

Rare Earth Elements  
Nickel | Copper | Gold  
Narryer Terrane, Western Australia

AGM Presentation

November 2022

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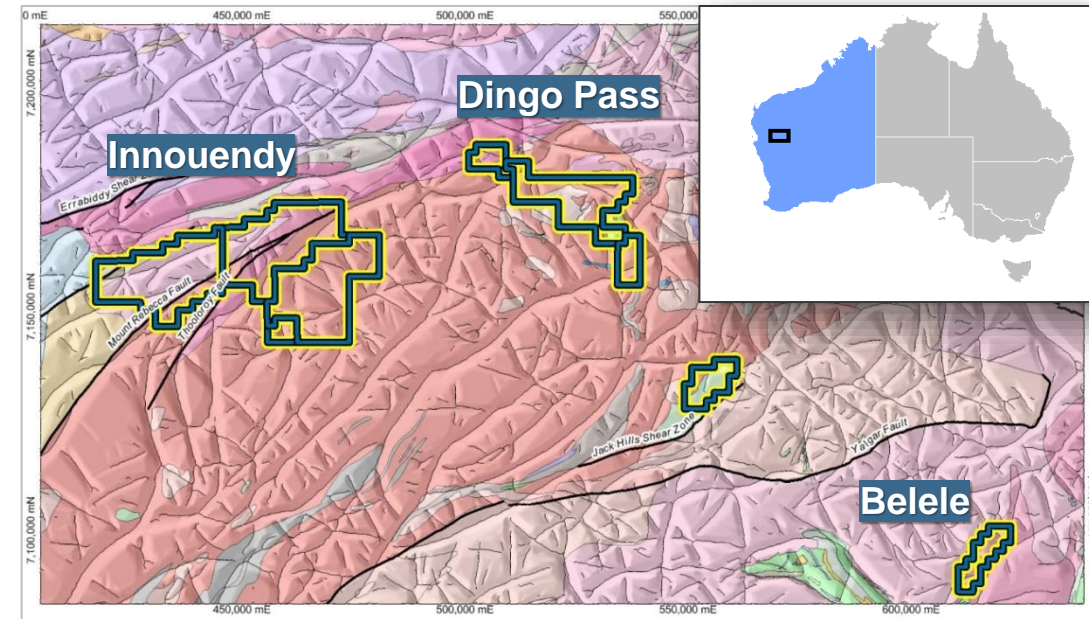
**No New Information** This document contains information extracted from ASX market announcements reported in accordance with the 2012 edition of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves” (2012 JORC Code) and available for viewing at <https://www.desertmetals.com.au/site/investors/asx-announcements/>. Desert Metals confirms that it is not aware of any new data that materially affects the information included in any original ASX market announcement.



# Desert Metals ASX:DM1

The Company has been successful in discovering new greenfields mineralisation across several different geological settings, project areas and commodity types.

- **Rare earth elements discovery in shallow clays at Innouendy**
- **New laterite nickel mineralisation at Innouendy**
- **New PGE mineralisation at Innouendy**
- **Blind and under cover copper mineralisation at Belele**
- **Encouraging host rocks and multiple new nickel-copper-PGE targets at Dingo Pass**



GSWA 500k bedrock geology over gravity derived shaded structure, exposed major faults annotated.

## Target Generation / Data collection

Project	Survey	Metres	# Holes / Lines
Innouendy	DownHole EM	274	2
Belele	DownHole EM	694	2
Dingo Pass	DownHole EM	1,196	5
Innouendy	MovingLoop EM	8,900	6 lines
Irrida East	MovingLoop EM	11,500	8 lines
Belele	MovingLoop EM	2,100	3 lines
Dingo Pass	MovingLoop EM	13,700	14 lines
Dingo / Innouendy	Soil sampling	3488 samples	

## Target Testing / Drilling

Project	Drilling Type	# Holes	Metres
Innouendy	Aircore	313	12,703
Innouendy	RC	13	1,836
Belele	RC	10	2,206
Dingo Pass	RC/Diamond	9	2,228
Irrida Hill	RC/Diamond	3	842

# Desert Metals Rare Earth Element Discovery

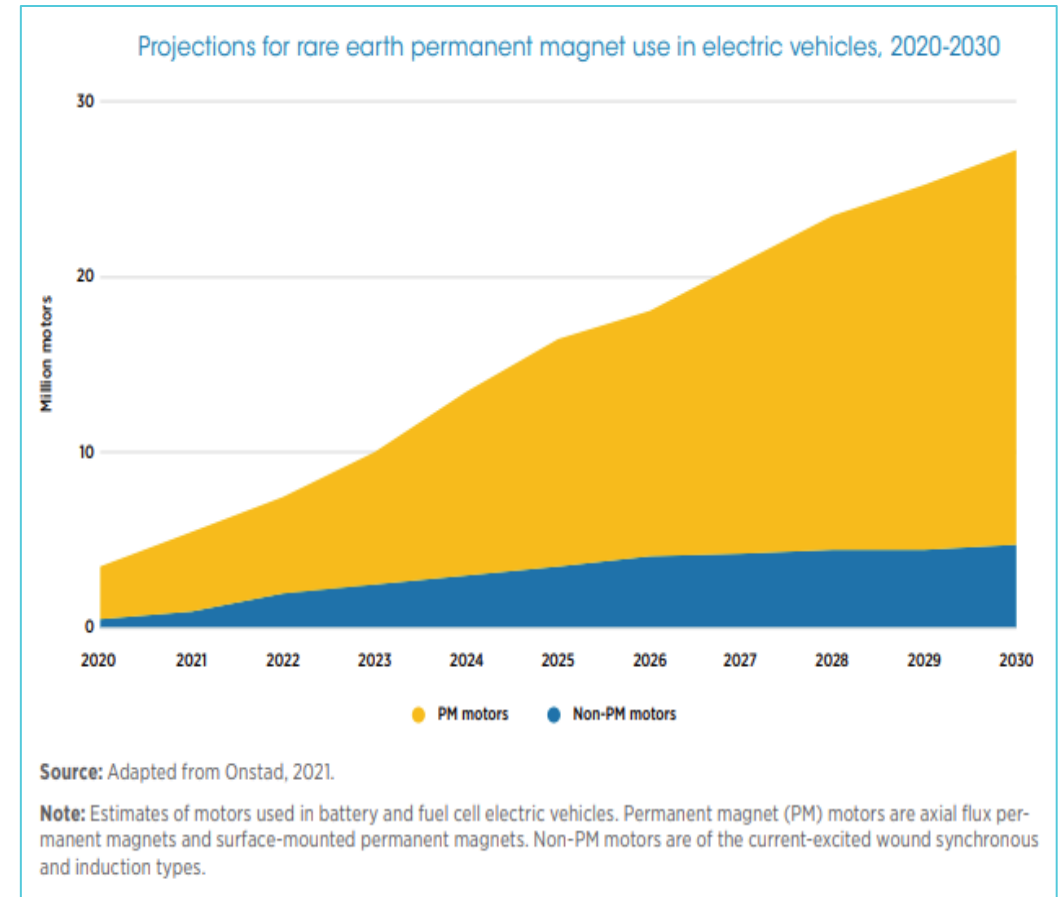
- Analysis from the recent drilling program at the Innouendy project in WA confirmed a significant clay-hosted rare earth discovery
- Desert Metals holds over 1,600 km<sup>2</sup> in an emerging new REE province
- TREO intersections within the clay at Innouendy appear to be thick (8-48m) and relatively continuous
- Step out drilling traverses across 20km of strike length have intersected both thick clays and large volumes of mafic and ultramafic rock
- Large extent of untested target area for potentially globally significant clay REE mineralisation
- Excellent recoveries from limited testing to date
- Assays remain pending for an additional ~4000m



