



tharisa

DISCOVER DEVELOP DELIVER **DIVERSIFY**

Investor Presentation

10 December 2020

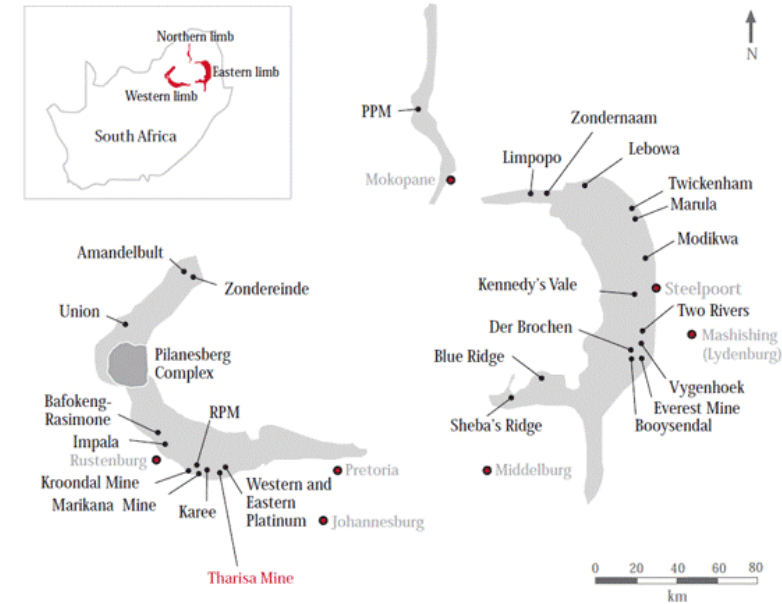
INVESTING IN SUSTAINABILITY

THS:LSE • THA:JSE

Enriching lives through innovating the resources company of the future

WHO WE ARE

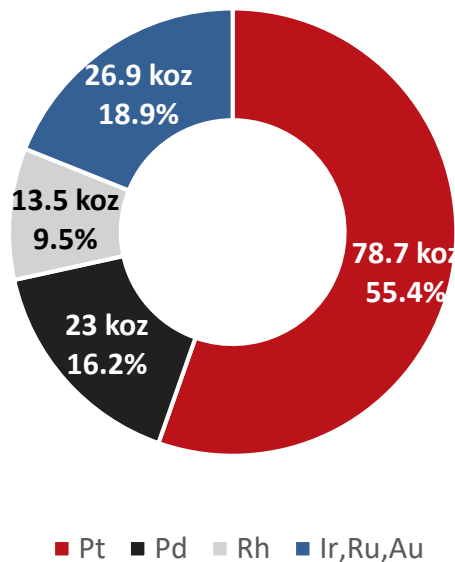
- Leading PGM and chrome co-producer
- Located in the heart of PGM and chrome country
- South Africa is host to over two-thirds of the world's PGMs & chrome
- Close to infrastructure, road, rail and power
- Tharisa a product of the new mining code - fully compliant
- Mechanised, open pit operation with a highly skilled workforce
- Drive to add value to the product we mine and capture more margin
- R&D team have developed exposure to the chemical chrome market, Vulcan fine chrome recovery technology, applications for chrome and new smelting opportunities in the PGM market



HOW IS THARISA POSITIONED

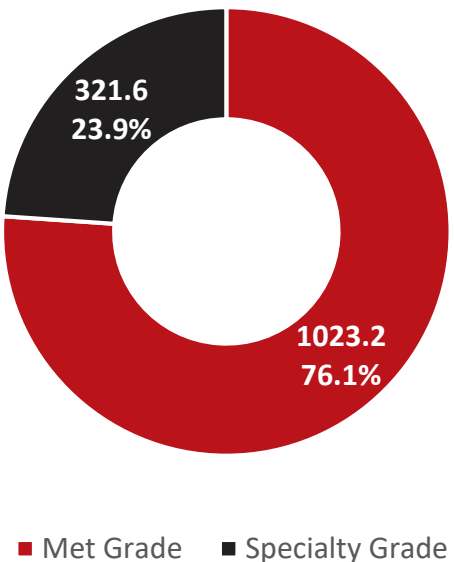
- Sixth largest listed South African PGM producer
 - 142 100 ounces per annum of PGM
- Tharisa position in terms of global demand
 - ~1.3% of platinum demand
 - ~0.3% of palladium demand
 - ~2% of rhodium demand

THARISA PRILL SPLIT



- Fourth largest South African Chrome Producer
 - 1 344 800 tonnes of chrome per annum
 - Provides China with 10% of all its chrome concentrate
 - One third specialty and foundry grade chrome
 - Largest global chemical grade chrome producer
 - Specialty chrome market trades at a premium

CHROME PRODUCTION FY2020 (kt)



LTFIR

0.09

Lost Time Injury Frequency Rate
30 September 2020

FATALITY FREE YEARS

5+

Achieved: 28 September 2020

ACHIEVEMENTS

4 million Fatality Free Shifts

Tharisa Minerals - achieved: 19 June 2020

365 days LTI free

Mining Production and Genesis Plant

5 years LTI free

Tharisa Laboratory and R&D

58

Engineering Learnerships

40

Interns and Graduates

209

Adult Education and Training
learners



A RESOURCES COMPANY FOR THE FUTURE

Committed to climate change interventions and the Paris Accord

- Developing a roadmap with our suppliers and stakeholders that will see a reduction in carbon emissions by 2030
- Solid governance structures – value of accountability and transparency
- Responsible corporate citizenship
- Subscribe to Equator Principles
- Upskilling and development of our employees – human resource development, learnerships, internships, bursaries, cutting edge training centre
- Committed to empowering and developing the communities close to our operations including the provision of community services
- Enterprise development and local economic development, environmental management and projects
- Adult Education and Training, community youth mathematics and science programmes
- The Tharisa Thusanang Wellness programme has been running since December 2011 - the programme provides support, counselling and training for employees, their families and the community about their lifestyle, wellbeing and work environments



