

# WESTERN MINES GROUP

## AN EMERGING NICKEL SULPHIDE DISCOVERY UNDER COVER

MINES AND MONEY CONNECT  
MELBOURNE  
14-15 JUNE 2023

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Western Mines Group



ASX: **WMG**  
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## **COMPETENT PERSON STATEMENT**

Dr Caedmon Marriott who is a member of the Australasian Institute of Mining and Metallurgy, the Australian Institute of Geoscientists and the Society of Economic Geologists, is Managing Director of the Company. Caedmon has sufficient experience that is relevant to the styles of mineralisation and type of deposits 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'. Caedmon consents to the inclusion in this presentation of the matters based on his information in the form and context in which it appears.

## **MONETARY VALUES**

Unless otherwise stated, all dollar values are in Australian Dollars (A\$). The information in this presentation remains subject to change without notice.

# A SMALL COMPANY WITH A BIG PROJECT



## WESTERN MINES GROUP COMPANY OVERVIEW

- High-impact exploration focused on Ni-Cu-PGE and Au
- 8 projects all located in Western Australia
- **Flagship Mulga Tank Ni-Cu-PGE Project** - major komatiite nickel system undercover

- Compelling valuation and risk vs reward
- Tight capital structure - **exceptionally leveraged to exploration success**
- Fully funded Phase 2 diamond drilling in progress

- Experienced and successful board and management – exploration team lead by WA nickel expert Dr Ben Grguric

**10x**  
“An exploration driven company looking to create value through discovery”











Western Mines Group Ltd	ASX:WVG
Shares Outstanding	59,702,831
Share Price (12/06/23)	\$0.73
Market Capitalisation	\$43.6 Million
Cash (28/04/23)	\$4.03 Million
Unlisted Options (\$0.30 strike)	21,366,670

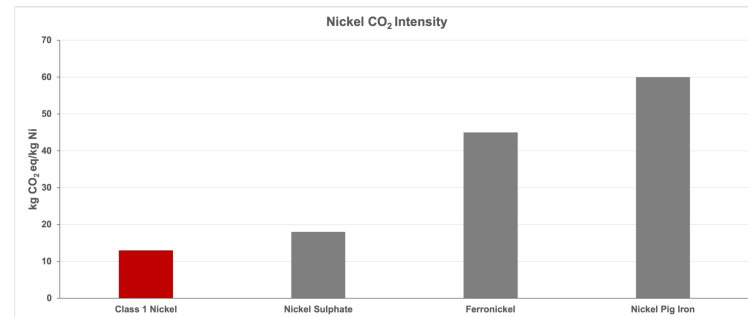
Equentia Natural Resources	8.5%
Directors and Management	8.1%
Top 20 Shareholders	42.0%

## SIGNIFICANT NEAR TERM NEWS FLOW | SMALL MARKET CAP | EXCITING RISK-REWARD

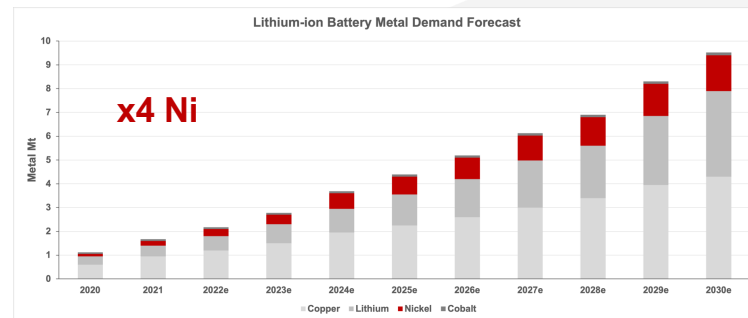
# NICKEL: KEY COMPONENT OF THE GLOBAL ENERGY TRANSITION

## LARGE LOW-GRADE NICKEL SULPHIDE WILL INCREASINGLY BECOME AN ESSENTIAL NEW SUPPLY

NICKEL LATERITE		
	Around four times more energy and CO <sub>2</sub> intensive than sulphide	
	Large surficial deposits, often in tropical regions, can be very environmentally destructive	
HIGH-GRADE MASSIVE SULPHIDE		
	High value per tonne deposits	
	Hard to find on a size and scale that will meet supply shortfall e.g. major Nova Bollinger discovery "only" ~325,000t contained Ni	
LARGE LOW-GRADE DISSEMINATED NICKEL SULPHIDE		
	Largest nickel mines in the world – nickel "equivalent" of copper porphyry	
	Deposits >1Mt contained Ni able to supply +30kt/yr Ni for multiple decades	
	Readily produce high-grade Ni concentrate	
	Potential for NetZero Carbon Nickel – waste rock from dunite/serpentinite bodies can spontaneously carbonate and absorb CO <sub>2</sub>	