# Electrification - Critical Minerals Supply will need to Increase

## Electrification and the global energy transition is substantially raising demand for certain minerals and metals.

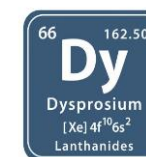
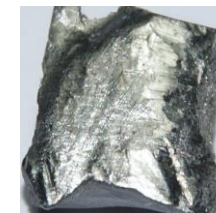
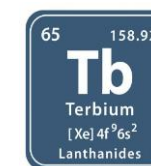
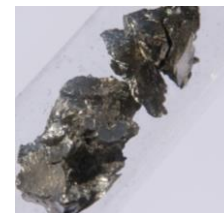
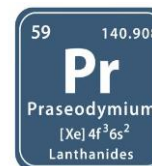
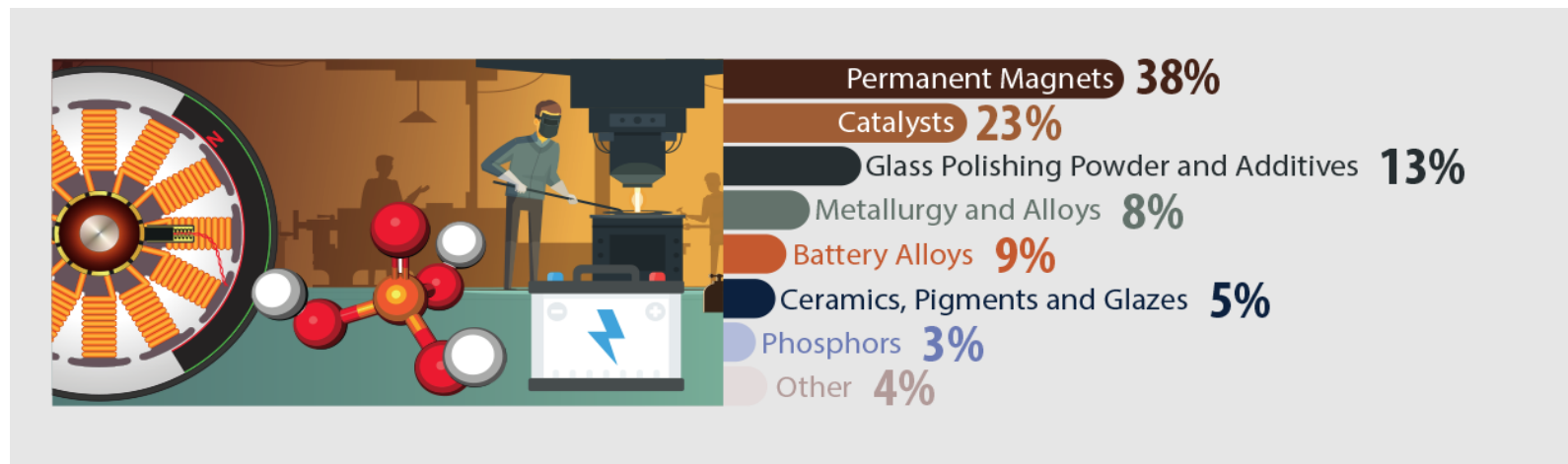
- Solar and wind power generation, grid expansion and electromobility (motors and batteries) will be the main drivers for critical minerals
- For many materials, the additional quantities are not that significant compared with total consumption; for example, copper and nickel
- Some materials – such as rare earth elements and lithium – have historically had few significant uses therefore the effect of growth in demand can, in relative terms, be very significant





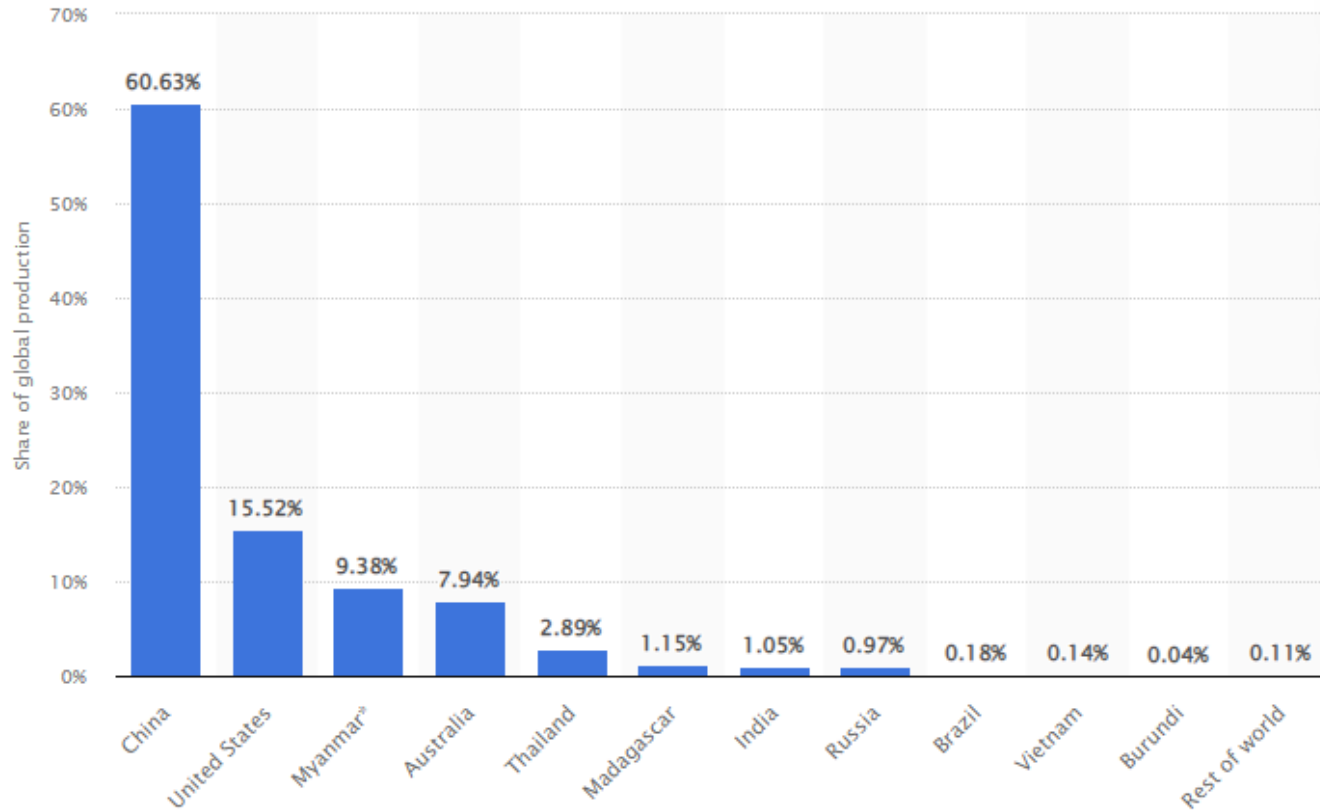
# Rare earth elements uses

- The sudden REE boom reflects these elements' unique optical and magnetic properties (Adler and Müller, 2014)
- Roskill (2021) reports that rare earth permanent magnets, the largest single end use, accounted for 29% of total demand in 2020
- By 2030, magnets are predicted to constitute approximately 40% of total demand
- Demand for key magnetic REEs may far exceed supply by the end of this decade (Alves Dias et al., 2020; Barrera, 2021)





