

ASX:PIM



PINNACLE MINERALS LTD

Kaolin | Metakaolin | Halloysite | HPA

**EMERGING TECHNOLOGY
MINERALS COMPANY**

Q1 2023



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The information in this presentation that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by William Witham, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy. William Witham is a director of Pinnacle Minerals Limited. William Witham has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the ‘Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’. William Witham consents to the inclusion in the presentation of the matters based on his information in the form and context in which it appears.

COMPANY OVERVIEW

Pinnacle Minerals Ltd (ASX:PIM) is an emerging technology minerals company with multiple DSO kaolin projects that have the potential to provide feedstock to high value green technology minerals (Metakaolin & HPA)

PIM's strategy is to develop long life, strategically located DSO mineral deposits in Tier 1 mining jurisdictions where logistics and capital costs are favourable, whilst using projected future cash flow to mature larger and more capital-intensive company-making assets and technologies.

Tightly held register - \$4M MC : EV < \$700k ¹

1 – At 31/12/2022 @ 11 cps



INVESTMENT HIGHLIGHTS



Kaolin market currently valued at US\$4.2B and forecast to reach US\$5.87B by 2030 driven by a global supply shortage¹.



Metakaolin is an environmentally friendly solution for the concrete industry with the green cement industry forecast to grow to US\$56b by 2027².



Experienced Board and management team with a proven track record in driving growth in the resources sector.



Highly prospective Australian projects with a defined exploration and development strategy for 2023

Kaolin Project Southwest, WA

- Bills Middle Maiden Mineral Resource Estimate H1 2023
- Follow up drill program H1 2023 (Holly & Bobalong)

Tammin Kaolin Project, WA

- Maiden Drill Program H1 2023

White Knight & Camel Lake, SA

- Land Access Negotiations + Target generation

CORPORATE SNAPSHOT

Capital Structure

Shares on Issue	36,375,200
Market Capitalisation at 11c / share	\$4.00m
Cash in bank (31/12/22)	\$3.3m
Enterprise Value	\$0.7m
Options on Issue	29,937,634

Capital structure is accurate as at 31/12/2022

Shareholders

Position	Holder Name	Holding	% IC
1	WILLIAM JOHN ANDREW WITHAM & KATHERINE DARIAN WITHAM	2,400,200	6.60%
2	RWH NOMINEES PTY LTD	2,400,000	6.60%
2	EXPLORATION RESOURCES PTY LTD	2,400,000	6.60%
3	SEATTLE CAPITAL PTY LTD	2,100,000	5.77%
4	HSBC CUSTODY NOMINEES (AUSTRALIA) LIMITED	2,095,744	5.76%
5	MS CHUNYAN NIU	1,575,000	4.33%
6	VERMILLION MINERALS PTY LTD	1,500,000	4.12%
7	DIVIDELI PTY LTD	1,200,000	3.30%
8	MCNEIL NOMINEES PTY LIMITED	1,150,000	3.16%
9	MR PETER ANDREW PROKSA	875,000	2.41%
10	MOUNTS BAY INVESTMENTS PTY LTD	685,000	1.88%

BOARD OF DIRECTORS



William (Bill) Witham
Chairman
BSc (Hons) Geology UWA MAIG

- Held senior executive roles across the Australian and African resources sector for over two decades and has worked and lived in Australia, Africa and South America.
- Further experience in member-based organisation leadership, including currently with the Australia-Africa Minerals & Energy Group (AAMEG - CEO), Chamber of Minerals & Energy WA (Government Relations and Policy) and the National Party WA (Corporate Director) and South Coast Natural Resource Management Inc. (Chair).



Maurice (Nic) Matich
Managing Director
BEng Mech (Hons), BSci (Phys/IT),
GDip (Finance) GAICD

- Mechanical engineer and finance professional with over 15 years experience in the resources sector.
- His wide industry experience includes the provision of engineering, risk consulting and insurance services to numerous tier 1 mining companies with operations in mineral sands, kaolin, iron ore, gold and zinc.
- Previously Executive Director of Heavy Minerals Limited that he led to listing on the ASX in 2021, and key driver of the company, delivering both a maiden resource and scoping study (NPV₈ \$253M) in his first twelve months there.



Stephen Ross
Non-Executive Director
BSc (Geology) FFin MAusIMM

- Geologist, independent consultant and public company director that has been involved in the international minerals industry in technical, business development and corporate positions for 30 years.
- Has sourced significant investments for junior explorers and pre-development resource companies worldwide while holding managing director and technical positions when based in Central Asia, West Africa and Sri Lanka.
- A member of the Australasian Institute of Mining and Metallurgy and is a Fellow of the Financial Services Institute of Australasia.
- Currently a director of Summit Minerals Limited Limited and Chairman of Power Minerals Limited.



