



tharisa

**INTEGRATED RESOURCE GROUP | LOW COST CO-PRODUCER – PGMS AND CHROME**  
February 2015



# DISCLAIMER

*This document has been compiled by Tharisa plc (“Tharisa”). While the information contained herein is believed to be accurate, no representation or warranty, express or implied is or will be given by Tharisa or its respective directors, employees or advisors or any other person as to the accuracy, completeness or fairness of this document and, so far as permitted by law and except in the case of fraud by the party concerned, no responsibility or liability whatsoever is accepted for the accuracy or sufficiency thereof or for any errors, omissions or misstatements negligent or otherwise relating thereto.*

*This document includes certain statements, estimates, targets, forecasts and projections with respect to Tharisa’s anticipated future performance. Such statements, estimates, targets, forecasts and projections reflect significant assumptions and subjective judgments and analysis by Tharisa’s management concerning anticipated results which may or may not prove to be correct and there can be no assurance that any estimates, targets, forecasts or projections are attainable or will be realised. Nothing contained in this document is, or shall be relied upon as, a promise or representation, whether as to the past or the future. Accordingly, neither Tharisa nor any of its directors, employees or advisors nor any other person, shall be liable for any direct, indirect or consequential loss or damage suffered by any person as a result of relying on any statement in or omission from this document and any such liability is expressly disclaimed. In particular, but without limitation, no representation or warranty is given as to the achievement or reasonableness of, and no reliance should be placed on, any estimates, targets, forecasts or projections contained in this document (or otherwise provided by or on behalf of Tharisa with respect to the subject matter of this document).*

# KEY INVESTMENT HIGHLIGHTS

Direct access to the only JSE listed PGM and chrome concentrate open pit co-producer with an integrated marketing, sales and logistics platform



Large scale  
(**832 Mt** resource)  
mid-tier PGM and chrome  
concentrate co-producer

Open pit operations with  
over **22 years LOM** and  
**36 year LOM**  
underground extension

One of the **worlds largest**  
single chrome  
resource mines

**Mechanised** open pit  
mining with a  
comparatively small and  
**skilled** contracted  
labour force

Steady state production  
of **144 koz 5 PGE + AU**  
and **1.85 Mt** of chrome  
concentrates

In production and  
**de-risked**

**Lowest cost** quartile  
producer of PGM and  
chrome concentrates

In-house, cost effective  
**mine to customers**  
logistics solution

Growth/optimisation  
**initiatives**

## MINING ALL SIX MG CHROMITITE LAYERS FACILITATES CO-PRODUCTION

### MINERAL RESOURCE

- 832 Mt
- 5 PGE + Au 1.56 g/t
- Cr<sub>2</sub>O<sub>3</sub> 20.38%

### OPEN PIT MINERAL RESERVE

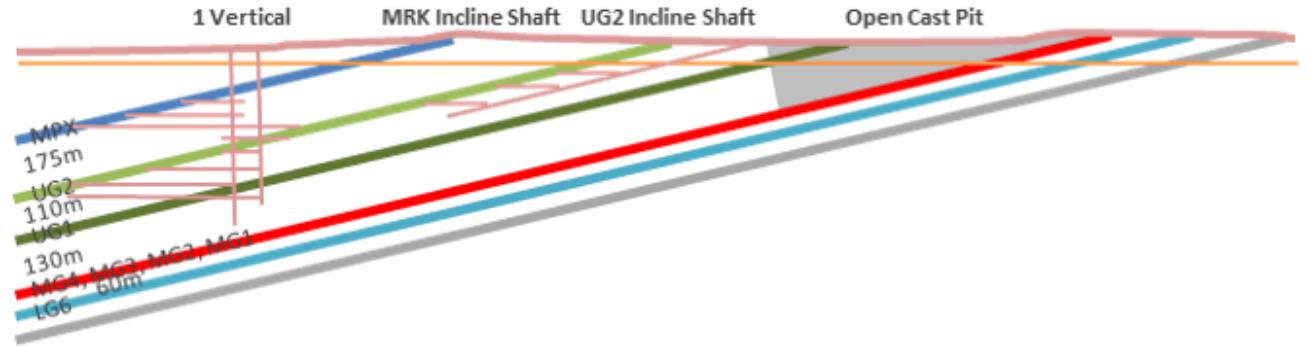
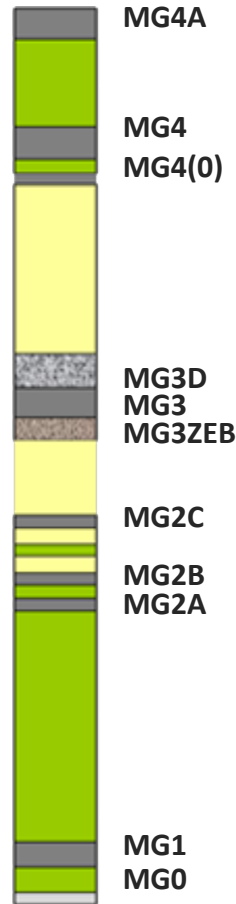
- 104 Mt
- 5 PGE + Au 1.51 g/t
- Cr<sub>2</sub>O<sub>3</sub> 19.36%