REEF MINED

4.97 Mt

up 7.6%

(2019: 4.62 Mt)

PGM PRODUCTION

(5PGE+Au)

142.1 koz

up 1.7%

(2019: 139.7 koz)

CHROME CONCENTRATE PRODUCTION

1.34 Mt

up 3.9%

(2019: 1.29 Mt)

STRIPPING RATIO*

12.1 m³:m³

up 45.7%

(2019: 8.3 m³:m³)

PGM PRICE

US\$1 704/oz

up 57.6%

(2019: US\$1 081/oz)

CHROME CONCENTRATE PRICE

US\$140/t

down 13.6%

(2019: US\$162/t)

*LOM stripping ratio of 9.8 m³:m³

FY2020 FINANCIAL HIGHLIGHTS

AVERAGE EXCHANGE RATE ZAR:US\$
16.2
(2019: 14.4) 12.5%

REVENUE

US\$406.0 m

up 18.4%
(2019: US\$342.9 m)

OPERATING PROFIT

US\$87.6 m

up 262.0%
(2019: US\$24.2 m)

EBITDA

US\$113.4 m

up 119.8%
(2019: US\$51.6 m)

PROFIT BEFORE TAX

US\$75.8 m

up 576.8%
(2019: US\$11.2 m)

EPS

US 16.2 cents

up 305.0%
(2019: US 4.0 cents)

OPERATING CASH FLOW

US\$73.0 m

up 4.4%
(2019: US\$69.9 m)

PROPOSED DIVIDEND

US 3.5 cents

up 367.0%
(2019: US 0.75 cents)

RETURN ON INVESTED CAPITAL (ROIC)

18.8%

up 261.5%
(2019: 5.2%)

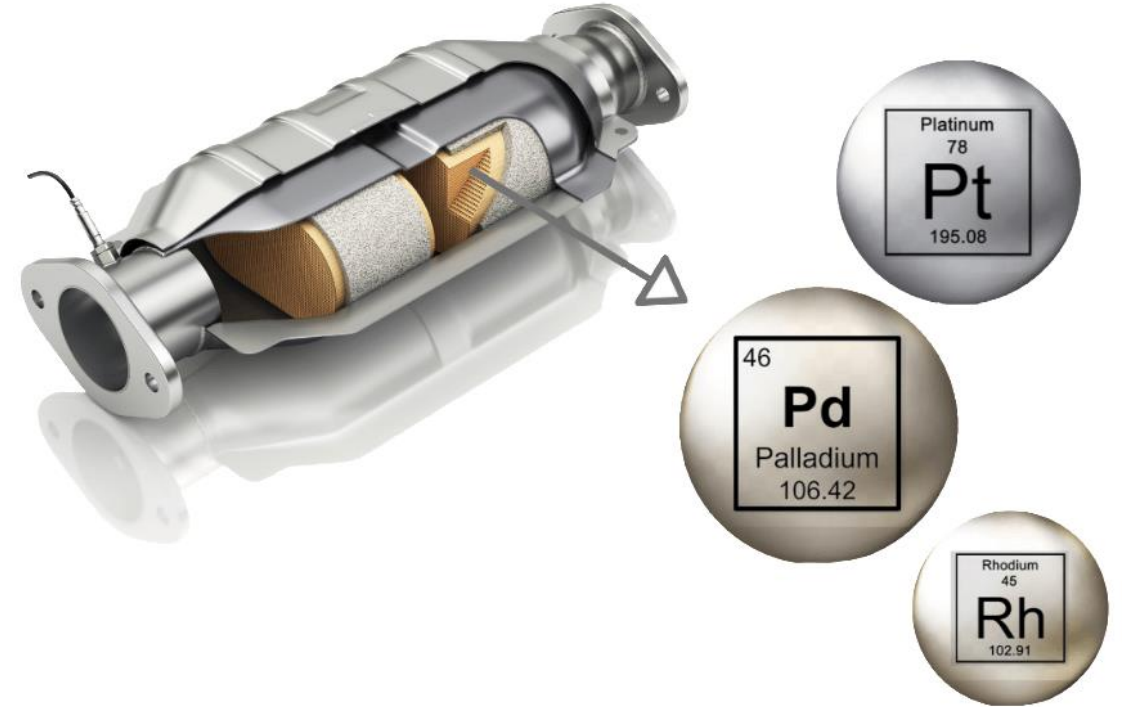
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OUR MARKETS

THARISA & THE PGM MARKET

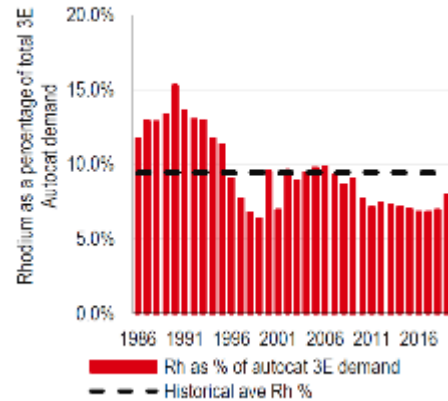
- Known for their purity, high melting points and unique catalytic properties
- Extremely resistant to corrosion
- With up to a quarter of all manufactured goods either containing PGMs or having had PGMs play a role in its production, PGMs are some of the most versatile and ubiquitous metals
- Used in a number of industrial applications including flat screens, medical equipment, hydrogen fuel cells and jewelry
- The versatility of PGMs continues to grow. For example, a US company, Lion Technologies, last month filed for a patent on a technology that if successful will see platinum replace the use of cobalt-nickel in electrical vehicle batteries



Source: pgmrecoverysystems.com/

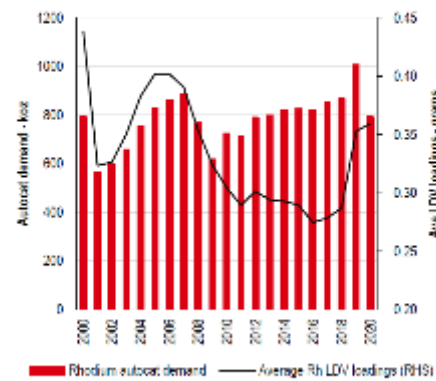
HEADWINDS FROM DEEP MINES TO MEET GROWING RHODIUM DEMAND

