Capital Contingency	43	2.8
<b>Total Mining Capital</b>	<b>974</b>	<b>62.9</b>
Plant Capital		
Sub-Total Initial Plant Capital	989	63.8
Sub-Total Expansion Plant Capital	320	20.6
Plant Capital Contingency	205	13.3
<b>Total Plant Capital</b>	<b>1,514</b>	<b>97.7</b>
Other Non-Direct Capital		
Sub-Total Initial Non-Direct Capital	191	12.3
Other Capital Contingency	23	1.5
Total Other Capital	214	13.8
<b>Total Initial Capital</b>	<b>1,538</b>	<b>99.2</b>
Total Expansion Capital	320	20.6
Total Sustaining Capital	573	37.0
Total Capital Contingencies	271	17.5
<b>Total Capital</b>	<b>2,702</b>	<b>174.3</b>



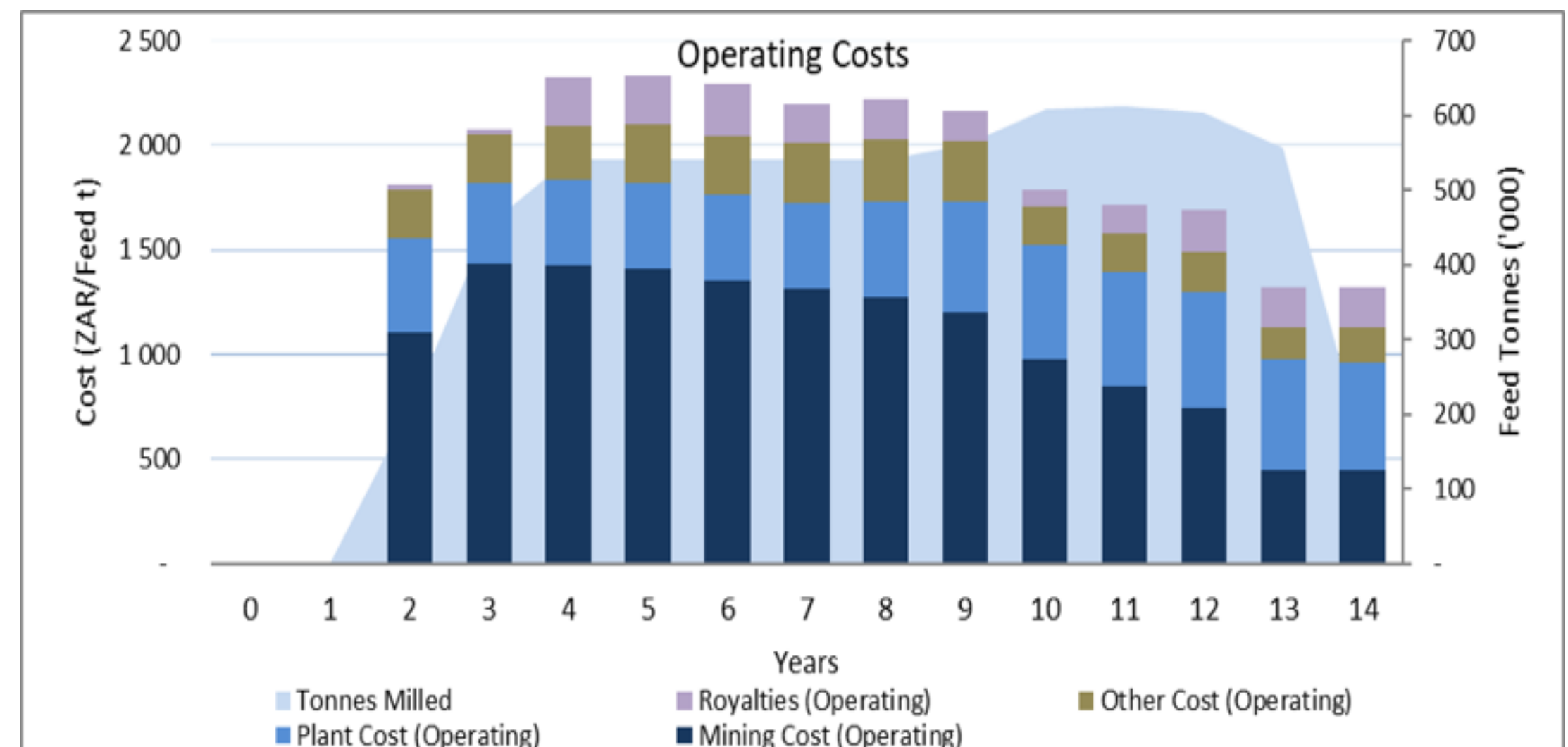
- The capital schedule over the life of the project in USD
- Capital in year 0 and year 1 consists of Beta mine's infrastructure, plant Infrastructure, oxide plant circuit 45 ktpm and the TSF.
- The capital in year 2 consists of the tailings backfill plant and Rietfontein mine infrastructure
- Capital in year 8 and year 9 includes the DMS circuit, as well as Frankfort and CDM mines infrastructure.
- Total peak capital requirements is US\$77m (LOM capital US\$174m)
- The engineering, procurement, and construction management ("EPCM") costs are included in the capital costs.



# FS - Operating Costs (Project over LoM)

Operational Cost	ZAR/Milled tonne	USD/Milled tonne
Mine Cost	1,109	72
Plant Costs	475	31
Other Costs	240	15
Royalties	165	11
<b>Adjusted Operating Costs</b>	<b>1,988</b>	<b>128</b>
Renewals and Replacements	89	6
Reclamation	25	2
Off-mine Overheads	53	3
<b>All-in Sustaining Costs (AISC)</b>	<b>2,154</b>	<b>139</b>

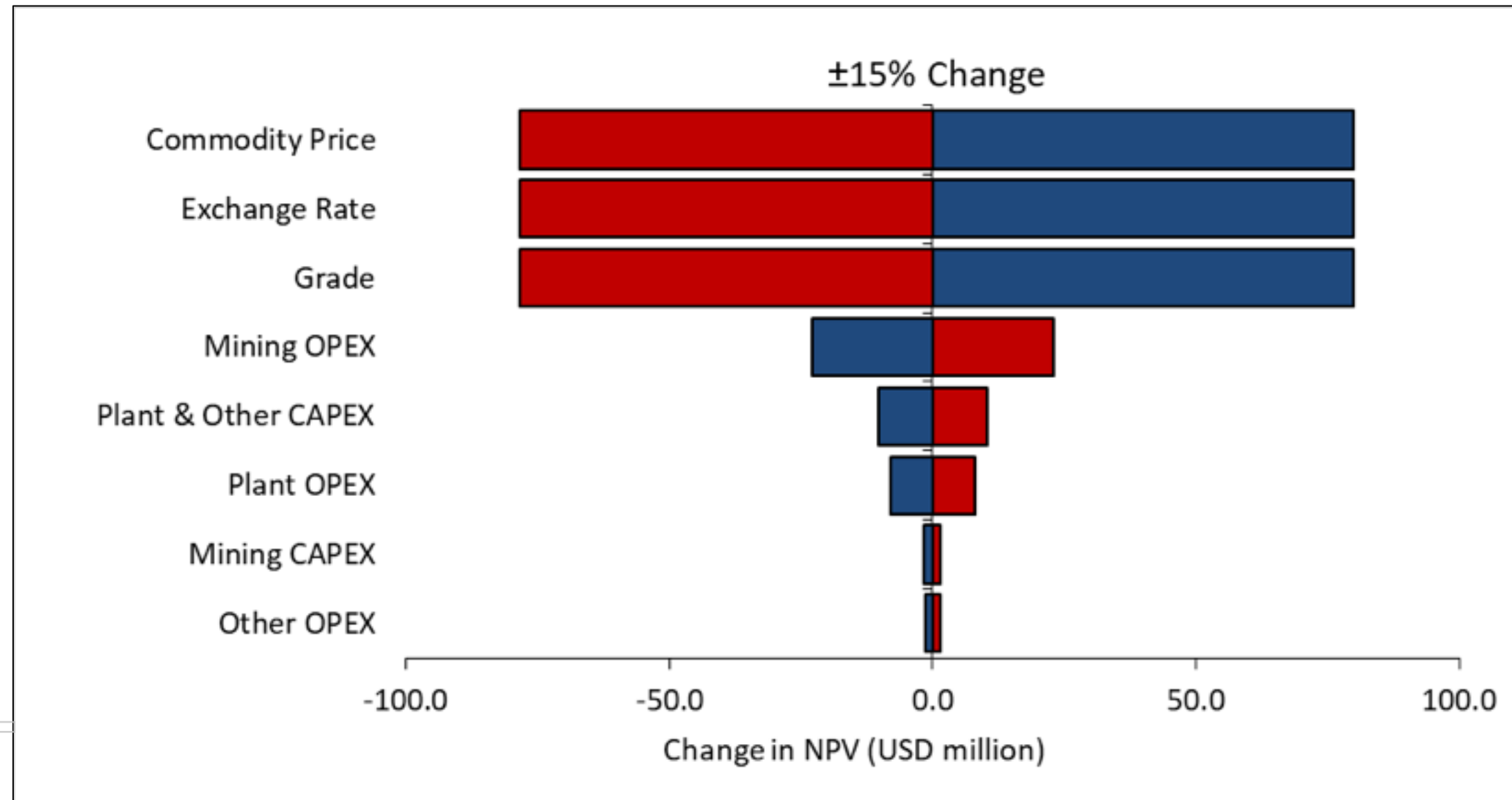
- Adjusted Operating Costs against the milled tonnes per year
- The increase in feed tonnes in years 9 to 12 is due to Frankfort mine being mined, and the tonnes reflected are prior to the Density Media Separation.