# Production- Rare Earth Elements



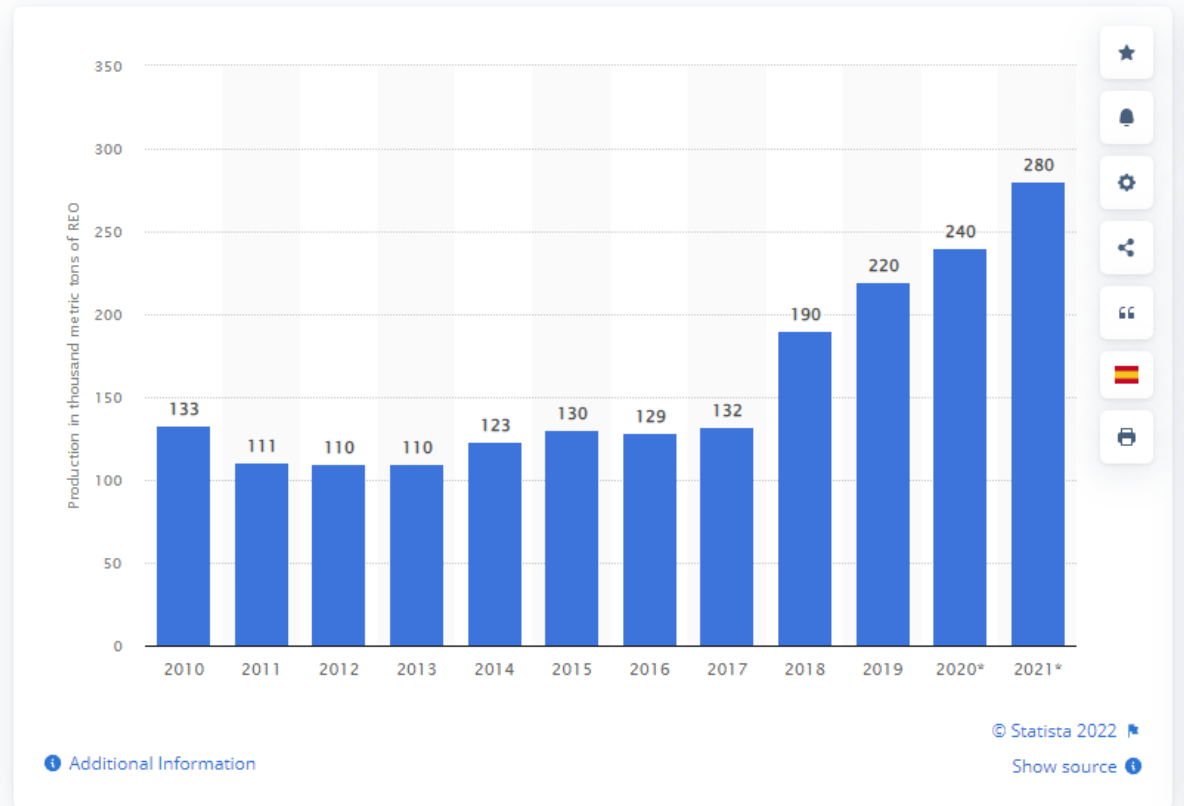
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- China produced more than half of the total global rare earth oxide in 2021- 168,000 tonnes
- Australia's production comes from Lynas Mt Weld mine in Western Australia

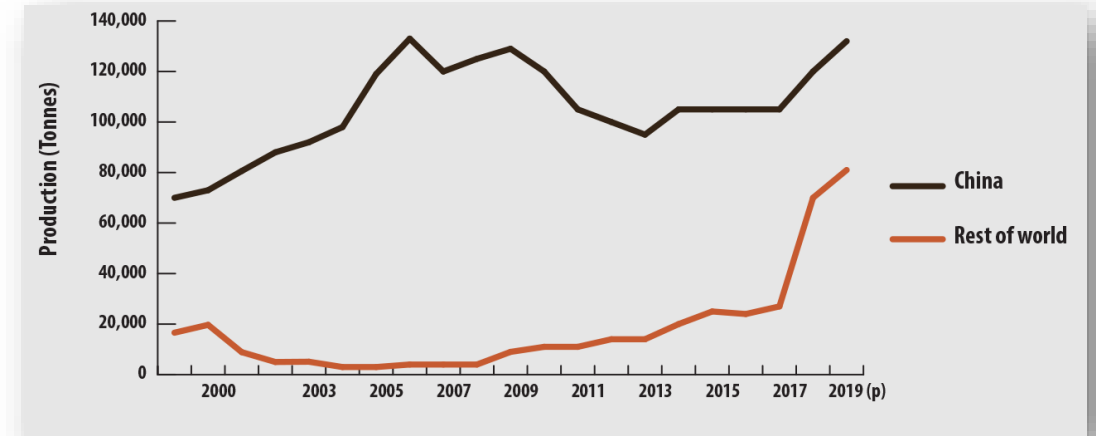
# Production- Rare Earth Elements

## Mine production of rare earth elements worldwide from 2010

(in 1,000 metric tons REO)



<https://www.statista.com/statistics/270277/mining-of-rare-earths-by-country/>



- Production of rare earth elements more than doubled between 2010 and 2021 from 133,000 tonnes in 2010, to an estimated 280,000 tonnes in 2021.
- The United States was the world's largest supplier of REEs until the emergence of China in the mid-1990s.
- China was virtually the world's sole REE supplier until 2012, when the US producer Molycorp Inc. and the Australian company Lynas Rare Earths Ltd. started commercial production.

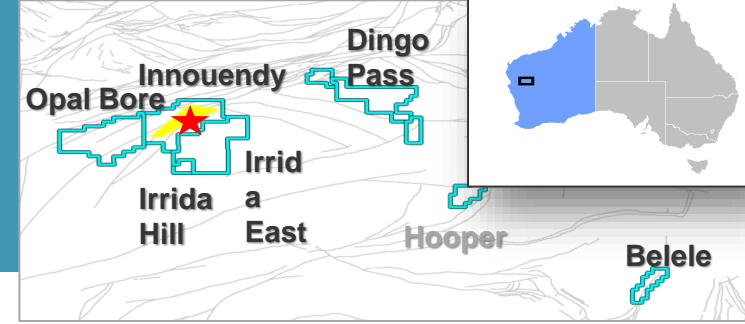
# Rare Earth Oxide Prices

Rare earth oxide prices

PRODUCT (OXIDE)	(% PURITY)	USD/KG		
		2017	2018	24 DECEMBER 2021
Scandium	99.990	4 600	4 600	836
Yttrium	99.999	3	3	11.9
Lanthanum	99.500	2	2	2
Cerium	99.500	2	2	1.5
Praseodymium	99.500	65	63	140
Neodymium	99.500	50	50	143
Samarium	99.500	2	2	4.5
Europium	99.990	77	53	32
Gadolinium	99.999	37	44	76.2
Terbium	99.990	501	455	1720
Dysprosium	99.500	187	179	452