Rhodium auto-catalyst demand relative to platinum and palladium at 7.9% is below the historical 9.4%



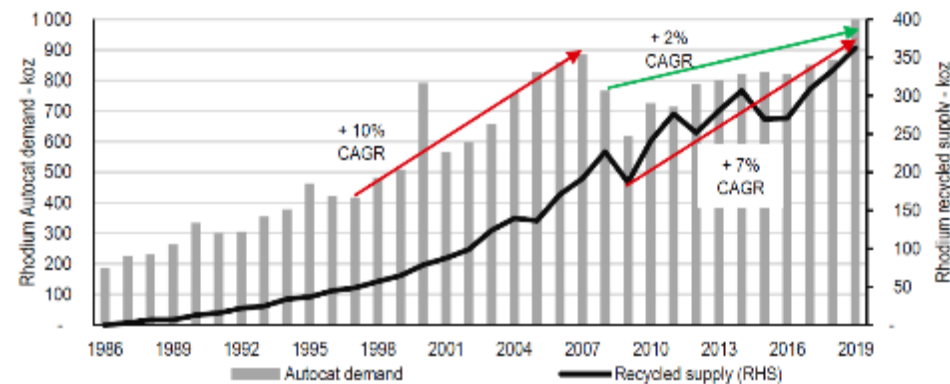
Source: Johnson Matthey, HSBC estimate (2020)

Average LDV rhodium loadings at 0.36 g/vehicle are below 2004-08 average of 0.39 grams despite tighter emissions



Source: Johnson Matthey, IHS Merit, HSBC estimate (2020)

Slower growth in rhodium loadings since 2008 is likely to lead to slower growth in recycled supply over the next 6 years



Source: Johnson Matthey

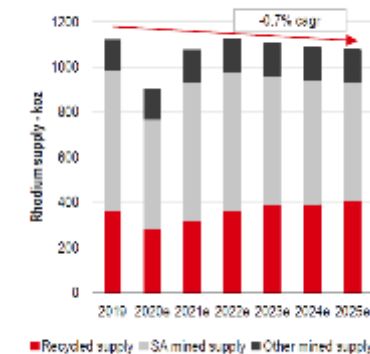
Source: HSBC, JM

PRIMARY DEMAND OUTSTRIPPED BY PRIMARY SUPPLY

Supply '000 oz	2017	2018	2019
South Africa	611	618	624
Russia	78	69	68
Others	70	70	65
Total primary supply	759	757	757

Gross demand '000 oz	2017	2018	2019
Autocatalyst	834	883	1 008
Other	207	170	137
Total gross demand	1 041	1 053	1 145
Recycling	(310)	(335)	(363)
Total net demand	731	718	782
Movements in stocks	28	39	(25)

Overall rhodium supply is expected to decline 4% or -0.7% CAGR over the next 6 years



Source: HSBC estimate, Johnson Matthey

PALLADIUM AND PLATINUM OUTLOOK

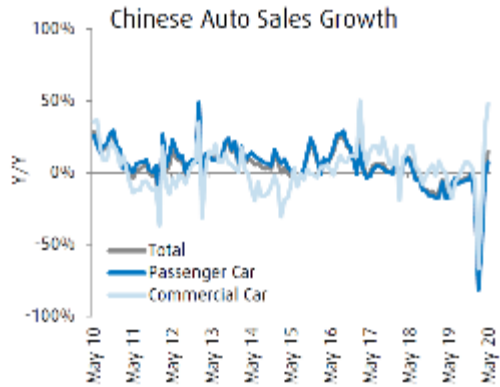
PALLADIUM

GROSS DEMAND (2019)



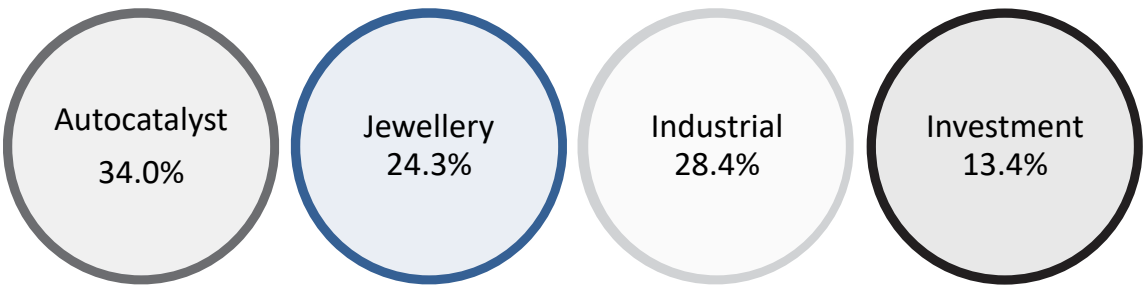
- Growing car sales in China
- Tighter emission standards
- Continuing shortages

Exhibit 1: Commercial Car Sales Growth Has Outstripped That of Passenger Cars...



