THETA GOLD MINES LIMITED

ASX: TGM, TGMO



6 Moz Resource, first mining reserve & open cut Feasibility Study Results

May 2019

Disclaimer and Competent Persons Statement

This announcement has been prepared by and issued by Theta Gold Mines Limited (ASX:TGM) 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.

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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 Eng (Min.), MCom (Bus. Admin.), MMC, Pr.Eng. No. 20050318, FSAIMM, AMMSA), a director of Minxcon (Pty) Ltd and a member of the Engineering Council of South Africa respectively.

The original reports titled "Theta Gold Increases Mineral Resource to over 6Moz" and "Positive Feasibility Study for Theta Project" were dated 16 May 2019 and were released to the Australian Securities Exchange (ASX) on that date. 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.

Forward looking and cautionary statements

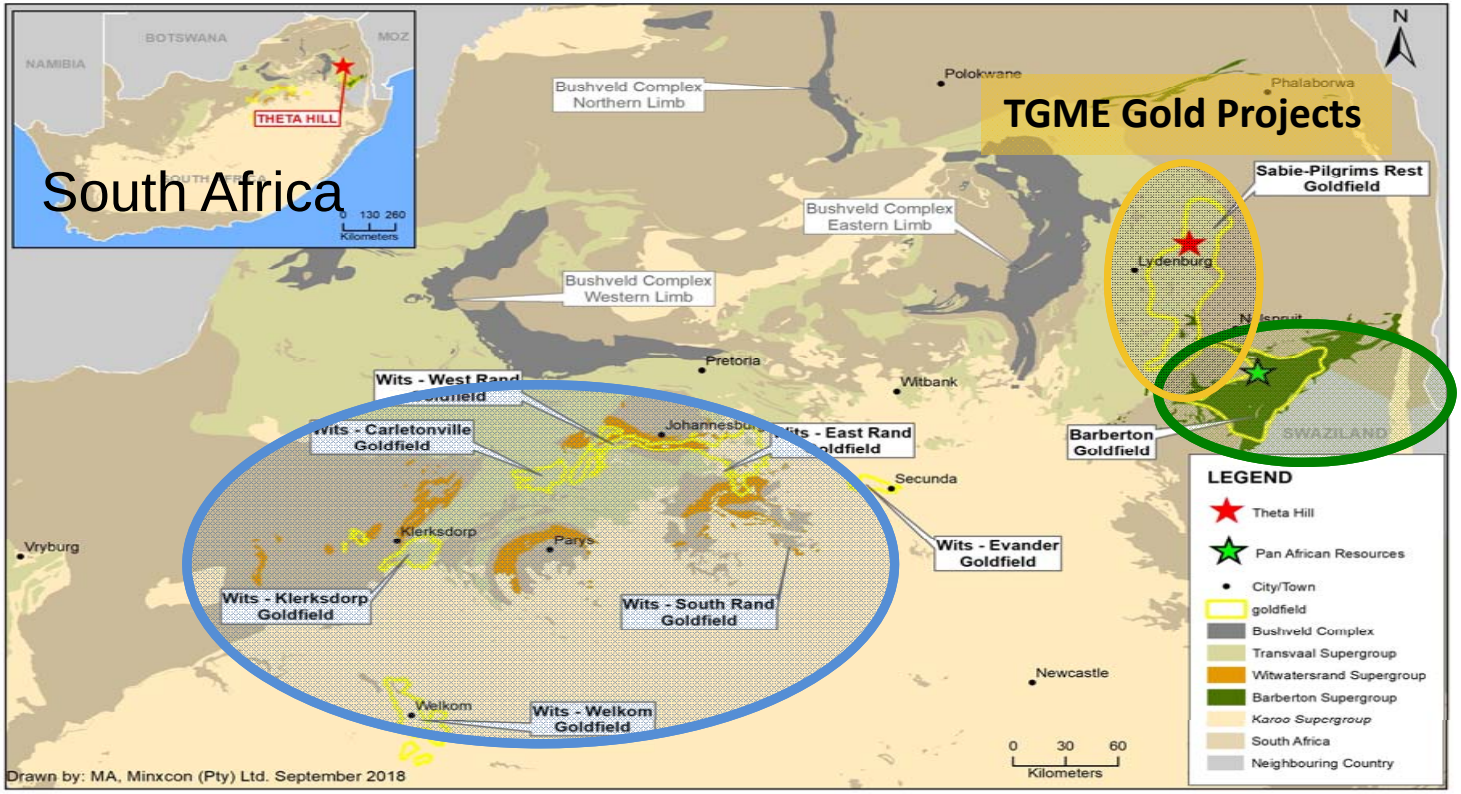
This announcement may refer to the intention of Theta Gold Mines regarding estimates or future events which could be considered forward looking statements. Forward looking statements are typically preceded by words such as "Forecast", "Planned", "Expected", "Intends", "Potential", "Conceptual", "Believes", "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 as funding availability, market-related forces (commodity prices, exchange rates, stock market indices and the like) and political or economic events (including government or community issues, 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.

BUSINESS ARRANGEMENT

Theta Gold Mines holds 100% issued capital of its South African subsidiary Stonewall Mining (Pty) Ltd ("Stonewall"). Stonewall holds a 74% shareholding in both Transvaal Gold Mining Estates Limited ("TGME") and Sabie Mines (Pty) Ltd ("Sabie Mines"). 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.

Situated in South Africa controlling our own goldfield

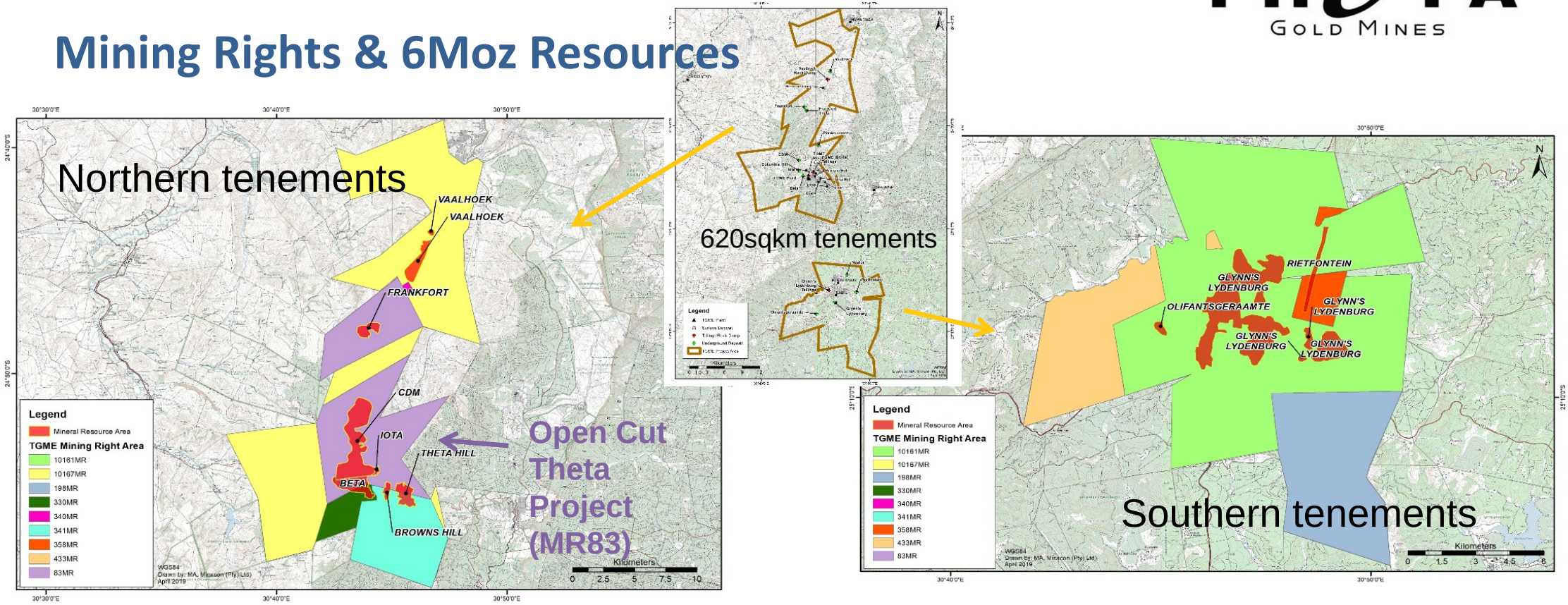


TGME Goldfields (owned by Theta Gold Mine's subsidiaries, from/near surface - flat reef systems) 1873 – WWII, 1980s, 90s…

- 1886 – Current. **Witwatersrand** (surrounds Johannesburg, currently mining up to 4km underground)
- 1881 – Current. **Barberton Goldfield** (450km East of Johannesburg, Greenstone belt, currently mining up to 2km underground, recently announced discovery of opencut resources to be the new focus, LSE: PAF, Market Cap: £200m+)

Theta Gold Mine's TGME Gold Projects is located 370km NE of Johannesburg, South Africa, just 4 hours drive by highway. This prolific gold field has produced over 6.7Moz gold since 1880.

