

15 August 2019

SOUTH AFRICA

GOLD

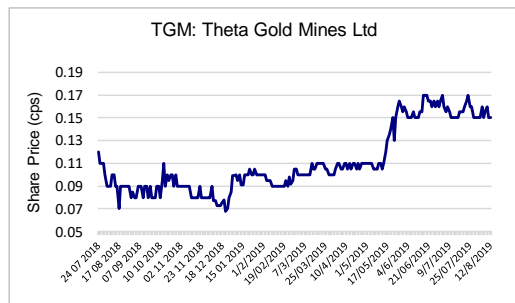
DEVELOPMENT

EXCHANGE: ASX:TGM

CAPITAL PROFILE

Share price (A\$)	0.15
Target Price (A\$) 12mth	0.52
52 week range (A\$/share)	0.068 to 0.18
Number of shares (M)^	408
Options and warrants (M)	31
Fully diluted (M)	439
Market capitalisation (undiluted) (A\$M)	61.2
Debt (A\$M) - Dec 18A*	5.2
Enterprise value (A\$M)	64.4
Major shareholders (as at 12/08/2019):	
Fineway Creation (16.7%)	
Zenith (HK) Holdings Ltd (11.6%)	
Tasman Funds Mgmt (8.2%)	
Avg monthly volume (M)	2.7
Cash (A\$M) - Sep'19E	2.0

* Non-recourse loan A\$5M with major shareholder



THETA GOLD MINES LIMITED

Potential for over 150kozpa from multiple mines, with first production planned for 2020

Share Price: \$0.15

Buy

Resource base of 6.0 Moz, Feasibility Study completed on Theta open-cut mine and forecast production 2H20.

Potential low cost producer, with development of multiple mines planned through brownfields development in South Africa. Low capital needs for production recommencement. RCR's TGM NAV is A\$0.47/share (@US\$1350/oz, AUD 0.68) with a price target of A\$0.52/share on a 12 month basis.

INVESTMENT POINTS

- ◆ **Low-cost open cut strategy set to deliver:** Two potential open-cut mines, the first being Theta Project (Theta Hill) with a DFS into the 500ktpa starter project released to the ASX on 16 May 2019.
- ◆ **Low capex and opex:** Theta Hill Feasibility Study highlighted a low capital project (US\$29M) with strong cashflow, and an AISC of US\$764/oz based on 40kozpa average production, with planned expansion.
- ◆ **Largely permitted:** The majority of mines are within granted mining rights, with most permits in place for commencement of mining. Amendments to some approvals required ahead of construction commencement later in 2019.
- ◆ **High operating margin:** On our assumptions, there is potential for all mines to operate at competitive costs, with group AISC <US\$700/oz and production >150kozpa.
- ◆ **Multiple mines:** Strategy to bring multiple mines into production, feeding the central processing plant at TGME. We anticipate Theta Hill to commence first in 2020, followed by Vaalhoek and/or Rietfontein by 2022 and Beta Mine potentially commencing by 2023.
- ◆ **Undervalued against peers:** Due to the high grade of the mining projects, the large resource base and low capital needs, we consider TGM to be undervalued against other ASX listed peers who are seeking to construct gold mines in Africa including WAF and CDV, along with Australian gold developers.
- ◆ **EV/oz cheap on comparable metrics:** African pre-development gold companies on the ASX trade at A\$47/oz on average, hence with TGM trading on ~A\$11oz, this is another reason why we consider the company to be undervalued, particularly in the increasingly buoyant gold market and active M&A environment emerging right now.

COMPANY STATISTICS

Year End June	Jun-19A	Sep-19F	FY18A	FY19A	FY20F
Exporation/Development (US\$M)	0.82	1.00	2.21	3.34	14.90
Corporate (US\$M)	0.94	0.90	2.39	2.69	3.00
Expl/Dev (Expl.+ Corporate) (%)	47	53	48	55	83
Funding duration at current burn (years)				0.1	0.4
Shares on issue (pr end) (M shares)	389	444	301	389	539
Drilling - RAB/Aircore (m)	0	0	0	0	0
Drilling - RC/Diamond (m)	1,750	0	3,500	15,000	17,500
Land holding ('000 ha)*	62	62	62	62	62
Capital raising/inflow (US\$M)	2.04	5.44	5.23	6.79	24.00
Funding from JV partners (US\$M)	0.0	0.0	0.0	0.0	0.0
Cash (US\$M)	0.5	4.0	0.2	0.5	6.6
Cash backing (Ac/share)	0.1	0.9	0.1	0.1	1.2

* Tenements held and under application.

Quarters refer to calendar year.

Drill metres are RCR estimates.

DIRECTORS

Charles William (Bill) Guy (Chairman)
Rob Thomson (Managing Director)
Bill Richie Yang (Non Exec Director)
Finn Behnken (Non Exec Director)
Simon Liu (Non Exec Director)
Brett Tang (Non Exec Director)

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COMPANY COMMENT

Overview: The TGME project is located within the Sabie-Pilgrim's Rest goldfield, 300km northeast of the Witwatersrand Basin, in Eastern South Africa. Owned by Theta Gold Mines (ASX: TGM) a name change in late 2018 saw the company re-branded from Stonewall Resources (ASX:SWJ).

Total permit area is 62k Hectares, with over 43 historical mines, surface deposits, an existing 130ktpa CIL plant, and JORC resource of 6.0Moz. RCR undertook a site visit to the TGME project, including Theta Hill, in 2018, following on from our 2017 visit and March 2017 RCR report (ASX: SWJ).

Company History: The Pilgrims Rest area was the first goldfield discovered in South Africa in 1873. In 1895, the Transvaal Gold Mining and Estates (TGME) company was created which produced gold for over 100 years. Between 1895 and 1970 TGME and Sabie Mines produced at least 6Moz of gold at an average recovered grade of 10.4g/t. Since then, it is estimated over 500koz may have been produced.

In recent decades, prior to acquisition and consolidation of the field by TGM (then SWJ) in 2010, the mines were private, with various attempts at re-establishing underground mining focused on old lower grade areas which did not prove profitable.

Shandong Qixing made a US\$141M takeover offer in 2013 which was not completed. The takeover was based around a 280kozpa concept, involving plant expansion & BIOX®.

Since our last report in 2017, TGM has completed over 18,000m of drilling aimed at primarily at evaluating open-cut potential, with recent open-cut resources of 1.3Moz declared. The open-cut has lower capital cost and better cashflow profile than underground mining, hence has been prioritised for development.