### CONTAINED METAL

- 169.6 Mt chrome
- 41.8 Moz PGMs

Reef dip east: 9-12°  
Reef dip west: 14-18°

5.5km strike length



Generalised Cross Section showing Chromitite layers in relation to MRK, UG2 & LG

- Commitment to health and safety, and stable employee and community relations
- Mechanised open pit mining with 22 years LOM
- All mining, environmental and water use licences have been granted and are valid
- Multi-contractor mining

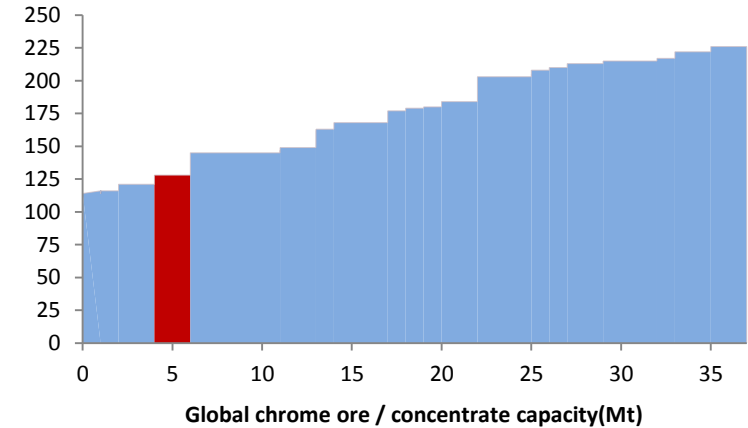
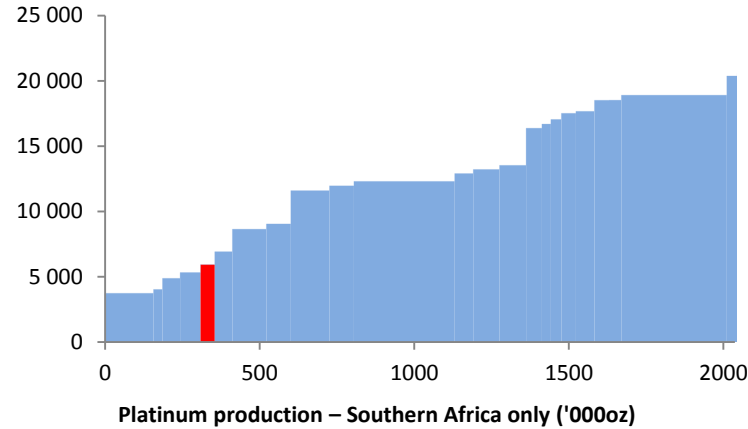


# PROCESSING, BENEFICIATION AND OPTIMISATION

## KEY HIGHLIGHTS

- Producing PGM (5 PGE + Au) concentrate
- Producing metallurgical, chemical and foundry grade chrome concentrates
- Processing flexibility provided through owner operated Voyager (300 ktpm capacity) and Genesis (100 ktpm capacity) standalone concentrator plants. Total 400 ktpm ROM capacity
- Operationally de-risked co-producer
- Optimisation underway
- Research into the feasibility of producing chrome alloys with minimal or no electricity as a long term strategic objective