Mining Rights & 6Moz Resources



- Theta Gold Mines holds approximately 620km^2 of tenements, predominantly Mining Rights
- Global Resource increased to **6Moz Au (44.8Mt @ 4.18g/t Au), with a 30% increase for open cut resources:**
  - 1.3Moz open cut resources (13.08Mt @ 3.12g/t Au)
  - 4.5Moz underground resources (26.3Mt @ 5.4g/t Au)
- **Initial Ore Reserves for Theta Project (part of MR83 only): 205 Koz (2.3Mt @ 2.76g/t Au) (Only 16% of total OC Resources)**

Corporate Overview: technical board & supportive register

Capital structure	
Ordinary shares	~381.4 million
Listed Options (TGMO), 2yr expiration $0.30 exercise (m)	31.4
Unlisted Options and Rights (m)	35.7
Market capitalisation (A$m) (undiluted)	40.0[1]
Cash	$1.1 M

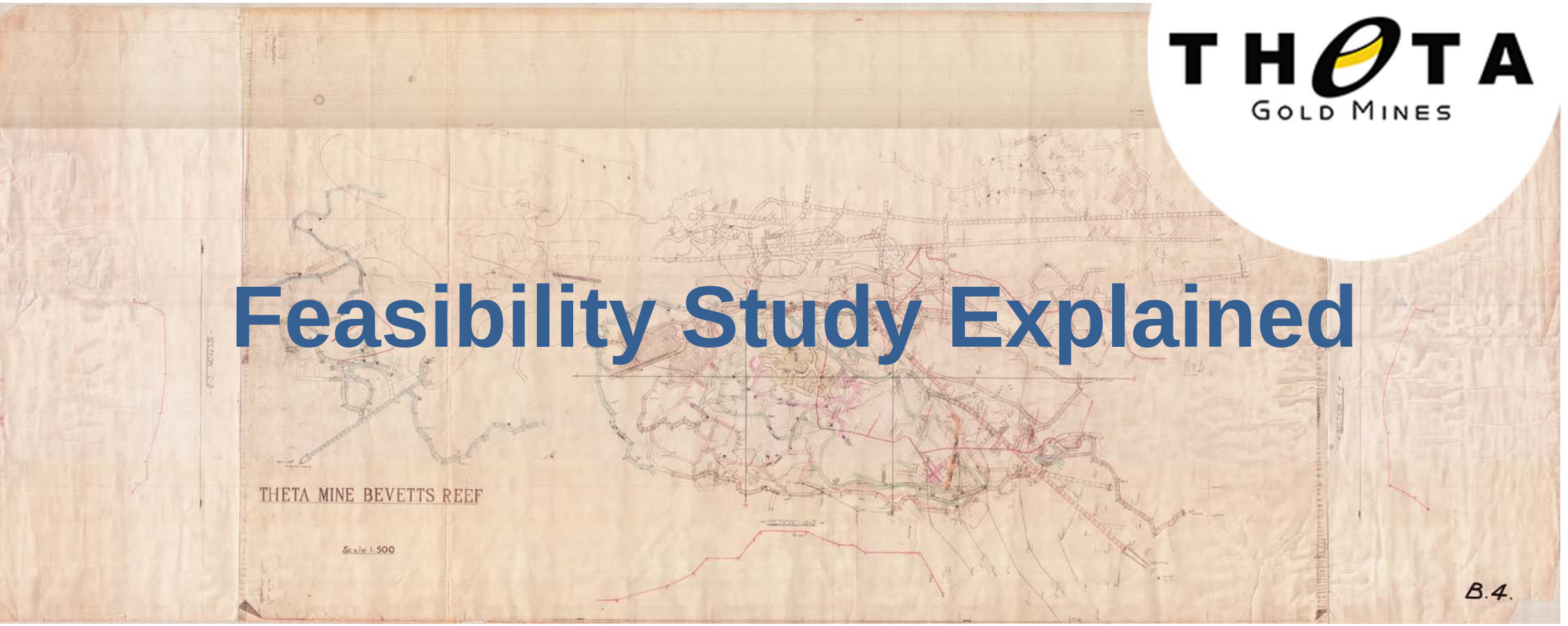
Key board members & senior management	
Bill Guy (Geologist)	Chairman
Robert Thomson (Mining Engineer)	Managing Director
Finn Behnken (Mining Engineer/Financier)	Non Executive Director
Richie Yang (Financier)	Non Executive Director
Chin Haw Lim (Accountant)	Chief Financial Officer
George Jenkins (Metallurgist)	CEO (South Africa)
Johan Fourie (Engineer)	Environmental & Strategic Planning

[1] Based on share price of $0.105

85% of register owned by Top 20	
Fineway Creation Ltd (Since 2018)	17.59%
Zenith (H.K) Holding Limited (Since 2019)	12.23%
Tasman Funds Management (related to Director, Since 2015)	8.58%
Golden Asia Investment Group Ltd (Since 2016)	8.16%
High Gift Investments Ltd (Since 2015) USA	6.04%
Citicorp Nominees Pty Ltd	5.80%