Theta Hill Open Cut: (TGM 74%). A Feasibility Study into open cut mining at Theta Hill was published on 16 May 2019, indicating a viable project, subject to further refinement (standard feasibility study variables of $\pm 15\%$ as per JORC, 2012). The current reserve is 2.31Mt@2.76g/t Au for 205koz from a resource of 10.1Mt@2.71g/t Au for 870koz (41% Indicated). To date only 17% of open-cut resources have been included in the reserves (37% of the Theta Hill resource) due to the plan to expedite production, whilst drilling is planned shortly to expand reserves and resources.

The Feasibility Study scheduled 500ktpa of ore to be extracted over a period of 5.0 years. Peak cash drawdown was estimated at US\$29M, including US\$25.5M for refurbishment of the TGME CIL plant, and US\$3.5M for mine works and related infrastructure.

Operating costs were estimated at US\$54/t, with a forecast C1 cash cost of US\$717/oz and AISC of US\$764/oz including royalties. A post-tax NPV (5%, US\$1258/oz) of US\$49.6M was estimated in the Study with US\$65.7M in free cashflow LOM.

Along with our expectations for an increase in the size of the reserves, we believe the plant will ultimately be expanded above 1.0Mtpa to allow for both project expansion, and introduction of ore from other project areas which are yet to have reserves declared. We can see 4 mines producing >150kozpa within 4-5 years.

Rietfontein: (TGM, 74%) TGM completed a scoping study into Rietfontein early 2017, later combined with Beta for a potential production profile of up to 100kozpa (ASX release dated 16 May 2017).

Work on Rietfontein in 2017 was delayed for several reasons, including the discovery of high grade open-cut potential ('Project Bentley', ASX release 7 Sep 2017) and the high cost of drilling out the resource from surface.

The decision to dewater the mine (now ongoing for >12 months with more than 350ML and 30m reduction across the

3km of workings achieved) and drill from underground later, while focusing on the new Theta Hill project, proved to be the right one. Theta Hill represents half the development capital and half the development timeframe that was envisaged with Rietfontein, however Rietfontein is still a priority development. The revised JORC resource on is 2.88Mt@8.42g/t Au for 780koz (31% Indicated, 69% Inferred).

Vaalhoek: (TGM, 74%) The JORC resource of 3.77Mt @ 7.08g/t Au for 829koz of contained gold (Indicated and Inferred) includes an open cut resource of 0.62Mt@16.9 g/t Au for 335koz (82% Inferred, 18% Indicated).

Preliminary internal whittle pit designs have been carried out on two open-pit resources, with some metallurgical testwork undertaken. Due to the high grade (and thus high potential cashflow margin) of this resource, we anticipate conversion to reserves will be a priority for TGM over the next year or so, with potential production by 2022.

Beta Mine (TGM, 74%). The Beta Mine is located a short drive (2.5km) from the TGME plant site. The current JORC resource is 4.72Mt@6.61g/t Au (48% Indicated) for 1.03Moz. A scoping study released on 16 May 2017 scheduled a mine producing on average 37kozpa at a C1 cash cost of US\$643/oz for a total mine life of 7.6 years.

We have adopted a similar production schedule, with first ore produced by April 2022 and peak capex of US\$20M for development, including contribution to an expanded plant.

TGME Plant: TGM's estimate to upgrade the capacity of the CIL plant to 500ktpa is around US\$25.5M (see ASX release 16 May 2019). The plan is to further increase capacity towards 1Mtpa or more over coming years through modular expansion. We have allowed for total group capital of US\$95M over the next four years including development of two underground mines and expansion of plant capacity to 1.2Mtpa by 2023 including BIOX® if deemed necessary.

Valuation: We value TGM at **A\$200M or \$0.47/share** diluted (at US\$1350/oz, ZAR/USD 14.0, AUD 0.68). This is based on our updated DCF models on four proposed mines (8% discount rate), adopting approximately 25-50% of the NPV due to pre-DFS and development risks - see *valuation table*, p12.

For comparison, our valuation equates to around A\$45/oz of resources (74% equity) approximating the A\$47/oz average of ASX-listed peers with pre-development gold projects in Africa.

We adopt a price target above our valuation, with the expectation of continued growth in resources and reserves for both Theta Hill project area and other projects, and progress towards production over the next twelve months.

Investment Comment:

RCR's 12 month share price target is A\$0.52. TGM appears suitable for those seeking exposure to an African gold development play, with good leverage on both implementation success and gold prices.

With likely low capital and potential low operating costs, combined with >150kozpa medium term gold production potential, the company appears well placed to attract market attention, as gold production gets closer in 2020.

Risks include timing of final permits and normal equity market risks such as funding, commodity price and exchange rates. Key milestones for potential re-rating include further upgrades to resources/reserves, exploration success and first gold production potentially by 2H20.

KEY PROJECTS

Project	Ownership/ Option	JV Partner	Target Type	Process Route	Project Status	Location
TGME Gold Project*	74%	BEE	Au	CIL	Pre-Prod	South Africa

* 43 Historic Mines with over 6.7Moz historic production, JORC Resource of 6.0Moz

RESERVES AND RESOURCES

Code for reporting mineral resources - Australian: (JORC 2012)

Gold Au	Classification	Project Equity	Ore Mt (100%)	Grade g/t	Cut Off g/t	Au koz (100%)
Reserves						0
Resources						
OC	Measured	74%	-	-	-	-
OC	Indicated	74%	7.16	2.11		485
OC	Inferred	74%	5.92	4.35		827
Sub Total			13.08	3.12		1,312
UG	Measured	74%	0.09	5.37		16
UG	Indicated	74%	4.77	6.21		954
UG	Inferred	74%	21.45	5.22		3,597
Sub Total			26.31	5.40		4,566
Surface Dumps	100% Inferred	74%	0.12	1.64		6
Tailings	99% Indicated	74%	5.26	0.83		141
Total - Residual			5.38	0.85		147
Total Mineral Resources		74%	44.78	4.19		6,026