Source: Nickel Institute, Goldman Sachs Global Investment Research



Source: Bloomberg NEF



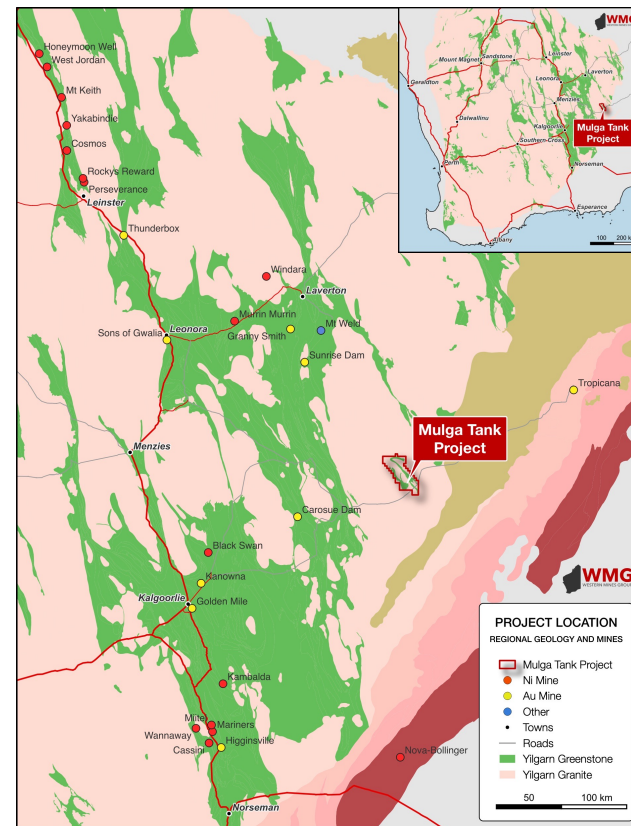
# FRONTIER EXPLORATION IN A WORLD CLASS NICKEL PROVINCE

## YILGARN CRATON WESTERN AUSTRALIA



- One of the world's major nickel provinces
- World-class examples of komatiite-hosted nickel deposits – Kambalda (35Mt @ 3.1% Ni), Perseverance (50Mt @ 2.3% Ni) and Mt Keith (643.7Mt @ 0.58% Ni)

## MULGA TANK NI-CU-PGE PROJECT

- Frontier exploration play for major komatiite-hosted Ni-Cu-PGE deposits under cover
- Strategically assembled 395km<sup>2</sup> position on the under-explored Minigwal Greenstone Belt
- Mulga Tank Ultramafic Complex (WGM 100%) comparable scale (29km<sup>2</sup>) to the Kambalda Dome camp
- Tenure under-explored to date - significant potential for exploration upside
- Recently demonstrated significant nickel sulphide mineral system
- Unlock with modern techniques and fundamental geology



## EXPLORATION MODELS ARE PERSEVERANCE AND MT KEITH

MULGA TANK ULTRAMAFIC COMPLEX OF COMPARABLE SIZE/SCALE TO PERSEVERANCE AND MT KEITH		
Model	PERSEVERANCE	MT KEITH
Type	Type 1 Stratiform Basal Massive Sulphide*	Type 2 Interstitial Disseminated Sulphide*
Resource	50Mt at 2.3% Ni	643.7Mt at 0.58% Ni
Notes	High value per tonne deposits amenable to deep underground mining	Large open pit economies of scale – <b>net &gt;0.2% Ni payable</b>
Size	 650m x 160m	 1,900m x 400m
Target	Basal contact of the complex	Shallow depths within the main body of the complex
<b>How much “free” nickel in sulphide form?</b>		

\*Deposit classifications from: Komatiite-associated Ni-Cu-PGE Deposits, Leshar and Keays, 2002