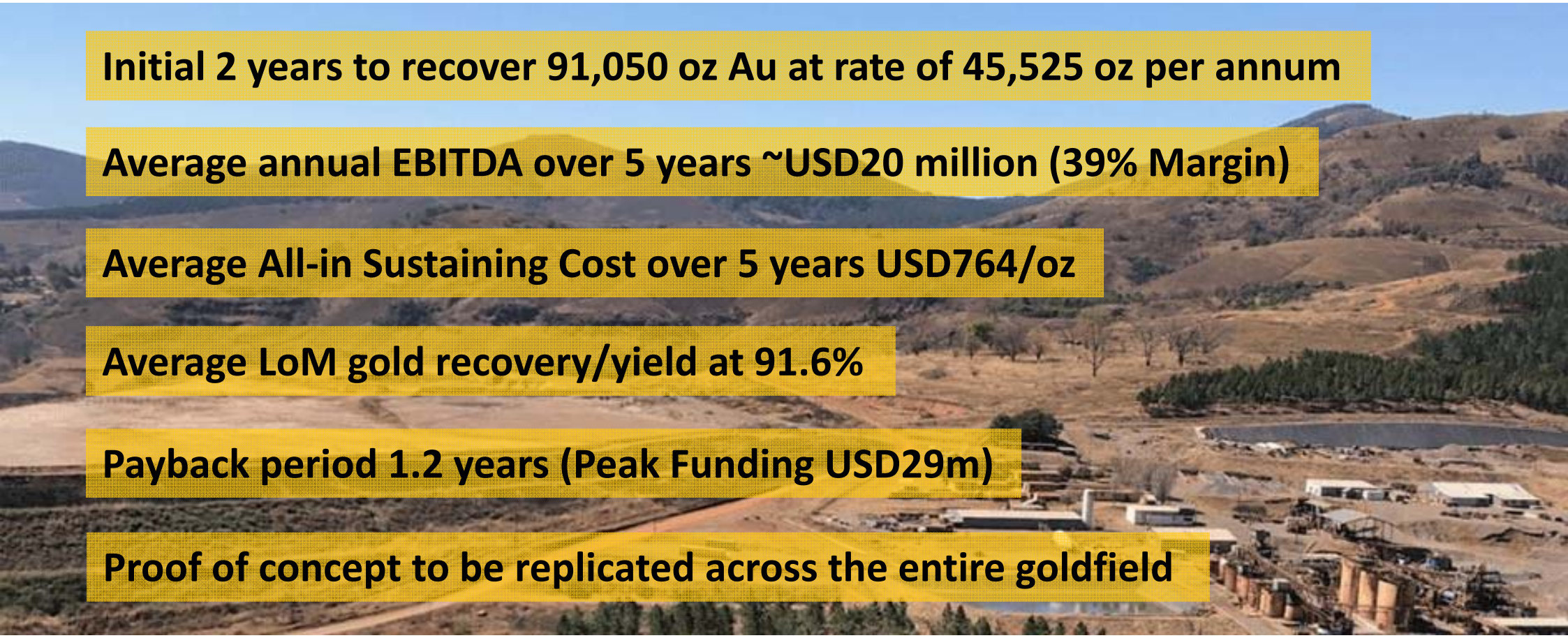


Feasibility Study Explained



Subject to Permitting and funding approvals

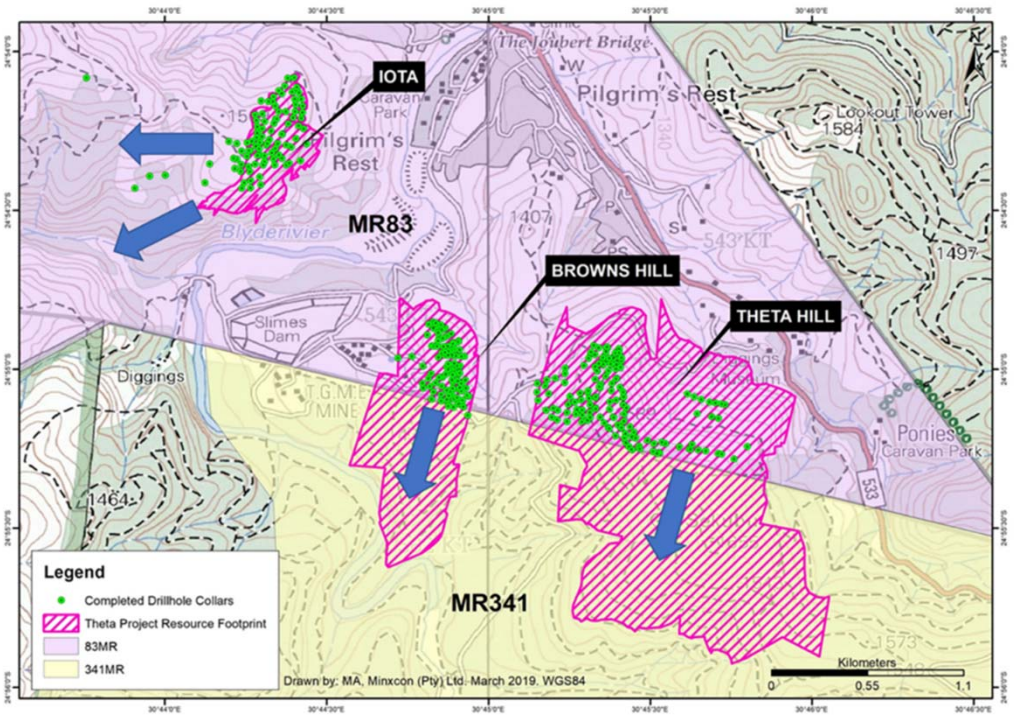
Headline numbers – Theta Project Feasibility Study



- Initial 2 years to recover 91,050 oz Au at rate of 45,525 oz per annum
- Average annual EBITDA over 5 years ~USD20 million (39% Margin)
- Average All-in Sustaining Cost over 5 years USD764/oz
- Average LoM gold recovery/yield at 91.6%
- Payback period 1.2 years (Peak Funding USD29m)
- Proof of concept to be replicated across the entire goldfield

Theta Project Feasibility Study Background

- Open Cut Theta Project startup Feasibility Study (“FS”) (May 2019) was limited to Indicated Resources within Mining Right (“MR”) 83 – ***only 16.7% of OC resources***
- The study was completed based on initial Ore Reserve within MR83 of 205.0 Koz Au (2.31Mt @ 2.76g/t Au)
- The current FS was also limited to the existing fully approved 2.5Mt Tailings Storage Facility (“TSF”) where the company is in progress to apply for additional ground to enable potential plant/production expansion
- New open cut mineral resource across MR83/341 is 879.6 Koz Au (10.1Mt @ 2.7g/t Au) hence significant potential to define additional ore reserves to ramp-up production and extend Life-of-Mine



Theta Project Feasibility: Minimal CAPEX, near-term production

Unlocking large 6Moz resource base: starting from open cut mining

Open Cut Theta Project - startup Feasibility Study

- Total gold recovered over 5 years 201Koz @ 40Kozpa
  - Initial 2 years from Theta Hill (incl. Browns) to recover ~91.05Koz (recovered grade 2.81g/t Au) at 45.53Kozpa
- Average All-in-Sustaining Cost USD764/oz (C1 Cost USDS717/oz)
- 9 month construction timeline & plant construction to 500ktpa
- Post-tax cumulative undiscounted cashflow of USD65.7m
  - Cumulative undiscounted EBITDA over LoM USD100m
  - 1.2 years payback period.
  - Post-tax NPV of USD49.6m and 65.1% IRR
- USD29.2m peak funding (incl. new mill & elution circuit)

Mineral Resource Category in LoM Plan	Pit	Grade	Reef Tonnes	Au Content	
		g/t	kt	kg	oz
Probable	Browns Hill	3.24	564	1,826	58,699
Probable	Columbia	2.54	1,253	3,189	102,513
Probable	Theta Hill	2.76	493	1,362	43,798
Total		**2.76**	**2,310**	**6,377**	**205,010**

The Ore Reserves exclude Inferred Mineral Resources.

Near term open cut ramp-up priorities

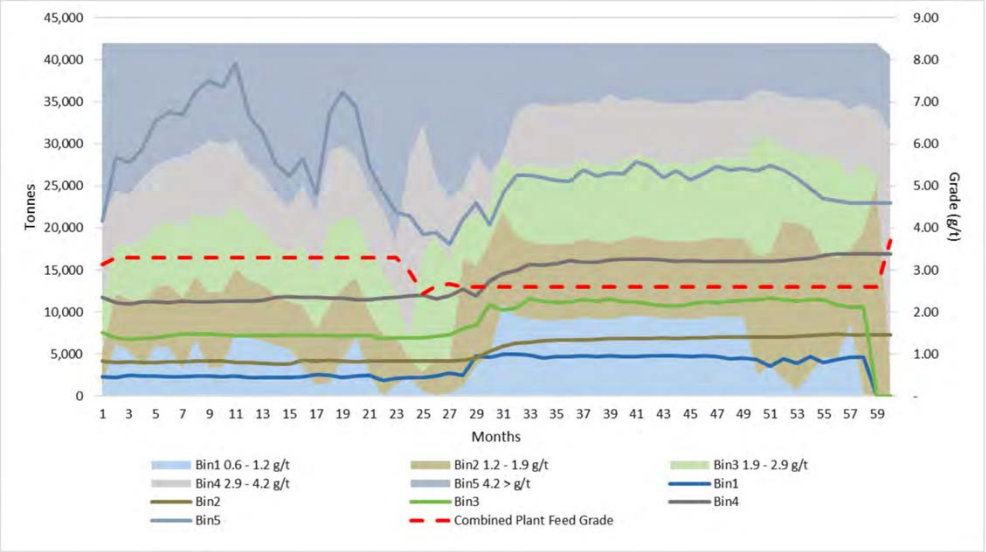
- **Application for additional tailing storage capacity** beyond existing approved 2.5mt, to enable accelerated and/or expanded production
- **Additional Theta Hill & Columbia Hill (MR83/341 inclusive) reserve conversions** through further indicated resources drilling
  - currently 879.6 Koz @ 2.7g/t Indicated/Inferred Resources
  - only 35% of resources in MR83 included in reserves
  - Columbia Hill Iota ore body open to the west, not yet at resource status
  - Numerous other open cut targets to be drilled out
- **Vaalhoek (MR10167) – 335koz OC Resource-** drilling to delineate maiden Indicated Resource & Reserve status
- **Plant expansion –** Planning for increased milling capacity for >1Mtpa to facilitate growth projects

Notes:

