



# INTERIM RESULTS

MAY 2017

tharisa





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# INTRODUCTION TO THARISA

## UNIQUE APPROACH

- Co-producer of PGMs and chrome
  - Global top 5 producer of chrome concentrates

## LOW COST OPERATION

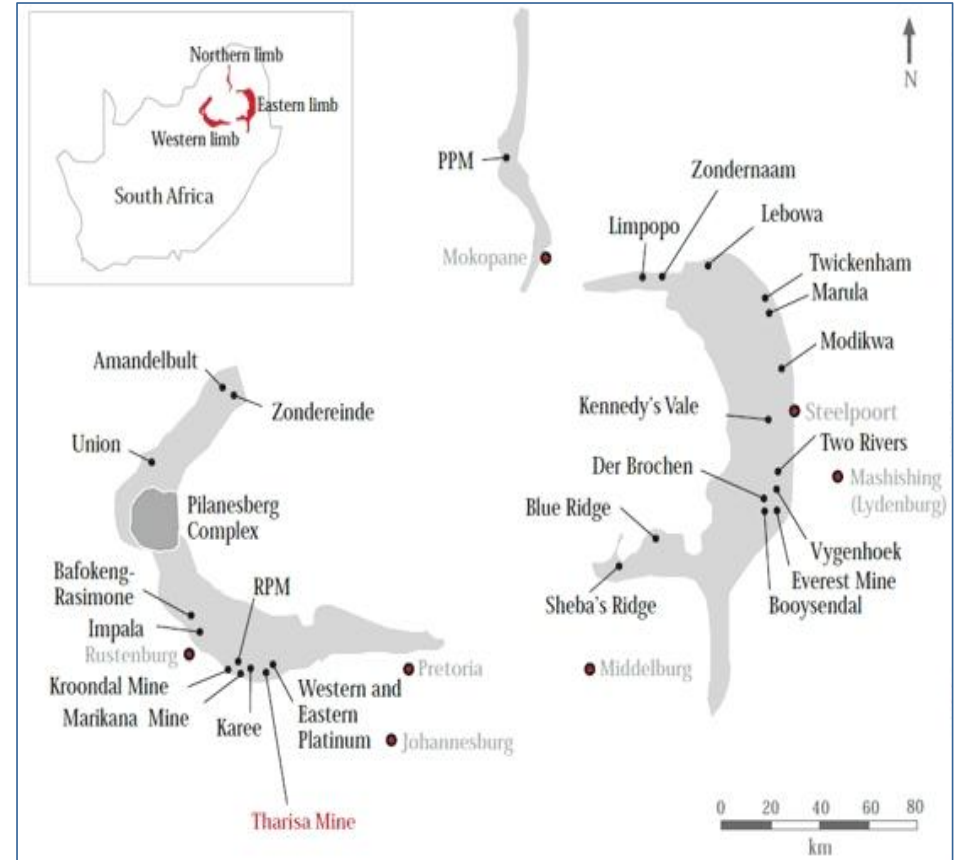
- Lowest cost quartile in the industry
  - Shallow, mechanised long life open pit

## HIGHLY CASH GENERATIVE

- Major mine development capital investment complete
- Annual dividend policy of 10% of NPAT

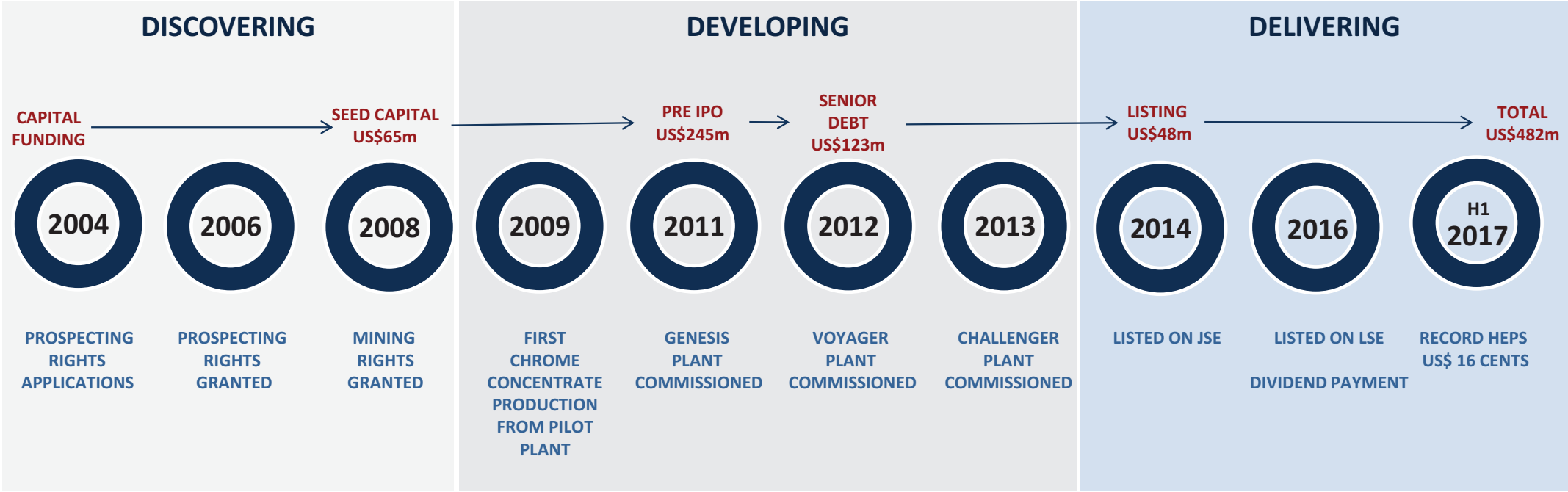
## GROWTH OPPORTUNITIES

- Organic growth – 18 years O/P LOM + 40 years U/G
- Innovative R&D and improved productivity through optimisation
- Insourcing of mining



THARISA DELIVERS VALUE TO ITS SHAREHOLDERS THROUGHOUT THE COMMODITY CYCLE

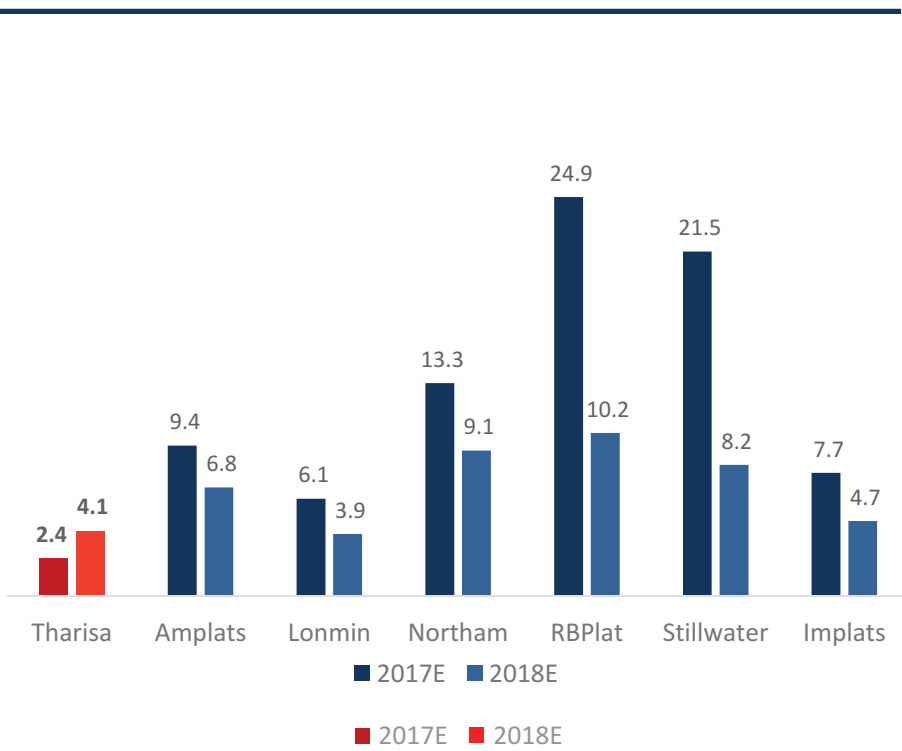
# THARISA'S JOURNEY



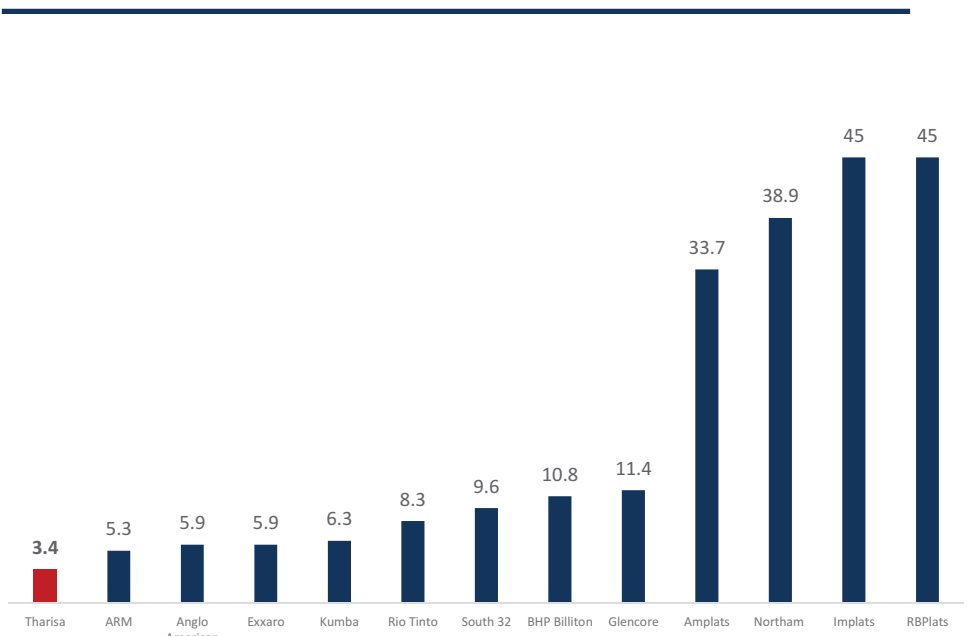
Mining 4.8 Mtpa  
 PGM concentrates of 147.4 kozpa  
 Chrome concentrates of 1.3 Mtpa