Average ZAR:USD conversion rate for Adjusted Operating Costs is 15.53  
Average ZAR:USD conversion rate for All-in Sustaining Costs (AISC) is 15.50



## FS - Project Sensitivities (Based on real cash flow in USD)

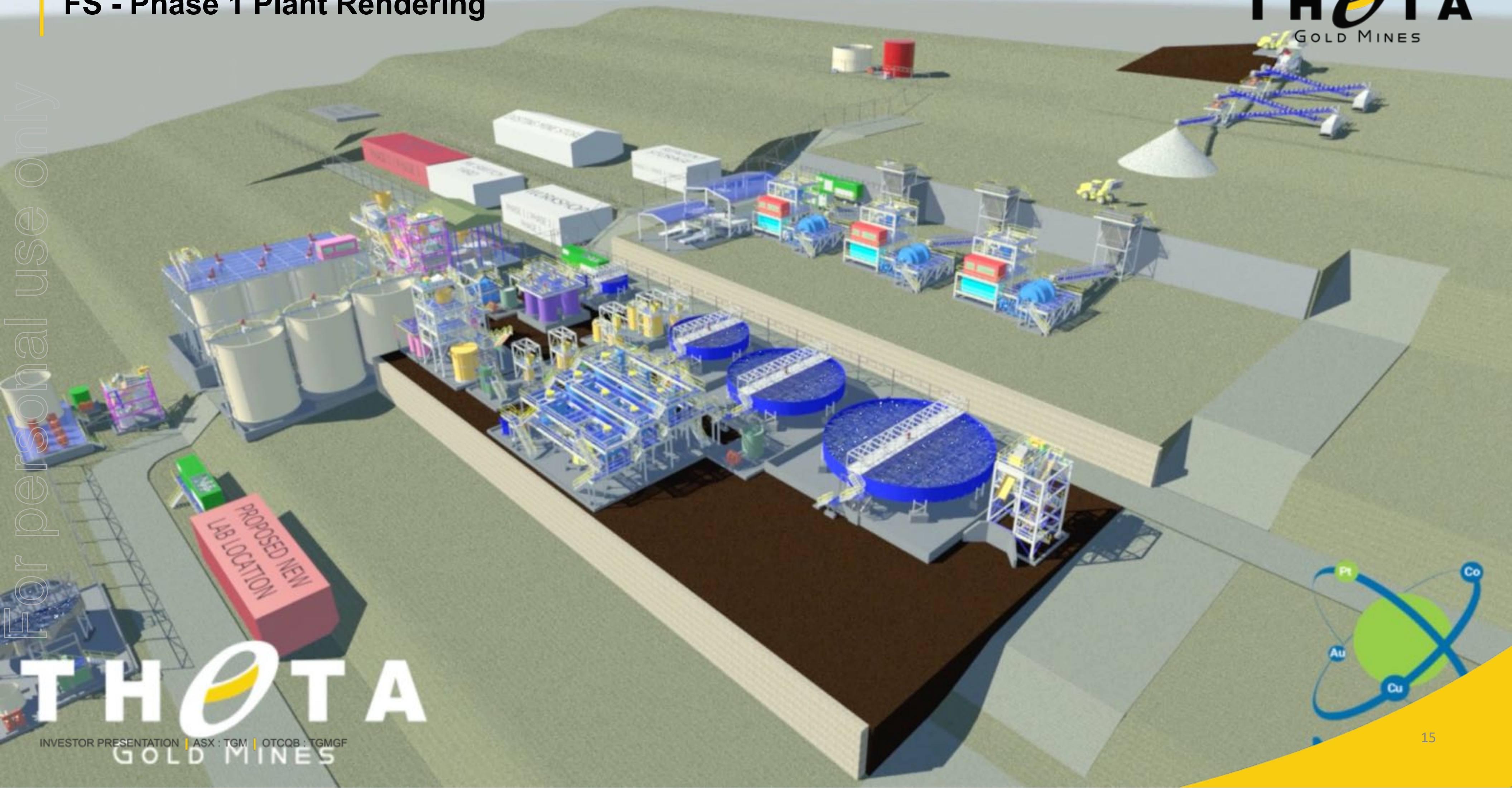


- Based on the real cash flow calculated in the financial model, a single-parameter sensitivity analyses are used to ascertain the impact on the NPV.
- The bars represent various inputs into the model, each being increased or decreased by 15%.
- The left-hand side of the graph indicates a negative 15% change in the input while the right-hand side of the graph indicating a positive 15% change in the input
- the gold price, exchange rate and grade have the biggest impact on the sensitivity of the Project followed by the mining and plant operating costs
- The Project is least sensitive to capital expenditure changes.



