



# Quarterly Report

for the Quarter ended December 2023

Armada Metals Limited (ACN 649 292 080) (ASX: AMM) ('Armada' or the 'Company') is pleased to provide a summary of activities for the Quarter ended 31 December 2023.

## HIGHLIGHTS

- **Bend Nickel Project:** the Company completed an initial drilling program at the Bend Nickel Deposit, Zimbabwe. Nine (9) diamond holes were drilled for a total of 2,506 metres.
- **Bend Nickel Deposit Assay Results:** results demonstrate high-grade Ni-Cu-PGE sulphide resource potential. Further:
  - Several high-grade zones intersected over an area that extends more than 450m and is open to the north and south and down plunge to the east. Significant intercepts (at a 0.4wt% Ni cut-off) include:
    - **BNDDDD001** returned an upper mineralised zone returned 16.65m @ 0.64% Ni, 0.07% Cu and 0.013% Co from 118.4m. A lower mineralised zone returned 1.13m @ 1.86% Ni, 0.37% Cu and 0.020% Co from 244.51m in a broader mineralised interval of 5.77m @ 0.75% Ni, 0.15% Cu and 0.013% Co from 242.87m.
    - **BNDDDD002** returned 0.76m @ 2.46% Ni, 1.03% Cu, 0.03% Co, 4.30g/t Pt, 11.97g/t Pd
    - **BNDDDD005** returned an upper mineralised zone of 10.00m @ 0.75% Ni, 0.08% Cu and 0.01% Co from 45.00m including 1.18m @ 2.49% Ni, 0.31% Cu and 0.03% Co from 51.00m.
  - High-grade Ni-Cu-PGE sulphide zones have been discovered along-strike from known mineralisation.
  - This first program has confirmed that the Bend Nickel Deposit is a primary Ni-Cu-PGE-sulphide deposit related to a high-level extrusive lava flows with high-grade mineralisation of a similar style to Kambalda-type deposits (Yilgarn Craton, Western Australia).
- **Forward Plan:** A dual approach to accelerating the exploration program at the Bend Nickel Project to include follow-up and infill drilling of high-grade nickel, copper and PGE zones and fast-tracked exploration in the immediate vicinity of the deposit to identify additional mineralisation.



**Commenting on the December 2023 Quarter, Armada's Managing Director & CEO, Dr Ross McGowan, said:**

*"It has become clear that the Bend Nickel Project, Zimbabwe has the potential to host high grades of Ni, Cu and PGEs, and that previous work may have failed to fully assess the potential of this historically-drilled deposit. We moved rapidly to complete the first diamond drilling program, fulfilling our initial target to drill 2,500m, in order to meet our commitment to earn 50% of the Project. I am confident that the team has done the right work to both assess the scale and potential of the Project and also understand the tools and exploration methods we will need to identify further mineralisation potential across the Bend Nickel Project. This sets us up for an exciting 2024."*





## BEND NICKEL PROJECT, ZIMBABWE

### Program Update

Armada commenced and completed a systematic exploration program at the Bend Nickel Deposit ('**Bend**') targeting high-grade nickel and copper (Figs. 1 - 3). An initial geophysical program consisting of Natural Source Audio Magnetotellurics ('**NSAMT**') was followed by a diamond drill program which was completed in mid-December 2023.

Environmental Impact Assessment ('**EIA**') approval and certification was received by the Company on 11<sup>th</sup> October 2023. The certification is valid for a two-year period and allows the Company to complete drill programs across the entire licence package.

A total of 2506.24m has been drilled in eight drill holes at Bend and one drill hole drilled into the area of the B1 conductor on the southeastern flank of the deposit along a previously interpreted regional geological contact (Table 1, Figs. 2- 3 and Appendices 1- 4).

**Table 1: Bend Nickel Project - Exploration Program Overview**

Target areas	Grid   Line	Readings	Phase 1 - 2023	Total (to-date)
NSAMT <sup>1</sup>	50   200m	50m	22,95km	22,95km
Diamond drilling	9 holes	-	2,506.24m	2,506.24m
DHEM <sup>2</sup>	7 holes	5m	1,970.90m	1,907.90m
FLEM <sup>3</sup>	3 lines	50m	1,200.00m	1,200.00m
Field Traverses	4 regional lines			

#### Notes

1. Natural Source Audio MagnetoTelluric survey
2. Downhole Electromagnetic survey
3. Fixed Loop Electromagnetic survey

Drill cores from the nine (9) holes have been reviewed and geologically logged (refer to Appendices 2 – 4 for detailed technical discussion).

