

AIM : BRR | JSE : BRE  
[www.braemoreresources.com](http://www.braemoreresources.com)

# Braemore Resources plc

**Advancing nickel sulphide and PGM projects**



## About us

**Braemore** Resources plc

- PGM and nickel sulphide production-focused company with access to proprietary technologies
- Located in two key mining regions
- Processing capability augmented by key processing agreements
- Early revenue through demonstration plant, debt free, gearing capability
- Chairman, Dr Mathews Phosa; CEO, Leon Coetzer



**Braemore** Platinum

**Braemore** Nickel

## The Braemore team

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- Chairman, Dr Mathews Phosa, leading figure in South Africa's business and political world
- Chief Executive Officer, Leon Coetzer, with over 20 years' experience in the platinum sector
- Leading highly experienced team with on average more than 15 years' PGM and nickel experience per individual
  - internationally-recognised technical ability
- Technical team further strengthened through Mintek as technical partner on platinum

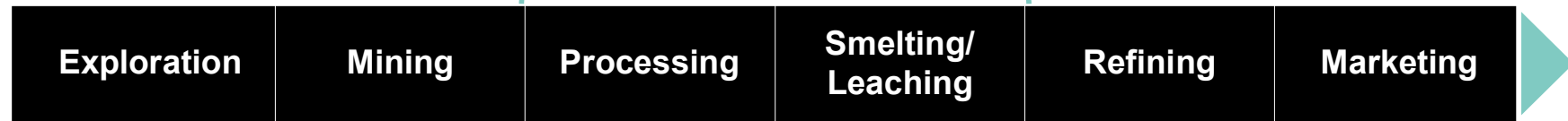


# Our strategy – uniquely placed in the metals stream

Our market entry point



Braemore Platinum

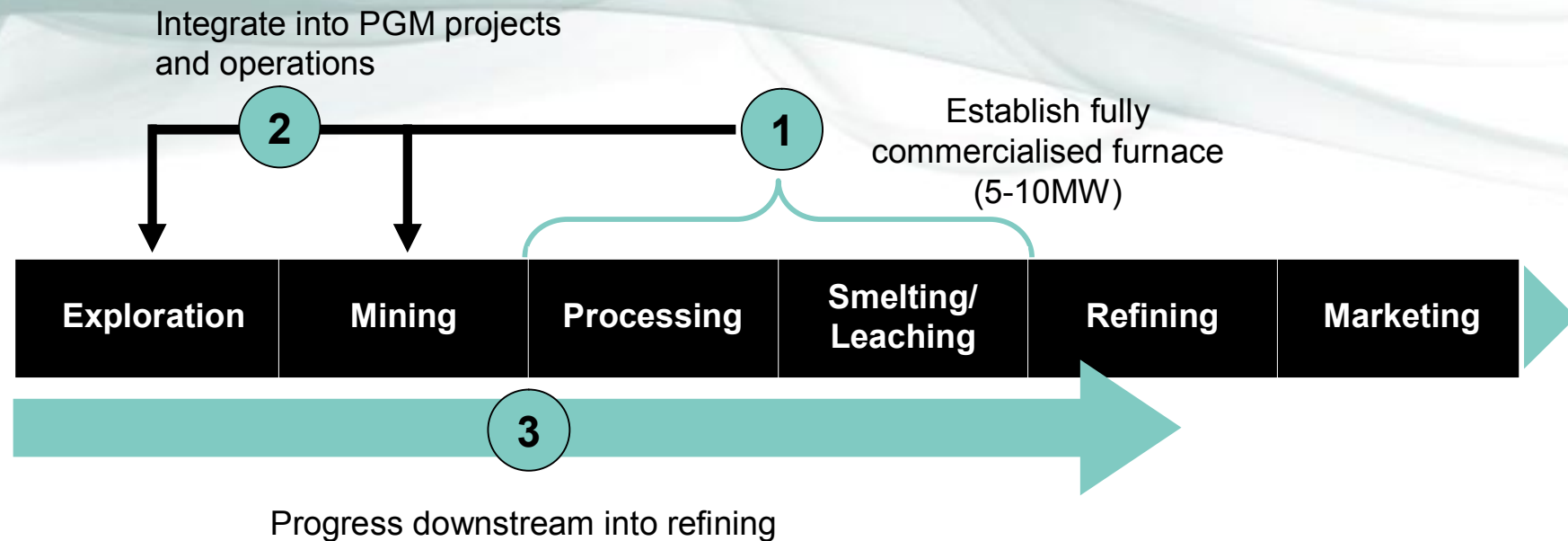


Traditional market entry point

Braemore Nickel

# Our strategy – establishing Braemore as a mine-to-metals company

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# Our strategy – establishing Braemore as a mine-to-metals company