# INVESTMENT CASE

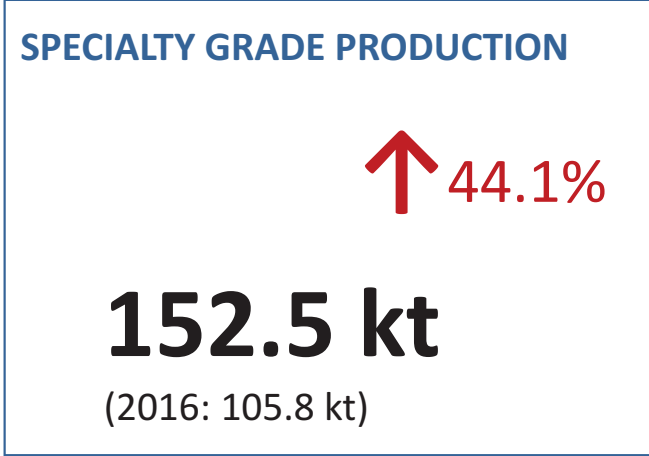
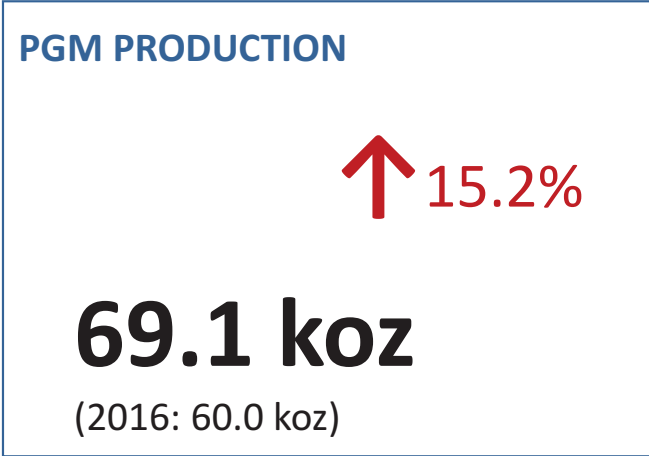
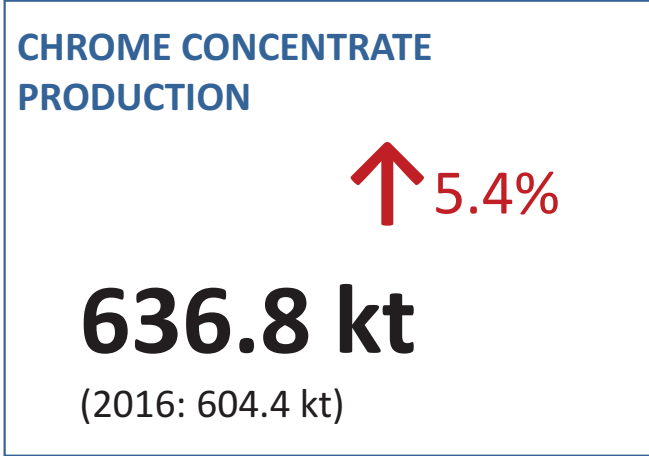
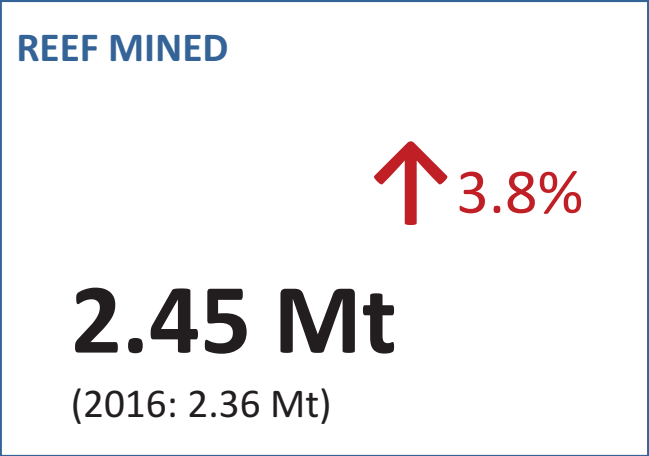
## EV/EBITDA



## PE AT CONSENSUS (CY2017E)



# OPERATIONAL HIGHLIGHTS

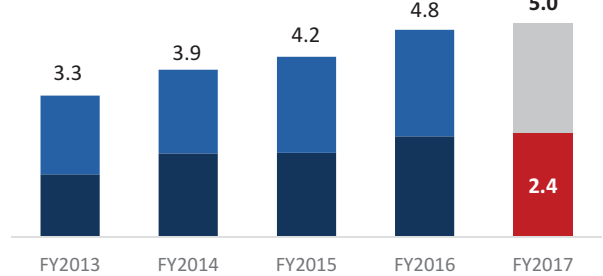


# IMPROVED PRODUCTIVITY

## REEF MINED

↑ 3.8%

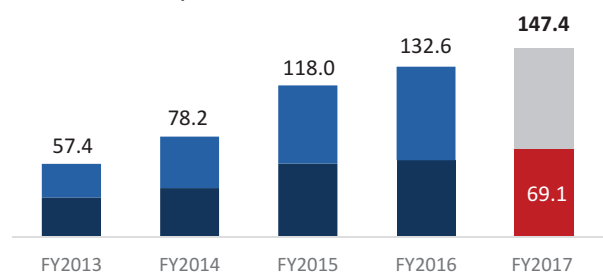
Mtpa



## PGM PRODUCTION

↑ 15.2%

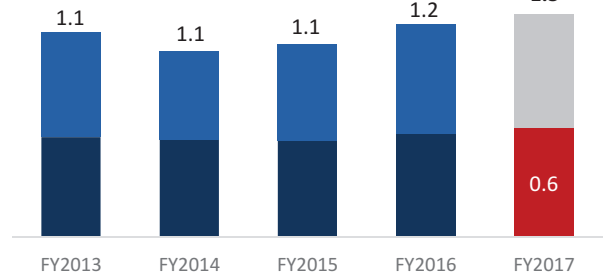
5PGE+Au kozpa



## CHROME PRODUCTION

↑ 5.4%

Mtpa





## —○ FINANCIAL REVIEW





# RESULTS HIGHLIGHTS

PGM BASKET PRICE  
US\$760/oz  
(2016: US\$686/oz) ↑ 10.8%

CHROME CONCENTRATE PRICE  
US\$278/t  
(2016: US\$106/t) ↑ 162.3%

REVENUE

↑ 103.6%

**US\$175.1m**  
(2016: US\$86.0m)

NET CASH GENERATED FROM OPERATIONS

↑ 142.9%

**US\$44.2m**  
(2016: US\$18.2m)

EBITDA

↑ 451.0%

**US\$81.0m**  
(2016: US\$14.7m)

HEPS

↑ 1 500.0%

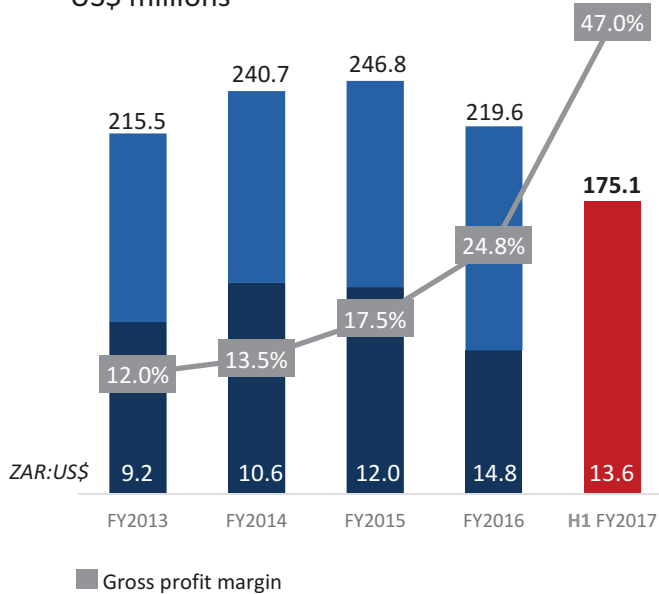
**US\$ 16 cents**  
(2016: US\$ 1 cent)