# FS - Phase 1 Plant Rendering

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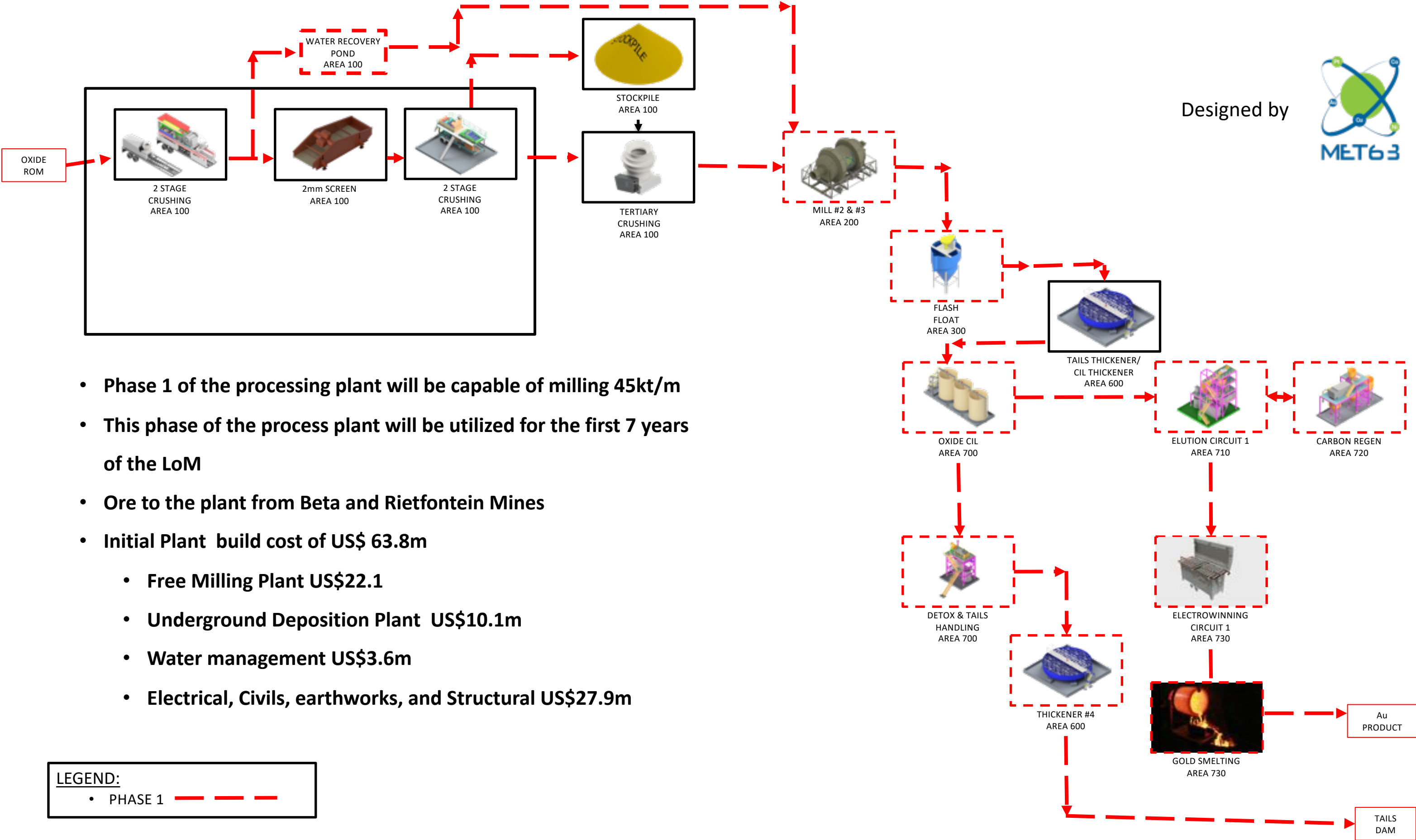




# FS - Free Milling Ore Process Plant



Designed by



- Phase 1 of the processing plant will be capable of milling 45kt/m
- This phase of the process plant will be utilized for the first 7 years of the LoM
- Ore to the plant from Beta and Rietfontein Mines
- Initial Plant build cost of US\$ 63.8m
  - Free Milling Plant US\$22.1
  - Underground Deposition Plant US\$10.1m
  - Water management US\$3.6m
  - Electrical, Civils, earthworks, and Structural US\$27.9m

LEGEND:  
• PHASE 1



# FS - Process Selection and Metallurgical Test Work

Individual Mine Metallurgical Test Work	% of 1.24M Oz into Mine Schedule	Test Work Recovery	DFS Recovery Used	Comments
Beta	60.4%	87-95%	88%	<ul style="list-style-type: none"> <li>Beta showed to be amenable to conventional CIL processing with 86-95% recoveries</li> </ul>
Rietfontein	27.3%	88-93%	90%	<ul style="list-style-type: none"> <li>Rietfontein showed to be amenable to conventional</li> </ul>
Frankfort	7.4%	61-82%	69%	<ul style="list-style-type: none"> <li>82% CIL recovery of sulphide flotation</li> <li>61% CIL recovery on sulphide float tails</li> </ul>
CDM	4.9%	93-95%	88%	<ul style="list-style-type: none"> <li>Dukes from CDM orebody indicated total recoveries of 93% and higher with combined flotation and CIL processing</li> </ul>

- Additional Metallurgical test work is currently ongoing on all the Mines with the objective to improve on the current recovery grades.
- Average gold recovery rate is 87.1%.

## FS - Mining Units Defined

### ONE PRODUCTION UNIT:

- CAN PRODUCE 15-20K t/m (20-30Koz/a)

#### MINING FLEET

- 2 Dev Drill Rig (\$1.6m)
- 2 Stoping LH Drill Rig (\$3m)
- 2 LHD (\$1.6m)
- 2 LDVs (\$0.7m)

#### ANCILLARY EQUIPMENT

- 1 Water jet / panel (\$40k)
- 1 Scraper Winch / panel (\$170k)
- 150m Conveyor belts (\$220k)
- 2 Dump trucks (surface) (\$2.5m)

**TOTAL EQUIPMENT COST PER PRODUCTION UNIT - \$9.8M**

#### DEVELOPMENT DRILL RIG



#### LONG HOLE DRILL RIG



#### LHD



### SEVEN PRODUCTION UNITS:

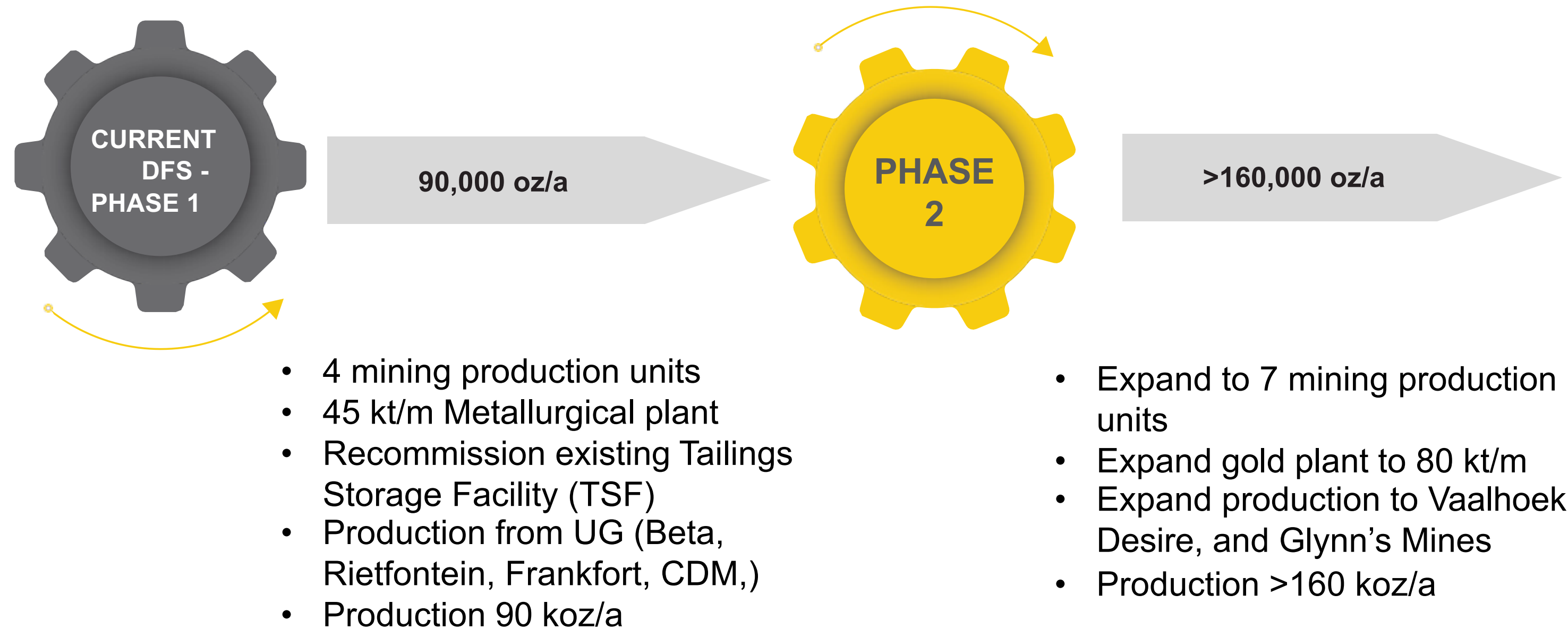
- CAN PRODUCE 100-140K t/m
- Only 80K t/m Plant feed required to produce >160K oz/a)

#### MODULAR EXPANSION APPROACH

- Simplistic mining methods
- Standardized
- Synergies
- Low safety exposure
- Low operational unit costs
- Mining fleet (lease or own) – Excellent supplier support