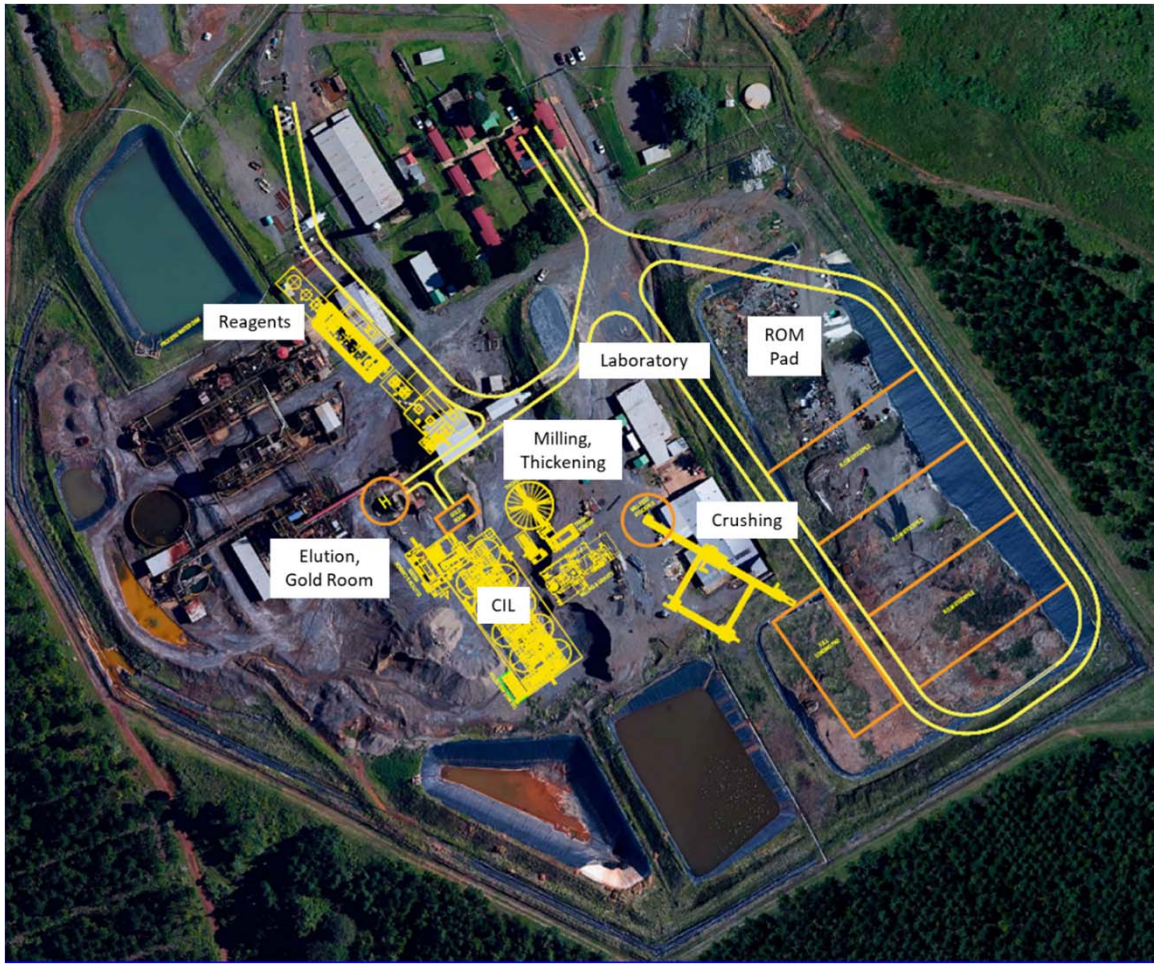
1. Totals in the Ore Reserve may not add-up due to rounding.
2. Mineral Resources are for MR83 only and excludes MR341.
3. No Inferred Mineral Resources are included in the Ore Reserve.

Theta Project Feasibility Study Production Summary

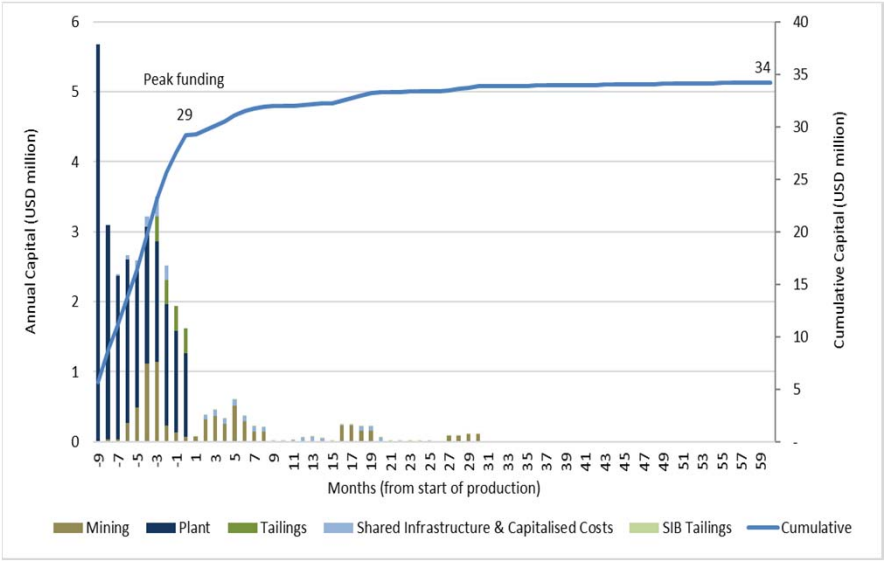
Production Summary over 5 years	
Total Ore Reserve Tonnes mined	2.31 Mt
Total Inferred Mineral Resources mined	0.211 Kt
Average Mined Grade	2.71 g/t
Strip Ratio (tonnes waste: tonnes ore)	13.4
Processing rate (design rate)	500,000oz per annum
LOM gold recovery assumption	91.6%
Total ounces in Mine Plan	219,424 oz
Total gold recovered	200,905 oz
Average ounces recovered per month	3,348 oz
Average ounces recovered per annum	40,176 oz
Recovered grade	2.48 g/t
Life of Mine	57 months
Life of project (Processing)	60 months



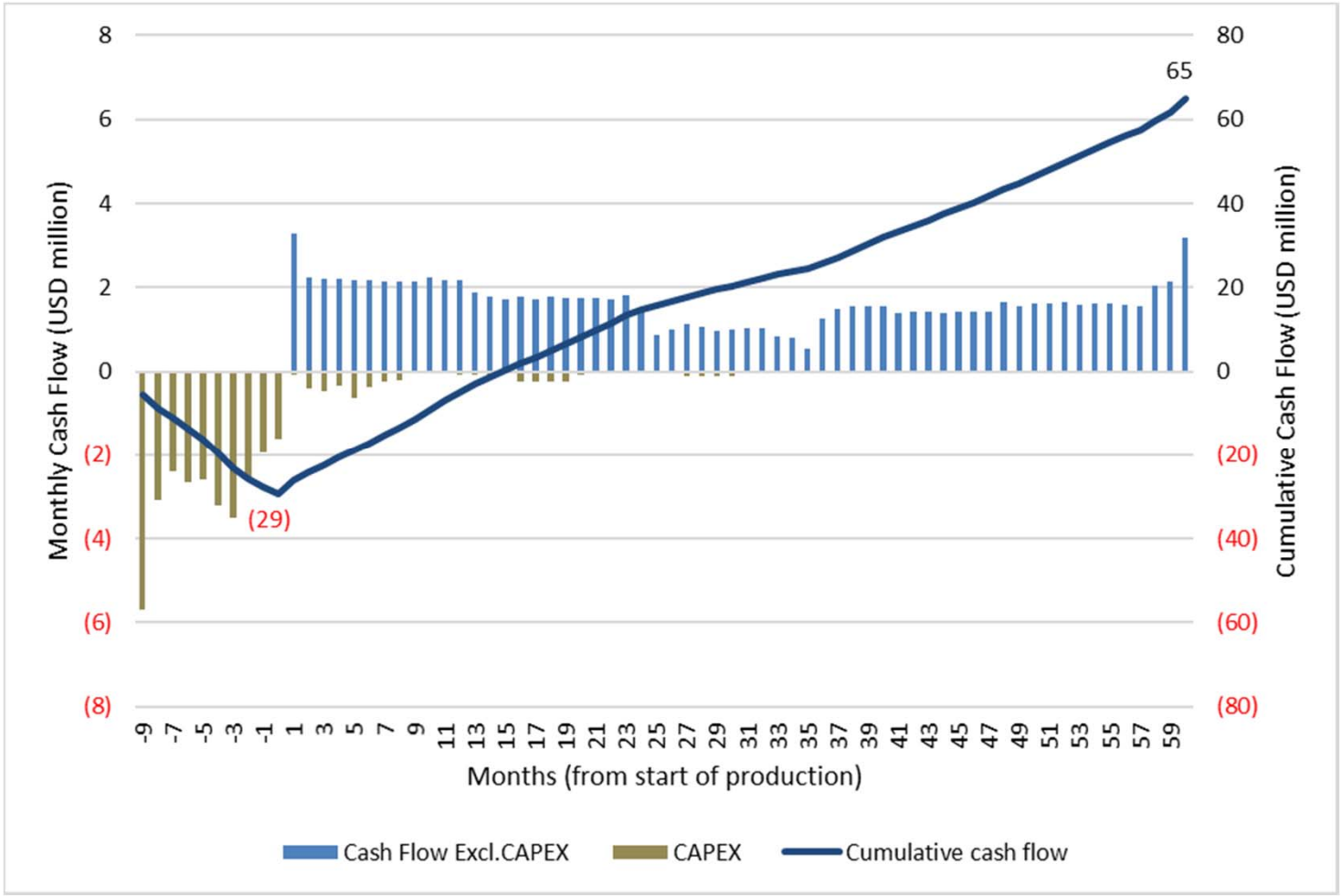
Theta Project Feasibility – Capital Cost