# STRONG FINANCIAL PERFORMANCE

## GROUP REVENUE

↑ 103.6%

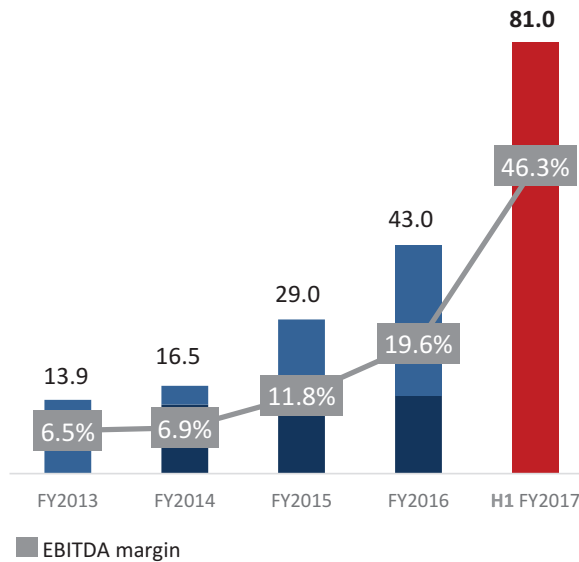
US\$ millions



## EBITDA

↑ 451.0%

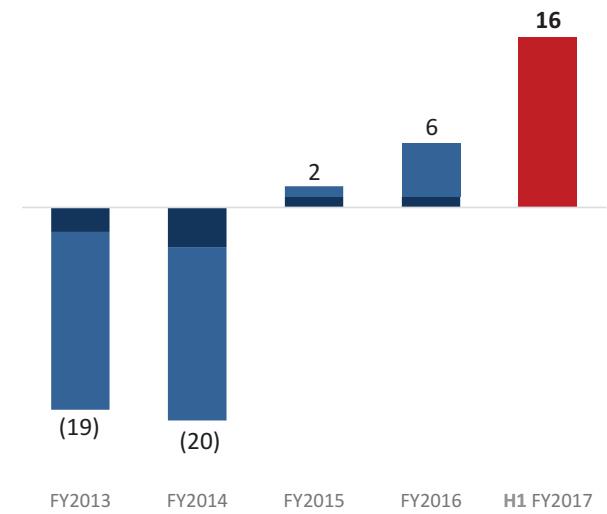
US\$ millions



## HEPS

↑ 1 500.0%

US\$ cents



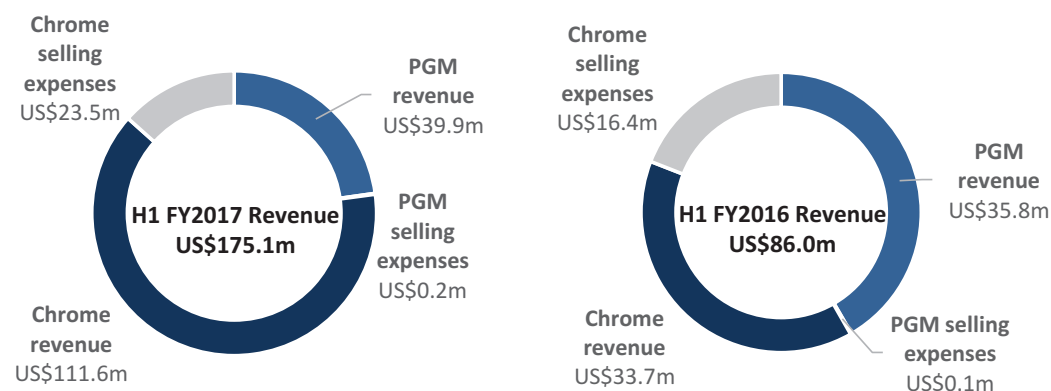
# SUMMARY OF RESULTS

## INCOME STATEMENT HIGHLIGHTS

US\$ millions	H1 FY2017	H1 FY2016	Change
Revenue	175.1	86.0	103.6%
Gross profit	82.4	21.1	290.5%
Gross profit margin	47.0%	24.6%	91.1%
Results from operating activities	69.9	10.6	559.4%
EBITDA	81.0	14.7	451.0%
EBITDA margin	46.3%	17.1%	170.6%
Net finance costs	1.6	6.1	(74.1%)
Profit before tax	68.3	4.5	1 417.8%
Tax	17.3	1.4	1 163.0%
Profit after tax	51.0	3.1	1 545.2%
Headline earnings per share (US\$ cents)	16	1	1 500.0%

## SEGMENTAL ANALYSIS

US\$ millions	PGMs		CHROME	
	H1 FY2017	H1 FY2016	H1 FY2017	H1 FY2016
Gross profit	19.0	12.1	63.4	9.0
Gross profit margin	44.5%	33.8%	47.8%	17.9%
Shared cost allocation	25%	50%	75%	50%
Sales volume	69.3 koz	59.1 koz	502.4 kt	481.7 kt
Average transport costs per tonne of chrome concentrate (CIF main ports China)			US\$50/t	US\$40/t





# INCREASING MARGINS

## PGM SHARED COSTS

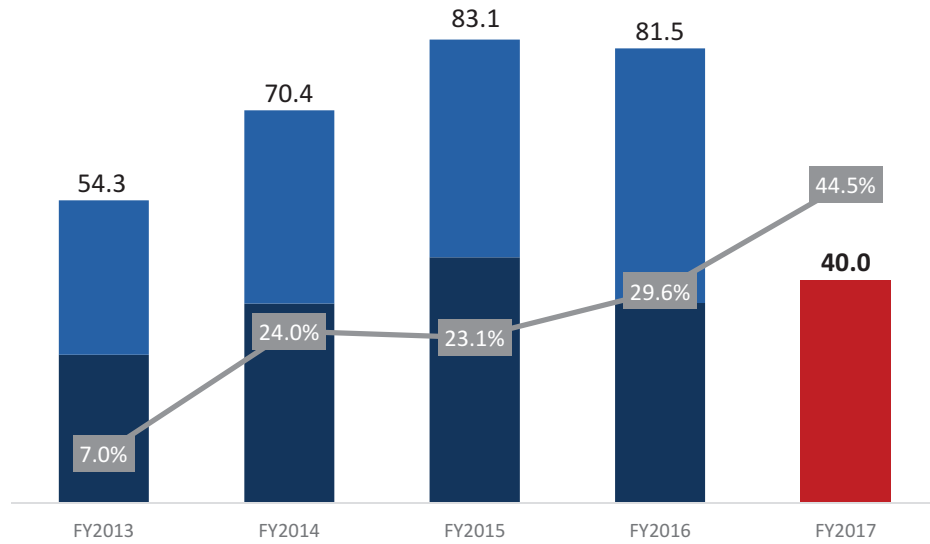
25%  
(2016: 50%)

## CHROME SHARED COSTS

75%  
(2016: 50%)

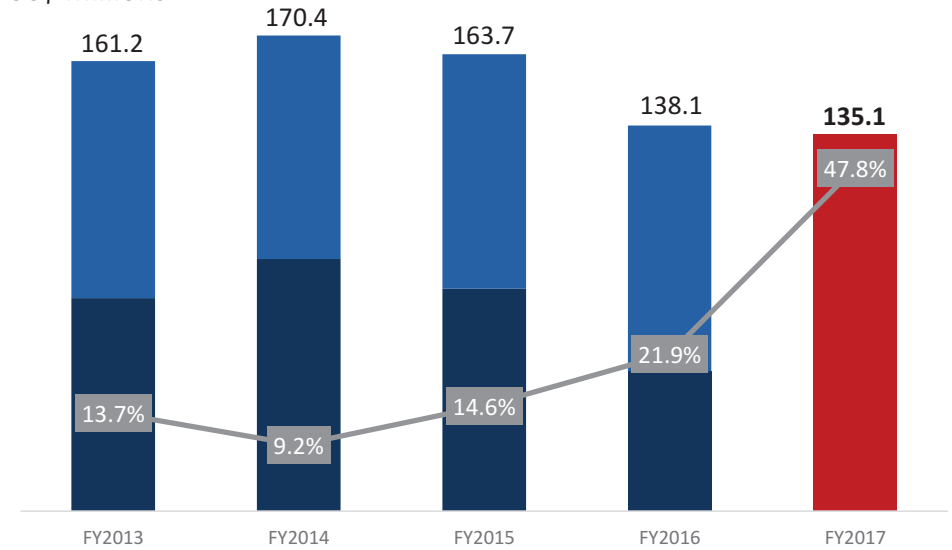
### PGM REVENUE AND GROSS PROFIT MARGIN

US\$ millions

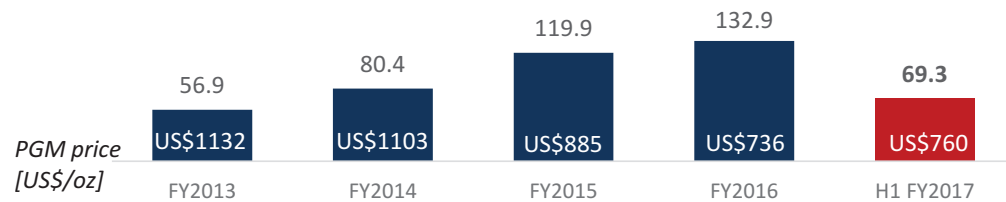


### CHROME REVENUE AND GROSS PROFIT MARGIN

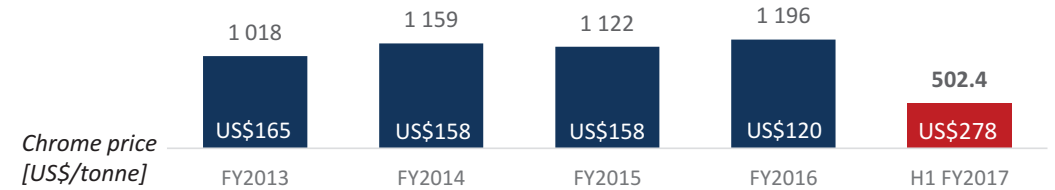
US\$ millions



### PGM SALES VOLUME [koz]



### CHROME CONCENTRATE SALES VOLUME [kt]



## CURRENT

US\$ millions	H1 FY2017	FY2016
<b>Total interest bearing debt</b>	<b>38.4</b>	67.1
Long term	10.5	24.0
Short term*	27.9	43.1
<b>Debt service reserve account</b>	<b>4.8</b>	9.8
<b>Pro forma interest bearing debt</b>	<b>33.6</b>	57.3
<b>Pro forma debt to total equity ratio</b>	<b>13.0%</b>	28.4%
<b>Cash and cash equivalents</b>	<b>26.6</b>	15.8
<b>Net debt</b>	<b>7.0</b>	41.4
<b>Net debt to total equity ratio</b>	<b>2.7%</b>	20.5%
<b>Net current assets</b>	<b>58.4</b>	0.5
<b>Return on equity</b>	<b>14.7%</b>	5.8%