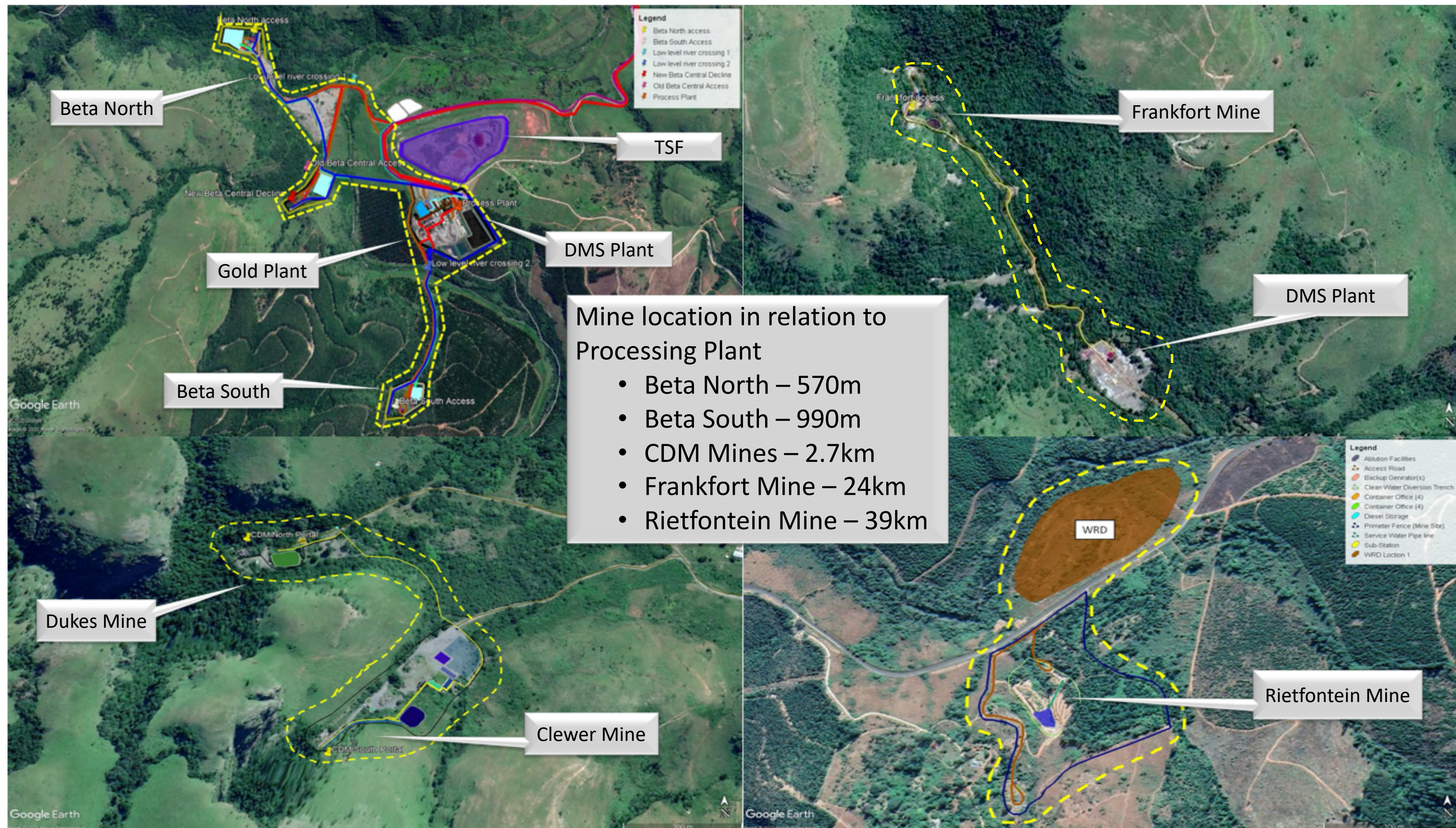
# Strategy to build up to >160,000oz/a Au production profile within 5 years (only 6 of >40 pre-developed mines)



**Assess other >40 old mines, expand reserves through on-reef exploration, development and drilling on operating mines and new exploration targets**



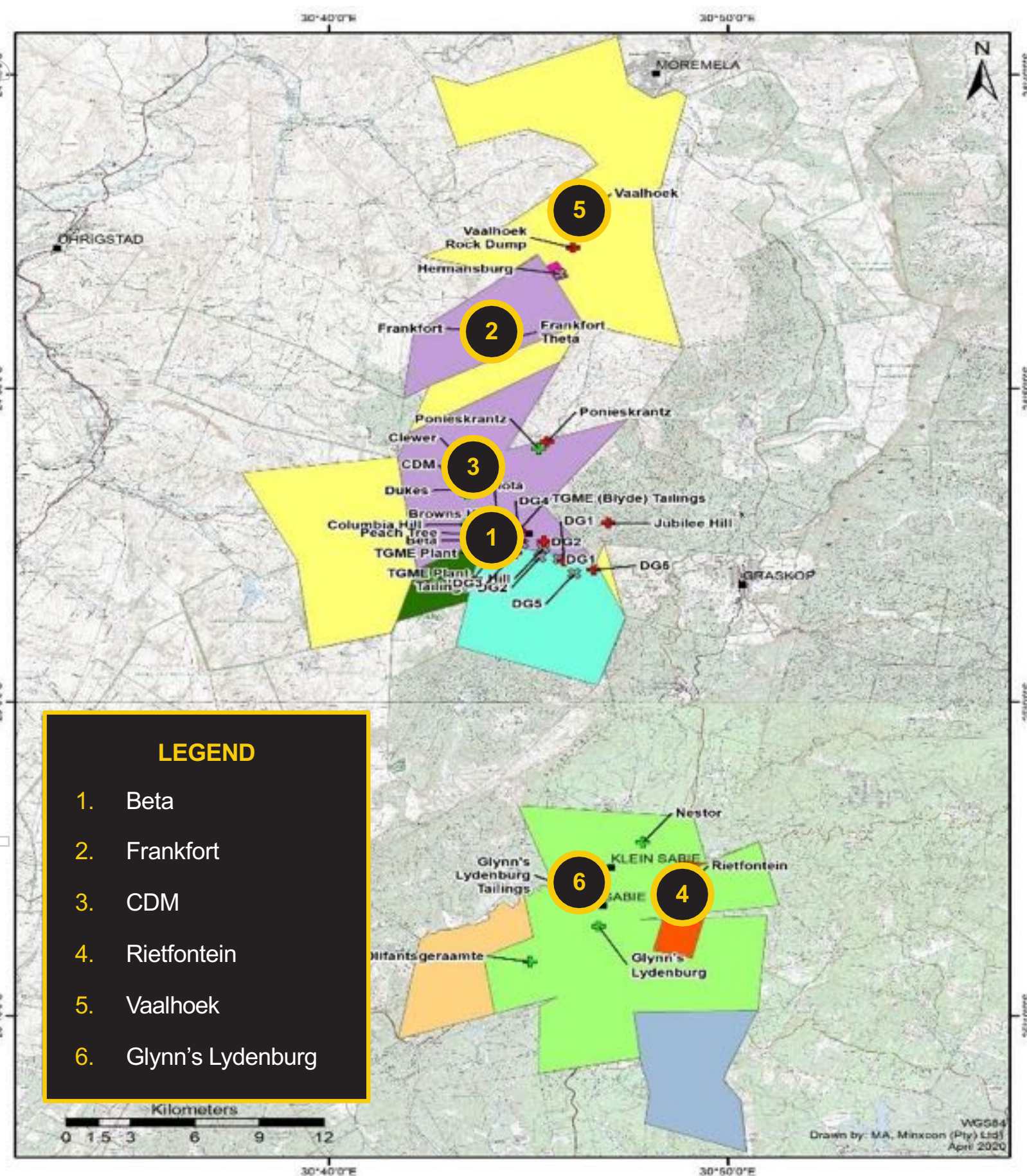
# FS - Mining Infrastructure Battery Limits





# 6 UG Mines targeted first out of potential > 40

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## Solid Growth Potential

Develop multiple mines, reaching >160koz/a within five years, from the resource base of +6Moz

First four-mine operation, central plant and tailings facility – up to 100koz/a

Modern mining and treatment methodologies enable low-cost operations (AISC <US\$900/oz) and reserve expansion