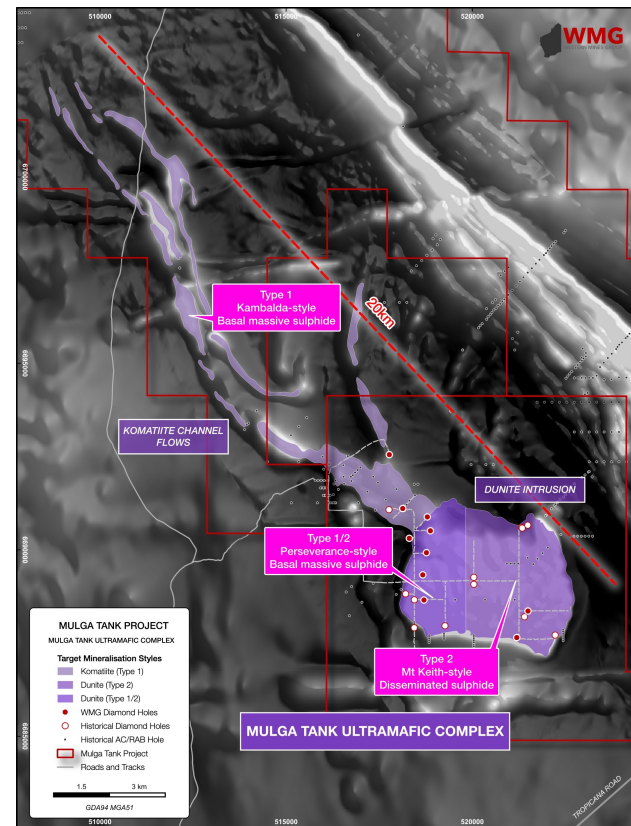
## MAJOR KOMATIITE NICKEL SYSTEM UNDER COVER

- Large adcumulate dunite body (~15km<sup>2</sup>) with interpreted komatiite channel flows extending NW over >12km
- Limited drilling has penetrated ultramafic system through cover - **21 out of 27 holes show nickel sulphide mineralisation**
- **ALL THREE MINERALISATION STYLES PRESENT**

## CRITICAL ELEMENTS OF A LARGE-SCALE WORKING SYSTEM

Critical Process	Description	Evidence
Source	Komatiite magma	✓
Pathway	Transport of komatiite magma through the crust	✓
Sulphur saturation	Addition of sulphur and sulphur saturation of undersaturated magma	✓
Chemical and physical trap	Sequestering metals into sulphides	✓
Physical concentration	Concentration of metal-rich sulphides into deposits	?

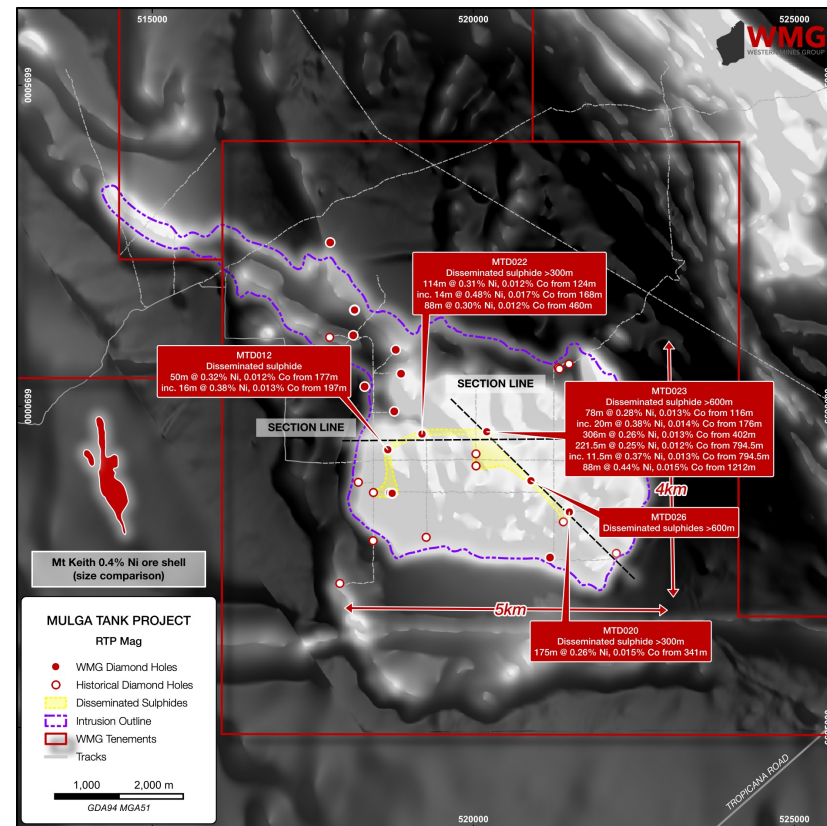
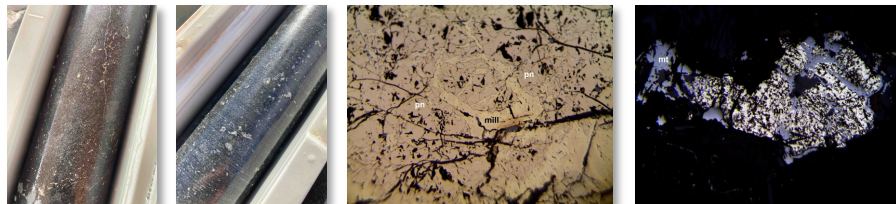
Adapted from: GSWA, Komatiite-Hosted Ni-Cu-PGE Deposits: A Mineral Systems Analysis, LL Grech, 2022