## OWNER MINING TRANSITION

	US\$ millions
<b>Fleet purchase</b>	22.3
<b>Lease equipment (approximate capital portion)**</b>	6.3
	<hr/>
	28.6
<b>Less: provisions and offsets</b>	1.8
	<hr/>
<b>Net purchase price payable</b>	26.8
	<hr/>
<b>Pro forma debt to total equity if fully debt funded</b>	23.3%

\*\* Assuming leases on balance sheet

\* Includes certain amounts in accounts payable relating mainly to accrued dividends payable by a subsidiary

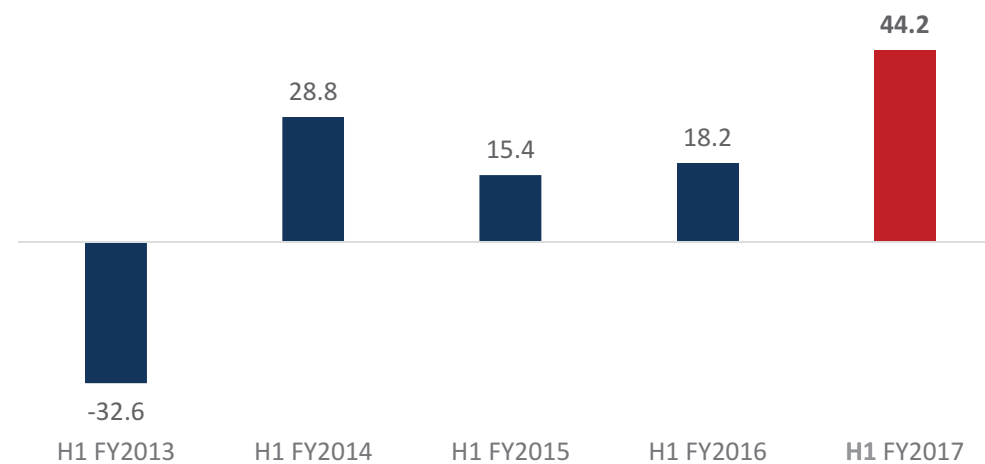
# STRONG CASH FLOW GENERATION

## SUMMARISED CASH FLOW STATEMENT

US\$ millions	H1 FY2017	H1 FY2016
Cash flow from operating activities	44.2	18.2
Investing cash flows	(8.8)	(6.6)
Financing cash flows	(24.9)	(23.6)
Net increase/(decrease) in cash	10.5	(12.0)
Cash at the end of the period	26.6	11.1
Free cash flow per share (US\$ cents)	14	5
Price/free cash flow per share	11.8	9.9
Depreciation	8.4	4.6

## OPERATIONALLY CASH GENERATIVE

US\$ millions





# COSTS IN THE LOWEST QUARTILE

## STRIPPING RATIO

8.4 m<sup>3</sup>:m<sup>3</sup>  
(2016: 6.8 m<sup>3</sup>:m<sup>3</sup>)

## AVERAGE EXCHANGE RATE

ZAR:US\$  
13.6  
(2016: 15.0)

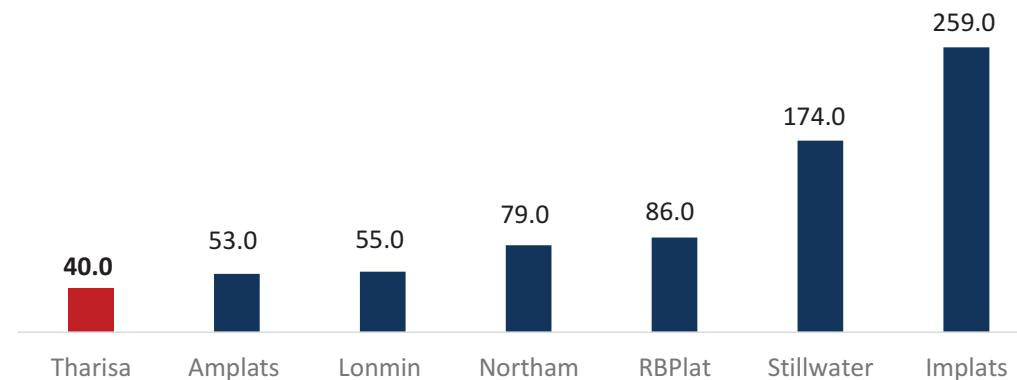
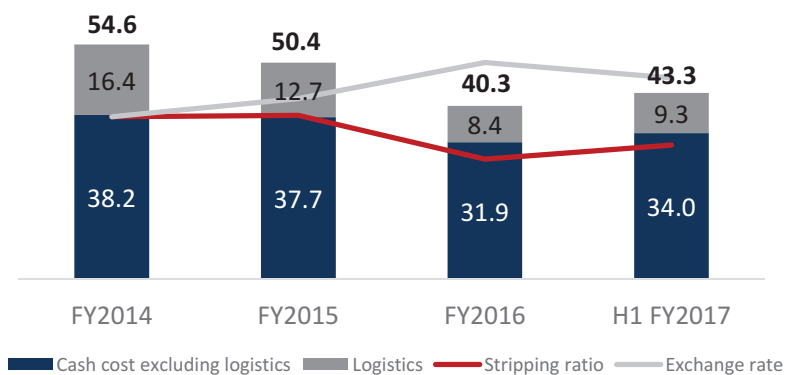
↓9.3%

## UNIT COSTS

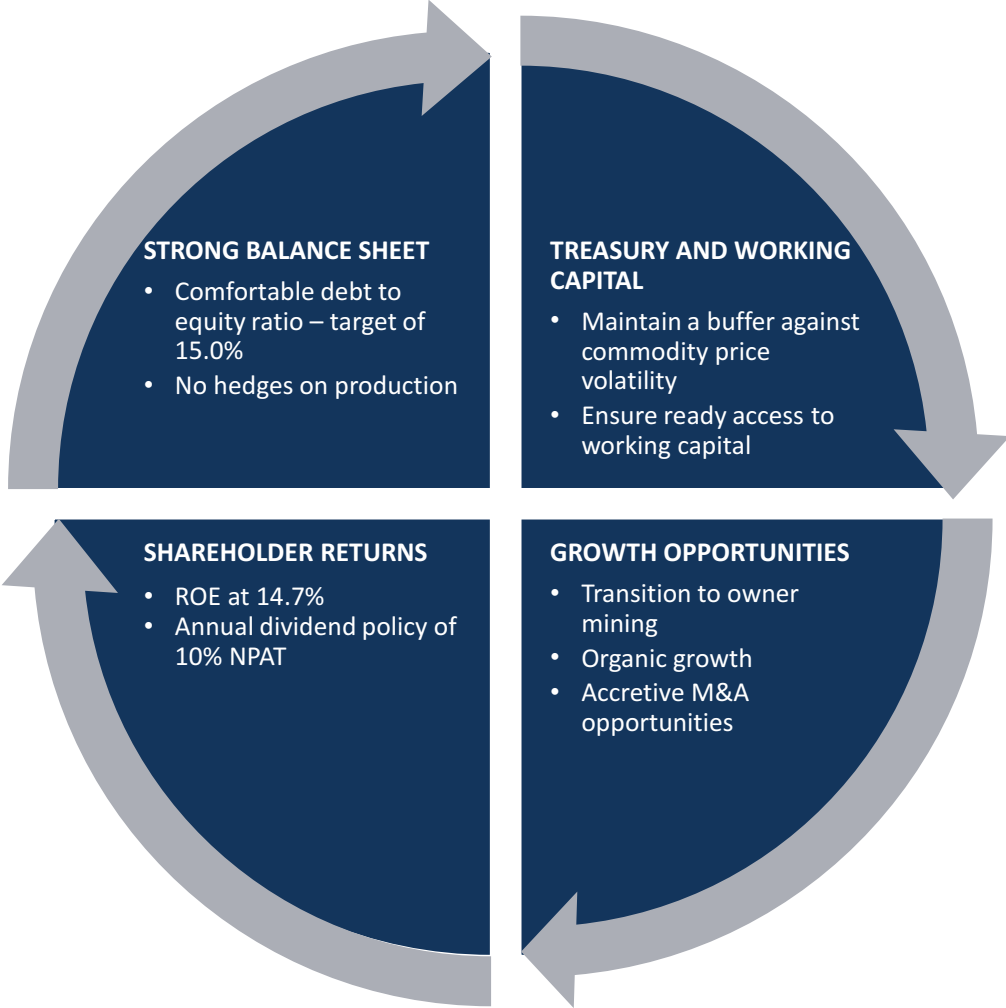
	H1 FY2017	H1 FY2016	Change
All in cost per Pt ounce sold	(1 123)	402	-
All in cost per 42% chrome tonne sold	88	85	3.5%