Lincoln Liu
Non-Executive Director
BBus, MCom, MBA

- Over the last decade, has worked in Australian equities including stockbroking, research and investment banking. Lincoln has experience in IPO's, Placements, Private Equity and M&A.
- Industry expertise in resources sector and has worked extensively with early-stage companies.
- Co-founder of a Sydney based Corporate advisory firm.
- Holds a Bachelor of Business and Commerce (Applied Finance) from UWS, Master of Commerce in Finance from UNSW & and a Master of Business Administration from USYD.

THE EVOLUTION OF KAOLIN $\text{Al}_2\text{O}_3 \cdot 2\text{SiO}_2 \cdot 2\text{H}_2\text{O}$

New economy industrial mineral finding specialised uses in a green, high-tech world

Metakaolin (calcined kaolin) is a key ingredient in green concrete

High Purity Alumina (HPA) produced from kaolin integral in lithium-ion batteries

Halloysite used in carbon capture, hydrogen storage and nanotechnology applications

Pinnacle targeting lab scale metakaolin and 4N+ HPA production in 2023

Technology uses for Kaolin / Halloysite / HPA

Kaolin



Pharmaceuticals



Cosmetics



Ceramics

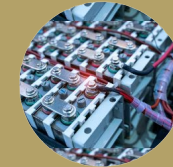
Halloysite



Hydrogen Storage



High Grade Porcelain

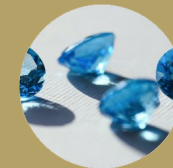


Lithium Ion Batteries

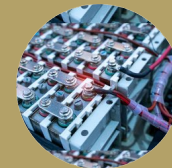


Water Purification

HPA



Synthetic Sapphires



Lithium Ion Batteries



PINNACLE TARGETTING LAB SCALE METAKAOLIN PRODUCTION Q1 2023

METAKAOLIN: A GREEN SOLUTION FOR CEMENT
PRODUCTION AND REDUCING EMISSIONS

METAKAOLIN: A GREEN SOLUTION

CEMENT PRODUCTION & EMISSIONS

Cement production is the world's single biggest industrial cause of carbon pollution, responsible for 8% of global emissions.



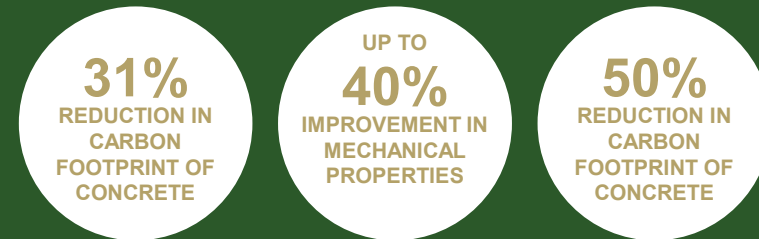
CEMENT EMISSIONS EQUAL THE GLOBAL CAR FLEET ¹

2030 TARGET

The Australian government has announced a target of a 43% reduction of greenhouse gas emissions by 2030 below 2005 levels ²

GREEN CEMENT MARKET FORECAST TO GROW TO **US\$56 BILLION BY 2027** ³

METAKAOLIN (CALCINED KAOLIN), WHEN USED AS A CONCRETE ADDITIVE HAS THE FOLLOWING BENEFITS:



AUSTRALIAN CONSTRUCTION MARKET ALONE ESTIMATED TO HAVE A POTENTIAL DEMAND OF **0.72 – 2.88 MT PER ANNUM** ⁴

PINNACLE TARGETING LAB SCALE METAKAOLIN PRODUCTION Q1 2023

1 – Beyond Zero Emission: Rethinking Cement
2 – Australia NDC 2022 Update

3 – Green Cement Market 2022-2027, IMARC Group
4 – SUV Announcement 15th September 2022

KAOLIN MARKET

US\$4.2B

2021 global market and rising due to global shortage¹

US\$5.87B

Global market expected to reach in 2030¹

3.7%

Compound annual growth rate 2022 - 2030¹

48 Mt pa

Global production 2022²



Halloysite Noodles

Kaolin – Halloysite Prices

Kaolin	+AU\$300 per tonne
Kaolin-Halloysite hybrid	AU\$500 to AU\$1,000 per tonne
Halloysite	+ AU\$7,500 per tonne