# MAIN DUNITE BODY: MT KEITH-STYLE MINERAL SYSTEM

## DISSEMINATED SULPHIDES OVER >300M INTERVALS

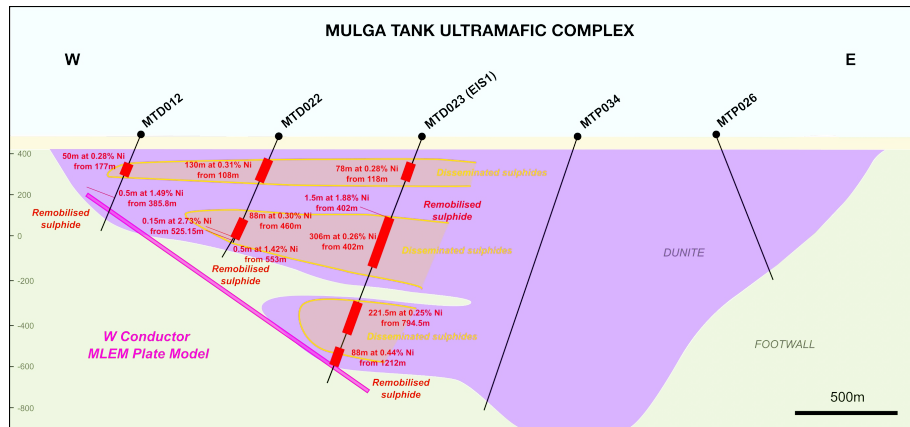
- Holes MTD012, MTD020, MTD022, MTD023 and MTD026 intersected extensive disseminated magmatic sulphides
- MTD012: 50m at 0.32% Ni, 25ppm Cu, 124ppm Co from 177m inc. 16m at 0.38% Ni, 38ppm Cu, 132ppm Co from 197m
- MTD020: 175m at 0.26% Ni, 149ppm Co, 103ppm Cu, 21ppb Pt+Pd with 0.49% S from 341m
- MTD022: 114m at 0.31% Ni, 121ppm Co, 33ppm Cu from 124m inc. 14m at 0.48% Ni, 171ppm Co, 152ppm Cu with 0.66% S from 168m
- MTD023: 78m at 0.28% Ni, 131ppm Co, 70ppm Cu, 32ppb Pt+Pd with 0.37% S from 118m inc. 20m at 0.38% Ni, 137ppm Co, 57ppm Cu, 45ppb Pt+Pb from 176m and 306m at 0.26% Ni, 130ppm Co, 47ppm Cu, 24ppb Pt+Pd from 402m and 221.5m at 0.25% Ni, 116ppm Co, 68ppm Cu, 23ppb Pt+Pd from 794.5m inc. 11.5m at 0.37% Ni, 134ppm Co, 75ppm Cu, 43ppb Pt+Pd from 794.5m and 88m at 0.44% Ni, 151ppm Co, 85ppm Cu, 38ppb Pt+Pd from 1212m
- Mineralogical work confirms abundant coarse grained pentlandite