## CASH COST PER TONNE MILLED (US\$)

### CONSOLIDATED CASH COST PER TONNE MILLED US\$/tonne milled



# DISCIPLINED CAPITAL ALLOCATION



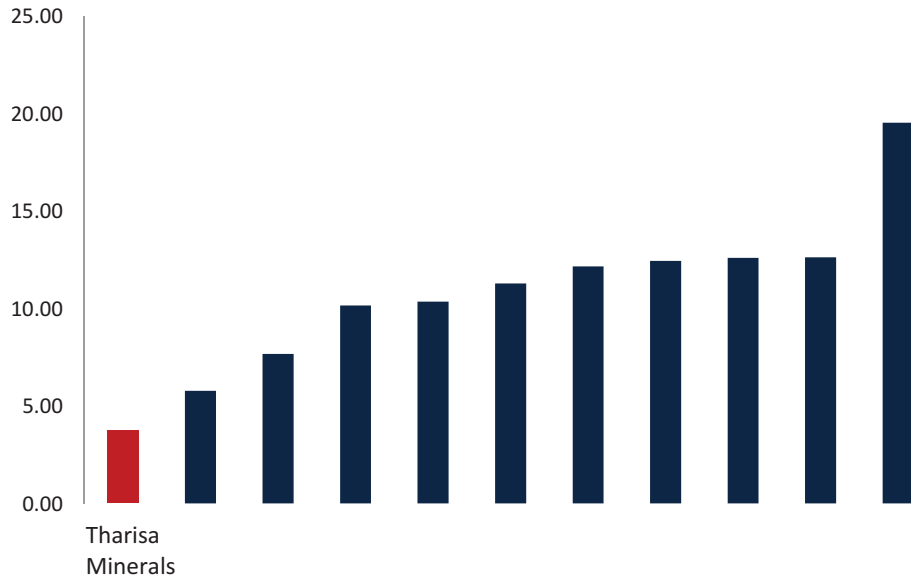
## —○ OPERATIONAL REVIEW





## COMPARATIVE LTIFR RATE (March 2017)

Per million hours worked



## SAFETY AND HEALTH A PRIORITY

- Safety remains a top priority and Tharisa strives for zero harm
- Lost Time Injury Frequency Rate (LTIFR) of 0.17 per 200 000 man hours worked



# OPERATIONAL HIGHLIGHTS

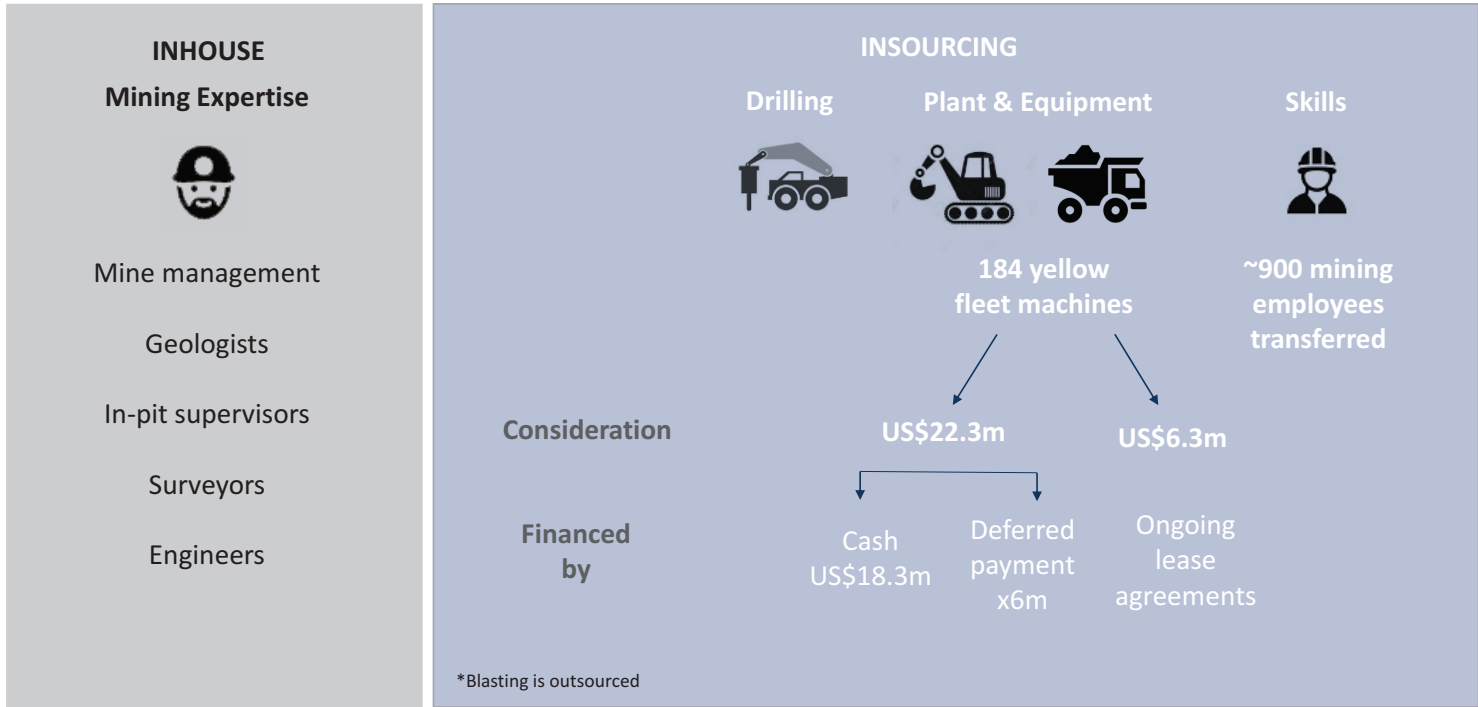
## KEY OPERATIONAL METRICS

		H1 FY2017	H1 FY2016	Change
Reef mined	kt	2 449.1	2 358.6	3.8%
Stripping ratio	m <sup>3</sup> :m <sup>3</sup>	8.4	6.8	23.5%
PGM rougher feed grade	g/t	1.54	1.68	(8.3%)
Chrome grade	%	17.5	18.4	(1.4%)
ROM processed	kt	2 417.7	2 197.0	10.0%
PGM recovery	%	78.3	65.0	20.5%
PGM in concentrate	koz	69.1	60.0	15.2%
Chrome recovery	%	63.4	62.8	1.0%
Chrome concentrate	kt	636.8	604.4	5.4%
PGM basket price	US\$/oz	760	686	10.8%
Chrome concentrate price (42% CIF China)	US\$/t	278	106	162.3%
Average exchange rate	ZAR:US\$	13.6	15.0	(9.3%)

## FY2017 GUIDANCE

<b>MINERAL RESOURCE AND RESERVE</b>	<b>MINERAL RESOURCE</b> <b>877.7 Mt</b> <small>1.58 g/t 6PGE+Au 20.5% Cr<sub>2</sub>O<sub>3</sub></small>	<b>MINERAL RESERVE</b> <b>98.9 Mt</b> <small>1.50 g/t 5PGE+Au 20.1% Cr<sub>2</sub>O<sub>3</sub></small>
<b>MINING</b>	<b>ROM</b> <b>5.0 Mtpa</b>	<b>LOM STRIPPING RATIO</b> <b>9.7 m<sup>3</sup>: m<sup>3</sup><sub>OPEN PIT</sub></b>
<b>PRODUCTION</b>	<b>PGMS</b> <b>147.4 koz</b>	<b>CHROME</b> <b>1.3 Mt</b>
<b>TARGET RECOVERIES</b>	<b>PGMS</b> <b>80%</b>	<b>CHROME</b> <b>65%</b>

# TRANSITION TO OWNER MINING MODEL



# OWNER MINING MODEL

## INSOURCING



**Effective date**

Dependent on fulfilment of conditions precedent with a long stop date of 30 September 2017

**Conditions precedent**

- South African Competition Authorities approval
- Extract shareholder approval
- MCC shareholder approval
- Approval of Tharisa’s senior debt lenders
- Tharisa agreement to terms and conditions of the leases

**Benefits**

- Greater control over stripping rates
- Quality and grade control
- Costs

## — CHROME AND PGM MARKET DYNAMICS

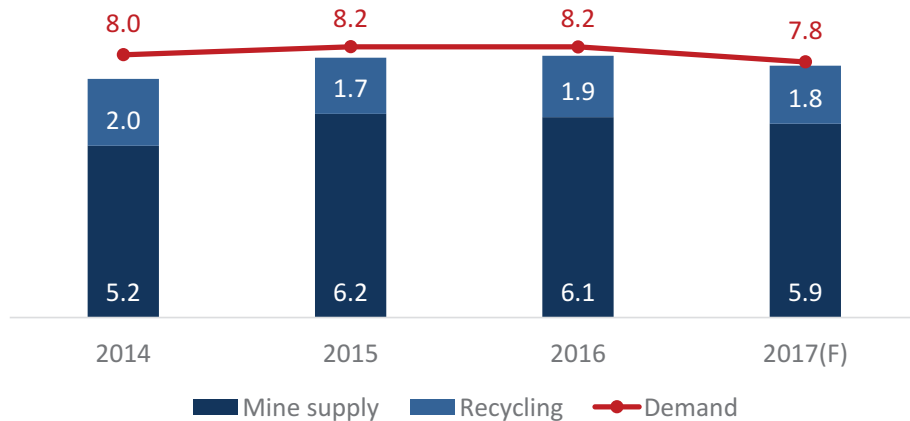




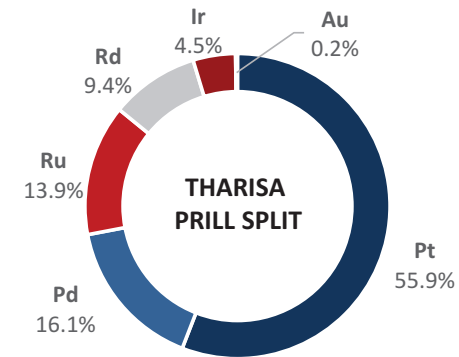
## PLATINUM DEMAND AND SUPPLY 2017

- Demand is driven by the autocatalyst, jewellery, industrial and investment sectors
- Supply expected to be weaker due to lower price, with lower capital investment and cost increases
- In 2017 platinum to remain in deficit by 120 koz