* Refer to ASX announcement dated 16/05/19

INVESTMENT THESIS

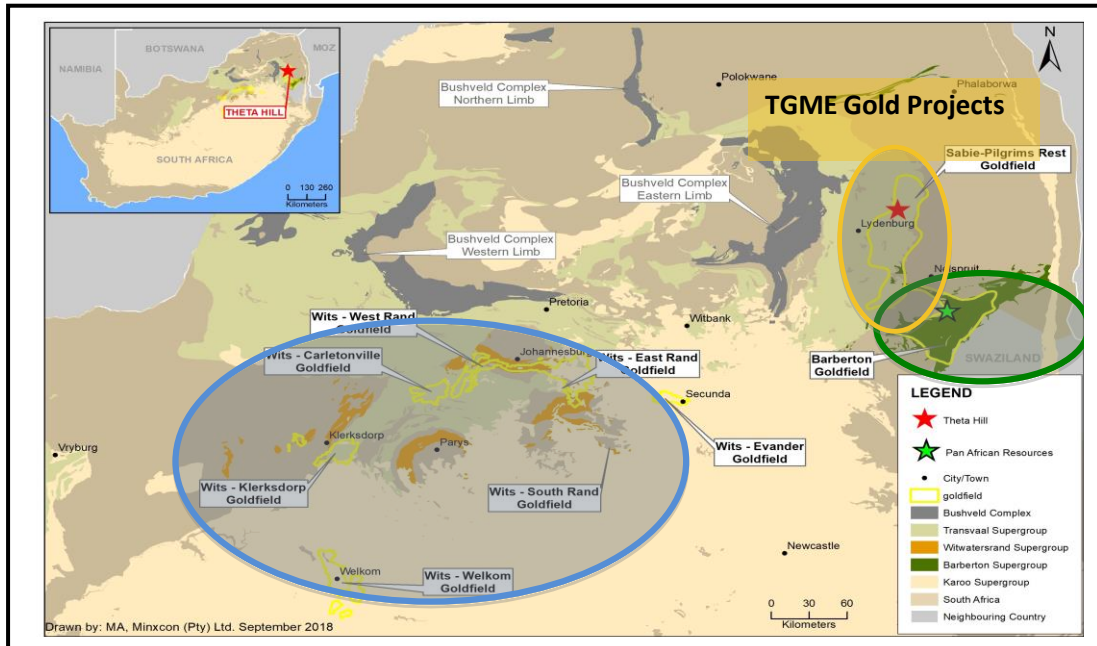
Theta Gold Mines has undergone a major transformation under new management who joined in recent years. The turnaround from focusing on small scale underground mining and remnant ore, to discovery of two high grade open-cut opportunities at both Theta Hill and Vaalhoek, gives us a high level of confidence the next twelve months can deliver a re-rating for the stock, as gold production edges closer in 2020.

The medium-term outlook is very positive, with multiple mines, a large resource base, and strong potential project economics means the stock remains suitable for those seeking exposure to an undervalued gold development company which can become a producer inside 18 months, all going to plan.

The increase in JORC resources by more than 2.0Moz since our last report in 2017 gives us confidence that resources can continue to grow, with the planned focus on converting as much of the resource base into reserves as required for the development schedule we envisage. Having visited site several times, we consider the large tenement holding to be underexplored, and expect ongoing exploration to continue to uncover new resources over time.

With supportive new shareholders and a recent A\$8M funding agreement, the company appears well placed to deliver on objectives of re-commencing gold production in 2020, and growing production to mid-tier producer status in coming years.

Figure 1) Regional location of gold district controlled by TGM



Source: TGM, 2019

Figure 2) Photo of Theta Hill in relation to the exiting CIL plant at Pilgrim's Rest



Source: TGM, 2018

Theta Open Cut Project

Results of a Feasibility Study into open cut mining at Theta Hill and Columbia Hill were released to the ASX on 16 May 2019 (Theta Project) indicating a viable project, subject to further refinement (standard feasibility study variables of $\pm 15\%$ as per JORC, 2012).

The resource at Theta Hill is 10.1Mt@2.71g/t Au for 870koz (41% Indicated). The current reserve is 2.31Mt@2.76g/t Au for 205koz from both Theta Hill and Columbia Hill area, to be extracted at a rate up to 500ktpa over a period of 5.0 years.

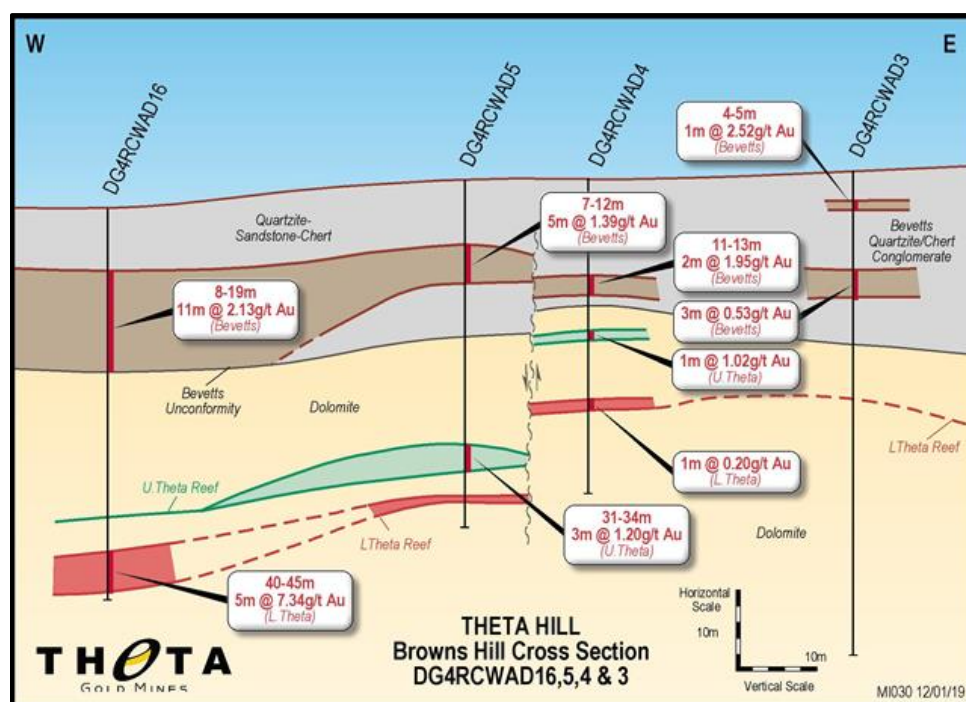
Peak cash drawdown was estimated at US\$29M, including US\$25.5M for refurbishment of the TGME CIL plant, and US\$3.5M for mine works and related infrastructure (US\$34.3M total capex).