PLATINUM

GROSS DEMAND (2019)



Source: BMO, Johnson Matthey, WPIC, SFA Oxford

THARISA & THE CHROME MARKET

- Chrome is what makes steel stainless
- South Africa hosts 72% of the global chrome reserves
- Tharisa supplies China with 10% -12% of all its chrome concentrate
- Chrome for Tharisa had a 25% margin in the FY2020 year, despite the low prices



Source: ICDA, Roskill, Minerals Council

CHROME – VITAL FOR STAINLESS STEEL

- Chrome is what makes *steel* stainless
- South Africa hosts 72% of the global chrome reserves
- Assuming a 5% CAGR in stainless steel:



Source: ICDA, Roskill, Minerals Council



Roskill ores and concentrates price forecast (US\$)

		Turkish lump	RSA primary	RSA UG2	Spec grade	Chem grade
2020	Q1	188	148	130	204	177
	Q2	197	163	153	206	181
	Q3	190	158	137	206	180
	Q4	186	155	133	197	178
2019	annual	211	173	156	330	213
2020	annual	190	156	138	203	179
2021	annual	199	163	147	212	184
2022	annual	206	172	155	223	194
2023	annual	207	175	158	228	198
2024	annual	214	182	164	233	205



FINANCIAL PERFORMANCE

SUSTAINABLE BUSINESS EVEN IN TIMES OF COVID-19

CO-PRODUCT AND EXCHANGE RATE BENEFITS



Multiple revenue streams
coupled with US\$
revenues and ZAR costs

HEALTHY CASH GENERATION



Exposure to the right
commodities coupled
with low operating costs
generates strong cash
flows

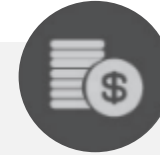
Consistent dividend payer

CONTINUED INVESTMENT



Investment in SHE,
people, infrastructure
and growth projects,
Vulcan, Karo

ROBUST BALANCE SHEET



Low gearing

LIQUIDITY MANAGEMENT



Proactive management of
the balance sheet during
COVID-19

Supported by strong
relationships with key
financiers, suppliers and
customers

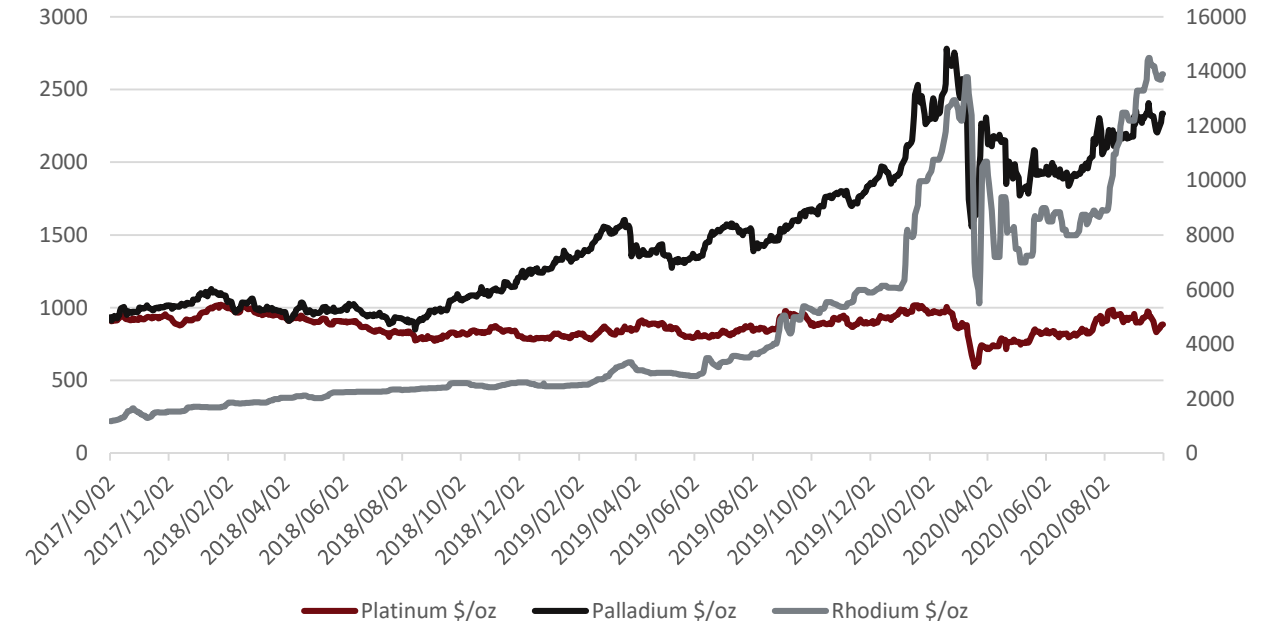


Our Motto

DISCOVER DEVELOP **DELIVER** DIVERSIFY

- **2019 – a year of investment**
 - In people
 - In equipment
 - In mine design
- **2020 – a year of delivery**
 - Exceptional safety performance in COVID-19 times
 - Improved performances on all mining metrics
 - PGM price kicker
 - Rhodium the standout performer