## LOCATED IN THE LOWEST COST QUARTILE OF PGM AND CHROME CONCENTRATE PRODUCERS



Source: CPR (FY14), peer company information, as at December 2013 – Pre Platinum Strike  
Note: Allocated costs to PGM and chrome concentrate production (40:60 – PGM:Chrome)



## 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% of total Chinese chrome imports, and ~16% of South African exports to China



## 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, sufficient for steady state chrome production
- Shipment of chrome concentrate in bulk from the 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



# FINANCIAL OVERVIEW

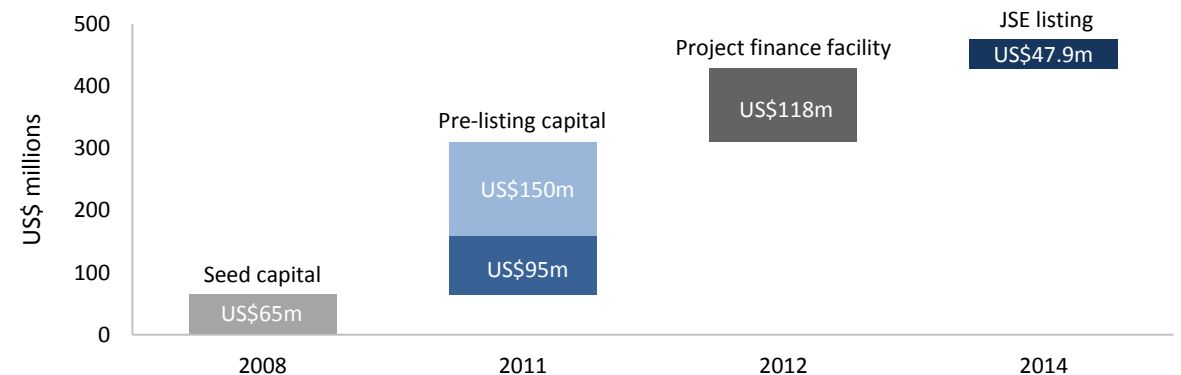
## FY2014 FINANCIAL

US\$ millions	FY2014			FY2013		
	PGMs	Chrome	Total	PGMs	Chrome	Total
Revenue	70.4	170.3	240.7	54.3	161.2	215.5
Cost of sales	53.5	153.3	206.8	50.5	139.1	189.6
Gross profit contribution	16.9	17.0	33.9	3.8	22.1	25.9
Gross profit margin	24.0%	10.0%	14.1%	7.0%	13.7%	12.0%
EBITDA			16.5			13.9
EBITDA margin			6.9%			6.5%

## PRODUCTION

	FY2014		FY2013	
	PGMs	Chrome	PGMs	Chrome
Production	78.2 koz	1.085 Mt <sup>1</sup>	57.4 koz	1.193 Mt
Average PGM basket price	US\$1 103 per oz		US\$1 132 per oz	
CIF contract price (42% metallurgical)	US\$158 per tonne		US\$161 per tonne	
Average exchange rate ZAR:USD	10.56		9.24	

## CAPITAL RAISED



1: Includes the production of metallurgical, chemical and foundry grade chrome concentrates

# KEY DIFFERENTIATORS

- Strength to strength from 2006, through the financial and energy crises
  - identification of **unique** ore body
  - **innovative** development of the Genesis and Voyager plants
- **Capital** investment programme complete
- **Mechanised** open pit mining – **no electricity** requirement
- Mining of all six MG chromitite layers and **co-production** of PGM and chrome concentrates
- Independent processing plants provides **operational flexibility**
- **Stable** labour relations – small skilled labour force
- **Integrated** marketing, sales and logistics platform
- Extensive industry and management **experience** with a successful **track record** of identifying, developing and operating mines
- **Optimisation** in progress with continuous research and development to maximise value