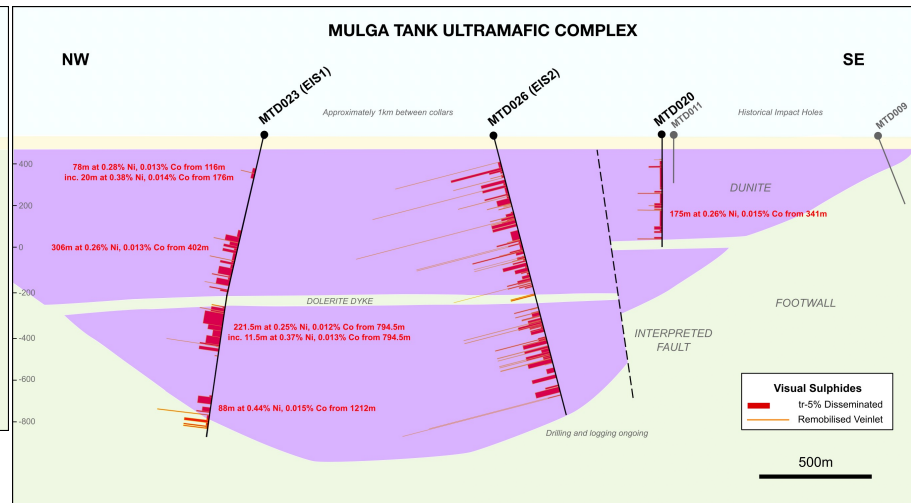


# MULTIPLE BROAD ZONES OF DISSEMINATED MINERALISATION

## CROSS SECTION W-E

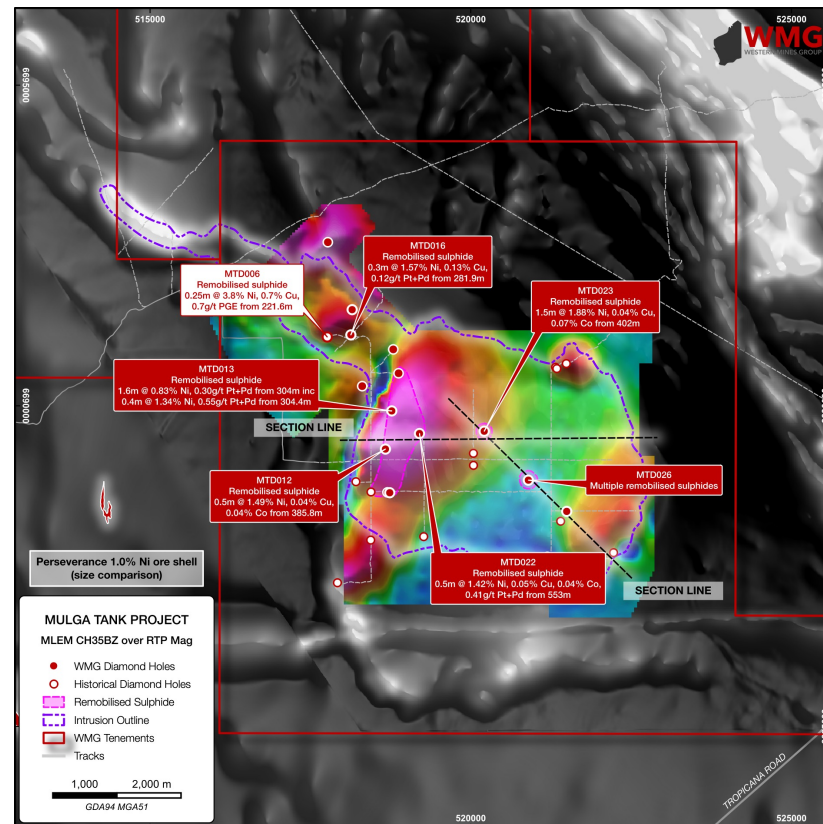


## CROSS SECTION NW-SE



## REMOBILISED MASSIVE NICKEL SULPHIDE VEINING

- Multiple zones of remobilised massive nickel sulphide veinlets above a large EM target
- MTD012: 0.5m at 1.49% Ni, 0.04% Cu and 0.04% Co from 385.8m
- MTD013: 1.6m at 0.83% Ni and 0.30g/t Pt+Pd from 304m inc. 0.4m at 1.34% Ni, 0.04% Co and 0.55g/t Pt+Pd from 304.4m and 0.4m at 1.29% Ni and 0.43g/t Pt+Pd from 153.6m
- MTD022: 0.5m at 1.42% Ni, 0.05% Cu, 0.04% Co and 0.41g/t Pt+Pd from 553m
- MTD022W1: 0.15m at 2.73% Ni, 0.08% Cu, 0.06% Co and 0.10g/t Pt+Pd from 525.15m
- MTD023: 1.5m at 1.88% Ni, 0.04% Cu, 0.07% Co from 402m
- Sulphide material migrates along faults and fractures – *from where?*