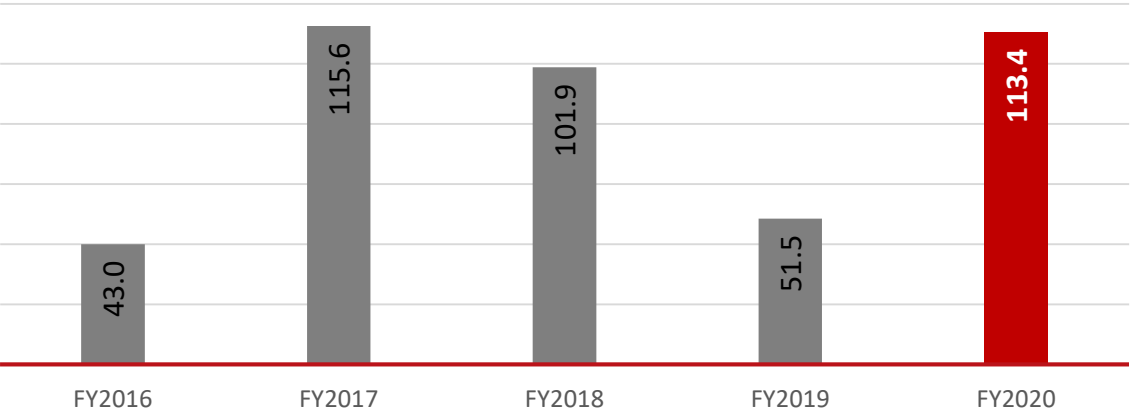
PGM PRICES
US\$/oz



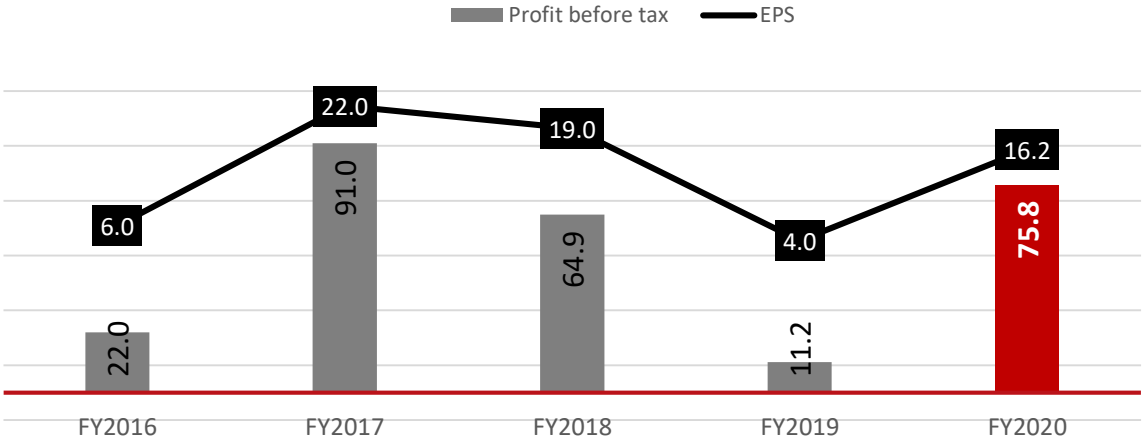
PROFITABILITY

METRIC	UNIT	FY2020	FY2019	% change
Revenue	US\$ m	406.0	342.9	18.4
EBITDA	US\$ m	113.4	51.6	119.8
Profit before tax	US\$ m	75.8	11.2	576.8
Earnings per share	US\$ cents	16.2	4.0	305.0
Dividend per share	US cents	3.50	0.75	367.0
Return on equity	%	12.3	3.3	272.7
Return on invested capital	%	18.8	5.2	261.5

EBITDA
(US\$ m)



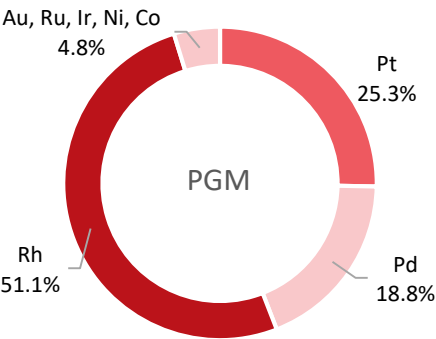
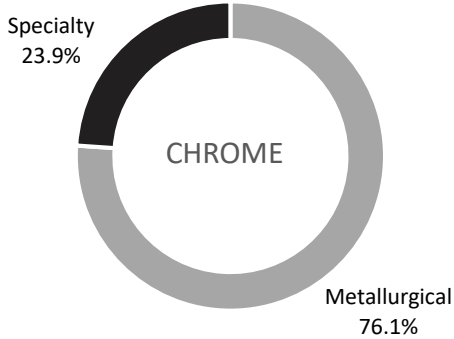
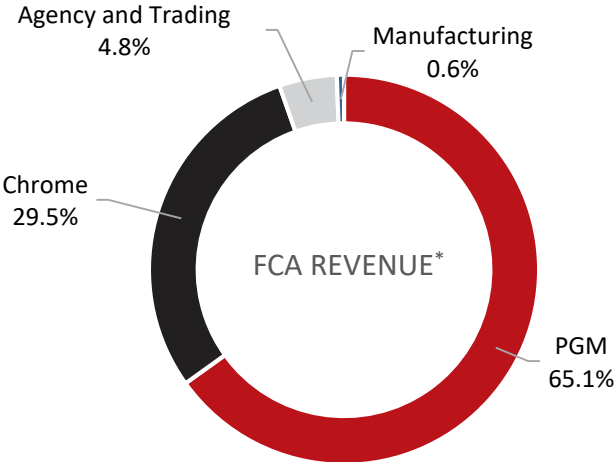
PROFIT BEFORE TAX AND EPS
(US\$ m) (US cents)



REVENUE AND GROSS PROFIT

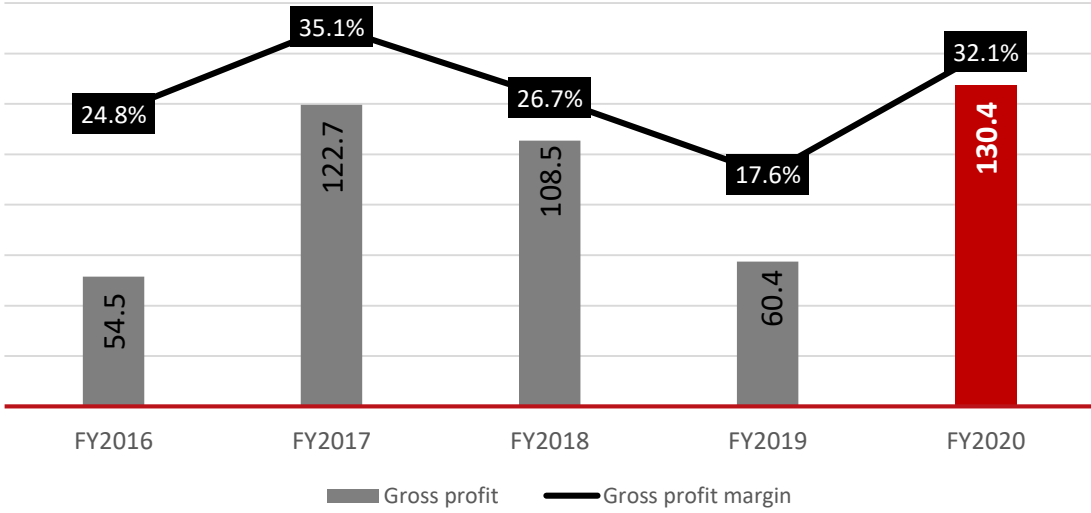
PGM GROSS PROFIT MARGIN
39.4%

CHROME GROSS PROFIT MARGIN
25.0%



- Gross profit margins improved to 32.1% (2019: 17.6%)
- The major factors contributing:
 - increased sale volumes
 - increase in the PGM basket price
 - benefits of the weaker ZAR:US\$ exchange rate