- Unique mid-market entry into platinum
  - proprietary proven technology supported by extensive world-leading R&D programme
  - addressing key challenges in platinum processing stream
  - targeting difficult materials
    - low-grade high-chromium concentrates
    - revert tailings
    - converter slag
  - cost-effective, environmentally-friendly, chrome insensitive
  - leverage position to gain access to metal projects up-stream
- Perfectly positioned to play key role in current consolidation climate

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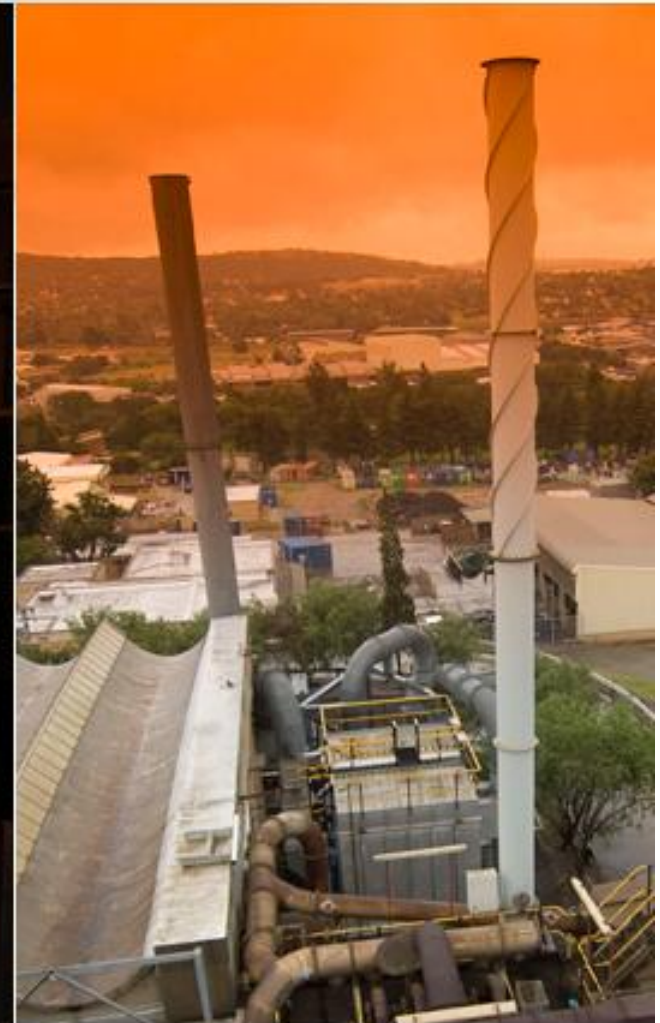
## Our technology – world leading

- ConRoast process developed and patented by Mintek
- Braemore has an exclusive global license to use the process for a period of 3+7 years
  - rights to commercially exploit technology package globally on other nickel and platinum projects
- Chrome insensitive, highly efficient, proven process
  - upgraded demonstration facility now offer capacity of 60,000 – 70,000 oz PGM per annum depending on feed grade
- Order of magnitude reduction in sulphur emissions
  - solves SO<sub>2</sub> environmental problem
  - > 98% S capture in one continuous unit
- Most (70 – 100%) of the minor impurity elements (As, Bi, Mn, Pb, Se, Te, V) are removed



# PROGRESS

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## Steady progress

- DC arc smelting of PGM-containing materials has been demonstrated at Mintek over four years, treating more than 37 000 tons at up to 1.6 MW
- Mintek process emits about 30g of SO<sub>2</sub> / oz Pt, compared to about 3kg SO<sub>2</sub> / oz Pt for the conventional process
- Proved the process to be robust, effective and clean
- Braemore entered into agreement with Mintek to expand the smelting facility to demonstrate scalability of technology
- 3.2MW facility commissioned in September 2008
  - Facility included industrial drying and automation solution

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## Steady progress

- Discardable slag – less than 1 g/t PGMs
  - slag meets US EPA TCLP and acid rain test criteria for safe disposal
  - slag is used as a by-product for purposes such as concrete aggregate, road fill or shot blasting
- 3.2 MW unit fully operational
- Metallurgical results exceeded expectations with recovery of PGMs >99% on a high chrome feed