## PLATINUM DEMAND AND SUPPLY [Moz]



## THARISA'S PGM BASKET

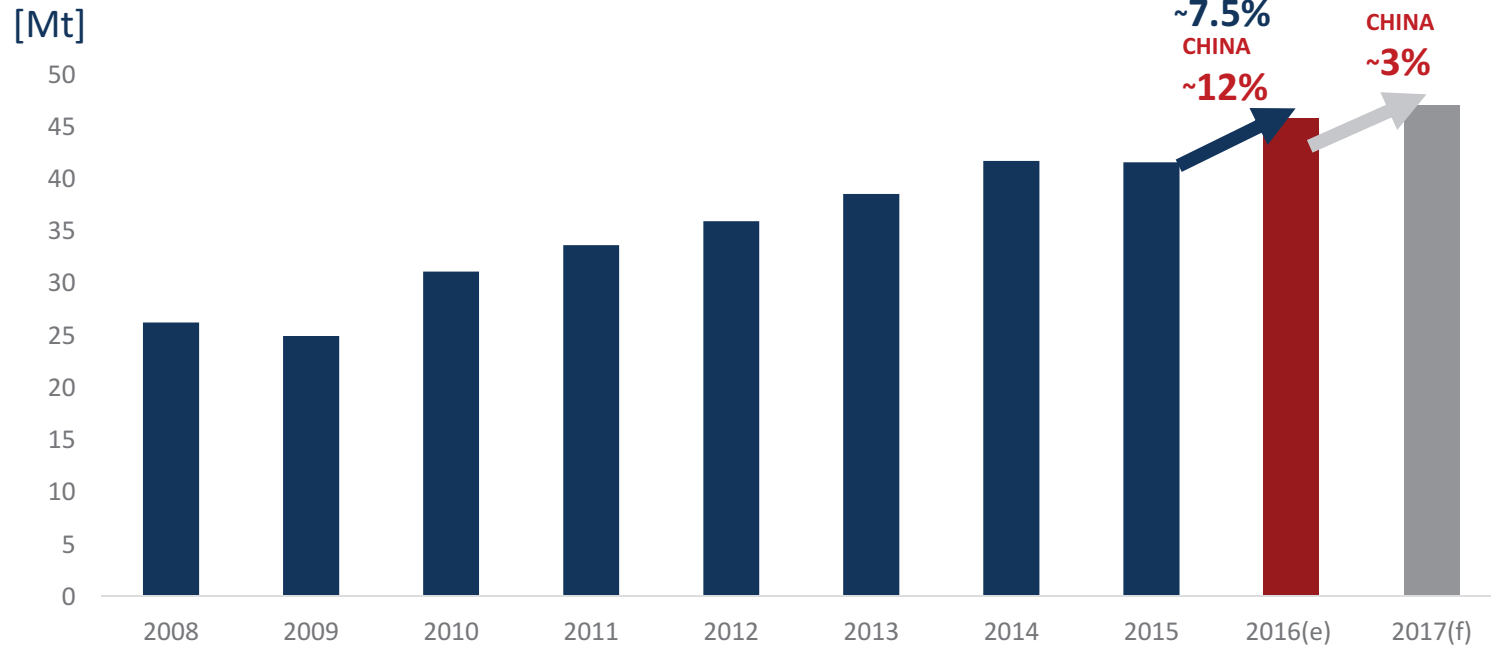


## PGM BASKET PRICES

	6 months	1 year
Platinum	↓ 5.1%	↓ 14.6%
Palladium	↑ 30.7%	↑ 30.1%
Ruthenium	↑ 42.0%	↑ 37.2%
Rhodium	↑ 62.5%	↑ 54.7%
Iridium	↑ 39.2%	↑ 7.4%
Gold	↓ 2.4%	↓ 3.0%

# STAINLESS STEEL – THARISA'S ULTIMATE MARKET FOR CHROME

### GLOBAL CRUDE STAINLESS STEEL PRODUCTION



# CHROME MARKET

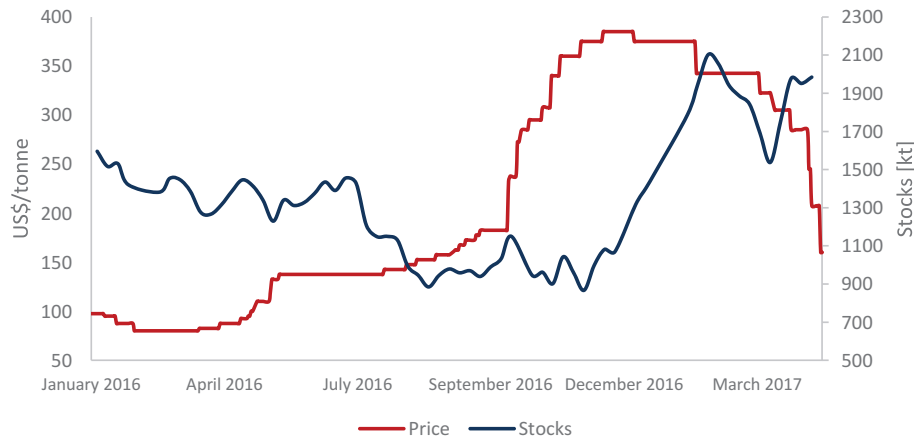
**CHROME CONCENTRATE PRICE**  
 Q1: US\$250/t Q2: US\$338/t

**CHROME CONCENTRATE PRICE**  
 US\$278/t  
 (2016: US\$106/t) ↑ 162.3%

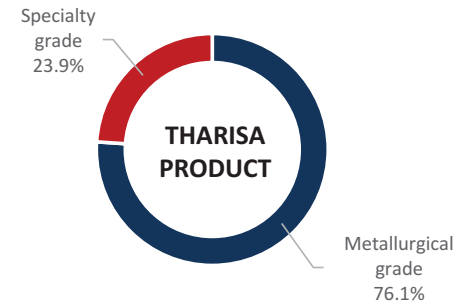
## DEMAND AND SUPPLY 2017

- Demand for metallurgical grade chrome concentrate is driven by its use in the manufacture of stainless steel
- Production of stainless steel in 2017 estimated to grow at 3% to 4%
- China is wholly dependent on imports of chrome ore/alloy
- Strong supplier response to abnormally high prices, causing increase in pipeline inventories
- Incentive pricing pushing markets into over supply

## CHINESE CHROME STOCK/ PRICE CORRELATION

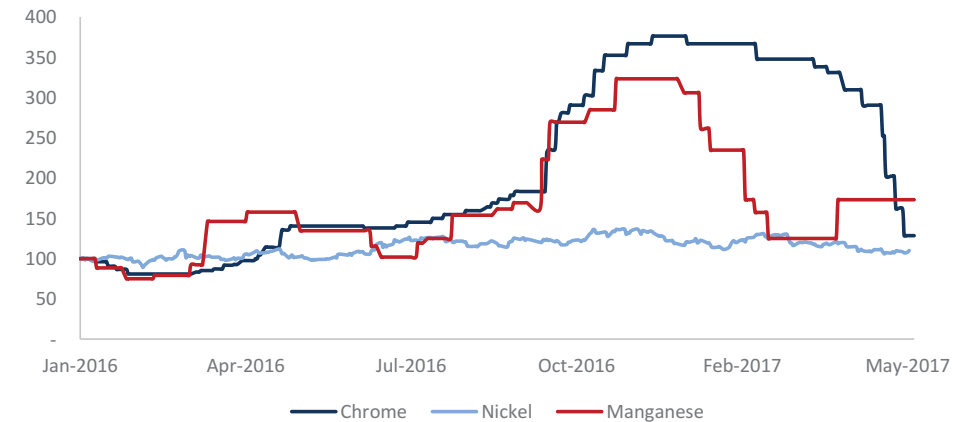


## THARISA CHROME GRADES



CHEMICAL GRADE	FOUNDRY GRADE
Cr <sub>2</sub> O <sub>3</sub> – 45% to 47% SiO <sub>2</sub> - <1.2%	Cr <sub>2</sub> O <sub>3</sub> - >46% SiO <sub>2</sub> - <1.0%
Used to produce sodium dichromate used in leather tanning, pigments, plating	Used in moulds for metal castings and nozzle sands

## STAINLESS STEEL RAW MATERIAL PRICE TRENDS



## —○ OUTLOOK



# UNIQUELY POSITIONED FOR THE FUTURE

**LEADING NATURAL RESOURCES GROUP**

**Globally significant diversified low cost operations**

Record financial and operational period, robust business model

<p style="text-align: center;"><b>STRATEGIC OBJECTIVE</b></p>	<p style="text-align: center;"><b>INNOVATION</b></p> <p style="text-align: center;">Growth through innovative research and development projects</p>	<p style="text-align: center;"><b>GROWTH INITIATIVES</b></p> <p style="text-align: center;">Transition to owner mining Maximise value extraction</p>	<p style="text-align: center;"><b>LEVERAGING MARKETING AND LOGISTICS PLATFORM</b></p> <p style="text-align: center;">Marketing, sales and logistics platform Expansion into multi-commodities Geographic diversity</p>	<p style="text-align: center;"><b>CAPITAL DISCIPLINE</b></p> <p style="text-align: center;">Dividend policy of 10% of NPAT Capital allocation to low risk projects</p>
<p style="text-align: center;"><b>STRATEGIC PLAN</b></p>	<p style="text-align: center;">South Africa's only PGM and chrome co-producer Innovative approach to processing multiple MG reef horizons</p>	<p style="text-align: center;">Continued improvement in PGM and chrome recoveries through: Genesis PGM flotation Secondary spiral project UG1 processing plant</p>	<p style="text-align: center;">Initiating third party trade and logistics</p>	<p style="text-align: center;">Disciplined capital allocation Dividend paying</p>



# DELIVERING ON OUR PROMISES

## IMPROVED VOLUMES

- Ore mined up 3.8%
- PGM concentrate produced 15.2% higher
- Chrome concentrate produced 5.4% higher

## RECOVERIES UP

- PGM recovery improved to 78.3%
- Chrome recovery improved to 63.4%

## RECORD FINANCIALS

- EBITDA up 451.0%
- HEPS climbs 1 500%

## CASH COSTS CONTAINED

- Lowest cost quartile
- Negative platinum cost (on an all in cost basis)

## INCREASED MARGINS

- EBITDA margin 46.3%
- Operating margin 39.9%

## UNCHANGED GUIDANCE

- 147.4 koz of PGM concentrates
- 1.3 Mt of chrome concentrates, including 300 kt of specialty products