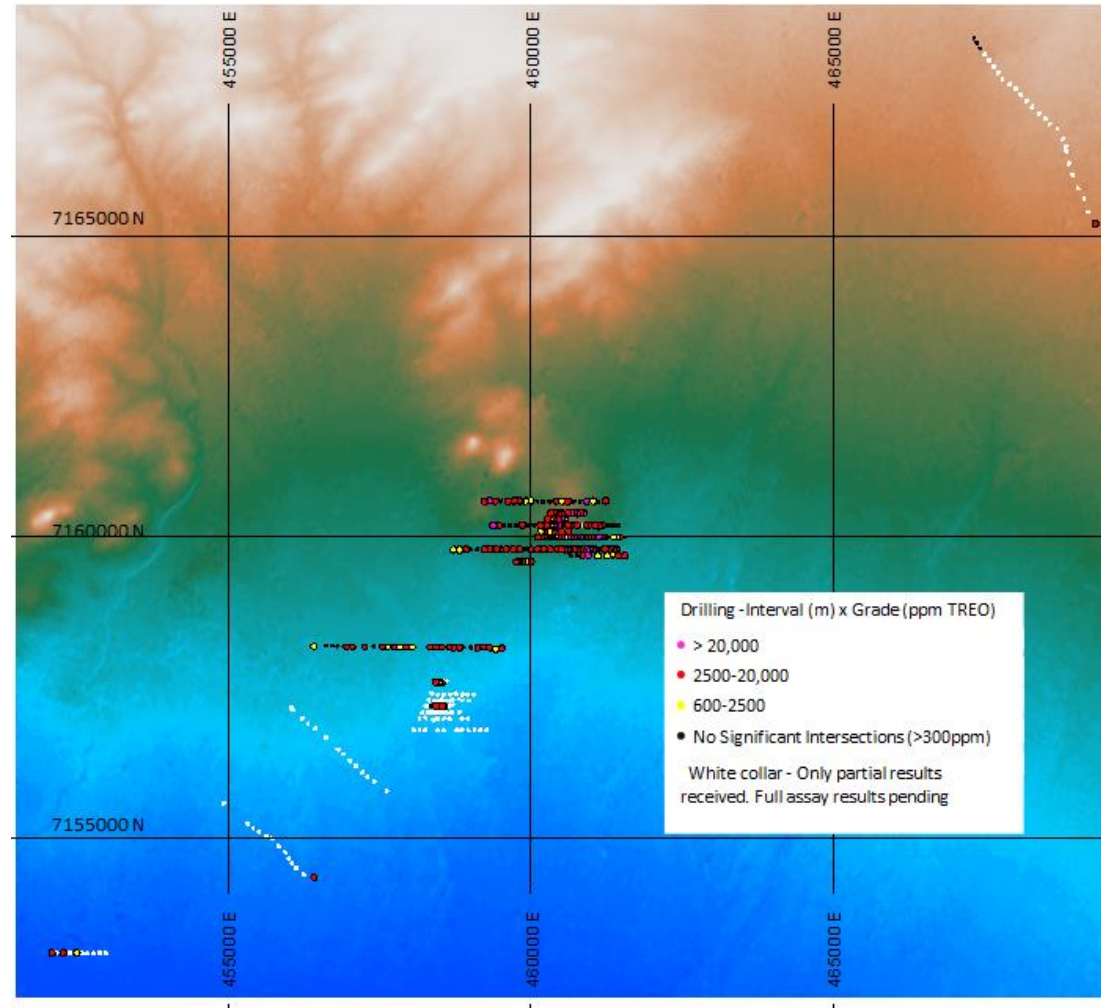
**Note:** Products are listed in order of atomic number. Prices depend on purity; data on similar purities from different sources have been combined. The source for the data on scandium is Stanford Metals Corporation. The source for all other elements is Argus Media Group – Argus Metals International. The source of the December 2021 data is ISE (2021).

# Innouendy Rare Earth Elements



## Desert Metals is advancing its Significant Rare Earth Element Discovery at Innouendy

- Assay results confirm the presence of thick - and continuous rare earths mineralisation lying close to surface and indicating a potentially significant mineralised system
- Clays which host the mineralisation start close to surface and have been intersected up to 80m thick in parts. Step out drilling traverses have intersected the prospective horizon across a strike length greater than 10km



Location of aircore and RC holes at Innouendy.

Drilling Results received to date

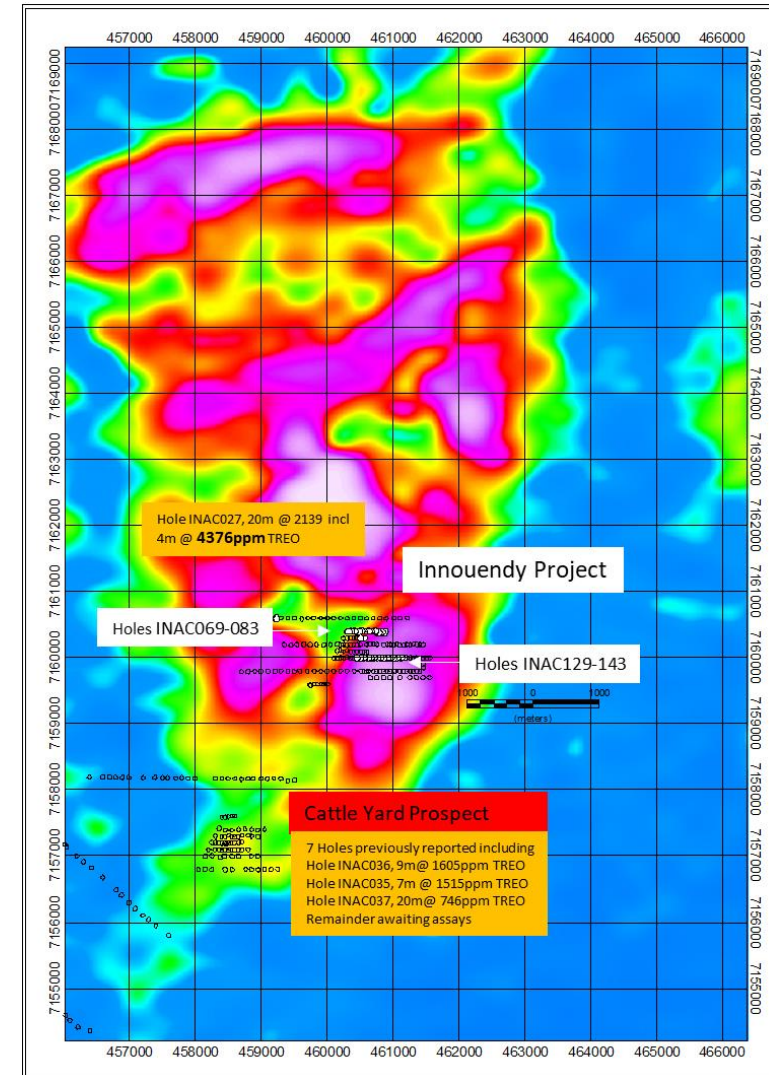
Current drilling program extends across greater than 20km.

Background image topography



## Desert Metals is advancing its Significant Rare Earth Element Discovery at Innouendy

- Assays remain pending for a further ~4000m.
- The mineralisation assayed to date is showing encouraging grades over significant widths from close to surface.
- The drill program extends over a 20km area. Once all assays are compiled, a more expansive drill program will test the extent of this new discovery and move towards defining a resource.