A follow-up 10-line km NSAMT survey was completed to complement a 12.95km trial survey (refer to Quarterly Report – September 2023). The aim of the survey was to target previously interpreted regional geological contacts and complete infill lines at Bend to assess the applicability of this technique in this geological setting.

Down-hole Electromagnetics ('DHEM') was completed on seven of nine holes drilled. Three test lines of Fixed Loop EM ('FLEM') were completed across Bend in the area of known mineralisation (Table 1 and Fig. 3).

Assay results for nickel ('Ni') copper ('Cu'), cobalt ('Co'), platinum ('Pt'), palladium ('Pd') and gold ('Au') have been received and reported (Fig. 4 and Table 2).



## Drilling Results

The Bend Nickel Deposit consists of massive, fine- to medium-grained dunite komatiite accumulates, overlying a pillow-textured, komatiitic-basalt sequence. This contact is considered to represent a primary exploration target or contact (Figs. 2- 4 and Appendix 4).

Near-surface mineralisation has been confirmed by the initial drilling program. This aligned with historical data that reported grades from surface. Mineralisation has been observed to vertical depths of up to 380m.

Mineralisation occurs as patchy disseminations, blebs and globules grading to net-textured (or matrix sulphide), massive stringers and semi-massive sulphides (Appendix 3 provides field definitions). Mineralisation is observed at the contact, and within multiple stacked zones, interpreted as 'flow units' (Appendix 4) above this primary contact. All mineralisation is considered primary (syn-emplacement). The sulphide mineralogy is not a pyrrhotite-pentlandite-chalcopyrite assemblage and is interpreted to have been modified, and upgraded, by post-genetic processes, to millerite-chalcopyrite. These observations require petrographic and whole-rock assay confirmation to support the interpretations.

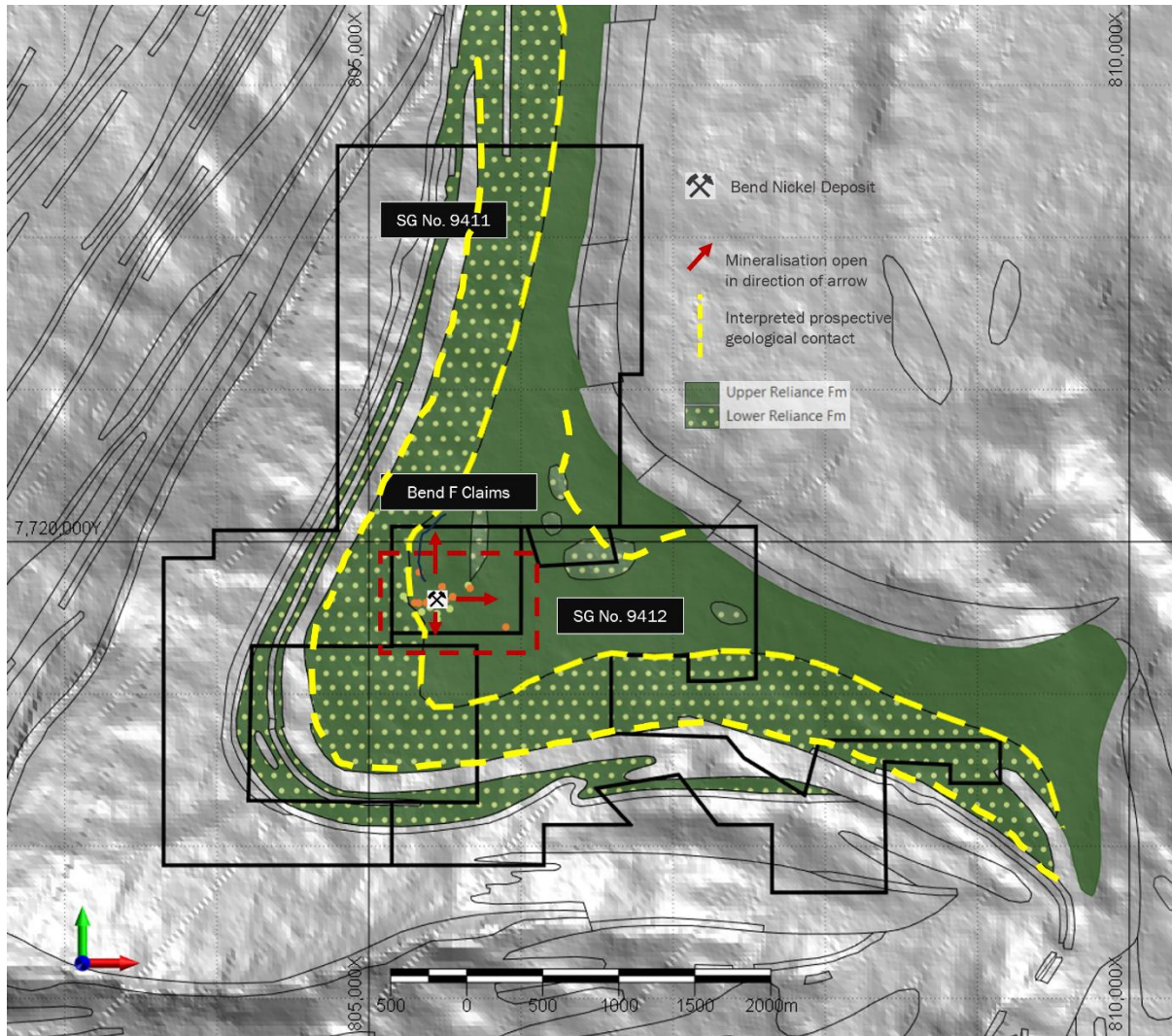
Assay data have demonstrated previously unreported Pt, Pd and Au endowment at Bend, from near surface to depth.