- Total peak funding of ~USD29m (over the 10 months of construction/pre-production)
- Direct plant capital of USD17m including USD8m for mechanical and USD4.4m for construction/engineering costs. New elution/gold room circuit.

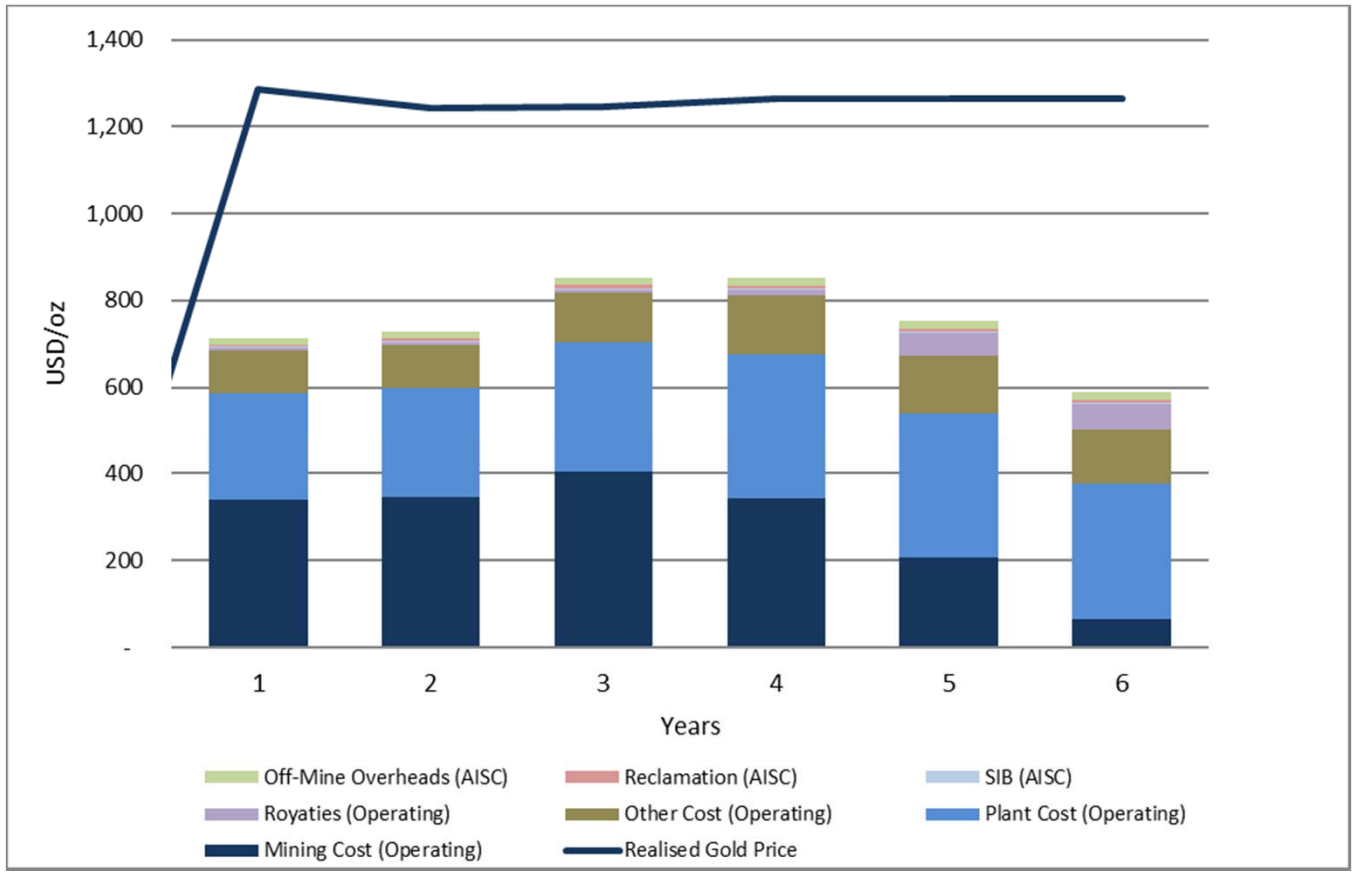


Theta Project Feasibility – Cashflow



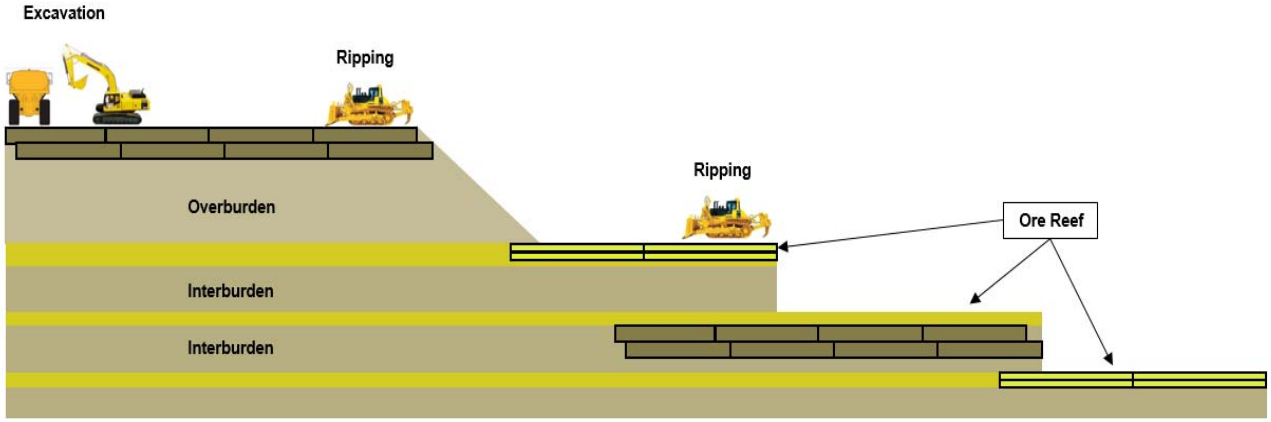
- Strong free cashflow generation post construction, total USD65.7m over LoM (post tax, costs)
- The Company aims to increase ore reserves and obtain additional TSF to extend LoM
- Pay back 1.2 years as LoM EBITDA ~USD100m