Operating costs were estimated at US\$54.43/t, with a forecast C1 cash cost of US\$717/oz and AISC of US\$764/oz including royalties. A post-tax NPV (5%, US\$1258/oz) of US\$49.6M was estimated in the Feasibility with US\$65.7M in free cashflow LOM.

There is ample scope to increase the reserve size over time, with only 17% of open-cut resources included in the reserves. In particular we see good potential to increase the size of the reserves in the Theta Hill area (with only 44koz currently included in the reserves). Engineering design for upgrade of the CIL Plant is underway ahead of contract award.

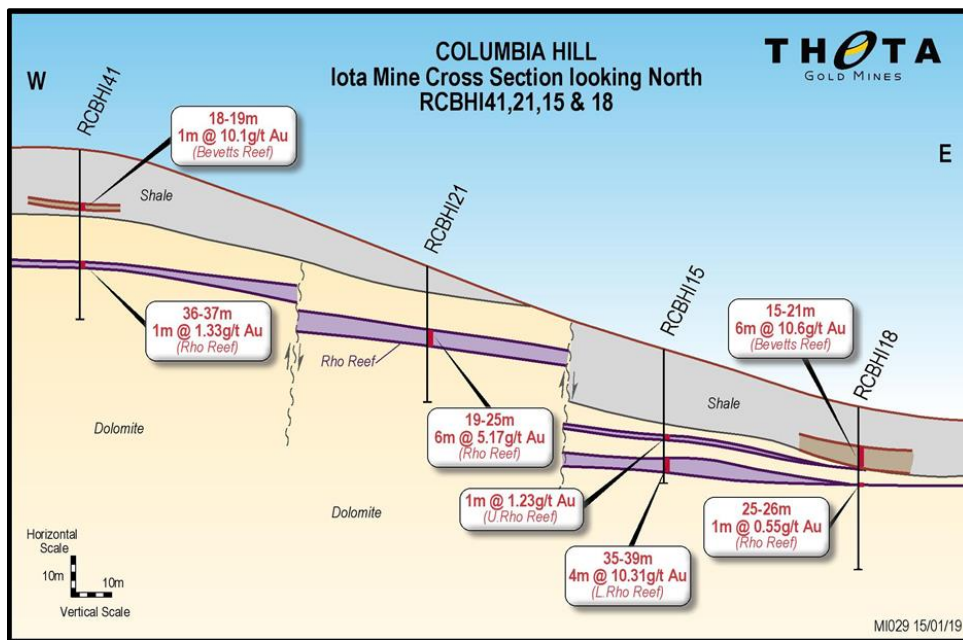
Examples of the interpreted geology of the Theta/Columbia Hill prospects are shown in Figure's 3 and 4.

Figure 3) Typical cross-section showing complex reef geology at Theta Hill



Source: TGM 2018

Figure 4) Typical cross-section at Columbia Hill



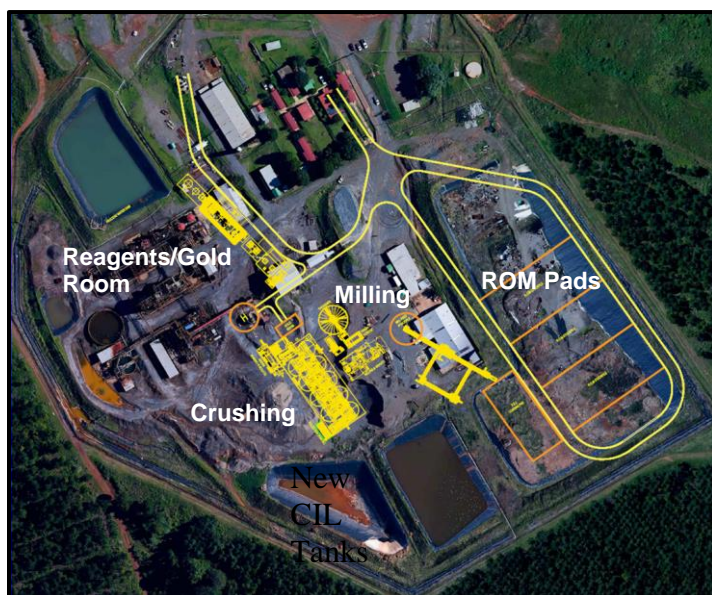
Source: TGM 2018

The Feasibility Study estimated US\$25.5M to upgrade the plant, which is more than 30 years old. Earlier plans to refurbish a large portion of the plant have been replaced with mostly new equipment, to reduce risk and improve reliability.

The mine method planned at Theta Hill and surrounds involves mostly in-pit waste emplacement and strip-style mining of the gold-bearing seams using standard mining equipment, including dozers and rock-breakers, with minimal drill and blast expected due to the highly broken and fractured ground. This method of mining is low cost, estimated at US\$1.50/t or so.

Similar mining methods (known as strip mining or 'modified terrace' mining) are used elsewhere in both hard and soft-rock mines globally.

Figure 5) Existing and proposed plant layout at TGME, Pilgrim's Rest



Source: TGM 2018

Vaalhoek Open Cut Project

The Vaalhoek deposit is located approximately 30km north of the TGME processing plant. Prior underground mining was carried out between 1910 and 1956, with 1.3Mt extracted at an estimated head grade of 11.7g/t and production of 473koz.

In 2018 a new JORC resource of 3.3Mt@7.46g/t Au for 780koz of contained gold (Indicated and Inferred) was announced, including 0.62Mt@16.9 g/t Au for 335koz open-cut (82% Inferred, 18% Indicated). This was recently upgraded to 3.77Mt @ 7.08g/t Au for 829koz of contained gold (Indicated and Inferred) with no change to the open-cut resource.

The deposit consists of a flat-lying narrow reef (<1m average thickness) at a relatively shallow depth.

A limited amount of internal scoping work has been carried out by TGM in recent years, with preliminary whittle pit designs done across the two potential open-cuts (Figure 6). We envisage an open-pit mine at a rate of 250ktpa ore mined, to produce on average 60kozpa over a 6 year mine life. There maybe scope for this mining rate to be increased.