Halloysite-Kaolin

¹Grand View Research report, Kaolin Market Size & Share Report, 2022 – 2030

²USGS Mineral Commodity Summaries 2023

NEW OPPORTUNITIES FOR HOLLOYSITE TUBES

NANO TECHNOLOGY FOR WATER FILTRATION
AND WATER TREATMENT



KAOLIN PROJECTS SOUTHWEST – WA

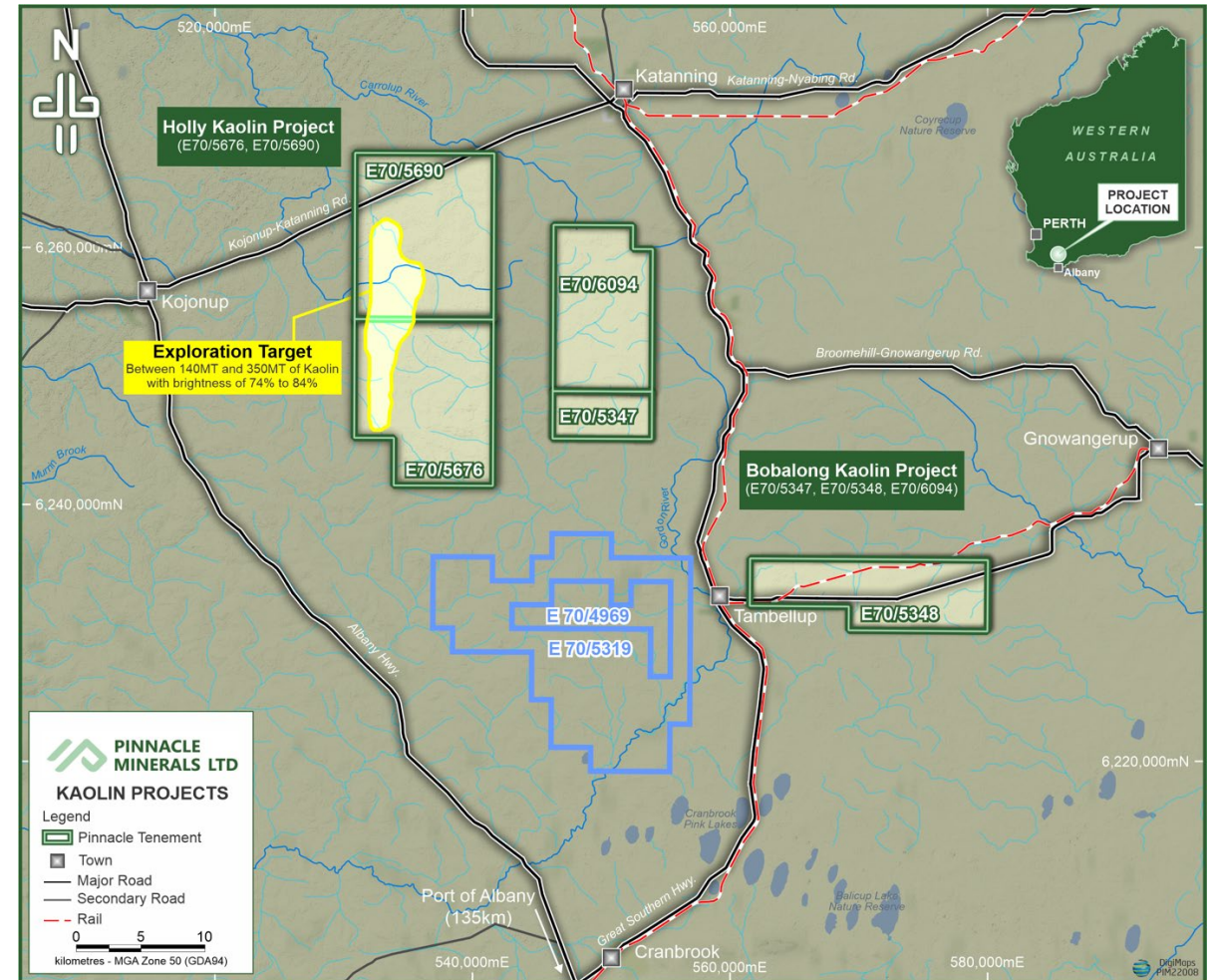
Strategically located, 120km from Albany deep water port

Exploration target : 140mt – 350mt of kaolin¹

Bobalong DSO meets potential Chinese offtake partner requirements

Maiden Resource announcement due H1 2023

Airborne magnetic and radiometric survey complete:
Target generation underway



1 – The potential quantity and grade of the Exploration Target is conceptual in nature and is therefore an approximation. There has been insufficient exploration drilling to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource