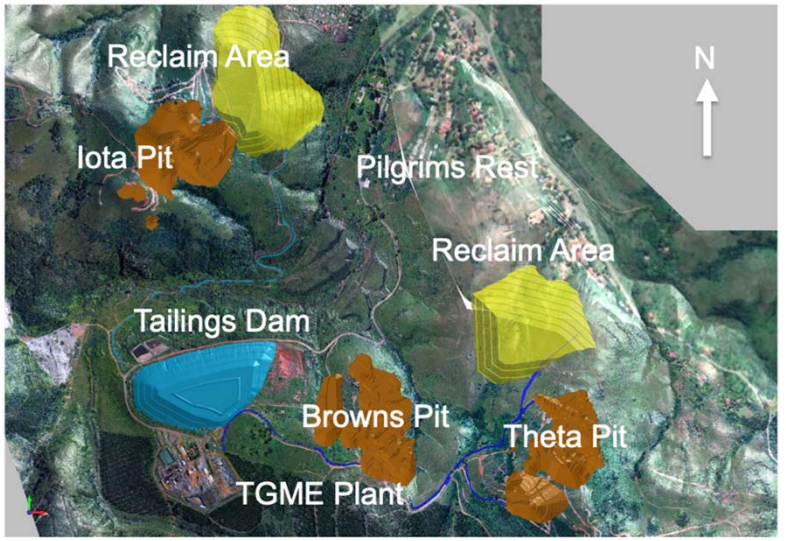
Theta Project Feasibility – AISC



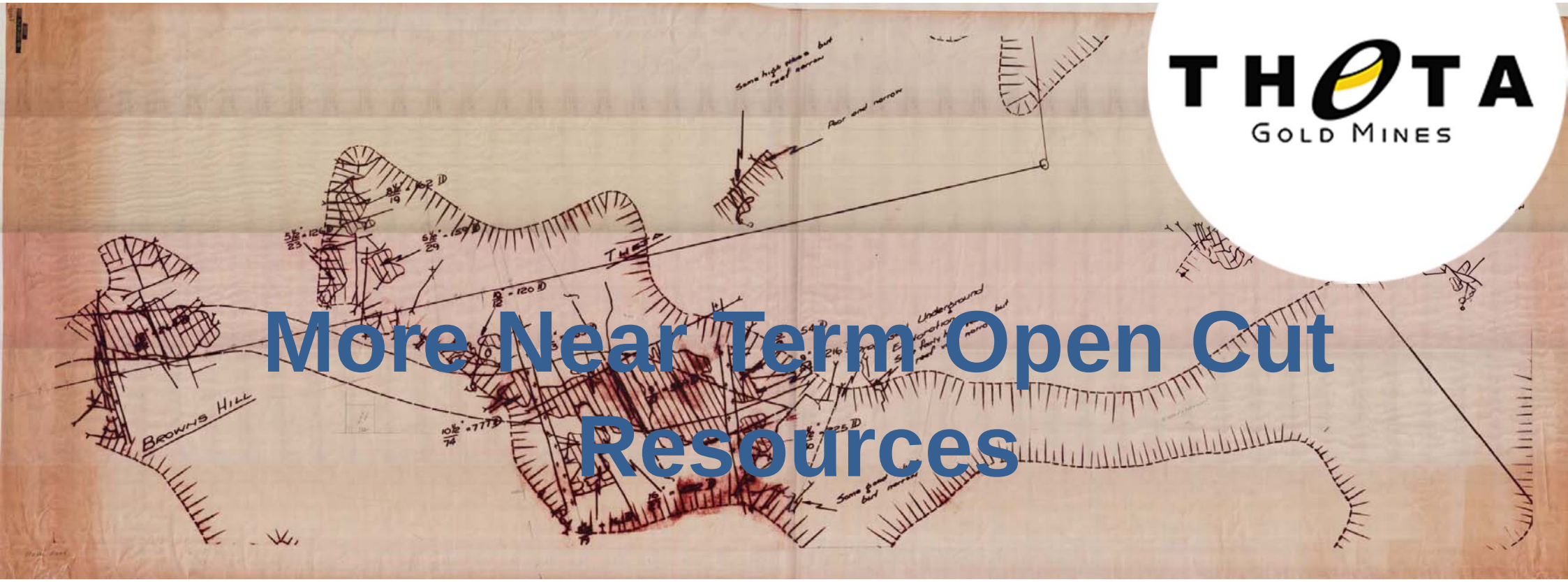
- LOM AISC averaging USD764/oz
- Simple crush/grind and standard CIL processing with high recovery (>91%)
- Operating cashflow to self-fund for multiple pit openings as year 3 and 4 higher AISC reflects maximum depth at Theta Hill and a lower initial mining grades at Columbia Hill.

Theta Project Feasibility – Mining





- Modified terrace mining with partial waste-backfill, low cost method due to relatively flat-lying ore seams and favorable topography
- Geotechnical evaluation demonstrates little to no drill/blast required
- Simple and efficient method using bulldozers, excavators for ripping and loading both waste and ore
- Short haulage (2-3km by road) to existing CIL Plant at Pilgrim's Rest Township



More Near Term Open Cut Resources

More Theta Project open-cut potential

- Only 16.7% of group OC resource in mine plan to date and only 57% of current Indicated Resources
- Open-cut resources have increased by 30% since 2018 to 1.3Moz, further potential defined
- Target to further increase the 870Koz at Theta Hill and drilling Vaalhoek
- Numerous other targets yet to be drill-tested

Mineral Resource Classification	Open Pit Mine	Reef	Reef Grade	Reef Width	Content	Reef Tonnes	Au Content	
			g/t	cm	cmgt	Mt	Kg	koz
Indicated	Total Theta Project	All	2.14	246	526	5.2	11,157	358.7
Inferred	Total Theta Project	All	3.30	132	435	4.9	16,202	520.9
Total Indicated and Inferred			**2.70**	**190**	**514**	**10.1**	**27,359**	**879.6**

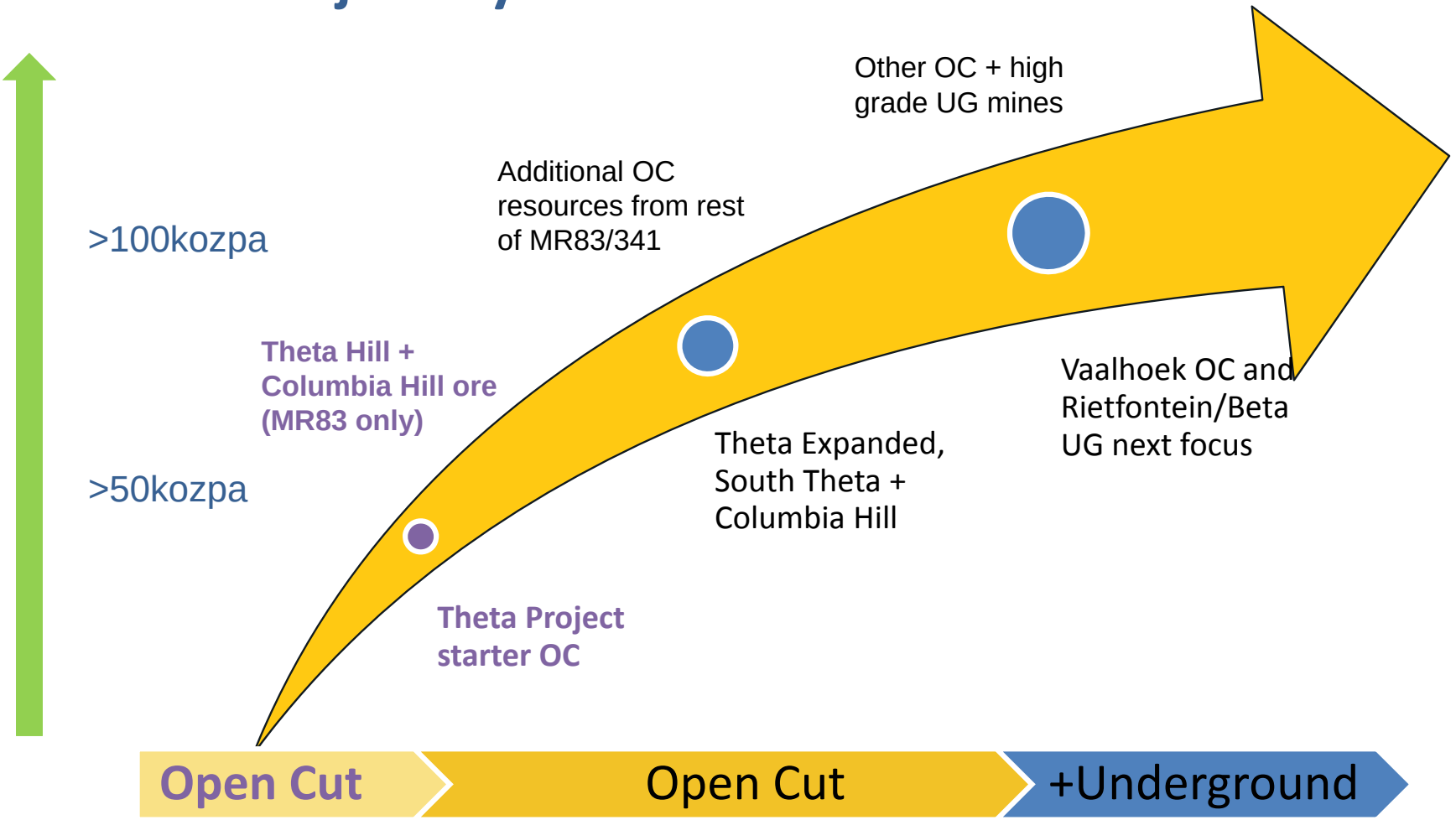
Mineral Resource Classification	Open Pit Mine	Reef	Reef Grade	Reef Width	Content	Reef Tonnes	Au Content	
			g/t	cm	cmgt	Mt	Kg	koz
Indicated	Theta & Browns Hill	Shale	1.02	200	204	0.439	402	12.9
	Theta & Browns Hill	Bevetts	1.10	221	244	0.891	886	28.5
	Theta & Browns Hill	Upper Theta	2.41	100	241	0.724	1,568	50.4
	Theta & Browns Hill	Lower Theta	3.70	100	370	0.888	2,956	95.0
	Theta & Browns Hill	Beta	2.49	100	249	0.383	859	27.6
	Columbia Hill	Bevetts	2.89	114	330	0.105	303	9.7
	Columbia Hill	Upper Rho	2.43	393	956	0.808	1,965	63.2
	Columbia Hill	Lower Rho	2.51	550	1381	0.815	2,047	65.8
	Columbia Hill	Upper Theta	1.08	114	123	0.158	171	5.5
Total Indicated			**2.14**	**246**	**526**	**5.211**	**11,157**	**358.7**