Various expansion opportunities to increase production and the resource base for >3 decades

Expand to >160koz/a - 7 mining production units @ 80kt/m



# Environmental Approvals Progress MR83

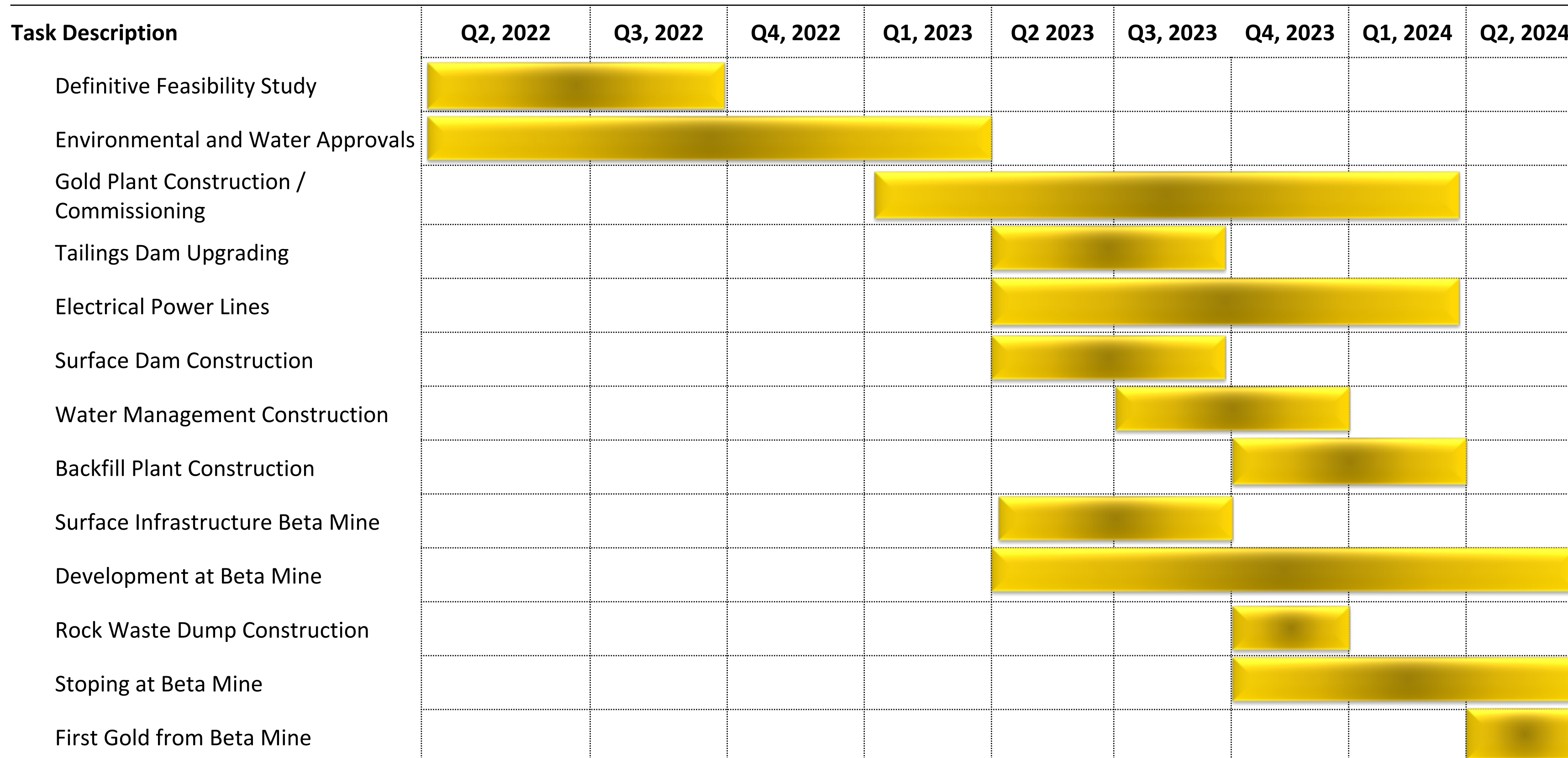
Task	Duration	Status <sup>1</sup>
Submit application for EA	Q3 2021	✓
Submit draft scoping report	Q1 2022	✓
Specialists EIA Studies Completed	Q1 2022	✓
DMRE acceptance of final Scoping report	Q2 2022	✓
Draft EIA/EMPr submitted for public review	Q2 2022	✓
Draft IWWMP submitted for public review	Q2 2022	✓
Expected EIA approvals (all studies and documentation submitted)	Q4 2022	
Expected Water use approvals (all studies and documentation submitted)	Q4 2022	
Expected Air Quality Emissions approval (all studies and documentation submitted)	Q1 2023	



<sup>1</sup> Forestry permits for the continuation of mining are in progress – refer to ASX Release dated 18 July 2022



# Timeline To Production

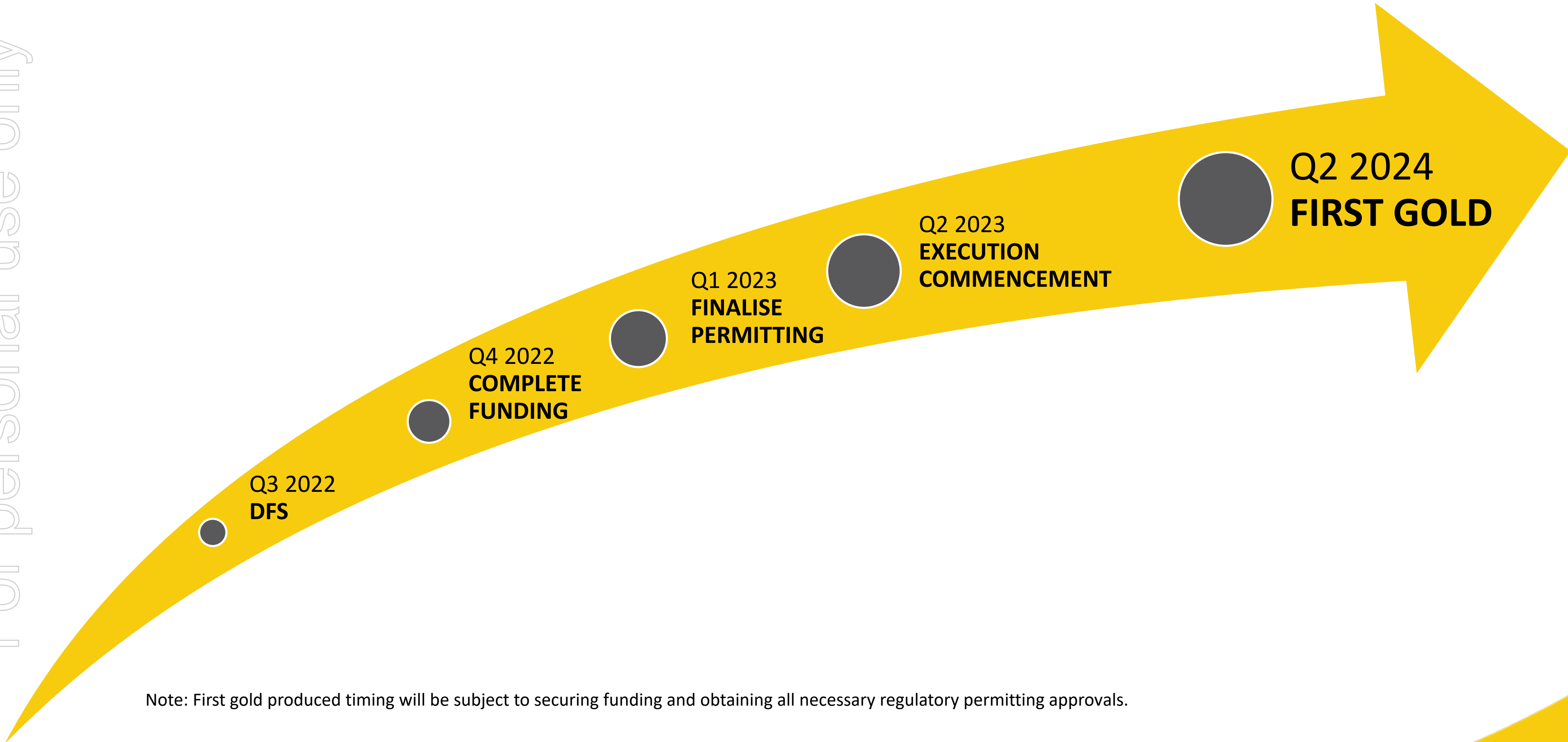


Note: Plant construction and commissioning subject to securing funding for project and permitting approvals.