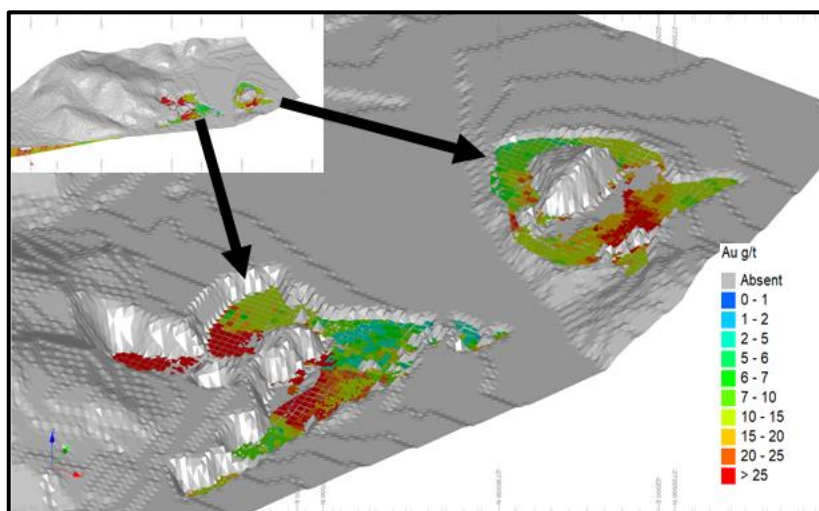
Drilling is planned to upgrade the JORC resource category to predominantly Indicated status. We have assumed upgrading the open-cut to reserves will be a priority for TGM in the next twelve months, with potential for production by 2022 under our assumptions.

With the resource grade of approximately 17g/t Au across an average reef width of 67cm, it appears there maybe potential for a higher grade than the 8g/t we have allowed for in our concept model. This would imply mining around 1.3m, leaving some scope for improvement closer to say the 1m bench height proposed at Theta Hill.

This would mean potential for >60kozpa production from Vaalhoek however at this stage without additional Indicated resources and more detailed mine plans, simplistic assumptions and a more conservative approach to expectations are warranted.

Our NPV applying an 8% discount rate is US\$112M (at US\$1350/oz), assuming production of 350koz from open-cut at 8g/t Au head grade. Our current value for Vaalhoek is US\$28M, taking only 25% of this conceptual NPV due to the predominance of Inferred resources and absence of formal, published mining studies.

Figure 6) Open-cut pit shells at Vaalhoek



Source: TGM 2018

Rietfontein Project

Following release of the Rietfontein scoping study in March 2017 (refer to ASX release dated 16 May 2017) further development was put on hold due to a number of factors including the relatively expensive cost of the surface drilling to achieve reserve status and the need for a long period of dewatering to access underground workings for rehabilitation/bulk metallurgical sampling. In addition, the emerging discovery of high priority open-cut targets in the vicinity of Theta Hill saw a change in corporate priority.

The Theta Hill open-cut mine which is to be developed as a priority is approximately half the capital, and half the development timeframe that was originally envisaged for Rietfontein.

The JORC (2012) resource was later reduced by 13.8% to 780koz (from 905koz) and the grade lowered to 8.42g/t Au from 11.0g/t Au (**2.88Mt@8.42g/t Au for 780koz, 31% Indicated, 69% Inferred**). This was primarily due to adoption of more conservative resource and dilution factors.

The original plan in 2017 was to complete over 30,000m of drilling from surface, however this was not considered cost effective at the time. A better solution may be to drill from underground. Parts of the resource show higher grades (15-20g/t in places) which may represent good targets for early drilling towards resource upgrades in the future.

The Rietfontein ore is mapped for over 3km (Figure 7) and we can see scope for further expansion of the resource/reserve base. Open-cut is also a potential in places.

We have assumed a reserve of 687koz (2.63Mt@8.1g/t Au) as we have a high degree of confidence having reviewed data and visited the site, that the resource is conservative and can be expanded.

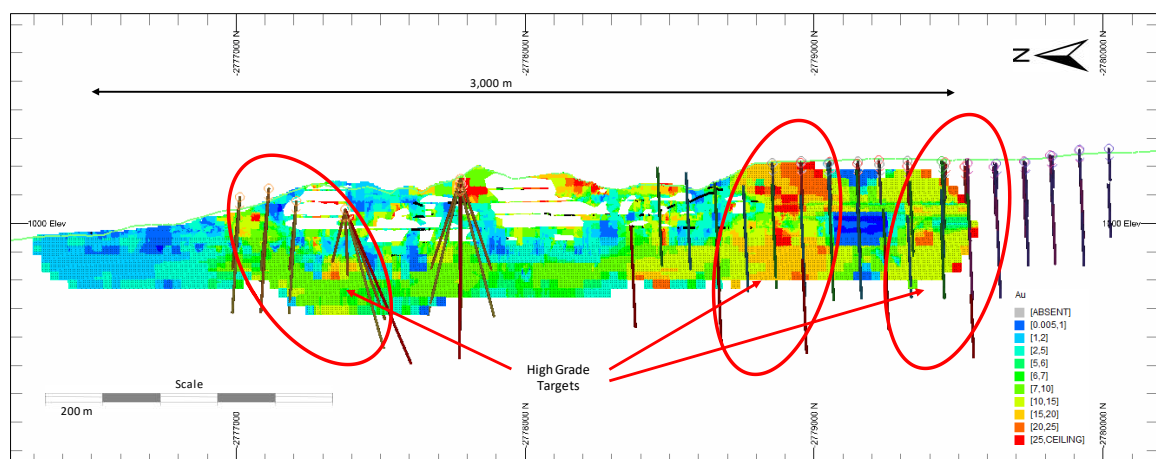
It remains open at depth across most of the 3km strike, and open in other areas also, including nearer to surface.

Expansion of the production rate to 250-300ktpa was also flagged in the Scoping Study as having potential through:

- ◆ Development of multiple underground access points. There have been at least 3 historic points identified, with 1 main refurbished adit.
- ◆ Addition of open-cut material, based on our review of data and site visit we see this as possible

Our NPV applying an 8% discount rate is US\$122M (at US\$1350/oz), assuming production of 625koz from underground at 8.1g/t Au head grade (vs resource grade of 8.42g/t). Our current risk-adjusted value is US\$42.6M (35% of NPV) and we imply further resource growth to over 1Moz in coming years.

Figure 7) 2017 drilling plan at Rietfontein showing strike length and higher grade areas of focus (10-20g/t Au)



Source: TGM/Minxcon 2017

Beta Project

The Beta mine is situated in close proximity to the TGME processing plant (2.5km by road) and is connected to water and electricity.