Mineral Resource Classification	Open Pit Mine	Reef	Reef Grade	Reef Width	Content	Reef Tonnes	Au Content	
			g/t	cm	cmgt	Mt	Kg	koz
Inferred	Theta & Browns Hill	Shale	1.11	216	240	0.703	666	21.4
	Theta & Browns Hill	Bevetts	1.07	213	227	0.648	589	19.0
	Theta & Browns Hill	Upper Theta	1.86	100	186	1.071	1,692	54.4
	Theta & Browns Hill	Lower Theta	8.11	100	811	1.643	11,329	364.3
	Theta & Browns Hill	Beta	2.23	100	223	0.748	1,417	45.6
	Columbia Hill	Upper Rho	5.13	106	544	0.099	507	16.3
Total Inferred			**3.30**	**132**	**434**	**4.912**	**16,202**	**520.9**

Notes:

1. Theta Project (Theta Hill, Browns Hill and Iota) cut-off is 0.35 g/t;
2. The gold price used for the cut-off calculations is USD 1,500 / oz;
3. Geological losses applied are 10% for inferred and 5% for Indicated and Measured;
4. Theta Hill and Browns Hill - Upper Theta Reef, Lower Theta Reef and Beta Reef are diluted grades over 100cm;
5. Geological losses applied are, 10% for inferred and 5% for Indicated and Measured;
6. Historical mine voids have been depleted from the Mineral Resource;
7. The inferred Mineral Resources have a high degree of uncertainty and it should not be assumed that all or a portion thereof will be converted to Mineral Reserves;
8. Mineral Resource fall within the mining right MR83 and MR341.

TGM Growth Trajectory: Towards 100koz+



Note: Production growth subject to exploration success and funding

Investment Snapshot



- First ~200 Koz Feasibility Study:
  - Starting point proof of concept
  - Positive Project Economics – Total Revenue USD253m (current ~200 Koz Ore Reserve)
  - All-in Sustaining Cost USD764/ounce gold (lowest quartile RSA)
  - Low Capex Project – USD29m Peak Funding (Initial Mining Reserve and Existing Mining Infrastructure)
- Massive Global Mineral Resources – Over 6 Million Ounces Au (44.78 Mt @4.18 g/t)
- Open Pit Reserve upside – 1.3 M oz existing Resource available for Reserve conversion
  - Exploration Upside - Discovery cost USD 15/oz Indicated Resources (JORC, 2012)
- Permitted Gold Plant Area – more space to increase plant production profile (modular)



Thank You

Theta Gold Mines Ltd

ASX: TGM, TGMO

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Appendix A
New Mineral Resources

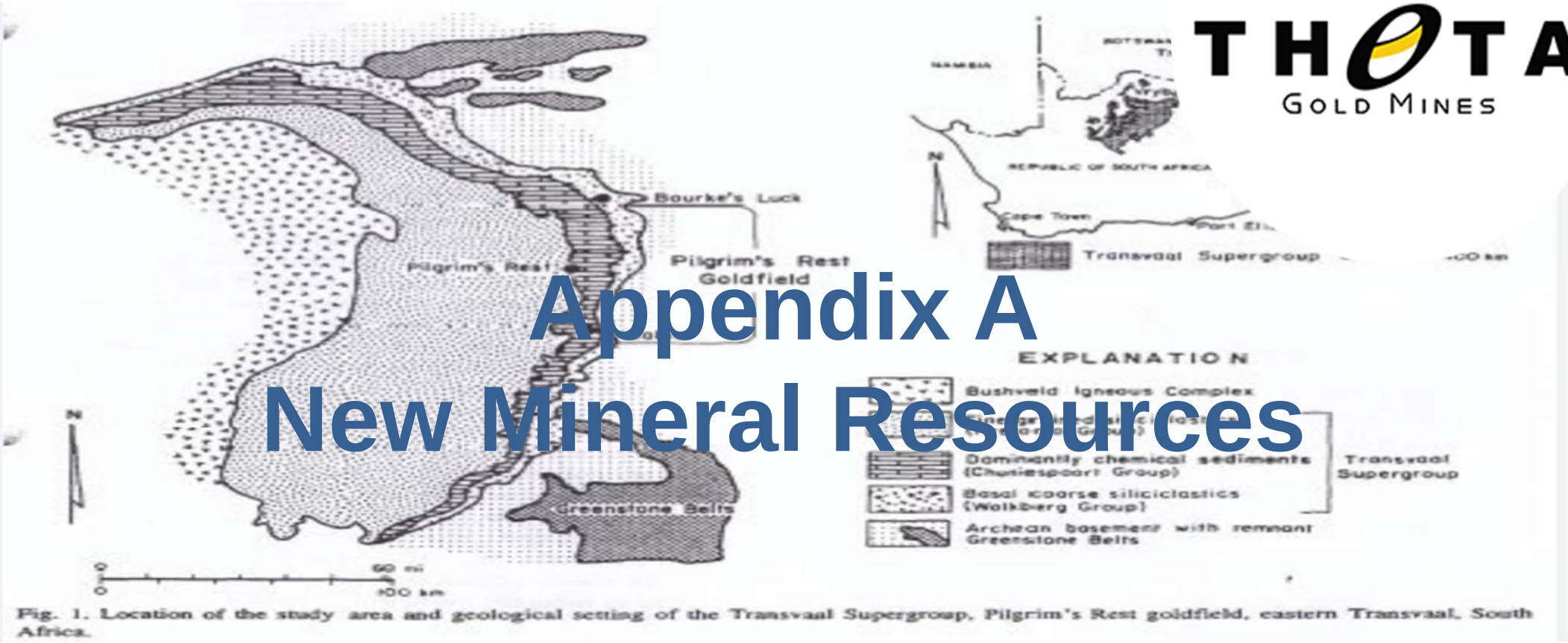

Fig. 1. Location of the study area and geological setting of the Transvaal Supergroup, Pilgrim's Rest goldfield, eastern Transvaal, South Africa.