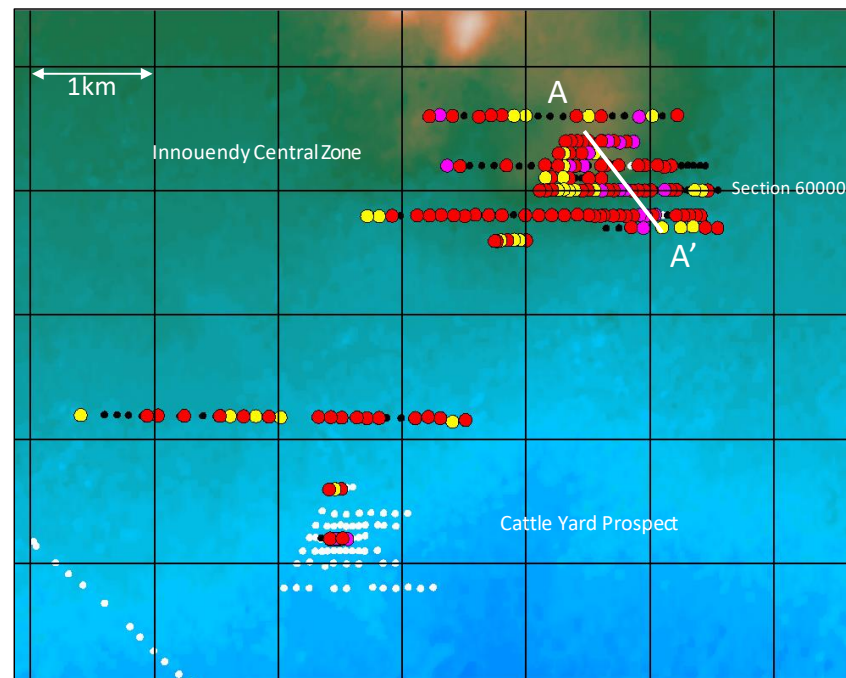


*Background Image-  
Radiometric thorium count  
from airborne spectrometer.*

*Primary minerals containing  
rare earth elements often  
contain thorium.*

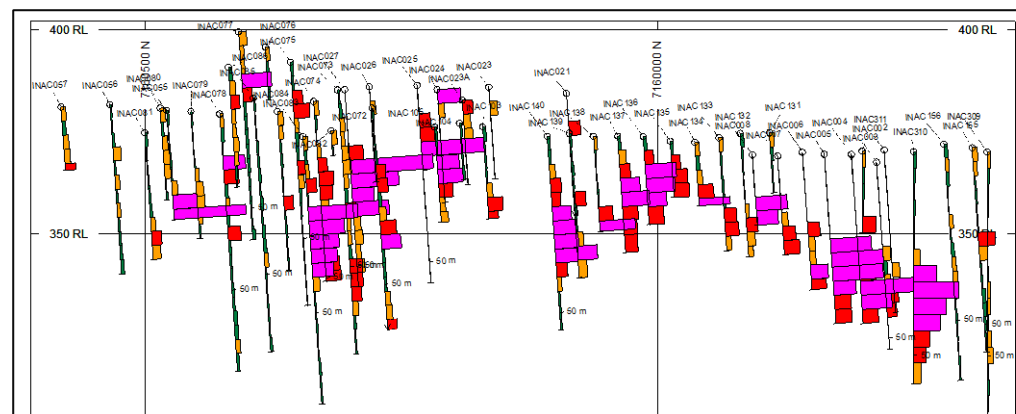
*Radiometric thorium, along  
with early time EM data, can be  
used in the targeting process to  
help identify thick clays with the  
potential for high-grade ionic  
rare earths.*

- Selected samples analysed by Lithium borate fusion, ICP-MS finish were re-analysed by weak acid (Aqua Regia) digest to test the level of REE's that can be easily leached.
- Recoveries were particularly good (>80%) for the high-grade zones of high value REE's (ASX:DM1 15 June 2022) and confirm the economic significance of the thick high-grade intersections.
- Development scenarios would likely be lower capex given the ease of extracting the minerals via simple leach.

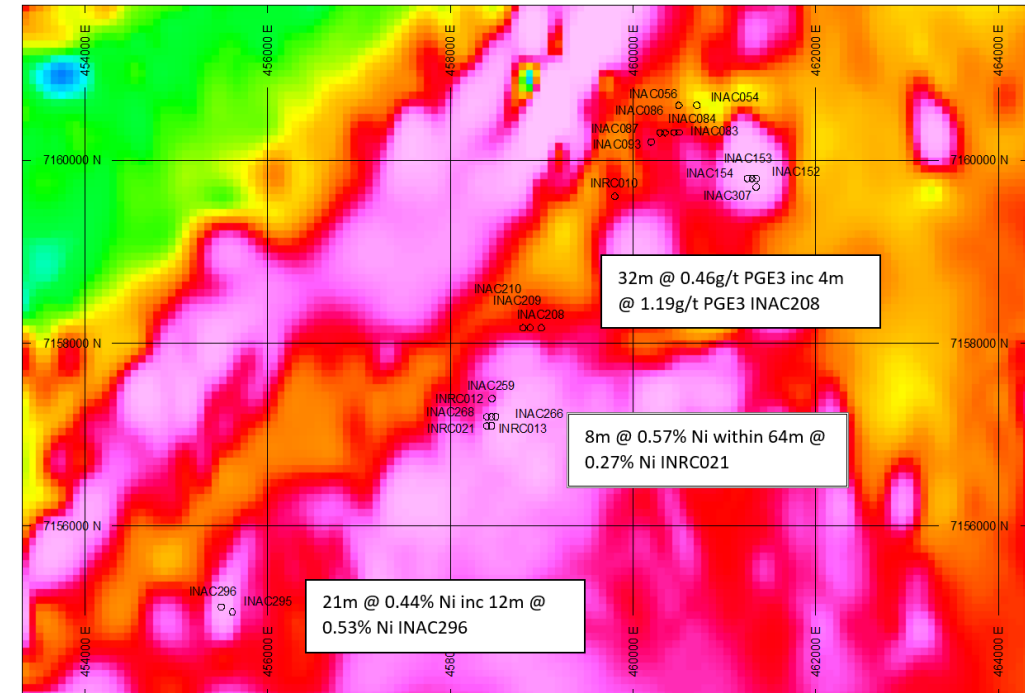


Drilling received to date – Innouendy Central Zone and Cattle Yard Prospect. Legend same as previous slide

*TREO intersections within the clay appear to be thick and relatively continuous from the results received.*



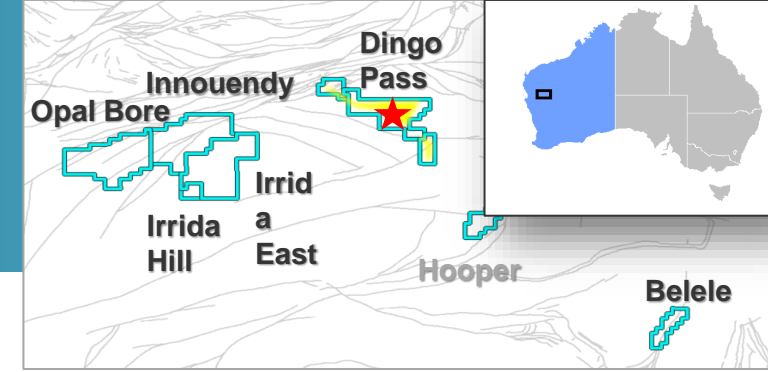
- First Platinum Group Elements (PGE) intercept of potentially economic grade in the Narryer Terrane returned:
  - **4m @ 1.19g/t Pt+Pd+Au (PGE3)** from 40m, within a broader zone of 32m @ 0.46g/t PGE3
  - The new zone is open along strike for at least 2km with additional follow up drilling planned as soon as practical.
- Several thick, lower grade nickel (Ni) intercepts in RC and AC drilling have been returned outlining a substantial nickel rich intrusive phase:
  - 64m @ 0.27% Ni from 24m, including **8m @ 0.57% Ni** (Cattle Yards)
  - 44m @ 0.33% Ni from 20m, including **12m @ 0.51% Ni** (Cattle Yards)
  - 88m @ 0.19% Ni from 16m (Cattle Yards)
  - 52m @ 0.29% Ni from surface (Innouendy Central Zone)
  - **21m @ 0.44% Ni** from 12m, including **12m @ 0.53% Ni** (new zone 3.5km southwest of Cattle Yards)
- The presence of thick nickel intervals is very encouraging with more work planned to identify the potentially higher-grade areas of the system.
- With mafic-ultramafic intrusive rocks now confirmed by drilling over a 20km strike length, a new nickel rich mafic-ultramafic intrusive complex is emerging at Innouendy.



Collar locations for significant nickel and PGE intercepts at Innouendy. Background Image RTP magnetics- regional 400m line spaced data.