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# Accelerated progress

## *Conclusion of Research & Development Programme*

- Hydrometallurgical process step to refine PGM containing alloy concluded in Q1 2009
  - R&D process operated at both batch and semi-continuous to produce separated high grade PGM concentrate and base metal concentrate
  - both products in high demand
    - indicative off-takes already offered to Braemore with significant value-add to product value

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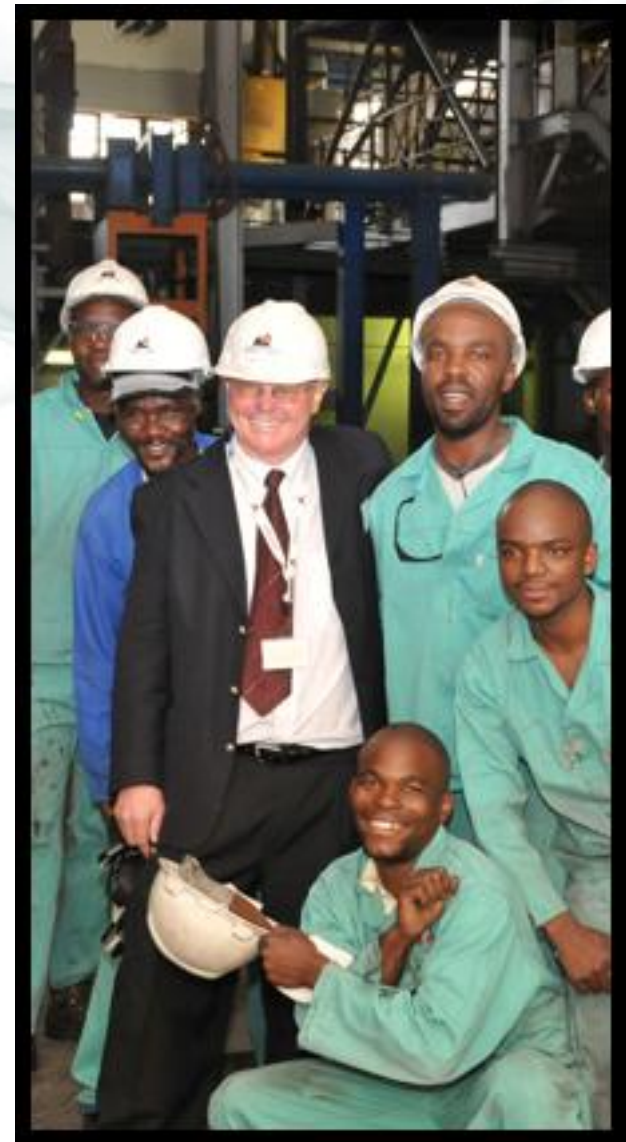


## Accelerated progress, cont'd

### *Conclusion of Research & Development Programme*

- Site secured with required infrastructure for hydrometallurgical process construction
- Offer complete ConRoast process as demonstration unit at an industrial size
  - including hydrometallurgical refining plant
- Braemore will refine all alloy produced through its 3.2MW demonstration furnace
- Critical R&D phase concluded for phase 2 of commercialisation
  - ability to demonstrate its technology offering at industrial scale to produce a highly marketable refined high grade PGM concentrate

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# Challenges

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# Technology Development to Commercialisation

- Technology Development faces key challenges
  - Willing initial investors that appreciate the potential as well as the initial risk
    - highest perceived risk is during initial concept phase
    - high degree of communication with investors are required to avoid disillusioned investor
  - Tempered expectations following concept phase into R & D
    - investors pressure to shorten R&D cycle to commercialisation



# Technology Development to Commercialisation

- Finding the right balance between commercialising key components of the process during the R&D phase
  - Ensure investor returns
  - Builds confidence in market and industry
  - Establish key industrial partners/relationships
  - Generate cash-flow to partially off-set investor spending into the development phase
- Establishing industrial partners for the full commercialisation of the technology at sufficiently large scale