The JORC resource was upgraded by 42% in March 2017 following re-evaluation of old drilling data. In summary the current resource is:

- ◆ **4.72Mt@6.61g/t Au for 1.03Moz** (2.15Mt@6.96g/t Au for 480.7koz Indicated, 2.57Mt@6.32g/t Au for 522koz Inferred)

A scoping study was released on 16 May 2017, presented in combination with the refined Rietfontein study, which demonstrated production potential for up to 100kozpa from both mines.

A total of 1.87Mt@6.15g/t Au (369koz) was scheduled for milling at 240ktpa at Beta with 79.6% recovery resulting in production of 284koz over the 9 year mine life (average of 36.5kozpa). A resource grade plan is shown in Figure 8, with higher grade areas in red/pink.

Cash operating cost of US\$97/t (C1 US\$643/oz) was estimated with peak capital of US\$31M including an allowance for plant capital (US\$15M). The mining method chosen was handheld air-leg mining of the narrow (90cm) sub-horizontal reef, with under-reef development to allow truck access for ore haulage.

Key differences with our model and the earlier Beta scoping study is that we assume high recovery (92% vs 80%) due to installation of a BIOX[®] facility at TGME to coincide with Vaalhoek open-cut mine & Beta development.

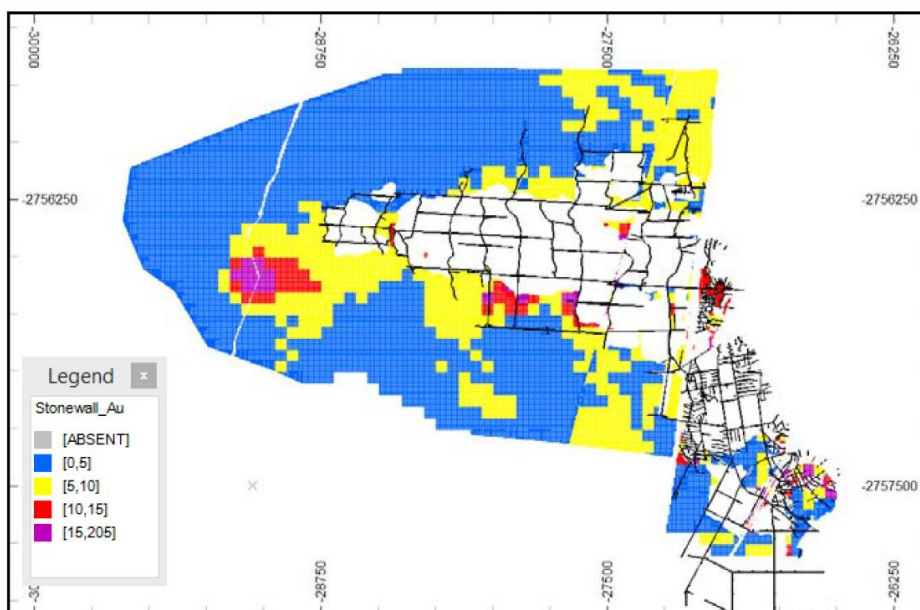
The US\$15M in additional plant capital has been included in the Vaalhoek capex for our model, though we acknowledge testwork has not yet been undertaken to determine metallurgy across the Vaalhoek resource (preliminary sampling in 2018 showed oxidised material with high recoveries in underground workings).

Should Vaalhoek not require BIOX[®] then we would need to reassess metallurgy of Beta Mine and the priority for development against other targets which may not require this plant upgrade. Beta requires a gold price >US\$1200/oz, in our assessment, and a focus on a low-capital development.

We assume a 40kozpa mine is possible, funded from cashflow, should the installation of a BIOX[®] facility by 2023, based on the assume benefit from other mines in the portfolio.

Our NPV applying an 8% discount rate is US\$57M (at US\$1350/oz), assuming production of 297koz from underground at 6.0g/t Au head grade (vs resource grade of 6.61g/t). Our current risk-adjusted valuation is US\$20M (35% of NPV).

Figure 8) Beta grade model vs channel width



Source: TGM 2017

Valuation & Peer Metrics

Our assessed NAV for TGM is A\$0.47/share on a diluted basis (refer to valuation table, following). This is based on a combination of our risk-adjusted DCF for a total of 4 gold mines to be constructed over the next 3 to 4 years and our market-based assessment.

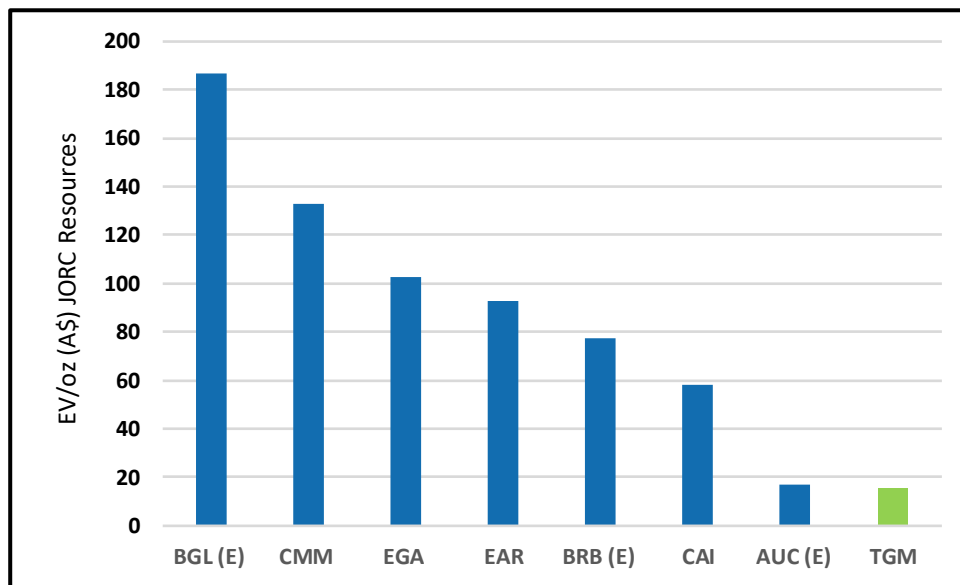
We adopt 25% to 50% of assessed NPV due to risks associated with development timing, reserve grade, general mining factors along with potential for delays to funding and permits. In addition to this, allowance for residual resource value and loan/tax benefits, offset by some liabilities, are applied taking the valuation to A\$200M. We note although TGM has 74% equity in the projects, with loans and other tax benefits, the NPV of the equity ownership is significantly higher.