# Dingo Pass

# Ni-Cu-PGE's



- Dingo Pass – just inboard of craton margin on major cross craton structure. Magnetic *dome* feature with a cluster of extremely high conductance EM targets and coincident soil anomalies [Ni, Cu, PGE's]
- An AEM survey flown in 2021 by the Company identified target zones across the package
- Ground EM surveying subsequently confirmed very high conductance discrete bedrock targets
- Mapping identified that some rocks previously mapped as BIF were mafic intrusives
- Soil geochemistry highlighted anomalous Ni, Cu, PGE over the “dome” prospect
- Compelling story emerged → strong conductors, the right rocks, coincident anomalous soil geochemistry

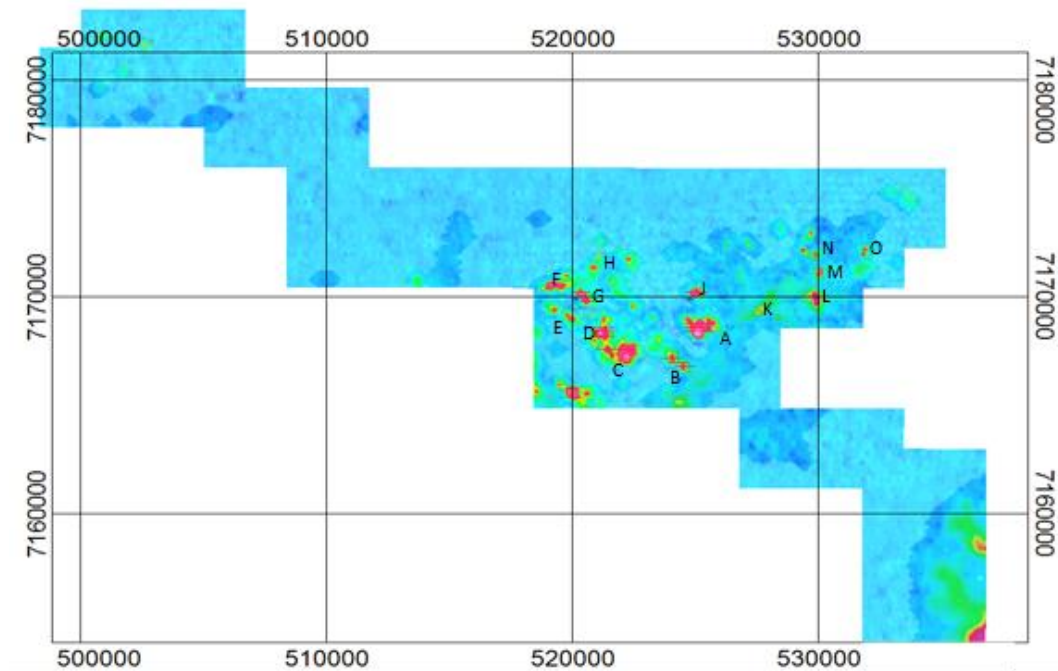
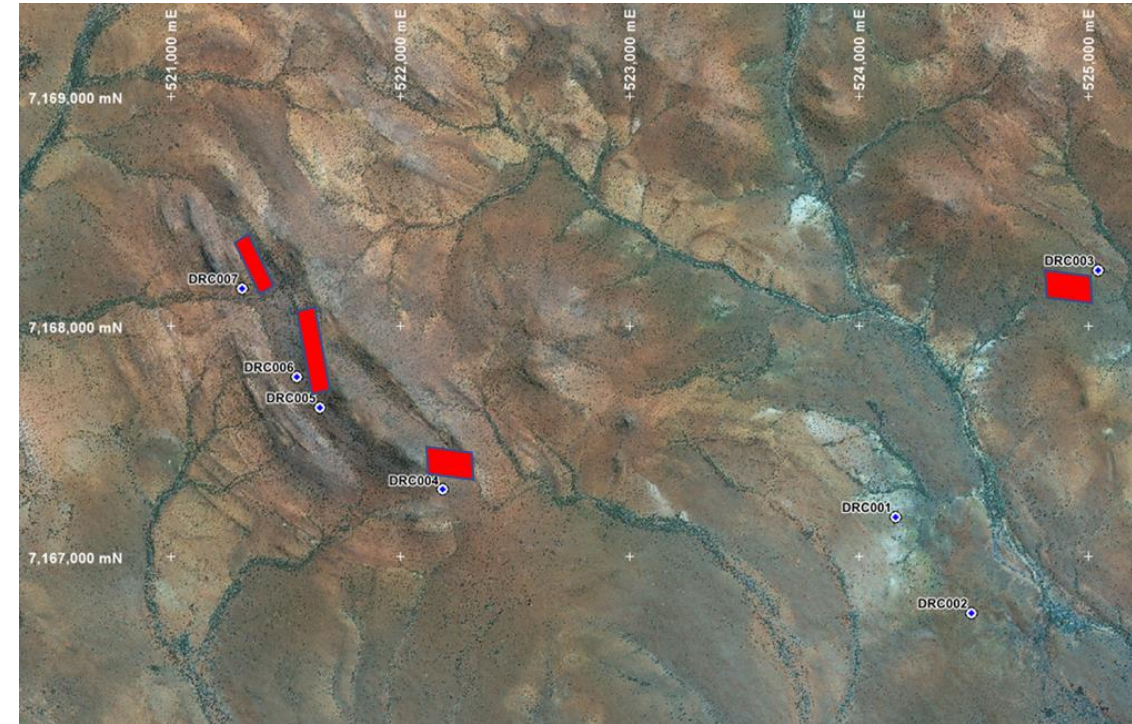


IMAGE: Tau [time constant] image [EM derived]. RED = high time constant [better conductor].



- Initial drilling did not intersect sufficient sulphides to explain the conductors at Dingo Pass.
- First drilling intersected mafic intrusions with traces of disseminated copper (Cu) and nickel (Ni) bearing sulphides, but not enough sulphide or other conductive rock to explain the anomalies
- Downhole electromagnetic data (DHEM) completed to better define the conductors location
- Subsequent drilling intersected semi-massive and/or networked sulphides coincident with the targeted modelled conductor. Assays pending.

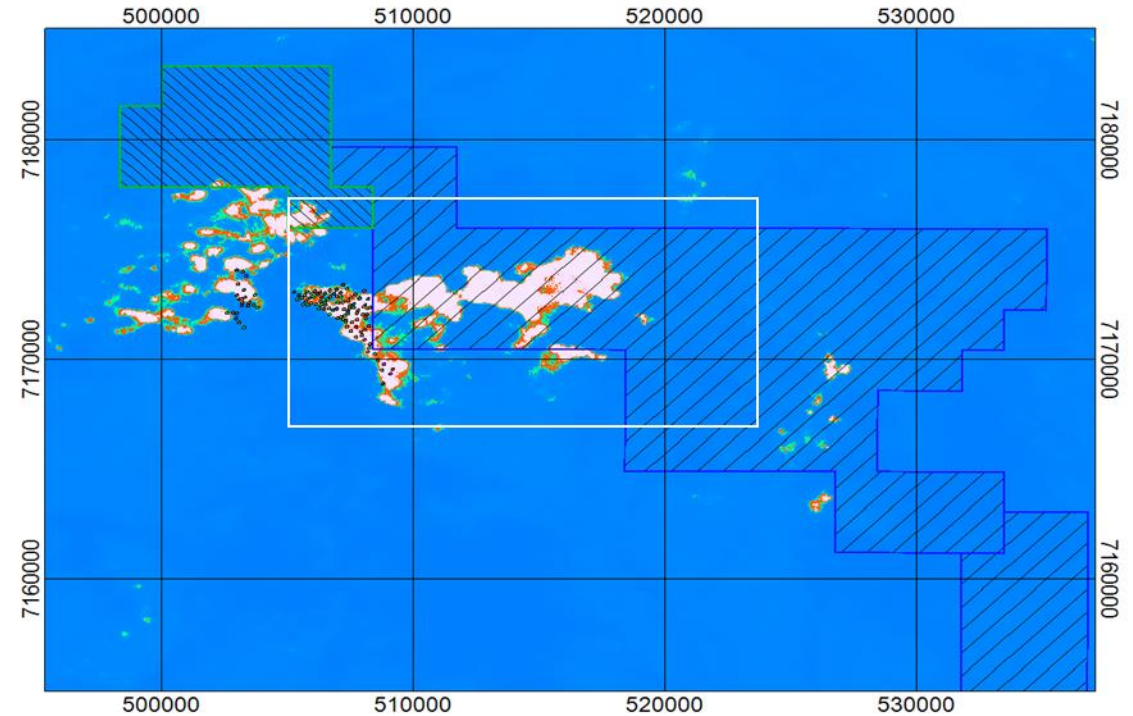


Dingo Pass Drill Hole Location Plan. Red squares - location of tested conductors modelled from DHEM