# VISION

**LEADING NATURAL  
RESOURCES COMPANY**

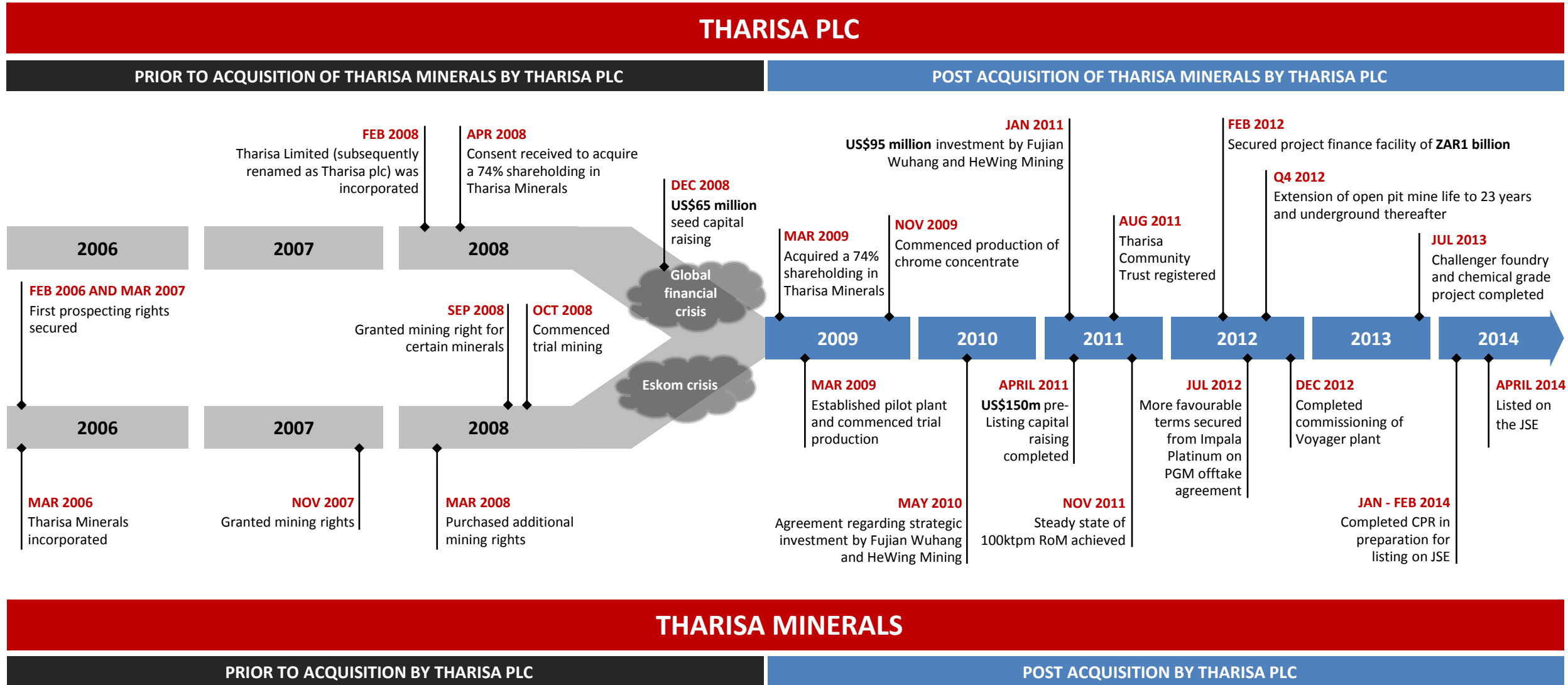
**PGM, CHROME AND  
STEEL RAW MATERIALS**