TAMMIN KAOLIN PROJECT – WA

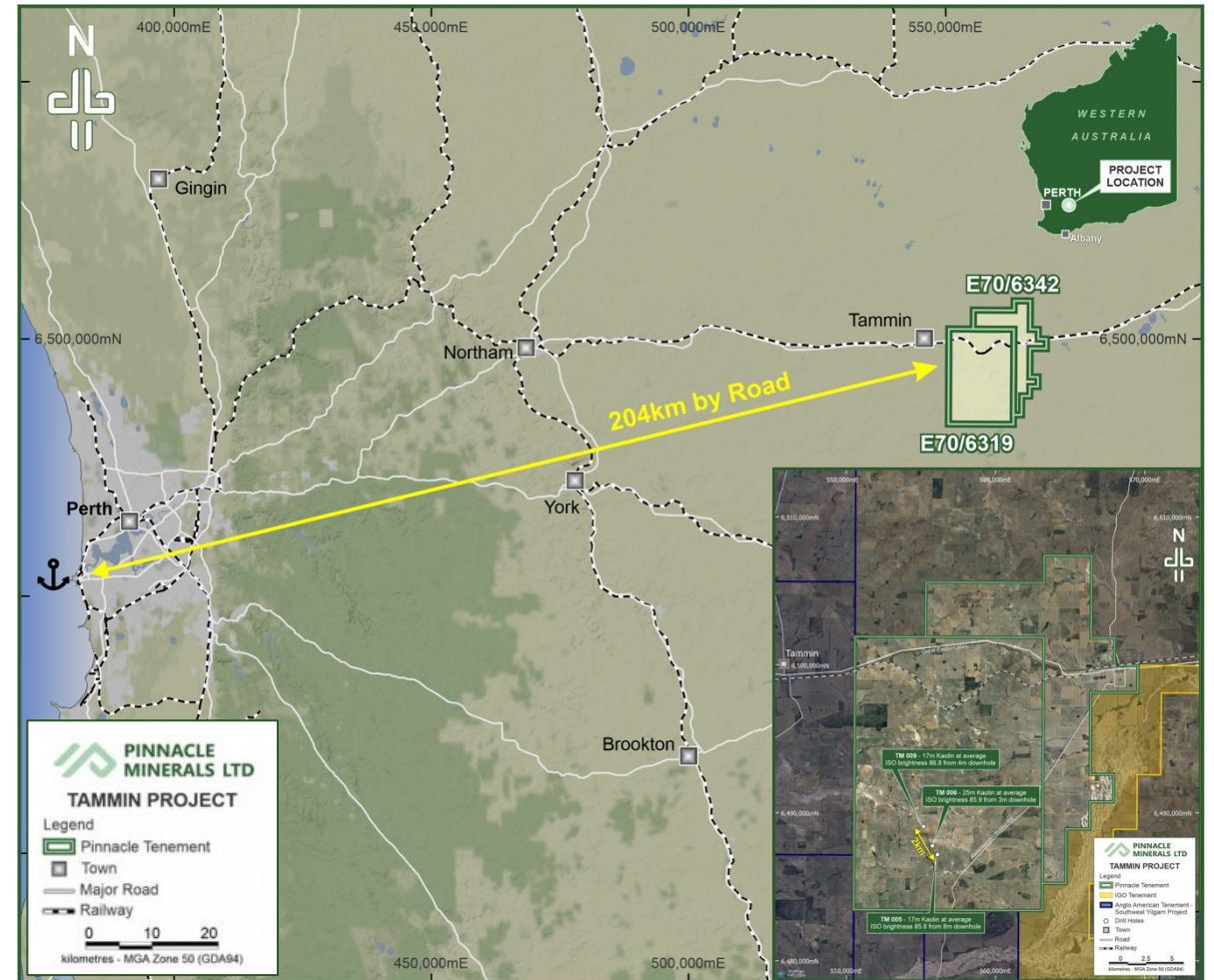
339 km² project area 204 km from Perth

Borders Anglo American and IGO projects

Multiple kaolin intercepts from near surface exceeding 15m in thickness with ISO brightness > 80 drilled by previous explorer

Significant assay results (ISO brightness > 85) over 2km of strike ¹

- TM 005 – 17m kaolin from 8m downhole
- TM 006 – 25m kaolin from 3m downhole
- TM 009 – 17m kaolin 4m downhole