# Progress towards production



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Note: First gold produced timing will be subject to securing funding and obtaining all necessary regulatory permitting approvals.





## **CORPORATE** | **OVERVIEW**

# ASX Listing

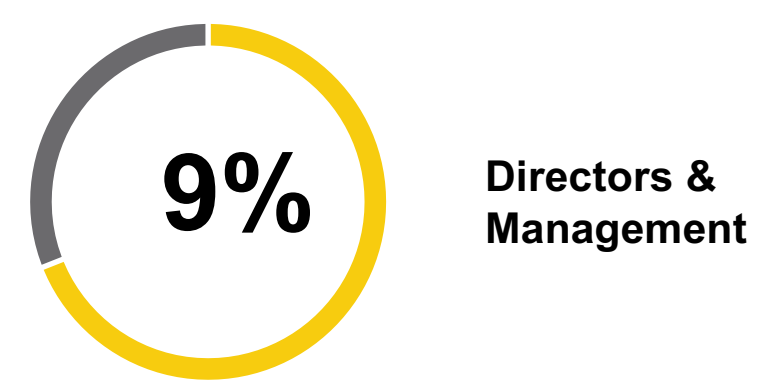
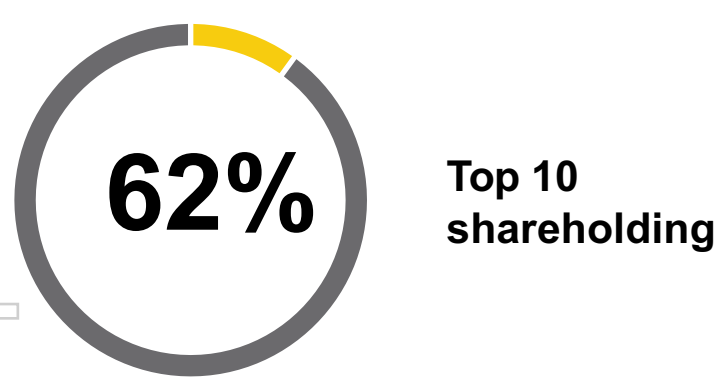


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Ordinary Shares ASX: TGM 550m

Out-of-the-money  
unlisted options and  
management performance  
rights 66m

Market Capitalisation<sup>1</sup>  
(undiluted) ~A\$33M (~US\$22M)



Note: <sup>1</sup> As of 27 July 2022



## BOARD OF DIRECTORS

Bill Guy	Executive Chairman
Finn Behnken	Non-Executive Director
Richie Yang	Non-Executive Director
Bryon Dumpleton	Non-Executive Director
Simon Liu	Non-Executive Director
Brett Tang	Non-Executive Director

## SENIOR MANAGEMENT & LOCAL BOARD

Jacques du Triou	Chief Operating Officer
Terence Mokale	SA Director
Puseletso Matete	SA Director
Brent Hofman	Company Secretary & Chief Financial Officer (AUS)

## REGISTERED AND PRINCIPLE OFFICE

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ASX Code: TGM

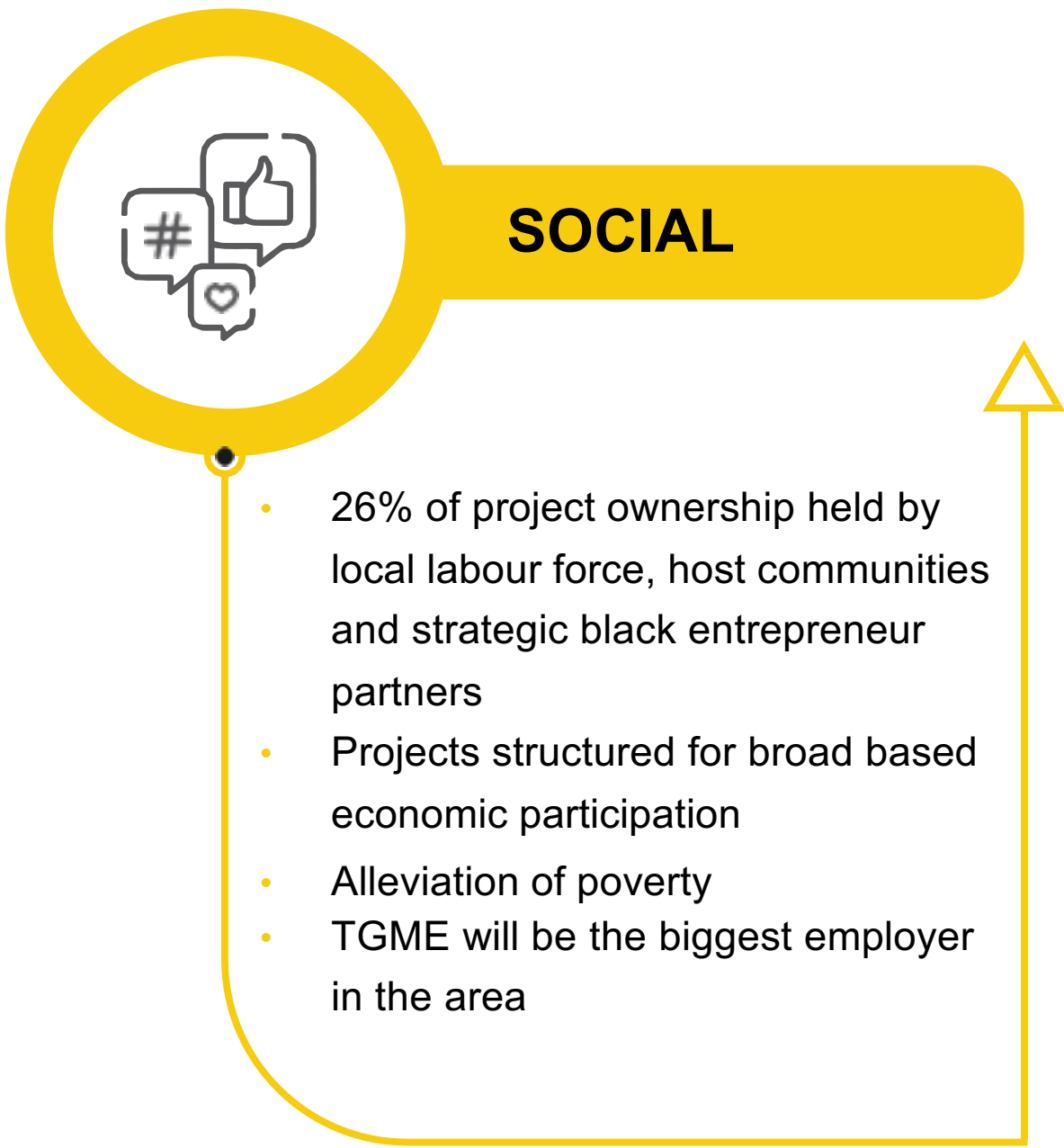
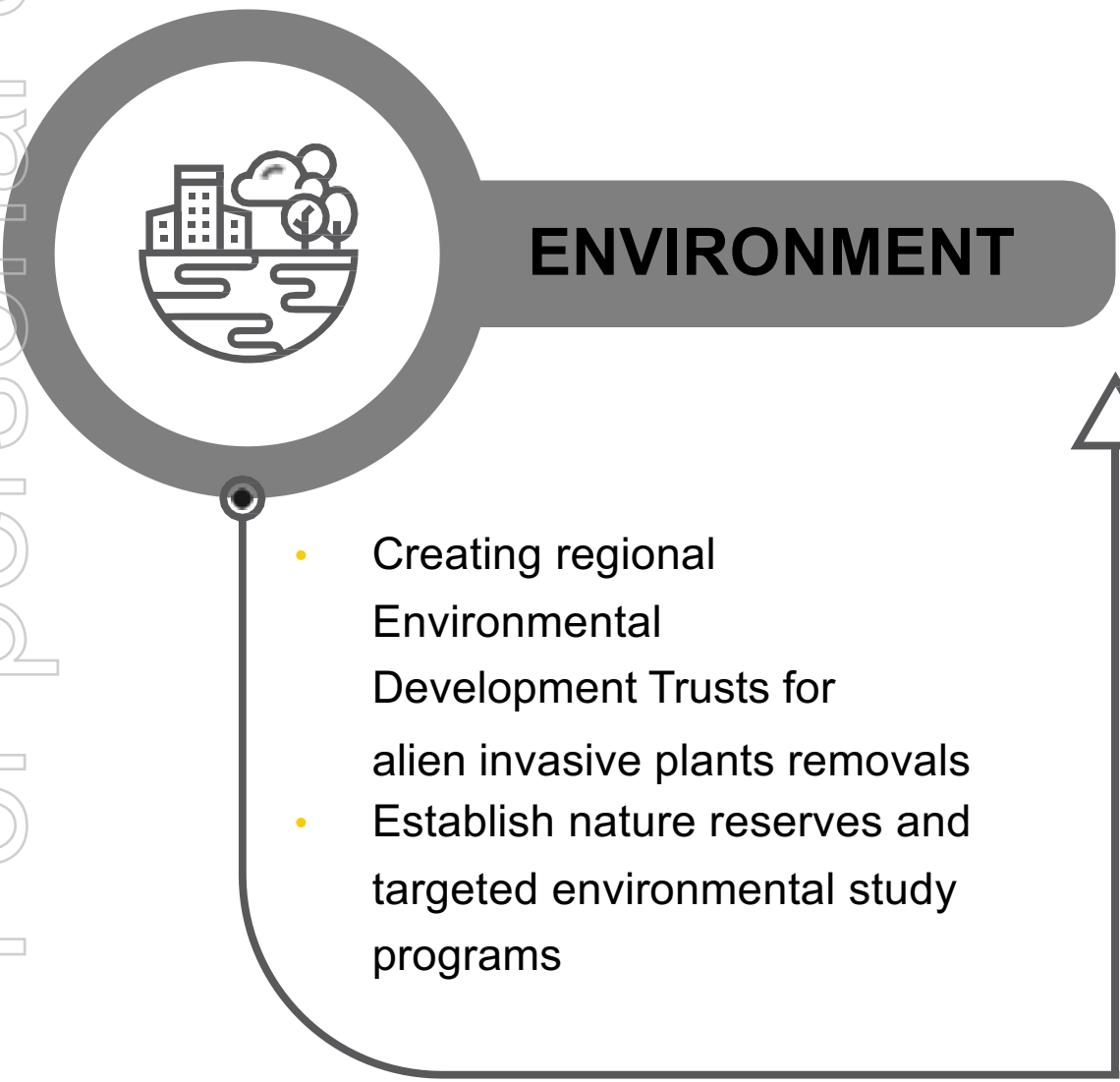
OTC Code: TGMGF