**LARGE SCALE, LOW COST  
PROJECTS THAT ARE IN OR  
CLOSE TO PRODUCTION**

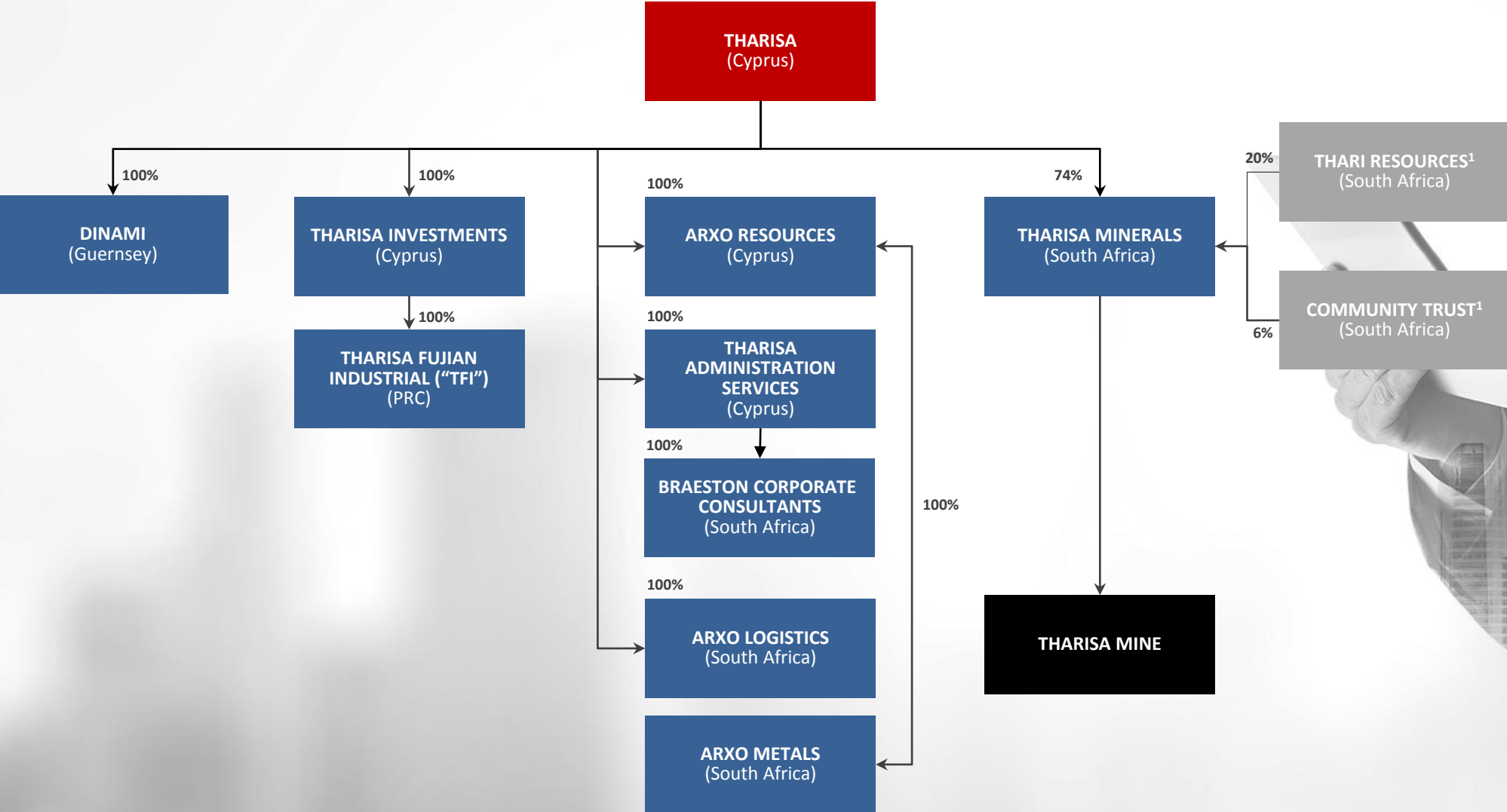




# HISTORY AND MILESTONES



# CORPORATE STRUCTURE



1: BEE/HDSA entity

## TOP FOUR SHAREHOLDERS

- Medway Developments Limited 46.7%
- Pershing LLC 15.9%
- Fujian Wuhang Stainless Steel Co., Limited 11.0%
- Maaden Invest Limited 5.9%