We have also considered peer analysis, of gold companies in Australia and Africa with pre-development (PFS) projects, or pre-construction (post DFS). Despite the wide range of peer valuations, the average of A\$47/oz JORC resources for African pre-development gold projects on the ASX implies TGM at A\$11/oz approximately, is undervalued (Figures 9,10). Coincidentally the peer analysis valuation method results in a similar valuation to the DCF method, as below:

	Un-risked Valuation	Risk-adjusted
DCF Methodology (8% WACC)	A\$586M	A\$200M*
Peer Comps		A\$209M (A\$47/oz resources TGM 74%, peer average)
Summary (adopted) Valuation	US\$1350/oz ZAR 14/AUD 0.68	A\$200M A\$0.47/share diluted

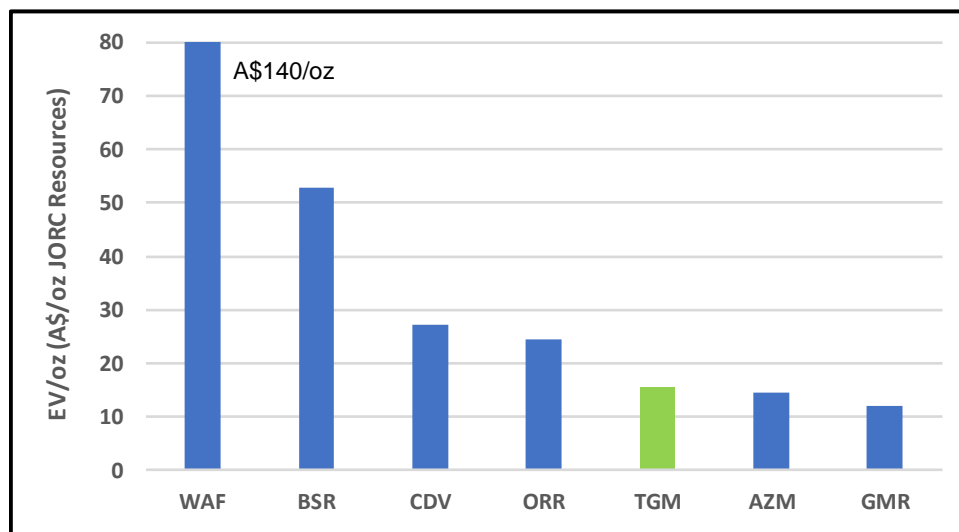
*Includes allowance for value of other resources, tax benefit, refer to table on p13

Figure 9) Australian gold developer peer comparison (ASX)



Source: RCR estimates, 2019. Closing prices on ASX as at 12/08/2019. Approximate figures only. Note BGL, BRB and AUC denoted with (E) which means still in exploration stage (not DFS or predevelopment).

Figure 10) African gold developer peer comparison (ASX)



Source: RCR estimates, 2019. Closing prices on ASX as at 12/08/2019. Approximate figures only.

TGM represents an attractive gold equity investment, based on the large resource base, near-term low capital development opportunity at Theta Hill, and optionality across numerous pre-development projects.

In our view TGM has good potential to be re-rated as the following milestones are achieved in the next twelve to eighteen months, including:

- ◆ Expansion of resources and reserves within the tenements, including reserve expansion at Theta Hill and surrounds
- ◆ Commencement of plant refurbishment, following approvals and funding (potentially 2H19)
- ◆ First gold production at TGME (potential for 2H20)

We consider TGM to represent an undervalued gold development company, with a strong portfolio of exploration and pre-development assets which can be progressed towards production in coming years (Figure 11). The company has potential to be the lowest cost gold producer in South Africa (Figure 12).

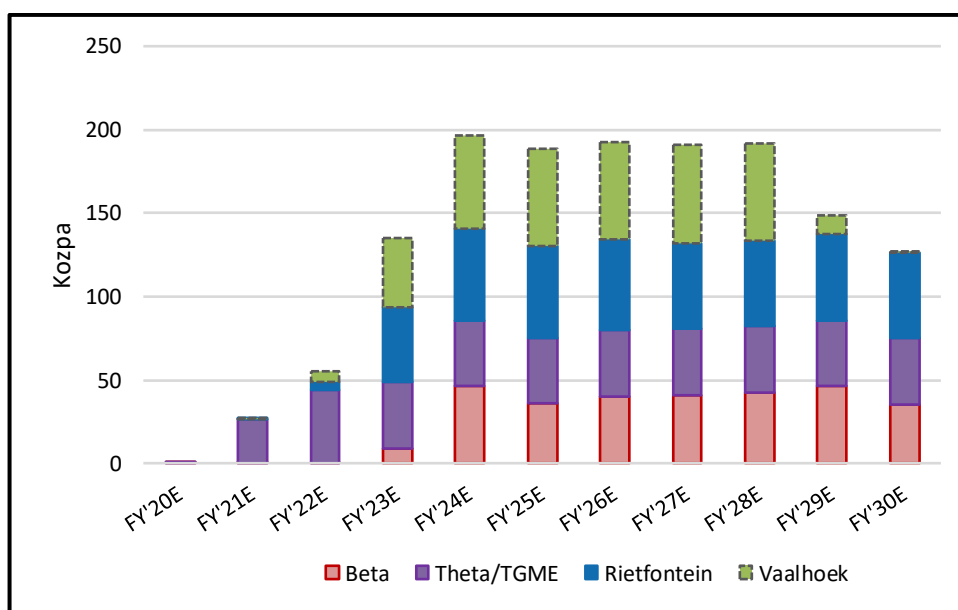
We believe the new focus on open-cut opportunities represents a much lower risk opportunity and consider the company is suitable for investment by those seeking exposure to African gold stocks on the ASX, particularly those with leverage to the gold price and upside on execution of production ambitions.