# Environmental, Social & Governance (ESG)

## ESG IS INTEGRAL TO THE DEVELOPMENT STRATEGY AND IS BASED ON:

- Holistic risk management
- Zero harm approach to health and safety
- Environmental stewardship
- Conservation of biodiversity
- Responsible production practices
- Positive impact on host communities
- Transparent stakeholder engagement and reporting





# Compelling Investment Rationale

## INVESTMENT CASE





## Closing Remarks

- **HIGH GROWTH GOLD INVESTMENT OPPORTUNITY** – Currently valued as exploration company, with first phase gold output reaching 90koz/a within two years
- **Low Capital Requirement** – Restart pre-developed, shallow mines and utilise existing tailings facility and plant footprint
- **Large, Growing Resource** - 6.1Moz gold resource @4.17g/t and growing (>130 years historical information of more than 40 other pre-developed shallow underground mines not yet reflected in the stated resource)
- **Realistic Growth Strategy** – Flexible expansion to >160koz within 5 years
- **Low-Cost Producer** – At <US\$900/oz AISC forecasted to become the lowest cost producer in South Africa
- **Execution-Ready** - DFS completed July 2022 with full front-end engineering designs (FEED) – ready for execution
- **Approvals On Track** - Environmental approvals for start-up progressing according to planned timeline
- **Team of Execution Experts** – Demonstrated mine build and optimization track record
- **Near Term Cashflow Potential** – Toll milling arrangement could be made with nearby plant operators to begin small scale yet very profitable operations





QUESTION TIME

[WWW.THETAGOLDMINES.COM](http://WWW.THETAGOLDMINES.COM)

**BILL GUY**

**CHAIRMAN**

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**THETA**  
GOLD MINES



TICKER: TGM (TRADE IN AU\$)



TICKER: TGMGF (TRADE IN US\$)





## APPENDICES |



# Combined Minerals Resource Statement (~6.1Moz)



Resource Classification	Type of Operation	Combined Mineral Resource			
		Tonnage	Gold Grade	Gold Content	
		Mt	g/t	Kg	koz
Measured	Underground	0.091	5.37	489	15.7
	Open pit				
	Tailings				
Total Measured		0.091	5.37	489	15.7
Indicated	Underground	4.774	6.21	29 661	953.7
	Open Pit	8.109	2.14	17 364	558.2
	Tailings	5.244	0.83	4 373	140.6
Total Indicated		18.128	2.84	51 398	1652.5
Inferred	Underground	21.452	5.22	111 880	3597.0
	Open pit	4.907	5.11	25 057	805.6
	Tailings	0.023	0.57	13	0.4
	Rock Dump	0.885	1.20	1 059	34.0
Total Inferred		27.267	5.06	138 009	4 437.0
Grand Total		45.485	4.17	189 896	6 105.2

- Notes:**
- 1. UG Mineral Resources are reported at a cut-off of 160 cm.g/t, open pit at 0.5 g/t and 0.35 g/t, tailings and rock dumps at 0.35 g/t.
  - 2. Fault losses of 5% for Measured and Indicated, 10% for Inferred Mineral Resources.
  - 3. Gold price used for the cut-off calculations is USD1,500/oz.
  - 4. Mineral Resources are stated as inclusive of Ore Reserves.
  - 5. Mineral Resources are reported as total Mineral Resources and are not attributed.



# Total Mineral Resources of the 4 Mines included in the DFS - Combined as of 1 February 2021

Mineral Resource Classification	Mine	Reef	Reef Grade	Stope Grade	Reef Width	Stope width	Content	Reef Tonnes	Stope Tonnes	Au Content	
			g/t	g/t	cm	cm	cm.g/t	Mt	Mt	kg	koz
Measured	Frankfort	Bevetts	7.13	5.37	73	103	520	0.069	0.091	489	15.7
<b>Total Measured</b>			<b>7.13</b>	<b>5.37</b>	<b>73</b>	<b>103</b>	<b>520</b>	<b>0.069</b>	<b>0.091</b>	<b>489</b>	<b>15.7</b>
Indicated	Frankfort	Bevetts	7.86	5.13	58	96	452	0.243	0.373	1,912	61.5
	CDM	Rho	13.19	3.80	23	90	307	0.258	0.895	3,401	109.4
	Beta	Beta	21.66	6.58	23	90	499	0.716	2.357	15,506	498.5
	Rietfontein	Rietfontein	14.57	8.20	52	92	755	0.517	0.919	7,534	242.2
<b>Total Indicated</b>			<b>16.35</b>	<b>6.24</b>	<b>30</b>	<b>91</b>	<b>540</b>	<b>1.734</b>	<b>4.543</b>	<b>28,352</b>	<b>912</b>
<b>Total Measured &amp; Indicated</b>			<b>16.00</b>	<b>6.22</b>	<b>32</b>	<b>92</b>	<b>540</b>	<b>1.803</b>	<b>4.634</b>	<b>28,841</b>	<b>927</b>