# Technology Development to Commercialisation

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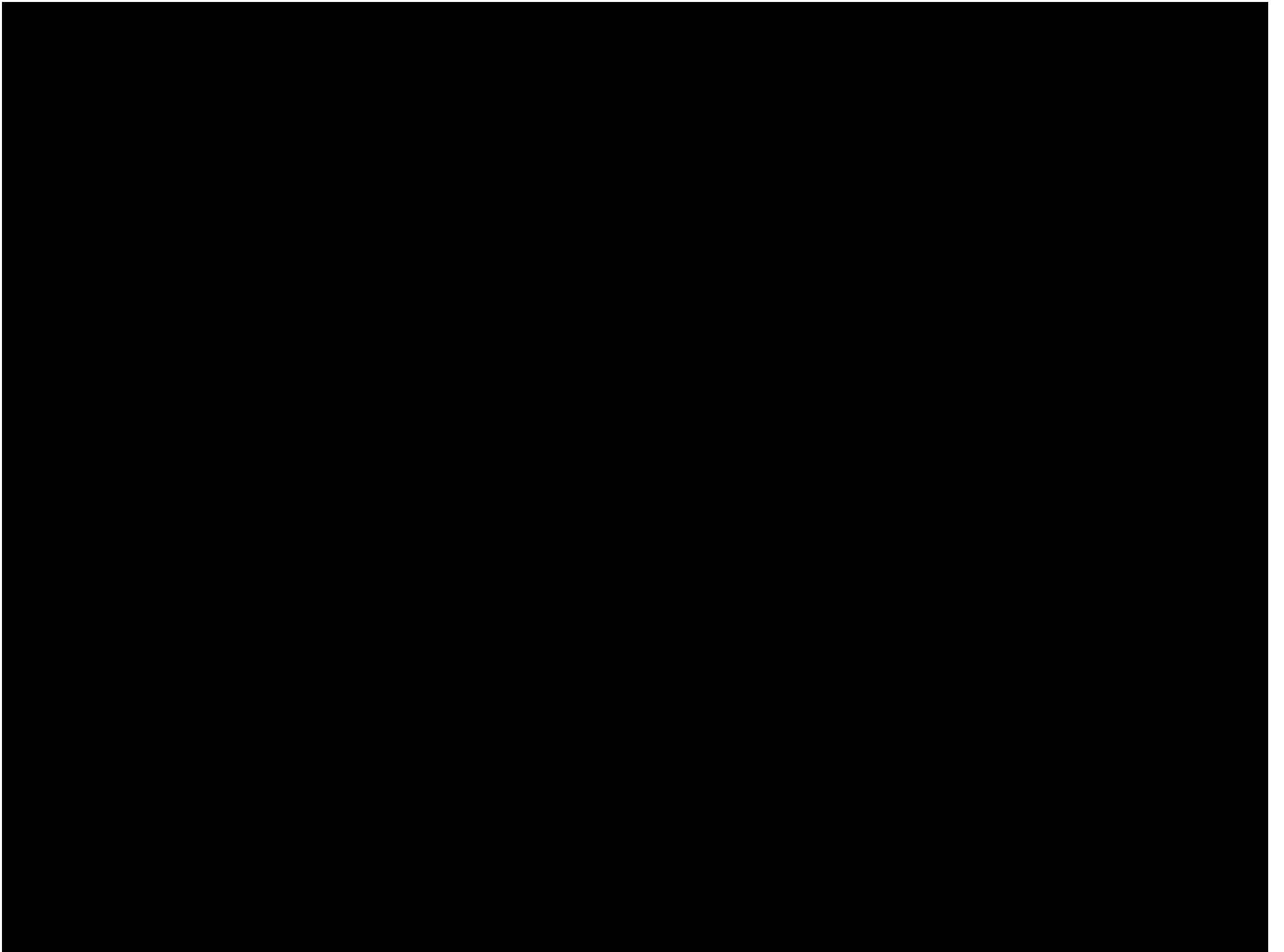
- Global Financial Crises
  - Tests agility of typical rigid R&D programme driven by medium and long term goals
  - Required review of commercialisation strategy to accelerate value adding intermediate refining step to grow margins
  - Secure strong funding and industrial partner



## Moving forward - platinum

- Strategic objective met
  - transition from 'proof of concept' smelter, refining to accelerated commercialisation
- Off-take agreements with established producers during the demonstration phase assisted with testing a wide range of feed materials ranging between 1,5% to 11% chrome
- Forged partnership with Mintek and government through DME
- Downstream move into refining
- Well advanced in negotiations to form key partnerships with current and future PGM producers
- New dawn for Braemore as it accelerates its commercialisation strategy





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