# Dingo Pass

# Ni-Cu-PGE's

- Krakatoa Resources recently declared a maiden resource at their Tower clay hosted REE discovery immediately adjacent to Desert Metals' Dingo Pass license (ASX:KTA release 21 November 2022).
- ~65km to the east of Desert Metals' recently discovered REE Innouendy Project.
- Desert Metals Rare Earth Element targeting index suggests there is a strong possibility a large part of this new discovery may lie on Desert Metals' license.

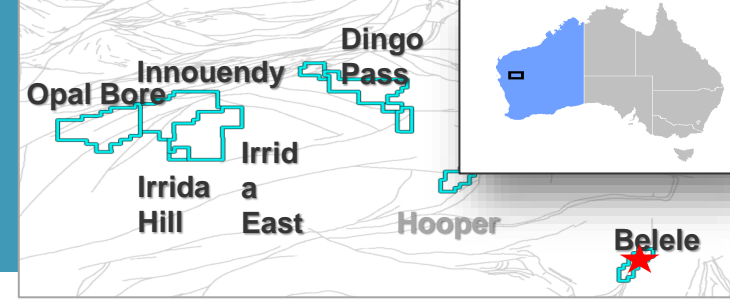


Desert Metals Dingo Pass License hashed. Krakatoas recent drill collars on their Tower REE discovery to the west of Dingo Pass. Background image Desert Metals inhouse REE targeting index derived from remote sensed data and airborne geophysics

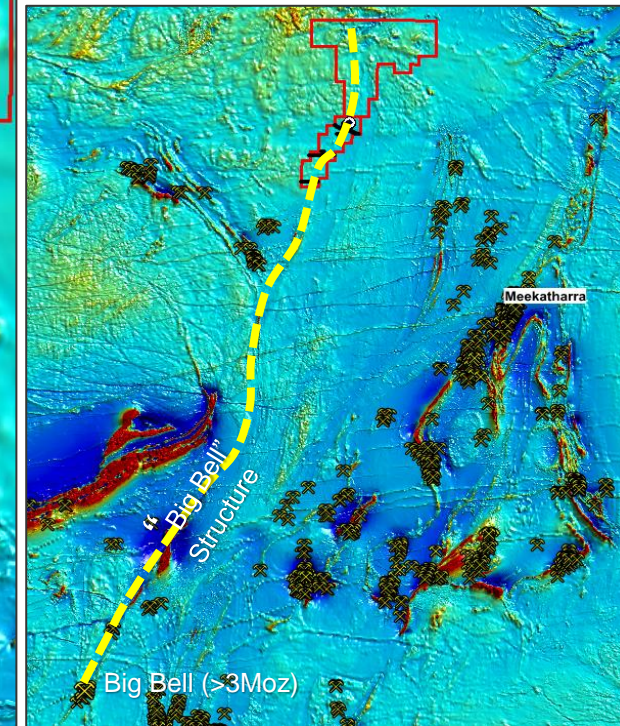
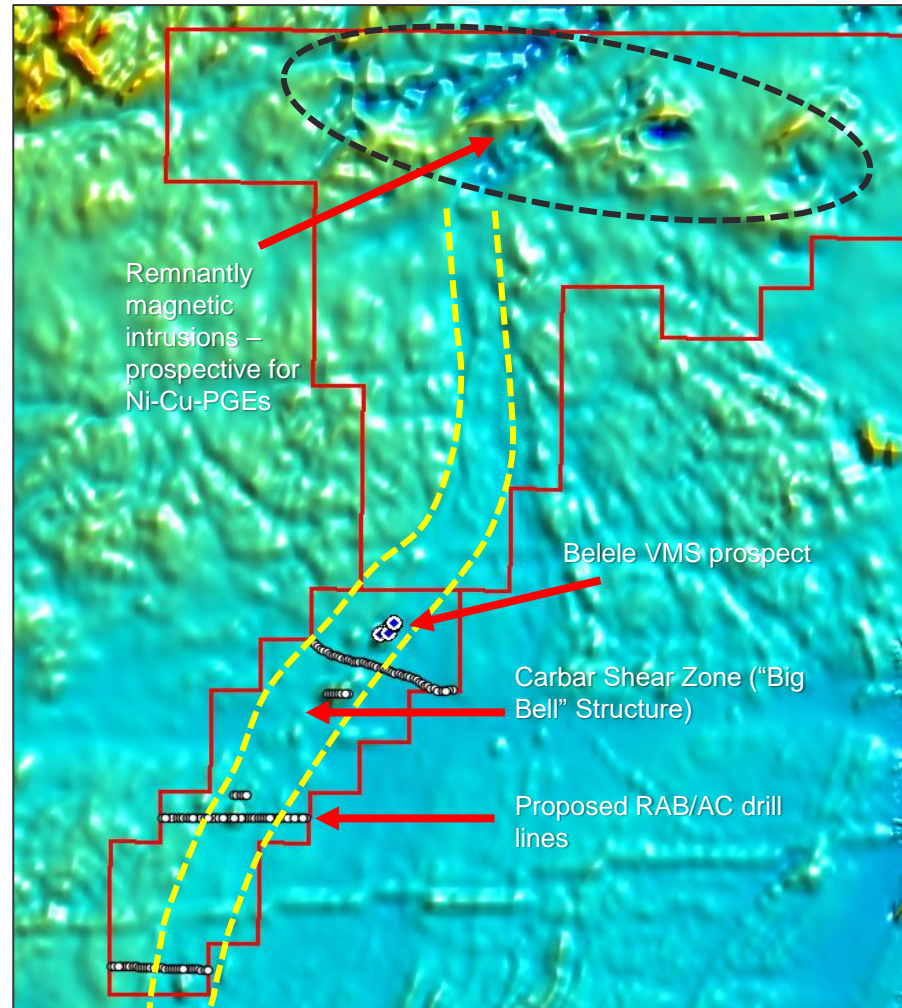