Mineral Resource Classification	UG Mine	Reef	Reef Grade	Stope Grade	Reef Width	Stope width	Content	Reef Tonnes	Stope Tonnes	Au Content	
			g/t	g/t	cm	cm	cm.g/t	Mt	Mt	kg	koz
Inferred	Frankfort	Bevetts	7.41	4.27	48	93	356	0.343	0.596	2,543	81.8
	CDM	Rho	10.06	3.02	24	90	244	0.544	1.811	5,472	175.9
	Beta	Beta	16.51	5.43	25	90	414	1.107	3.367	18,285	587.9
	Rietfontein	Rietfontein	14.06	8.52	57	94	803	1.190	1.962	16,721	537.6
<b>Total Inferred</b>			<b>13.51</b>	<b>5.56</b>	<b>39</b>	<b>92</b>	<b>524</b>	<b>3.184</b>	<b>7.736</b>	<b>43,022</b>	<b>1,383.2</b>

**Notes:-**

1. Mineral Resource cut-off of 160 cm.g/t applied.
2. Fault losses of 5% for Measured and Indicated, 10% for Inferred Mineral Resources.
3. Gold price used for the cut-off calculations is USD1,500/oz.
4. cm.g/t and g/t figures will not back calculate due to variable densities in reef and waste rock.
5. Mineral Resources are stated as inclusive of Ore Reserves.
6. Mineral Resources are reported as total Mineral Resources and are not attributed.



# Mineral Resource Statement – Underground Only (~4.5Moz)



Mineral Resource Classification	Mine	Reef	Reef Grade	Stope Grade	Reef Width	Stope width	Content	Reef Tonnes	Stope Tonnes	Au Content	
			g/t	g/t	cm	cm	cm.g/t	Mt	Mt	kg	koz
Measured	Frankfort	Bevetts	7.13	5.37	73	103	520	0.069	0.091	489	15.7
Total Measured			7.13	5.37	73	103	520	0.069	0.091	489	15.7
Indicated	Frankfort	Bevetts	7.86	5.13	58	96	452	0.243	0.373	1,912	61.5
	CDM	Rho	13.19	3.80	23	90	307	0.258	0.895	3,401	109.4
	Beta	Beta	21.66	6.58	23	90	499	0.716	2.357	15,506	498.5
	Rietfontein	Rietfontein	14.57	8.20	52	92	755	0.517	0.919	7,534	242.2
	Vaalhoek	Vaalhoek	13.90	6.34	36	90	499	0.064	0.140	887	28.5
	Olifantsgeraamte	Olifantsgeraamte	16.97	4.62	25	90	416	0.026	0.091	422	13.6
Total Indicated			16.26	6.21	36	91	591	1.824	4.774	29,661	953.7
Total Measured & Indicated			15.93	6.20	38	91	600	1.893	4.865	30,150	969.4

Mineral Resource Classification	UG Mine	Reef	Reef Grade	Stope Grade	Reef Width	Stope width	Content	Reef Tonnes	Stope Tonnes	Au Content	
			g/t	g/t	cm	cm	cm.g/t	Mt	Mt	kg	koz
Inferred	Frankfort	Bevetts	7.41	4.27	48	93	356	0.343	0.596	2,543	81.8
	CDM	Rho	10.06	3.02	24	90	244	0.544	1.811	5,472	175.9
	Beta	Beta	16.51	5.43	25	90	414	1.107	3.367	18,285	587.9
	Rietfontein	Rietfontein	14.06	8.52	57	94	803	1.190	1.962	16,721	537.6
	Olifantsgeraamte	Olifantsgeraamte	18.33	4.68	23	90	422	0.059	0.248	1,162	37.3
	Vaalhoek	Vaalhoek	16.28	4.77	22	90	361	0.873	2.980	14,209	456.8
	Vaalhoek	Thelma Leaders	12.18	9.47	96	123	1166	0.023	0.030	284	9.1
	Glynns Lydenburg	Glynns	15.87	5.19	25	90	397	3.218	9.833	51,078	1 642.2
	Ponieskrantz*	Portuguese	13.26	3.99	22	90	287	0.064	0.213	849	27.3
	Frankfort Theta*	Theta	7.22	3.24	34	90	244	0.099	0.220	714	23.0
	Nestor*	Sandstone	5.54	2.92	41	90	225	0.101	0.193	562	18.1
Total Inferred			14.68	5.22	31	91	458	7.622	21.452	111,880	3,597 597.0

## Notes:

1. Mineral Resource cut-off of 160 cm.g/t applied.
2. Fault losses of 5% for Measured and Indicated, 10% for Inferred Mineral Resources.
3. Gold price used for the cut-off calculations is USD1,500/oz.
4. cm.g/t and g/t figures will not back calculate due to variable densities in reef and waste rock.
5. Mineral Resources are stated as inclusive of Ore Reserves.
6. Mineral Resources are reported as total Mineral Resources and are not attributed.



# Mineral Resource Statement – Open Pit Only (~1.4Moz)



Mineral Resource Classification	Open Pit Mine	Reef	Reef Grade	Reef Width	Content	Reef Tonnes	Au Content	
			g/t	cm	cm.g/t	Mt	kg	koz
Indicated	Hermansburg	Eluvial	1.79	0	0	0.505	905	29.1
	DG1	Eluvial	2.24	0	0	0.640	1 432	46.0
	DG2	Eluvial	0.66	0	0	1.586	1 041	33.5
	Vaalhoek	Vaalhoek	17.25	33	574	0.111	1920	61.7
	Theta & Browns Hill	Shale	1.02	200	204	0.397	404	13.0
	Theta & Browns Hill	Bevett's	1.08	223	241	0.856	925	29.7
	Theta & Browns Hill	Upper Theta	2.41	100	241	0.651	1571	50.5
	Theta & Browns Hill	Lower Theta	3.79	100	379	0.839	3178	102.2
	Theta & Browns Hill	Beta	2.51	100	251	0.373	938	30.1
	Iota	Bevett's	2.98	114	340	0.108	323	10.4
	Iota	Upper Rho	2.33	402	937	0.897	2090	67.2
	Iota	Lower Rho	2.51	520	1306	0.981	2464	79.2
	Iota	Upper Theta	1.06	114	121	0.163	173	5.6
Total Indicated			2.14	168	360	8.109	17 364	558.2

Mineral Resource Classification	Open Pit Mine	Reef	Reef Grade	Reef Width	Content	Reef Tonnes	Au Content	
			g/t	cm	cm.g/t	Mt	kg	koz
Inferred	Hermansburg	Eluvial	0.88	0	0	0.110	97	3.1
	DG1	Eluvial	0.00	0	0	0.000	0	0.0
	DG2	Eluvial	0.00	0	0	0.000	0	0.0
	Vaalhoek	Vaalhoek	20.32	43	880	0.213	4 319	138.9
	Vaalhoek	Thelma Leaders	14.25	97	1 388	0.293	4 172	134.1
	Theta & Browns Hill	Shale	1.12	215	240	0.600	668	21.5
	Theta & Browns Hill	Bevett's	1.17	217	254	0.451	528	17.0
	Theta & Browns Hill	Upper Theta	1.86	100	186	0.948	1762	56.6
	Theta & Browns Hill	Lower Theta	8.06	100	806	1.384	11153	358.6
	Theta & Browns Hill	Beta	2.17	100	217	0.778	1686	54.2
	Iota	Upper Rho	5.12	134	687	0.131	673	21.6
Total Inferred			5.11	121	617	4.907	25 057	805.6

## Notes:

1. Mineral Resource cut-off of 0.5 g/t and 0.35 g/t applied.
2. Fault losses of 5% for Measured and Indicated, 10% for Inferred Mineral Resources.
3. Gold price used for the cut-off calculations is USD1,500/oz.
4. Vaalhoek, Theta Hill, Browns Hill and Iota Mineral Resources stated utilising pit optimisation.
5. Mineral Resources are stated as inclusive of Ore Reserves.
6. Mineral Resources are reported as total Mineral Resources and are not attributed.



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**OLD PLANT DEMOLISHED IN PREPARATION FOR NEW PLANT**





FRANKFORT MINE (TRIAL MINING - DECEMBER 2021)