GROSS PROFIT
(US\$ m)



*Net of inland logistics and freight costs

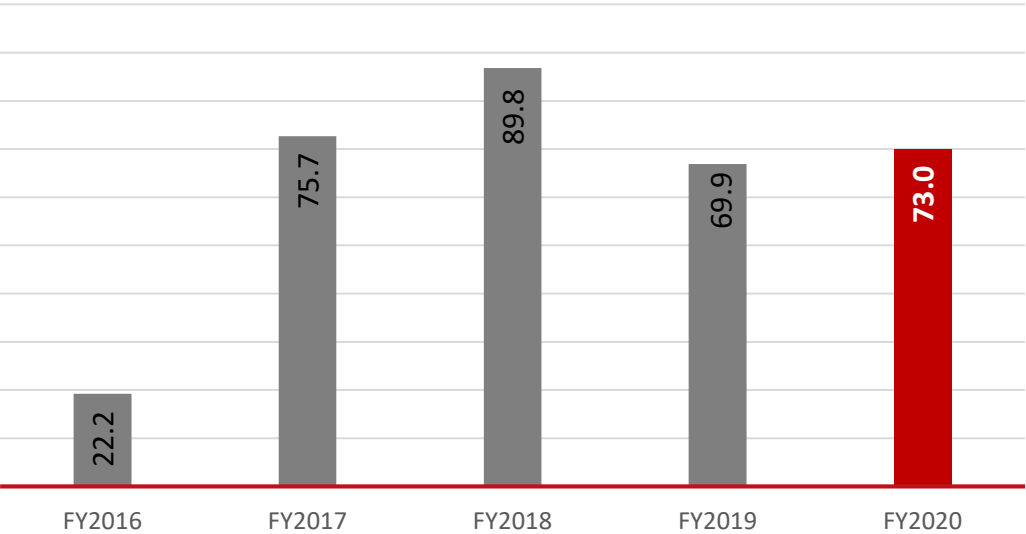
CO-PRODUCTION MODEL

CASH FLOW AND DIVIDENDS

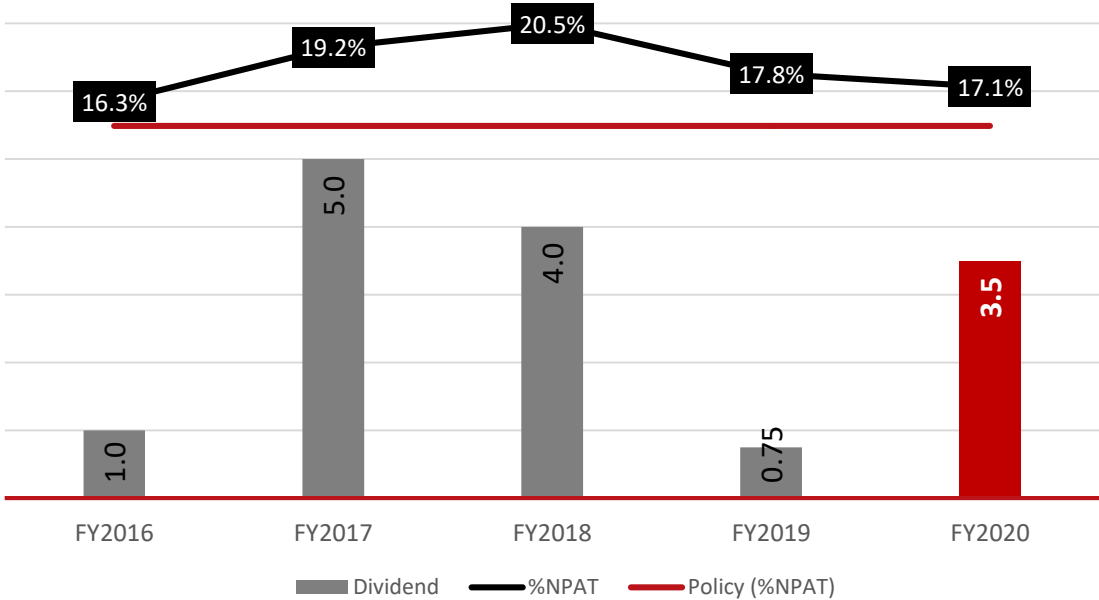
- Group generated operating cash flow of US\$73.0 m
 - Movement in trade and other receivables US\$50.6 m
- Capex of US\$70.6 m

- Committed to capital discipline
- Dividend of US 3.5 cents per share = 17.1% of NPAT
- Minimum of 15% of annual NPAT
- Capex commitments taken into considerations

NET CASH FLOW FROM OPERATING ACTIVITIES
(US\$ m)



CONSISTENT DIVIDEND PAYER
(US\$ m)