# Belele

# Copper - Gold



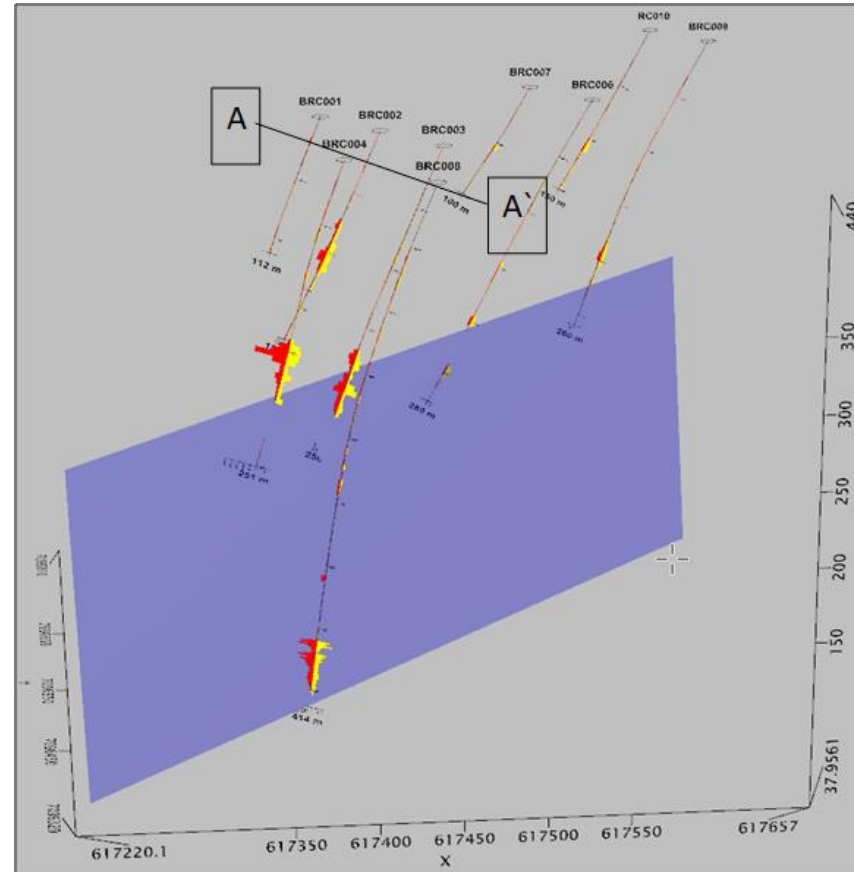
- DM1's RC drilling confirmed presence of greenstone belt and shearing
- >30km strike of gold prospective sheared greenstone belt
- 100% concealed under shallow cover and entirely untested
- Potassic alteration, silicification and sulphide mineralisation consistent with Carbar Shear Zone and analogous to Big Bell style of alteration
- **150 hole, 12,000m RAB/AC, RC drilling POW approved** – will test 15km strike of Carbar Shear Zone



# Belele

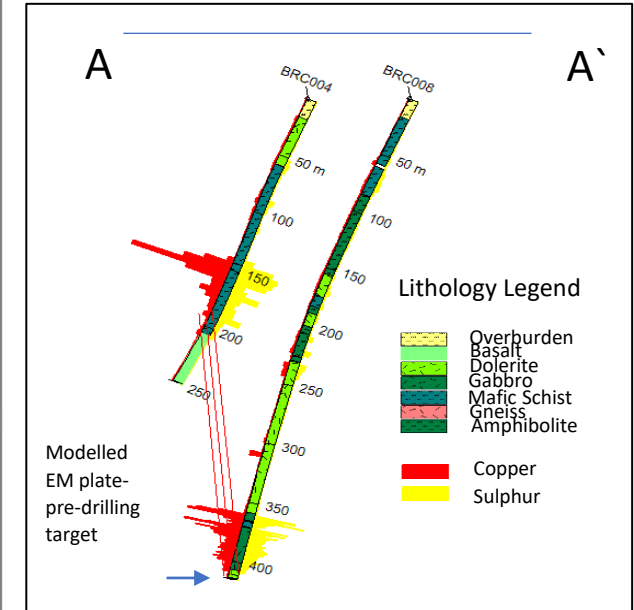
# Copper - Gold

- RC drilling confirmed the presence of the greenstone belt, shearing and conductive copper sulphide mineralisation
- The entire Belele license which is now known to be underlain by the Mingah Range Greenstone Belt has become prospective for both VMS and orogenic style gold
- Additional conductive targets along the license



**3D view looking North at Belele.**

The conductive plate modelled from EM data is shown in purple. Copper intercepts in red, sulphide in yellow. There is a good correlation between the location of then modelled plate, sulphide mineralisation and copper grade. Section A – A` shown in Figure 2.



**Hole 4 intersection**

44m @ 0.14% Cu, from 140-184m, incl  
 12m @ 0.32% Cu, from 148-160m, incl  
 4m @ 0.51% Cu, from 152-156m  
 200ppm lower cut-off

**Hole 8 intersection**

40m @ 0.11% Cu, from 360-400m, incl  
 21m @ 0.14% Cu, from 360-381m



# Corporate overview



**Mr Mark Stewart**  
*Chairman*



**Dr Rob Stuart**  
*Managing Director*



**Mr Tony Worth**  
*Director*



**Mr Keith Murray**  
*Non-Executive Director*

## Board of Directors

<p><b>Mr Mark Stewart</b> <i>Chairman</i></p>	<p>Mr Stewart has over 30 years of international legal and commercial experience, particularly in the resources industry, in Africa, Asia, North America and Australia.</p> <p>He worked as an in-house lawyer for Anglo American plc (Anglo) for over ten years. Mr Stewart has broad commercial experience in the junior mining and resources sector, having worked for junior listed resource companies from 2003 to 2010, including roles as a Non-Executive Director, Managing Director and Chairman of several ASX listed resource companies. Mr Stewart holds a Bachelor of Journalism majoring in Journalism and Law from Rhodes University (South Africa) and a Bachelor of Laws from the University of Cape Town (South Africa). He is a member of the Australian Institute of Company Directors.</p>
<p><b>Dr Rob Stuart</b> <i>Managing Director</i></p>	<p>Dr Stuart is a geoscientist who has worked in mineral exploration for the last 25 years. He has successfully explored for precious and base metals as well as bulk commodities in Australia, North America, Africa, the Former Soviet Union and Asia. He has worked for listed junior explorers and major mining companies. Rob spent 5 years as Program Manager – Minerals Exploration at BHP Billiton where he managed regional exploration for Russia and Central Asia exploring for Copper, Nickel and Metallurgical coal. Prior to that he was Program Manager for near mine exploration at BHP Billiton / Nickel West in Western Australia.</p>
<p><b>Mr Tony Worth</b> <i>Director</i></p>	<p>Mr Worth is a geologist and business development consultant with 25 years experience. He has worked in Australia, Africa, North America and South America on a wide range of commodities and deposit styles.</p> <p>Mr Worth has a broad range of experience across all aspect of the minerals exploration industry, from target generation, exploration management, field programs implementation, through to commodity market analysis, joint venture negotiations and project acquisitions.</p> <p>Mr Worth is currently Exploration Group Consultant - New Business, with First Quantum Minerals. He has also held the position of Director of Alamar Resources Ltd</p>
<p><b>Mr Keith Murray</b> <i>Non-Executive Director</i></p>	<p>Mr Murray is a Chartered Accountant with extensive knowledge and experience built up over 40 years at General Manager level in audit, accounting, tax, finance, treasury and corporate governance. Mr Murray's experience in mining extends to the 1990's during which time he was Group Accounting Manager Corporate and Taxation, and joint Company Secretary for Eltin Limited, a leading Australian based international mining services company. Mr Murray is currently General Manager Corporate and Company Secretary for Heytesbury, the privately owned Holmes à Court family company group in Western Australia.</p>

# Desert Metals Outlook

- Defining a new clay hosted Rare Earth Element Discovery
- First mover status in emerging Ni-Cu province
- Focus on Innouendy, Dingo Pass and Belele projects
- Numerous secondary targets
- Substantial leverage to exploration success on any one project. Low number of shares on issue
- Highly technical and experienced Western Australian explorer





## Contact us

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**ROB STUART**  
Managing Director

Phone      +61 8 97581333  
Email      [admin@desertmetals.com.au](mailto:admin@desertmetals.com.au)