Ni, Cu, Co and Pt, Pd and Au mineralisation is open to the east, south and north of Bend (Figs. 4 and 5). Initial modelling indicates a number of drill holes (e.g. BNDDD002) remain open at depth.

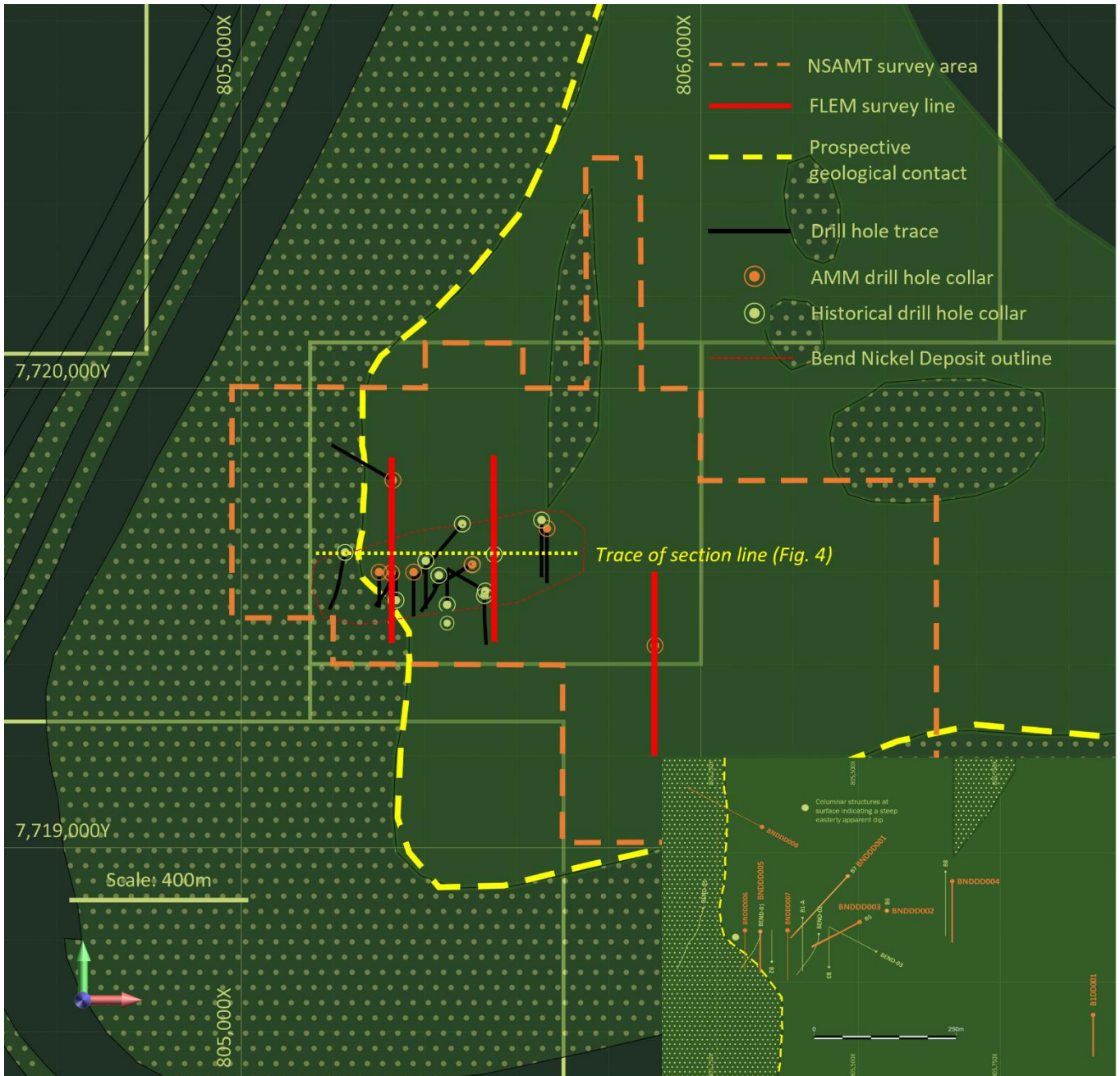
Drillhole B1DD001 targeted the southeastern flank of Bend and provided an initial test of the B1 conductor. The hole revealed a stratigraphic sequence with greater lithological variation than observed at Bend. The primary contact between the komatiitic basalt and overlying dunite komatiites was not intersected with this drillhole. Further lithochemical characterisation is required to fully interpret this hole.



**Figure 1:** Core photographs of typical mineralisation at the Bend Nickel Deposit. a) and b) BNDDD002 – 379.38m – adcumulate dunite komatiite with net-textured magmatic sulphides from within a zone where the sample returned **10.33% Ni, 2.24% Cu, 0.10% Co and 4.30g/t Pt, 11.97g/t Pd, and 0.47g/t Au** over 0.76m which relate to previous Company announcements (refer to Tables 2 and 3). Left (a) core sample, right (b) – cut core sample, NQ core. c) BNDDD005 – 99.90m - komatiitic basalt pillow lava intruded by massive sulphide with primary pyrrhotite-pentlandite-chalcopyrite showing dynamic process of absorption and generation of xenomelts at the massive sulphide margin (source: Hornsey, 2023). The sample returned **0.59% Ni, 2.47% Cu, 0.01% Co** over 0.76m (refer to Table 2). NQ core.



**Figure 2:** The Bend Nickel Project is defined by the permit boundaries. The Bend Nickel Deposit ('Bend') is displayed in the central permit (Bend F Claims). A simplified geological map displays the position of the Bend Nickel Deposit on an interpreted prospective geological contact - broken yellow line. The potential to discover further mineralisation along the prospective geological contacts is considered high. Outline of the area displayed in Fig. 3 is shown as a red broken line polygon. The Lower Reliance Formation is coloured in stippled green colours. The Upper Reliance Formation is coloured in a solid green. Historical drill hole collars are coloured light green and Armada drill hole collars are displayed orange (refer to Fig. 3 and Appendices 1 – 4).