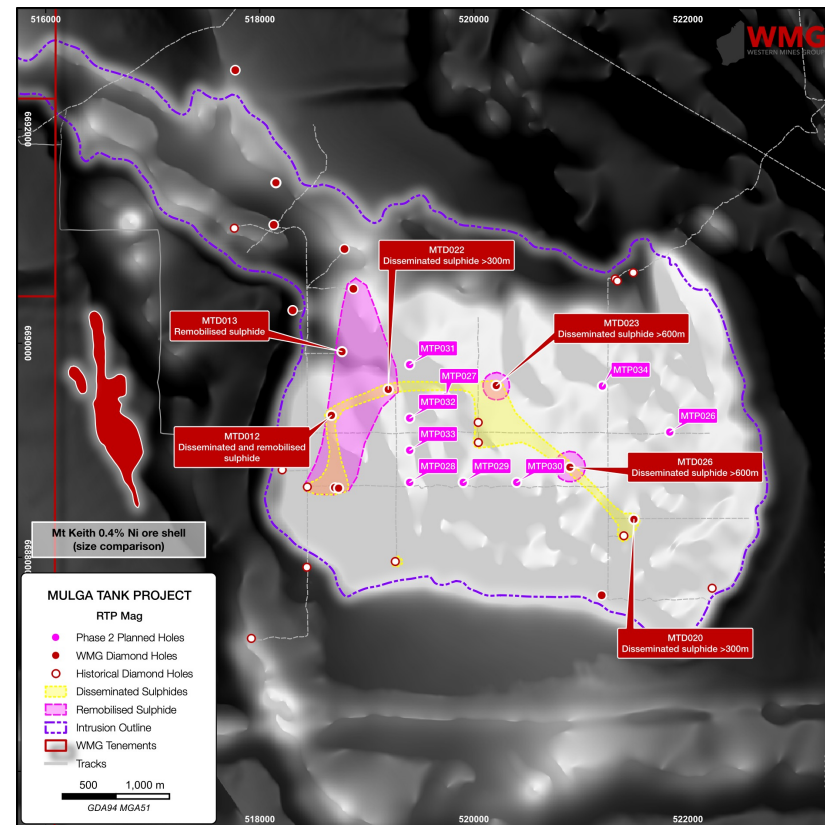
# EXPANSION OF PHASE 2 PROGRAM

## DEEP EIS HOLES UNLOCK KNOWLEDGE OF THE SYSTEM

- Phase 2 diamond program in progress to at least December 2023

HoleID	Target	Description
MTD022	EM	Testing centre of the <i>W Conductor</i> at depth between MTD012 and MTD013
MTD024	EM/Geology	Testing <i>Panhandle</i> offhole conductor between MTD006 and MTD016
MTD026 (EIS2)	Geology	Follow-up disseminated mineralisation between holes MTD020 and MTD023 (EIS1)
MTD025	EM	Testing MTD018 offhole conductor
MTD023 (EIS1)	Geology/EM	EIS deep hole testing base of <i>W Conductor</i> and centre of complex
MTP026	Geology/Gravity	Testing coincident gravity and magnetic high in an undrilled area of the Eastern Margin
MTP027	Geology	Follow-up disseminated mineralisation between MTD022 and MTD023
MTP028 MTP029 MTP030	Geology	Infilling undrilled area of the Complex between MTD025 and MTD026 to test extent of disseminated sulphide mineralisation
MTP031	Geology/EM	Testing western basal contact at depth beneath MTD013 with remobilised nickel sulphide veins
MTP032	Geology/EM	Testing western basal contact at depth beneath MTD012 and MTD022 both with remobilised nickel sulphide veins
MTP033	Geology/EM	Testing western basal contact at depth beneath MTD012 and MTD022 both with remobilised nickel sulphide veins
MTP034	Geology/Gravity	Deep hole testing centre of gravity high and base of complex

Visible Ni sulphides  
Visible Ni sulphides  
Visible Ni sulphides  
Visible Ni sulphides  
Visible Ni sulphides