Asset valuation summary table: RCR key assumptions

	Theta/TGME	Vaalhoek	Rietfontein	Beta
Reserves (Mt)	6.28	1.50	2.63	1.68
Grade (g/t)	2.7	8.0	8.1	6.0
Koz (contained)	555	385	687	323
Mining Rate (ktpa)	500	250	220	240
Av Prod (kozpa)	40	55	53	43
Mine Life (years)	13	6	12	7
Total Au Recovered	505	350	625	297
C1 (US\$/oz)	671	431	429	577
AISC (US\$/oz)	749	515	638	778
US\$/t Milled	54	101	103	102
NPV (US\$M)	107	112	122	57
Risk Value (US\$M)	53.5	28.0	42.6	20.1
Peak Capex (US\$M)	29	20	26	20
IRR (%)	92%	212%	175%	101%
Dev. Ranking	1	2	3	4

Source: RCR estimates, 2019

Figure 11) Conceptual production growth from 4 mines



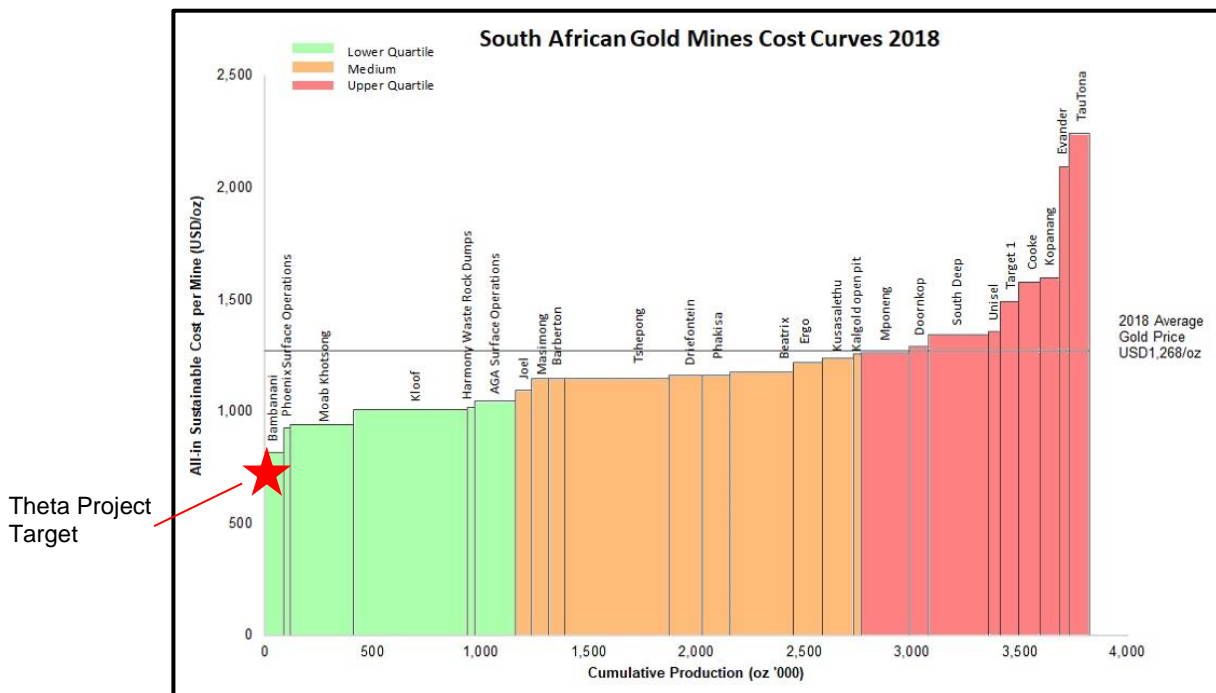
Source: RCR estimates, 2019.

Note: In the absence of published reserves for projects other than Theta/TGME, any assumptions shown here are conceptual only, and do not reflect any production targets or forecasts by TGM. Shown for the purposes of valuation assessment and asset development potential only. Resources scheduled refers to JORC (2012) resources applied to RCR concept DCF model, primarily Indicated resources with the exception of Vaalhoek where 82% of resources are Inferred, thus the risk discount applied is higher. The above analysis should not be used as the basis for any investment decision, and is subject to review and change, and cannot be relied upon as being a true and accurate representation of any production targets or forecasts endorsed by TGM.

THETA GOLD MINES LIMITED VALUATION

		Equity* (%)	Base DCF/Other Val'n (US\$M)	Asset 100% NPV (A\$M)	NPV Factor (%)	74% Adjusted Value (A\$M)	Sensitivity Adjusted (av 35% of NPV) Gold Price Sensitivity (US\$M)			
Assumptions										
LT Gold Price	: US\$/oz			1350		1350	1200	1400	1600	1800
LT Exchange Rate: ZAR/USD	:			14.00		14.00	16.00	14.00	12.00	10.00
Spot Exchange Rate: AUD/USD	:			0.68		0.68				
Projects										
Theta Hill Project	: NPV @8%	74%	107	157	50%	58	63	86	108	125
Rietfontein UG Project	: NPV @8%	74%	122	179	35%	46	52	67	82	95
Vaalhoek OC Project	: NPV @8%	74%	112	165	25%	30	35	44	52	60
Beta UG Project	: NPV @8%	74%	57	85	35%	22	23	32	41	49
Exploration/Other										
Additional Portfolio Resources	:	74%	29	40.8	100%	30	15	32	38	57
Equity/Tax Benefits (NPV est.)			15	20.8	100%	21	21	21	21	21
Sub-total Exploration							36	53	59	77
Assets										
+ Cash				2.0		2.0	2.0	2.0	2.0	2.0
+ Other				1		1	1	1	1	1
Liabilities										
- Debt				5		5	5	5	5	5
- Corporate				2		2	2	2	2	2
- Reclamation				3		3	3	3	3	3
TGM Net Assets							201	275	334	399
Issued Capital (M) - Aug'19A							408	408	408	408
Option Conversion Cash (US\$M)							4.3	4.3	4.3	4.3
TGM Net Asset Value per share : A\$/share							0.491	0.673	0.818	0.978
TGM Net Asset Value Diluted : A\$/share dil							0.466	0.635	0.769	0.918
* Actual equity 74%										
Operating Margin -TGME Concept total										
						LOM Av.	FY'20E	FY'21E	FY'22E	FY'23E
Production (100%): TGME						64	0	26	55	135
Cash Costs						523	0	595	527	501
Total Cash Costs (AISC)						661	0	705	673	636
Cash Margin P/L (need to add back initial capex)						689	0	645	677	714
Operating Cashflow (100%)- US\$Mpa						85	0	17	37	97

Figure 12) South Africa Cost Curve



Source: Minxcon/TGM ASX Release dated 16 May 2019

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