## —○ ANNEXURES



# CORPORATE STRUCTURE

## ONE YEAR INFORMATION (11 MAY 2017)

Short name  
Price  
High – 52 week  
Low – 52 week  
Market capitalisation  
One year return

**JSE**  
PRIMARY LISTING

**THA**  
ZAR21.00  
ZAR29.74  
ZAR6.50  
ZAR5.4 billion  
180%

**LSE**  
STANDARD LISTING MAIN BOARD

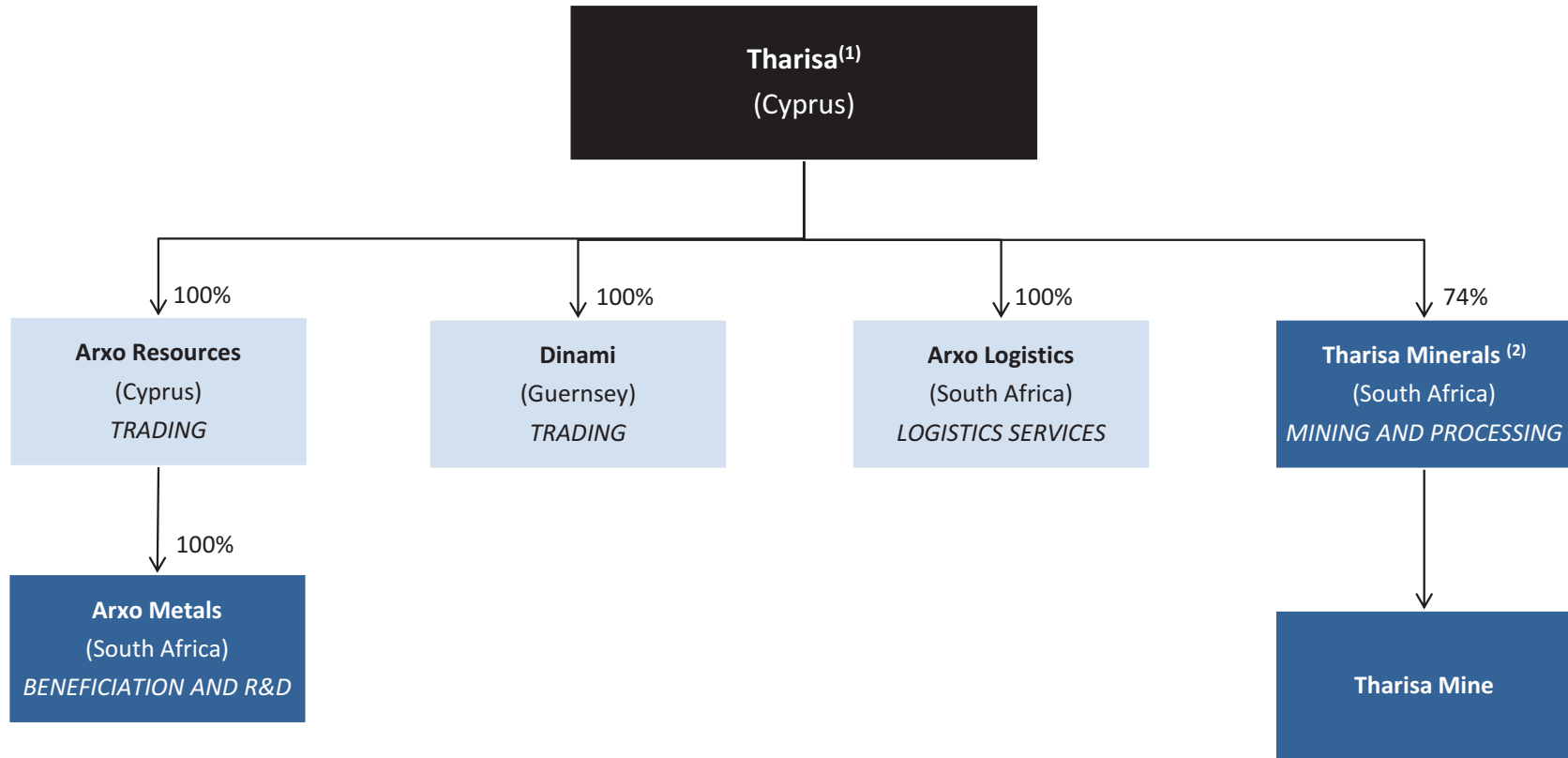
**THS**  
GBp125.00  
GBp165.00  
GBp35.00  
GBP321.2 million



## TOP SHAREHOLDINGS (11 MAY 2017)

	%
Medway Developments	46.3
Rance Holdings	15.8
Fujian Wuhang Stainless Steel	10.9
Maaden Invest	4.6
Macquarie Capital Hong Kong	3.2
Friedshelf 1525	2.6
Altius Investment Holdings	2.2
Hongkong Heyi Mining Resource	2.0
Phillip Ventures Enterprise Fund	1.3
Swiss Asia Financial Services (HK)	1.1
Quam Securities	1.1
BlackRock Investment Management	1.1
Old Mutual	0.5

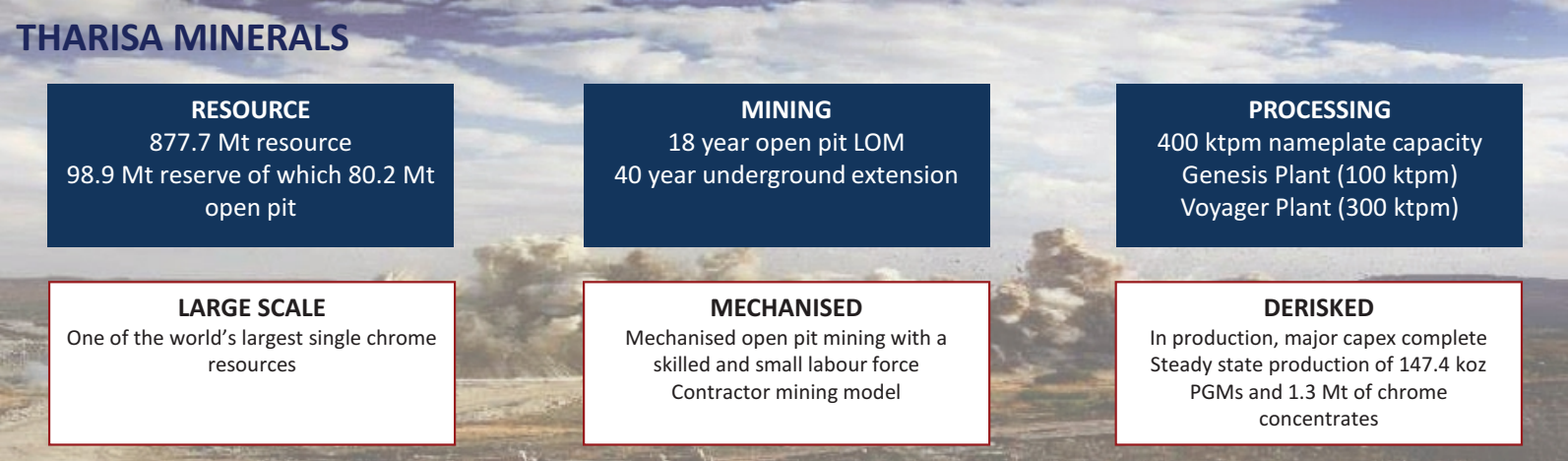
# CORPORATE STRUCTURE



(1) Primary listing on the JSE with secondary listing on the LSE  
(2) The 26% is held by Thari Resources at 20% and a Community Trust at 6%

# VALUE CHAIN

## THARISA MINERALS



<p><b>RESOURCE</b> 877.7 Mt resource 98.9 Mt reserve of which 80.2 Mt open pit</p>	<p><b>MINING</b> 18 year open pit LOM 40 year underground extension</p>	<p><b>PROCESSING</b> 400 ktpm nameplate capacity Genesis Plant (100 ktpm) Voyager Plant (300 ktpm)</p>
<p><b>LARGE SCALE</b> One of the world's largest single chrome resources</p>	<p><b>MECHANISED</b> Mechanised open pit mining with a skilled and small labour force Contractor mining model</p>	<p><b>DERISKED</b> In production, major capex complete Steady state production of 147.4 koz PGMs and 1.3 Mt of chrome concentrates</p>

**MID TIER OPEN PIT PGM AND CHROME CONCENTRATE CO-PRODUCER WITH AN INTEGRATED MARKETING, SALES, AND LOGISTICS PLATFORM**

## ARXO METALS



<p><b>BENEFICIATION</b> Production of specialty grade chrome concentrates</p>
<p><b>R&amp;D</b> New technology assessment</p>

## ARXO RESOURCES/DINAMI



<p><b>MARKETING AND SALES</b> Significant trader of chrome concentrates to China Global reach for specialty chrome concentrates</p>
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## ARXO LOGISTICS



<p><b>LOGISTICS</b> Road/rail transport, warehouse and port facilities for bulk chrome concentrates Road transport of PGMs</p>
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## CUSTOMERS



<p><b>AGREEMENTS</b> PGM offtake– Impala Platinum Specialty offtake/agency – Rand York Metallurgical agency – Noble Group Relationships with stainless steel and ferrochrome producers and global commodity traders</p>
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# MINING FIVE MG SEAMS

## RESOURCES AND RESERVES

- Steady state mining rate of 5.0 Mtpa with an average stripping ratio of 9.7 (m<sup>3</sup>:m<sup>3</sup> basis)