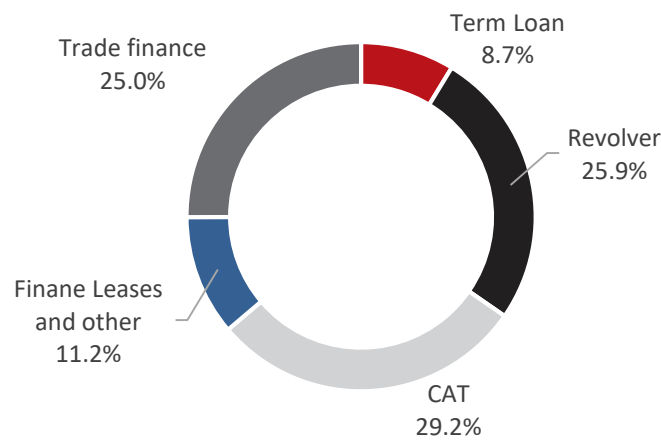
HEALTHY OPERATIONAL CASH GENERATION

BALANCE SHEET AND CAPEX

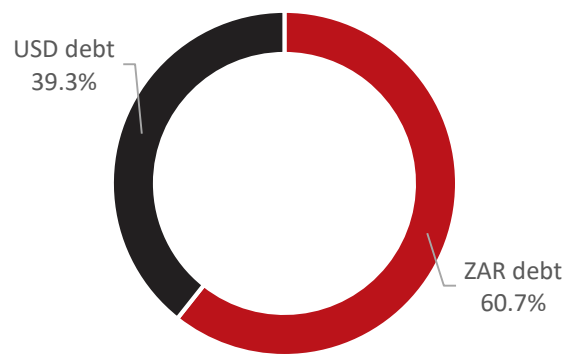
- Total debt of US\$70.4 m
 - Trade finance amounted to US\$17.3 m
 - Debt to total equity ratio of 21.9%
 - Cash and cash equivalent of US\$49.3 m
 - Net debt to total equity ratio of 6.6%
 - Focus on working capital management - current ratio at 1.8 times

- FY2020 Capex US\$70.6 m
 - US\$24.7 m mining fleet
 - US\$22.7 m deferred stripping
 - US\$11.4 m related to other mining assets
 - US\$11.8 m related to expansion capital
 - Depreciation charge of US\$27.9 m
- FY2021 Capex US\$54.4 m (excludes FY2021 deferred stripping)
 - Vulcan capex US\$46.4 m

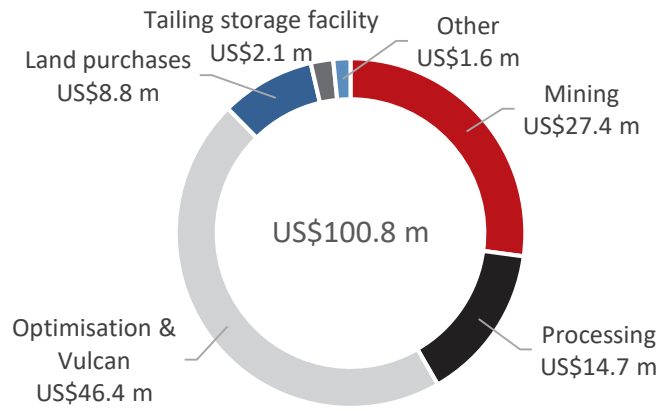
DEBT POSITION WITH TRADE FINANCE



DEBT CURRENCY SPLIT (EXCLUDING TRADE FINANCE)



FY2021 PLANNED CAPEX



CONTINUED SUSTAINABLE INVESTMENT

tharisa



OUTLOOK

COMMITMENT TO R&D AND INVESTMENT

- Since the initiation, Tharisa has been committed to the beneficiation of its mineral products as well as the development and deployment of innovative processing and technology
- The R&D department of Tharisa has been developing a number of different projects,
 - Specifically targeting PGM beneficiation, chrome beneficiation
 - Development of niche products
 - Entered the energy market through various initiatives.
- To date Tharisa has spent approximately US\$81 m on R&D projects
 - Including the commercialisation of these projects to operations and the current construction of the Vulcan Plant
- The Vulcan Process was conceptualised by the R&D department and is under construction
- Various areas of research include:
 - Original Tharisa Mine design including ferrochrome manufacturing capacity
 - The feasibility of ferrochrome smelting in China
 - Various PGM optimisation and beneficiation initiatives and studies
 - Development of niche chrome products and end uses
 - Energy related projects

US\$504 m

THARISA GROUP TOTAL INVESTMENT

US\$81 m

R&D AND COMMERCIALISATION SPEND



R&D TO COMMERCIALISATION

1MW SMELTER



Producing PGM alloy and to develop further downstream processes

PGM OPTIMISATION PROJECTS



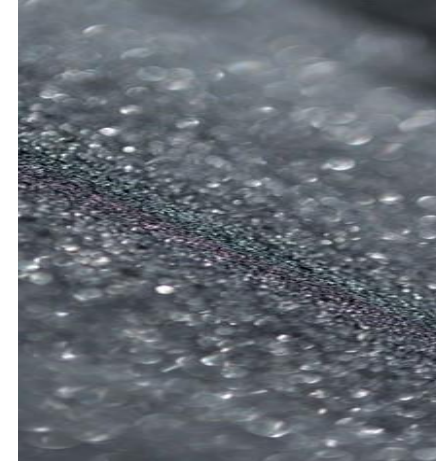
Successfully increasing the PGM recoveries at the Tharisa Minerals plants

CHALLENGER PLANT



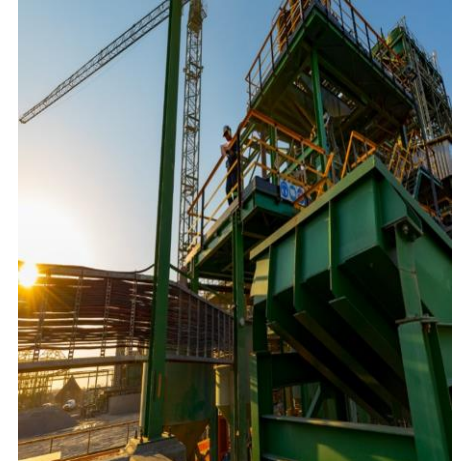
Production of higher value chemical and foundry grade chrome concentrates

FOURTH STAGE CRUSHING



Increased the capacity for production of specialty chrome products at the Genesis Plant