**Figure 3: Bend Nickel Deposit work programs completed (Q4-2023) (refer to Fig. 4 and Appendices 2 - 4). Historical drill hole collars are coloured light green. The drill holes completed as part of the Phase 1 drill program are coloured orange. Solid red lines display FLEM lines. Orange broken lines represent the area of the Bend Nickel Deposit NSAMT survey lines. DHEM surveys were completed on drill holes BNDD001, BNDD002, BNDD004, BNDD005, BNDD006, BNDD007 and B1DD001 – refer to inset map.**

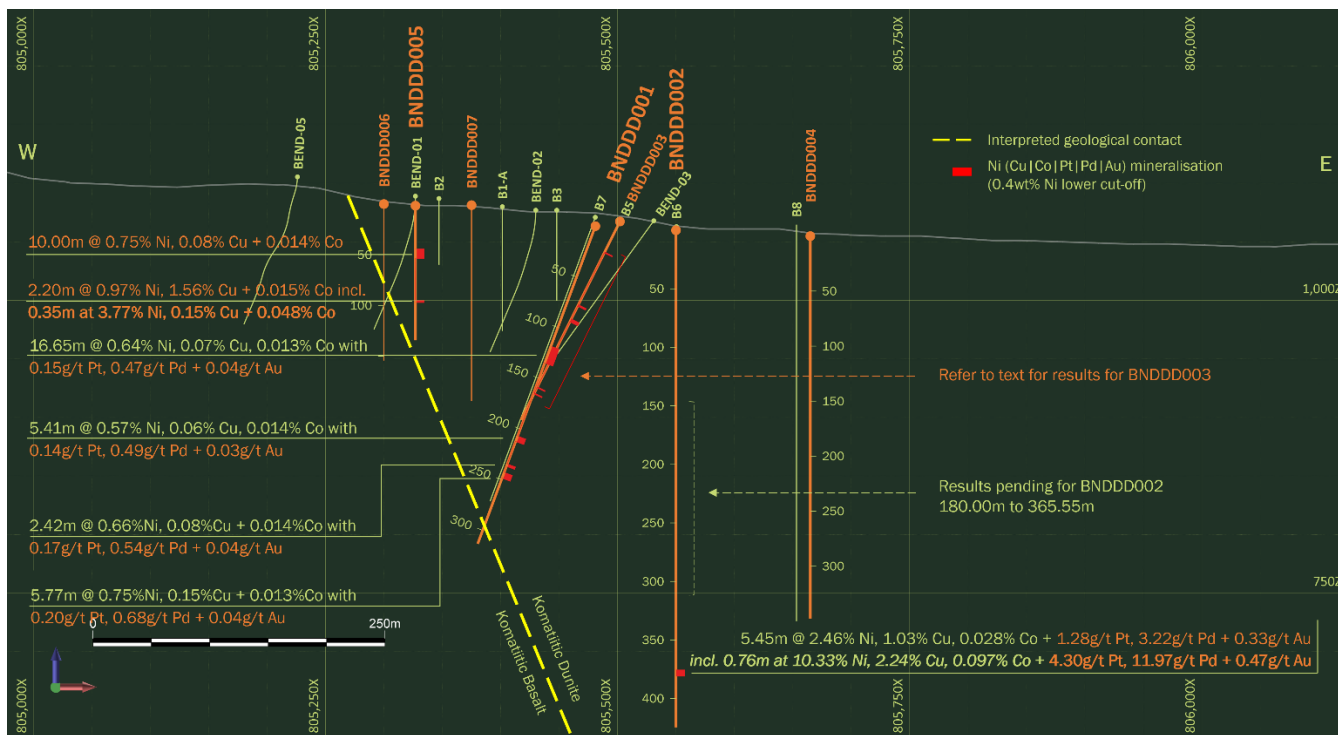


Figure 4: Bend Nickel Project – long section looking north with significant drill intercepts. Historical drill holes are displayed by light green colours. The drill holes completed with assay results as part of the Armada program are coloured in bold orange traces, where results are awaited and holes completed, thin orange traces. The section views displays drill data projected to the section line for display purposes.

Table 2: Significant intercepts - diamond drill holes at the Bend Nickel Deposit (0.4wt% Ni lower cut-off) including Pt, Pd + Au results (refer to Figs. 3 and 4).