## MINERAL RESOURCE

- 877.7 Mt
- 1.58 g/t 6PGE+Au
- 20.5% Cr<sub>2</sub>O<sub>3</sub>

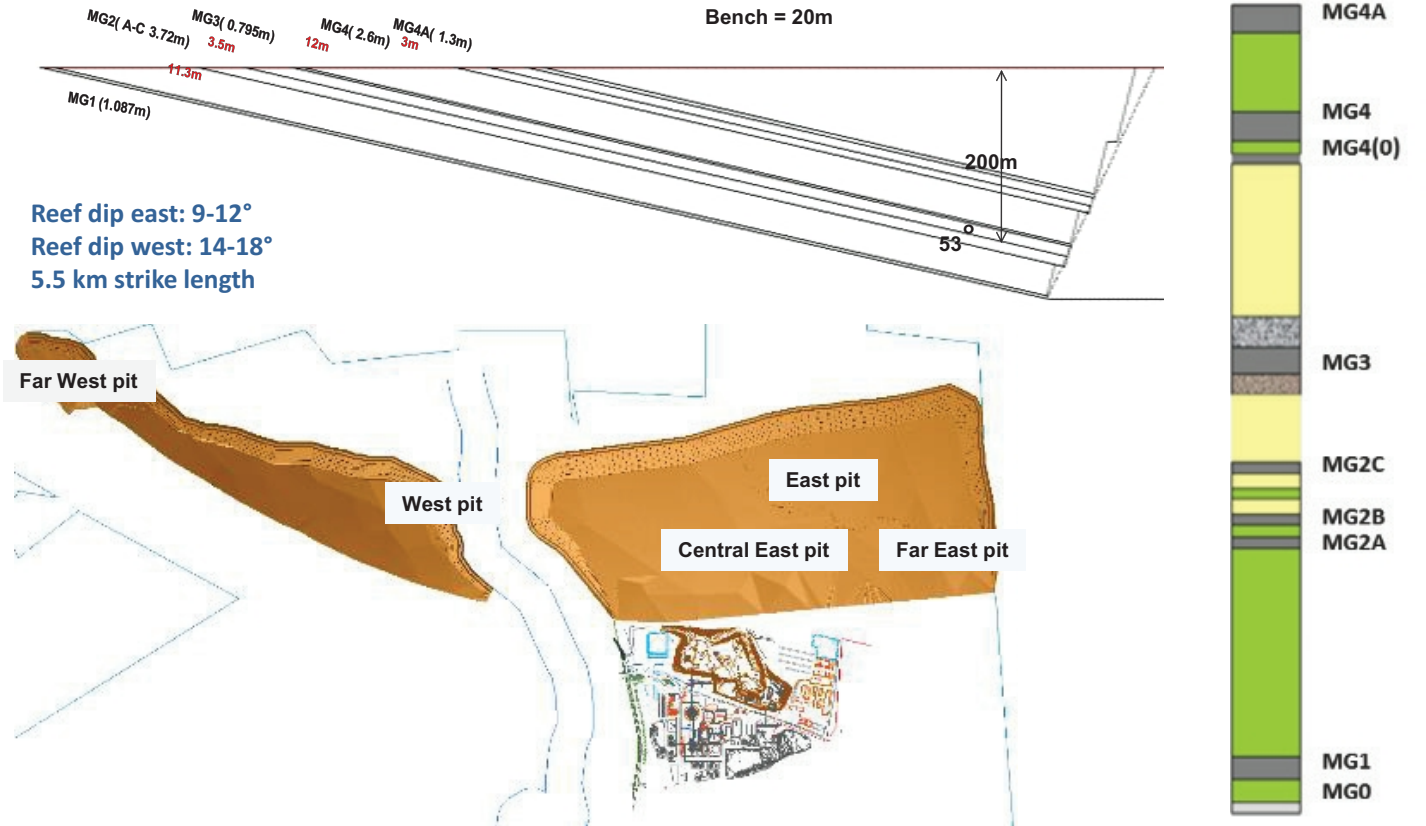
## MINERAL RESERVE

- 98.9 Mt
- 1.50 g/t 5PGE+Au
- 20.1% Cr<sub>2</sub>O<sub>3</sub>

## OPEN PIT MINERAL RESERVE

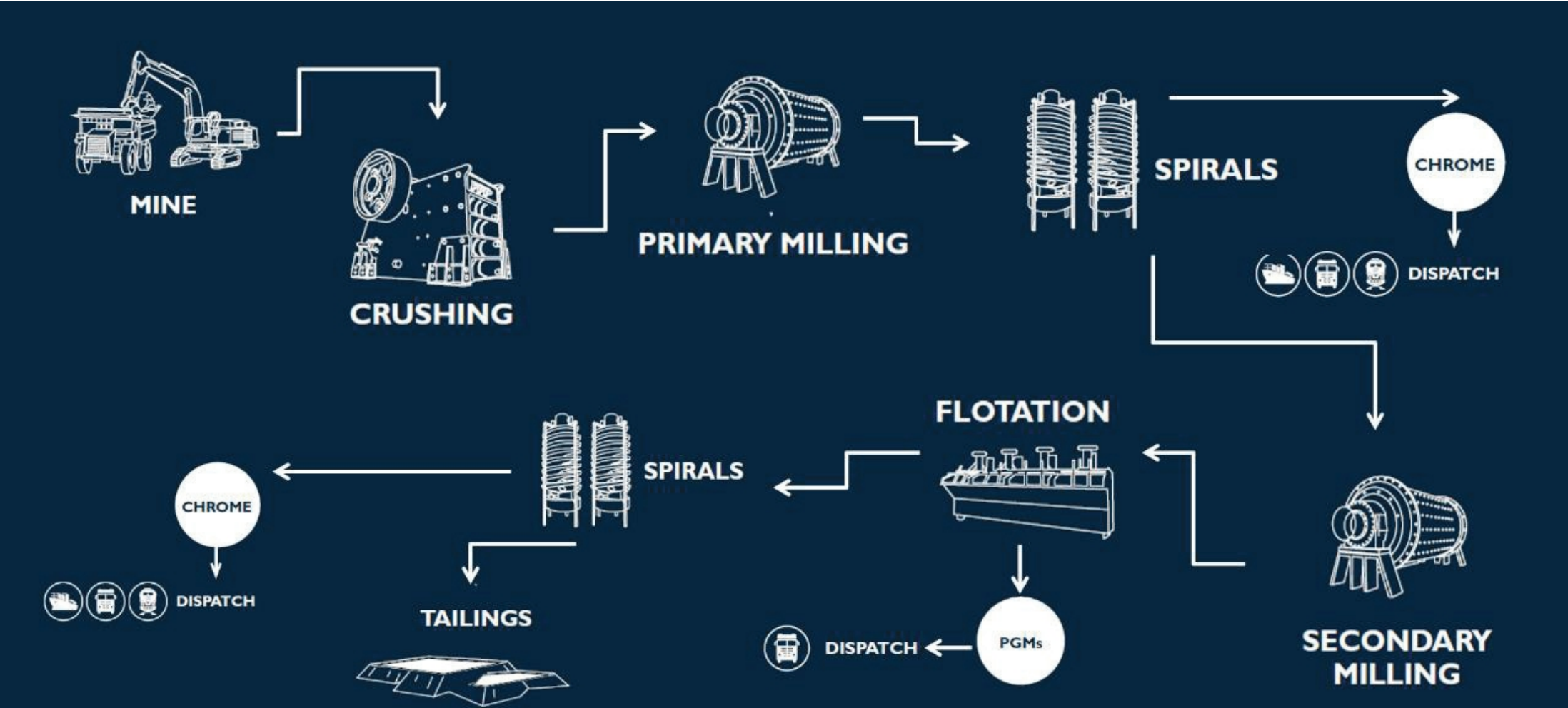
- 80.2 Mt
- 1.49 g/t 5PGE+Au
- 20.3% Cr<sub>2</sub>O<sub>3</sub>

## GENERALISED CROSS SECTION SHOWING THE MG CHROMITITE LAYERS AT PLANNED DEPTH



Declaration as at 30 September 2016

# — INNOVATIVE APPROACH



# PROCESSING

## KEY FACTS

- Process plants are owned and operated by Tharisa
- Each plant operates independently, providing flexibility and limiting potential process disruptions
- Basic process:
  - ROM is crushed and screened
  - Selected reef ROM sent to Challenger Plant to recover foundry and chemical grade
  - Primary milling to liberate chromite crystals
  - Primary spirals to recover chromite
  - Secondary milling to liberate PGM particles
  - Flotation circuit to recover PGM particles
  - Secondary spirals to recover additional chromite

## INDEPENDENT PROCESSING PLANTS

### GENESIS PLANT

- Capacity: 100 ktpm ROM
- Processes reef layers with lower PGM and higher chromite grades
- Challenger Plant recovers high value foundry grade and chemical grade chrome concentrates



### VOYAGER PLANT

- Capacity: 300 ktpm ROM
- Processes reefs with higher PGM and lower chromite grades
- Produces both metallurgical and chemical grade products



# MARKETING, SALES AND LOGISTICS

## MARKETING AND SALES

- PGM concentrate offtake agreement with Impala
- Agency agreement with Noble Resources for metallurgical chrome concentrate
- Foundry and chemical grade concentrate offtake agreement with Rand York Minerals
- Direct relationships with a broad range of stainless steel producers, ferrochrome producers and global commodity traders
- Scale of operation allows for direct access to market and chrome concentrate price discovery
- ~9.5% of total Chinese chrome imports, and ~12.9% of South African exports to China (FY2016)
- ~6.8% of total Chinese chrome imports, and ~9.6% of South African exports to China (H1 FY2017)



## LOGISTICS

- Integrated platform to mitigate logistics risks and providing a competitive advantage
- Road transportation of PGM concentrate to Impala
- Road and rail transport capacity, warehousing facilities and port facilities
- Shipment of chrome concentrate in bulk from Richards Bay Dry Bulk Terminal and containerised through the Durban port to customers in Asia and other international customers
- A platform to service third party customers in the future