VULCAN PLANT

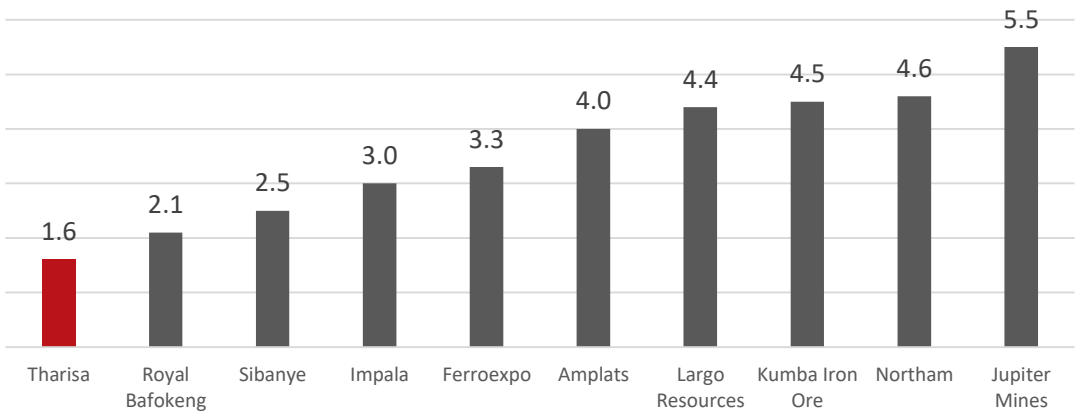


In house developed process for the recovery of fine chrome

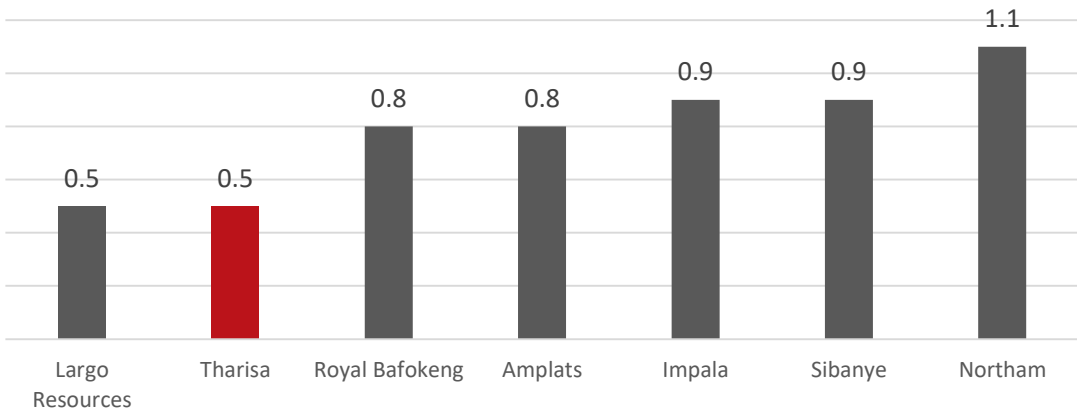
VALUE PROPOSITION

- Leading producer: excellent safety record and investment in asset sustainability
- Exposure to PGMs driven by high palladium and rhodium demand and growing stainless steel market
- Committed to strong returns to shareholders through capital discipline
- Healthy balance sheet supporting our expansion and strategic growth plans
- Invested management team has DISCOVERED, DEVELOPED and DELIVERED and now set to DIVERSIFY

EV/EBITDA (2021E)



P/NAV



Source: BMO

GUIDANCE FOR FY2021 OF 155 koz TO 165 koz OF PGMs (6E BASIS) AND 1.45 Mt TO 1.55 Mt OF CHROME CONCENTRATES

THARISA UNITE



SIX PILLAR GROWTH STRATEGY

- Expand and roll out our business sustainably
- Further optimise our existing operations
- Continue to invest in innovative thinking
- Become a global and diversified business
- Be the investment of choice in our chosen sector
- Responsibly enriching the lives of all of our stakeholders

 @tharisa_sa

#proudlytharisa



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CHROME TAX



- Anglo American Platinum, Assore, Bauba Resources, Implats, Northam Platinum, Sail, Sibanye-Stillwater, Siyanda Resources and Tharisa
- An independent Chrome Ore Producers Group representing primary and UG2 chrome ore producers
- Opposed to the chrome tax as this will not solve the fundamental challenge that the ferrochrome industry faces, namely escalating electricity prices
- The proposed chrome tax may lead to unintended consequences, including job losses and displacement of dominant South African supply
- Other interventions, which exclude a tax, and can assist the entire value chain
- Chrome SA is supportive of beneficiation and can assist in finding long-term solutions for all interested and affected parties

G: Many of the arguments in support of the proposed chrome ore export tax are either flawed or highly speculative

Logic of the tax: attempt to leverage global position of SA chrome ore exporters in order to raise the cost of Chinese ferrochrome and thereby increase the relative competitiveness of SA ferrochrome (See Appendix A for economic theories of export tax)

Outcome of the proposed tax critically depends on the complex chain of responses by other players in the global chrome value chain. Many of the extreme assumptions which underpin the proposed logic of the export tax are either highly uncertain or simply do not hold :

Assumption 1: SA chrome ore producers have sufficient market power to increase the chrome ore price without losing market share in the export market. Thus no harm to SA chrome ore miners is assumed.

Potential leakages:

- a) International chrome ore producers have excess capacity to displace material volumes of SA chrome ore
- b) Chinese ferrochrome producers have significant countervailing power.

Assumption 2: Increased chrome ore prices will reduce the relative competitiveness of Chinese ferrochrome producers and lead to a shift in Chinese stainless steel preferences in favour of SA chrome ore.

Potential leakages:

- Various responses by China are likely to dilute the impact of the export tax:
- a) State supported ferrochrome/stainless steel in China absorb additional cost to retain market share
 - b) Retaliatory trade policy aimed at SA

Assumption 3: The export tax will lead to a significant increase in the achievable revenue for SA ferrochrome producers – this will improve the sustainability of these operations.

Potential leakages:

- a) Only SA's exports to China and Indonesia can expect any form of benefit (i.e. only 48%-60%* of exports).
- b) Other international ferrochrome producers who are not reliant on SA chrome ore will provide a competitive constraint on prices in China/Indonesia.
- c) Rising electricity prices will erode any potential benefit in a couple of years

* 48% figure based on official SARS data – although ferrochrome sector suggest it may be closer to 60%

Source: Genesis Analytics