# MULTIPLE DRIVERS TO COMPANY SUCCESS OVER 6-12 MONTHS

## PATHWAYS TO SHAREHOLDER VALUE

### 1 MT KEITH-STYLE

EXTENDING DISSEMINATED  
SULPHIDE MINERALISATION

Ongoing systematic drill program

Beneficiation testwork

Confirm payable Ni sulphide mineralisation

RESOURCE DRILL OUT

Criteria: >500,000t [Ni], >0.25% Ni, top 200-300m

### 2 PERSEVERANCE-STYLE

TARGETING BASAL MASSIVE  
SULPHIDE MINERALISATION

Ongoing systematic drill program

DHEM surveys

Further geophysical techniques to  
image Mulga Tank Complex

AIM TO DISCOVER SOURCE OF REMOBIISED MASSIVE SULPHIDE

### 3 KAMBALDA-STYLE

HIGH-GRADE CHANNEL  
MINERALISATION

Grant of tenement E39/2299

Belt wide geophysics and targeting

FIRST BELT WIDE DRILLING OF KAMBALDA-STYLE  
KOMATIITE CHANNELS >12KM

*Company's exploration plans subject to change without notice*



# EXCITING DISCOVERY OPPORTUNITY



## EXPLORATION PHILOSOPHY

- We believe multiple significant nickel deposits could be found at Mulga Tank
- We strive to do high-quality technical exploration work
- We are frugal with overheads to maximise exploration spend and minimise equity dilution
- We want to change shareholders lives through share price increase not be a lifestyle
- We offer a compelling risk vs reward and leverage to exploration success

## FOR FURTHER INFORMATION PLEASE CONTACT OR VISIT US AT STAND D01

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Tel: +61 475 116 798

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**Rex Turkington** *Non-Executive Chairman*

Capital Markets | Corporate Management

Rex is a highly experienced corporate advisor and economist who has worked extensively in the Australian financial services and stockbroking industry, specialising in the natural resources sector and participating in numerous initial public offerings and capital raising for ASX listed companies. Rex is currently Managing Director of South Pacific Securities, an advisory company offering corporate finance and investor relations advice to listed companies. He was previously Chairman of Key Petroleum (ASX:KEY) and Non-Executive Director of TNG Limited (ASX:TNG). Rex is a graduate of the Australian Institute of Company Directors (GAICD) and an associate of the Financial Services Institute of Australia (AFINSAIA).



**Dr Caedmon Marriott** *Managing Director*

Exploration | Capital Markets

Caedmon has over 18 years experience in mineral exploration and equity capital markets. Caedmon was previously Managing Director of Western Australian gold and nickel explorer Aldoro Resources (ASX:ARN) and prior to that Managing Director of private exploration company Hanno Resources, responsible for establishing and managing the company's frontier exploration strategy in Western Sahara. Prior to Hanno, Caedmon worked as a buy-side mining analyst at GLG Global Mining Fund, Och-Ziff Capital and JPMorgan Natural Resources Fund. He holds a PhD in Geology, is a Chartered Financial Analyst and a member of the Australasian Institute of Mining and Metallurgy (MAusIMM), the Australian Institute of Geoscientists (MAIG) and the Society of Economic Geologists (MSEG).



**Francesco Cannavo** *Non-Executive Director*

Business Development | Capital Markets

Frank is an experienced public company director and entrepreneur with significant business and investment experience across a number of industries, including mining and natural resources. He has a strong network of investors and industry contacts throughout the Asia-Pacific region and has extensive experience in capital raising, investments and initial public offerings. Frank has been instrumental in assisting several listed and unlisted companies achieve their growth strategies through the raising of capital and the acquisition of assets. Frank is currently a Non-Executive Director of Golden Mile Resources (ASX:G88) and Lightning Metals (ASX:L1M).