1 – PIM ASX Announcement 26 October 2022

WHITE KNIGHT & CAMEL LAKE – SA

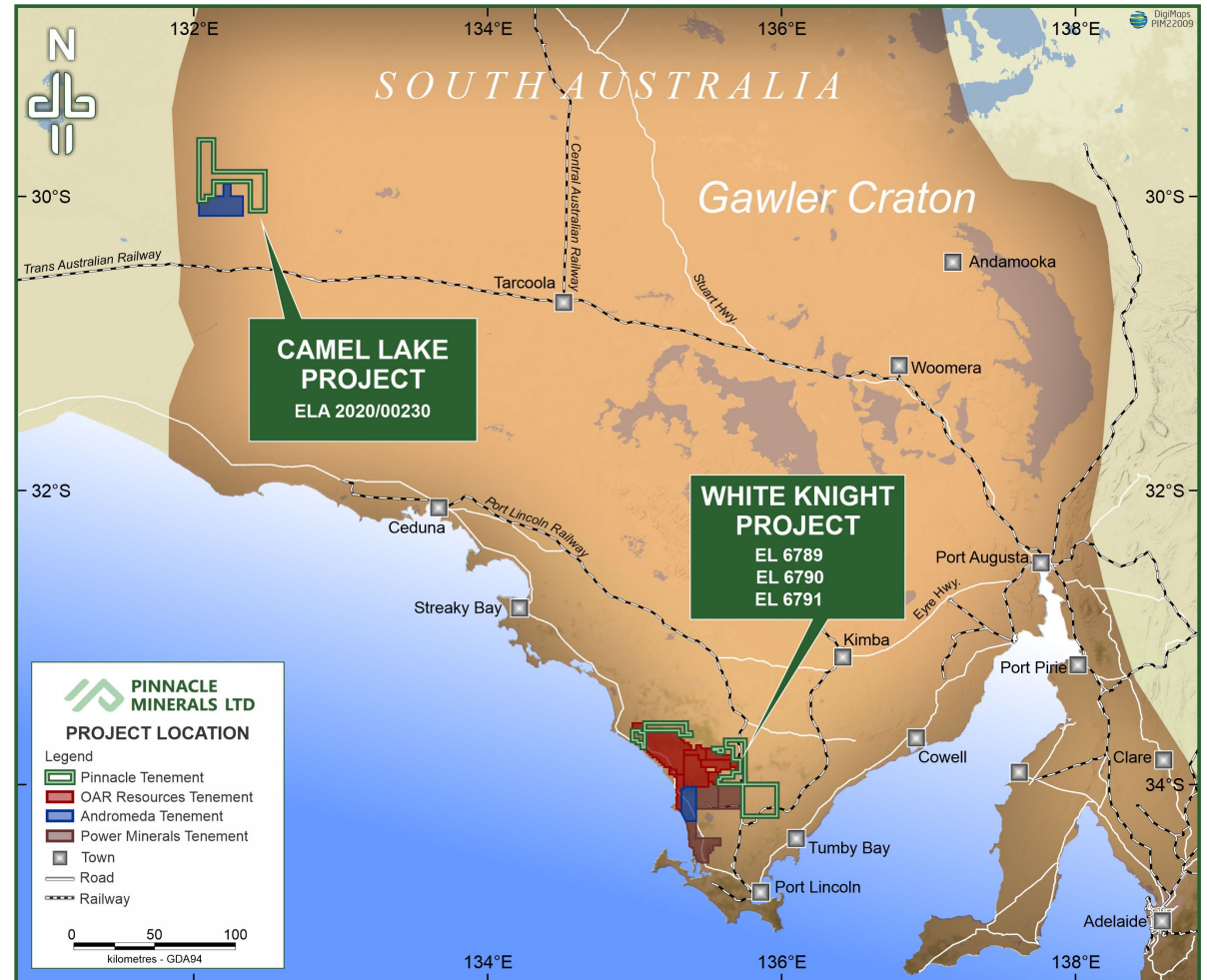
White Knight & Camel Lake projects prospective for halloysite with extensive drilling @ Camel Lake highlighting potential for a zircon dominated heavy mineral sands deposit

1,051 km² White Knight tenement package on the Eyre Peninsula

Projects adjacent to high-grade kaolinite and halloysite discoveries at Gibraltar (OAR), Mount Hope (ADN) & Power Minerals (PNN)

REE ionic adsorption clay potential

Target generation underway with initial exploration planned Q2 2023



2023 EXPLORATION & DEVELOPMENT PLAN

Tammin
Maiden Drill
Program
H1 2023

Latham
Land Access
Negotiations
Underway

Capel
Land Access
Negotiations
Underway

Holly & Bobalong
Bills Middle Maiden Mineral
Resource Estimate **H1 2023**
Follow up drill program **H1 2023**
(Holly & Bobalong)

Camel Lake
Land Access
Negotiations
+
Target Generation

White Knight
Target Generation
+
Initial Field Work

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