Hole Id	From (m)	To (m)	Interval (m)	Ni (%)	Cu (%)	Co (%)	Pt (g/t)	Pd (g/t)	Au (g/t)
BNDDDD001	118.40	135.05	16.65	0.64	0.07	0.013	0.15	0.47	0.04
	207.05	212.46	5.41	0.57	0.06	0.014	0.14	0.49	0.03
	234.54	236.96	2.42	0.66	0.08	0.014	0.17	0.54	0.04
	242.87	248.64	5.77	0.75	0.15	0.013	0.20	0.68	0.04
<b>Incl.</b>	<b>244.51</b>	<b>245.64</b>	<b>1.13</b>	<b>1.86</b>	<b>0.37</b>	<b>0.020</b>	<b>0.56</b>	<b>1.95</b>	<b>0.12</b>
BNDDDD002	375.55	381.00	5.45	2.46	1.03	0.028	1.28	3.22	0.33
<b>Incl.</b>	<b>379.38</b>	<b>380.14</b>	<b>0.76</b>	<b>10.33</b>	<b>2.24</b>	<b>0.097</b>	<b>4.30</b>	<b>11.97</b>	<b>0.47</b>
BNDDDD003	30.00	31.00	1.00	0.46	0.03	0.012	-	-	-
	82.00	83.55	1.55	0.45	0.04	0.013	-	-	-
	96.00	99.00	3.00	0.51	0.05	0.013	-	-	-
	163.00	164.00	1.00	0.49	0.03	0.014	-	-	-
	169.00	170.00	1.00	0.51	0.03	0.017	-	-	-
BNDDDD005	45.00	55.00	10.00	0.75	0.08	0.014	-	-	-
<b>Incl.</b>	<b>51.00</b>	<b>52.18</b>	<b>1.18</b>	<b>2.49</b>	<b>0.31</b>	<b>0.026</b>	-	-	-
<b>Incl.</b>	<b>98.80</b>	<b>101.00</b>	<b>2.20</b>	<b>0.97</b>	<b>1.56</b>	<b>0.015</b>	-	-	-
<b>Incl.</b>	<b>99.65</b>	<b>101.00</b>	<b>1.35</b>	<b>0.59</b>	<b>2.47</b>	<b>0.010</b>	-	-	-
B1DD001	No significant intercepts at 0.4wt% Ni cut-off								





#### Notes:

- 0.4wt% total nickel lower cut-off used to calculate significant intercepts.
- Apparent (or downhole) interval is reported.
- A maximum of 3 metres of internal dilution was used.
- '-' indicates Pt, Pd +Au assay results pending at the time of reporting.
- Assay results highlighted in light green were received and reported in early January (refer to Company announcement 15th January 2024).

## Other Work

The Company previously reported that the initial 2D inversion modelling of the acquired NSAMT data led to the identification of three new apparent conductors, B1, B2 and B3. The B1 conductor was tested in the recently completed drilling program (refer to Drilling Results). The results from the NSAMT programs are currently being assessed in combination with drilling and downhole geophysical data.

DHEM survey data is currently being processed and interpreted. Data collected includes short and long-wave conductivity and total natural gamma data.

FLEM survey data is currently being processed and interpreted.

## Initial Interpretation

- The initial program has confirmed that the Bend Nickel Deposit is a primary Ni-Cu-PGE-sulphide deposit related to a high-level intrusive-extrusive komatiitic lava flow field.
- Extrusive magma-channels have accumulated sulphide mineralisation. Individual flow units (within a broader flow field) appear to be stacked within what may have been a major channel reactivated and utilised by multiple magma fluxes.
- The target horizons are both zones of disseminated and blebby mineralisation within channelised lava flows located near or above the basal contact of the komatiitic flows (Type-2 – refer to Appendix 4 Glossary for additional explanation) and massive sulphide accumulations, typically at the basal contact (Type-1, refer to Appendix 4 Deposit Analogues – Data Comparison and Glossary / for further explanation).
- Mineralisation intersected to date is analogous in potential scale and genesis to Kambalda Dome Type-2 deposits. Type-1 deposit potential is considered high at Bend. Refer to Appendix 4 - Deposit Analogues - Data Comparison.
- The Bend komatiite exposure is amenable to mapping and komatiite facies analysis (Fig. 4.12) supported by lithochemical mapping using a PXRf.