Resources JORC 2012 - Global

Mineral Resource Classification	Type of Operation	Tonnage	Gold Grade	Gold Content	
		Mt	g/t	Kg	koz
Measured	Underground	0.091	5.37	489	15.7
Total Measured		**0.091**	**5.37**	**489**	**15.7**
Indicated	Underground	4.774	6.21	29,661	953.7
	Open Pit	7.161	2.11	15,091	485.2
	Tailings	5.244	0.83	4,373	140.6
Total Indicated		**17.179**	**2.86**	**49,126**	**1,579.4**
Inferred	Underground	21.452	5.22	111,880	3,597.0
	Open pit	5.922	4.35	25,730	827.3
	Tailings	0.023	0.57	13	0.40
	Rock Dump	0.121	1.64	199	6.40
Total Inferred		**27.518**	**5.01**	**137,823**	**4,431.0**
Grand Total		**44.788**	**4.18**	**187,438**	**6,026.2**

Notes:

1. Columns may not add up due to rounding.
2. Gold price used for the cut-off calculations is USD1,500/oz
3. 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.
4. Fault losses of 5% for Measured and Indicated, 10% for Inferred Mineral Resources.
5. Mineral Resources are stated as inclusive of Ore Reserves.
6. Mineral Resources are reported as total Mineral Resources and are not attributed.

[1] Refer to ASX Announcement on 16 May 2019.

Resources JORC 2012 – Open Pits / Underground

Open Pits

Resource Classification	Open Pit Mine	Reef	Reef Grade	Reef Width	Content	Reef Tonnes	Au Content	
			g/t	cm	cmgt	Mt	Kg	koz
Indicated	Hermansburg	Elluvial	1.79	0	0	0.505	905	29.1
	DG1	Elluvial	1.37	0	0	0.159	217	7.0
	DG2	Elluvial	0.76	0	0	1.174	892	28.7
	Vaalhoek	Vaalhoek	17.25	33	574	0.111	1920	61.7
	Theta & Browns Hill	Shale	1.02	200	204	0.439	402	12.9
	Theta & Browns Hill	Bevetts	1.10	221	244	0.891	886	28.5
	Theta & Browns Hill	Upper Theta	2.41	100	241	0.724	1568	50.4
	Theta & Browns Hill	Lower Theta	3.70	100	370	0.888	2956	95.0
	Theta & Browns Hill	Beta	2.49	100	249	0.383	859	27.6
	Iota	Bevetts	2.89	114	330	0.105	303	9.7
	Iota	Upper Rho	2.43	393	956	0.808	1965	63.2
	Iota	Lower Rho	2.51	550	1381	0.815	2047	65.8
	Iota	Upper Theta	1.08	114	123	0.158	171	5.5
Total Indicated			**2.11**	**179**	**378**	**7.161**	**15,091**	**485.2**

Resource Classification	Open Pit Mine	Reef	Reef Grade	Reef Width	Content	Reef Tonnes	Au Content	
			g/t	cm	cmgt	Mt	Kg	koz
Inferred	Hermansburg	Elluvial	0.88	0	0	0.110	97	3.1
	DG1	Elluvial	2.95	0	0	0.293	864	27.8
	DG5	Elluvial	0.76	0	0	0.101	77	2.5
	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	1.11	216	240	0.703	666	21.4
	Theta & Browns Hill	Bevetts	1.07	213	227	0.648	589	19.0
	Theta & Browns Hill	Upper Theta	1.86	100	186	1.071	1692	54.4
	Theta & Browns Hill	Lower Theta	8.11	100	811	1.643	11329	364.3
	Theta & Browns Hill	Beta	2.23	100	223	0.748	1417	45.6
	Iota	Upper Rho	5.13	106	544	0.099	507	16.3
Total Inferred			**4.35**	**115**	**502**	**5.922**	**25,730**	**827.3**

[1] Refer to ASX Announcement on 16 May 2019.

Underground

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	cmgt	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**

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	cmgt	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**	**3,597.0**

Note: * Manual Mineral Resources

Theta Project Ore Reserves (MR83 only)

Mineral Resource Category in LoM Plan	Pit	Grade	Reef Tonnes	Au Content	
		g/t	kt	kg	oz
Probable	Browns Hill	3.24	564	1,826	58,699
Probable	(Columbia Hill)	2.54	1,253	3,189	102,513
Probable	Theta Hill	2.76	493	1,362	43,798
Total		**2.76**	**2,310**	**6,377**	**205,010**

The Ore Reserves exclude Inferred Mineral Resources.

Notes:

1. The Ore Reserve cut-off grade is 0.4 g/t.
2. Totals in the Ore Reserve may not add-up due to rounding.
3. No Inferred Mineral Resources are included in the Ore Reserve.
4. Gold price of USD 1,300/oz used to provide the LoM optimised pits converting 61% of the 358 koz Indicated Mineral Resource to Probable Ore Reserves.
5. All Ore Reserves reported are delivered to the plant.
6. Mineral Resources are for MR83 only and excludes MR341.

Refer to ASX Announcement on 16 May 2019.

Total Theta Project Mineral Resources

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	Theta Hill & Browns Hill	Shale	1.02	200	204	0.439	402	12.9
	Theta Hill & Browns Hill	Bevetts	1.10	221	244	0.891	886	28.5
	Theta Hill & Browns Hill	Upper Theta	2.41	100	241	0.724	1,568	50.4
	Theta Hill & Browns Hill	Lower Theta	3.70	100	370	0.888	2,956	95.0
	Theta Hill & Browns Hill	Beta	2.49	100	249	0.383	859	27.6
	Columbia Hill	Bevetts	2.89	114	330	0.105	303	9.7
	Columbia Hill	Upper Rho	2.43	393	956	0.808	1,965	63.2
	Columbia Hill	Lower Rho	2.51	550	1381	0.815	2,047	65.8
	Columbia Hill	Upper Theta	1.08	114	123	0.158	171	5.5
Total Indicated			2.14	246	526	5.211	11,157	358.7

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	Theta Hill & Browns Hill	Shale	1.11	216	240	0.703	666	21.4
	Theta Hill & Browns Hill	Bevetts	1.07	213	227	0.648	589	19.0
	Theta Hill & Browns Hill	Upper Theta	1.86	100	186	1.071	1,692	54.4
	Theta Hill & Browns Hill	Lower Theta	8.11	100	811	1.643	11,329	364.3
	Theta Hill & Browns Hill	Beta	2.23	100	223	0.748	1,417	45.6
	Columbia Hill	Upper Rho	5.13	106	544	0.099	507	16.3
Total Inferred			3.30	132	434	4.912	16,202	520.9

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	Total Theta Project	All	2.14	246	526	5.2	11,157	358.7
Inferred	Total Theta Project	All	3.30	132	435	4.9	16,202	520.9
Total Indicated and Inferred			2.70	190	514	10.1	27,359	879.6

Notes:

1. Theta Project (Theta Hill, Browns Hill and Iota) cut-off is 0.35 g/t,
2. The gold price used for the cut-off calculations is USD 1,500 / oz;
3. Geological losses applied are 10% for inferred and 5% for Indicated and Measured;
4. Theta Hill and Browns Hill - Upper Theta Reef, Lower Theta Reef and Beta Reef are diluted grades over 100cm;
5. Geological losses applied are, 10% for inferred and 5% for Indicated and Measured;
6. Historical mine voids have been depleted from the Mineral Resource;
7. The Inferred Mineral Resources have a high degree of uncertainty and it should not be assumed that all or a portion thereof will be converted to Ore Reserves;
8. Mineral Resources fall within the mining right MR83 and MR341.

Refer to ASX Announcement on 16 May 2019.

Theta Project Feasibility – Study inputs & derivation

Feasibility Study sections:	Responsible parties
The Mineral Resources	**Minxcon (Pty) Ltd ("Minxcon") (Johannesburg)**
Probable Ore Reserve and detailed monthly mining and processing schedule, derived from primarily Indicated Mineral Resources and a small portion of Inferred Mineral Resources (<7% of content)	**Minxcon (Johannesburg)**
Geotechnical inputs and parameters for pit designs	**Open House Management Solutions (Pty) Ltd ("OHMS") (Rustenburg)**
Process engineering design, capital and operating costs	**METS South Africa (Pty) Ltd ("METS") (Pretoria)**
Metallurgical recovery inputs based on test work by SGS South Africa	**ENC Minerals (Pty) Ltd ("ENC")**
Tailings storage facility design, capital and operating costs	**Tailex Management Services (Pty) Ltd ("Tailex")**
Waste, residue and water storage designs	**Minxcon (Johannesburg)**
Rehabilitation provision	**Globesight (Pty) Ltd**
Other cost inputs, i.e. labour, overheads, outsources services and environmental and socio-economic costs	**TGM in-house**
Financial Model	**Minxcon (Johannesburg)**