**Dr Benjamin Grguric** *Technical Director*

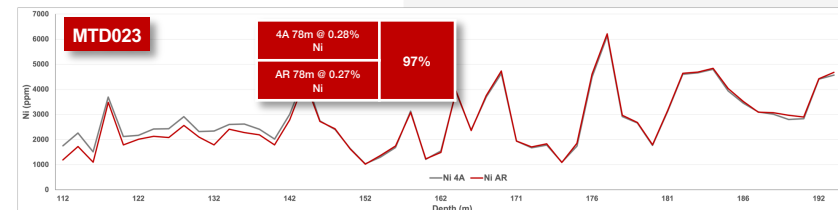
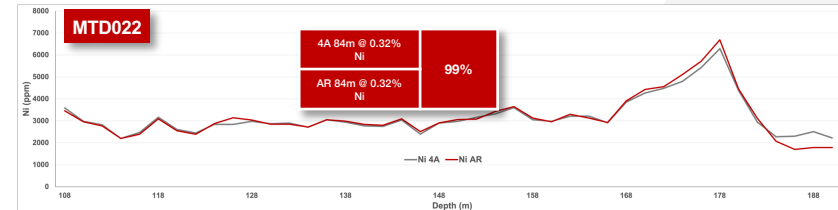
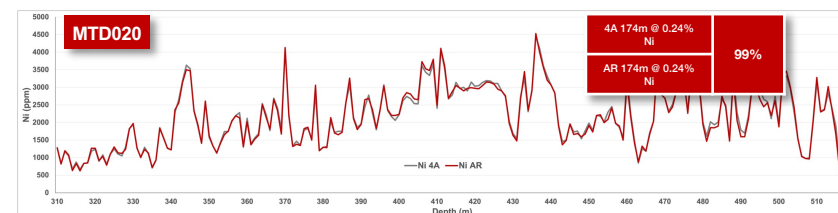
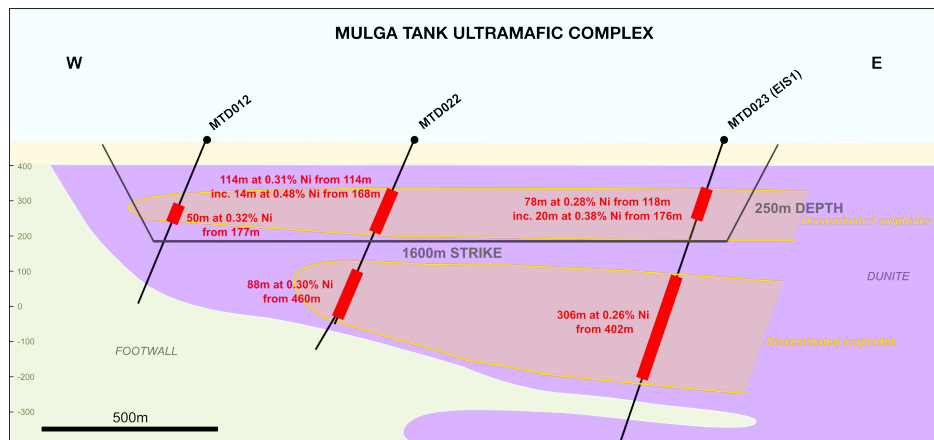
Exploration | Corporate Management

Ben has extensive experience in mineral exploration and scientific research, with direct involvement in a number of gold and nickel discoveries over the last 30 years. Ben is considered a leading expert on WA nickel sulphide exploration with over 50 peer-reviewed scientific papers. Ben spent his early career with WMC Resources/BHP, in particular at the Mt Keith Nickel Operation, managing brownfield and greenfield nickel sulphide exploration in Western Australia. As Geoscience Manager – Australia for Norilsk Nickel, Ben was responsible for exploration strategy across their portfolio of WA nickel assets and directly involved in the discovery of the West Jordan Type 2 nickel sulphide deposit. Ben holds a PhD in Earth Sciences and is a fellow of the Australian Institute of Geoscientists (AIG) and the Society of Economic Geologists (FSEG).

# INITIAL TESTWORK CONFIRMS SIGNIFICANT NICKEL IN SULPHIDE

## EXTENSIVE NICKEL SULPHIDE MINERALISATION

- Aqua regia (AR) versus four acid (4A) demonstrates nickel mineralisation in sulphide
- Shallow mineralisation over 3.2km MTD012-MTD022-MTD023-MTD026-MTD020
- Next step beneficiation testwork to confirm high-grade nickel concentrate recoverable



# PHASE 1 DIAMOND DRILLING TESTED A RANGE OF TARGETS

## VISIBLE NICKEL SULPHIDES IN SIX OUT OF TEN HOLES

- Significantly enhanced the understanding of the complex

HoleID	Target	Description
MTD012	Geology	Tested western margin of the intrusion between holes MTD003, MTD005 and the W Conductor
MTD013	EM	Tested basal contact of western margin at top of W Conductor
MTD014A	EM	Tested basal contact of western margin at top of W Conductor
MTD015	Geology	Longitudinal geological section through the neck of the Panhandle at top of the W Conductor, to confirm intrusive or extrusive related model of intrusion geometry, with implications for belt wide targeting
MTD016	Geology/EM	Followed up on high grade result of remobilised sulphides in hole MTD006 0.25m at 3.8% Ni, 0.7g/t Cu and 0.7g/t PGE, up dip of NW2 Conductor and along northern margin of gravity high body
MTD017	EM	Tested discrete EM anomaly along margin of coincident gravity high body in unusual orientation on western margin of intrusion
MTD018	Geology/EM	Tested down dip MTD003 intersection of 1m at 1.13% Ni and 0.49g/t Pd on the basal contact of coincident EM anomaly
MTD019	EM	Discrete EM anomaly on southern margin of the intrusion in highly favourable basal contact position
MTD020	Geology	Tested down dip of hole MTD011 that showed multiple zones of nickel sulphide mineralisation
MTD021	EM	Tested up dip component of NW3 Conductor