## Forward Plan

The Company will operate a dual approach, targeting both extensions of high-grade Ni-Cu-PGE channelised flow units with infill and step out holes at Bend, in addition to the implementation of broader exploration programs to directly detect additional mineralised units at contact zones mapped along strike in all directions from deposit (Figs. 2 and 3).

- **Physical property measurements:** to include magnetic susceptibility of selected core intersections.
- **Petrographic studies:** are required to confirm mineralisation and alteration styles.
- **IP geophysics:** given the potential variability in style of the mineralisation (disseminated / blebby to massive sulphide) it is appropriate to trial a ground-based 3D array IP geophysical survey.



- **Portable XRF ('PXRF') analysis:** for core analysis, outcrop mapping and soil geochemistry, analysing for Cr, Cu, Ni, Zn, Ti and Zr in all cases is appropriate, and will enable vector ratio analysis to discriminate prospective stratigraphy (further explanations can be referred to in Appendix 4 – Bend Nickel Deposit - Initial Interpretations and Discussion).
- **EM geophysics:** DHEM will continue to play a role in identifying potential high-grade targets for follow-up drilling.

## NYANGA PROJECT, GABON

### Program Update

No activities were completed during Q4-2023 due to the ongoing principal wet season.

### Forward Plan

Last quarter, the Company announced a total of 50-line kilometres of NSAMT survey that was planned for Q3-2023. This survey work was re-scheduled to take place during the short dry season in Q1-2024.

## ENVIRONMENTAL, SOCIAL & GOVERNANCE

The Company has published its Environmental, Social and Corporate Governance ('ESG') baseline report for the Company using the Socialsuite online platform.

### Bend Nickel Project

At the Bend Nickel Project, the Environmental Impact Assessment ('EIA') report was submitted. And later approved and certified on 6th October 2023. It was delivered to, and received by, the Company on 11th October 2023. The certification is valid for a two-year period.

### Nyanga Project

During the quarter meetings have been held with the Direction Générale de l'Environnement et de la Protection de la Nature ('DGEPN', a department of the Ministry of Water, Forests, Sea, Environment, Climate Change and Land Allocation) with the aim of extending the regulatory Notice d'Impact Environnemental et Social (Environmental and Social Impact study) for proposed future exploration programs. A site visit with ministry representatives is planned for Q1-2024.

## CORPORATE

### Brazil – Binding Term Sheet

In November 2023, Armada Metals announced the signing of a binding term sheet with Antares Minerais Estrategiucos Ltda to acquire legal ownership and title over certain exploration permits and applications for exploration covering an area of 16,750 hectares in the eastern portion of the Minas Gerais State, Brazil. Subsequent to the end of the Quarter, on 30 January 2024, Armada announced that it has decided not to proceed with the acquisition of the lithium projects in Brazil and focus on its core projects in Zimbabwe and Gabon.

### Results of Entitlement Offer

On 25 October 2023, Armada announced that it had successfully completed the Entitlement Offer, raising the full amount of A\$2.08M. The retail component received 40 valid applications, totaling A\$524,212.44, resulting in the issuance of 26,210,622 new fully paid ordinary shares. The shares were issued on October 27, 2023, with trading commencing on October 30, 2023. The Company has also received a commitment for a shortfall amount of A\$55,787.56, which was placed at the Company's discretion.



## Change of Company Address

On 5 October 2023, the Company's new registered address and principal place of business was changed to Level 10, Kyle House, 27 Macquarie Place, Sydney NSW 2000. All other details for the Company remain the same.

## ASX RELEASES

**Table 3:** Summary of ASX Announcements released on the Armada Metals' ASX Platform during and subsequent to the end of the December 2023 Quarter.

Date	Price Sensitive	Title
30 January 2024	Yes	Update on Brazil Lithium Acquisition
30 January 2024	Yes	Near-Surface & Broad Mineralised Intervals- Zimbabwe
15 January 2024	No	Notification of cessation of securities - AMM
15 January 2024	No	Completion of DD for Brazil Lithium Acquisition
15 January 2024	Yes	Near Surface Nickel & Copper & PGE Grades - Zimbabwe
18 December 2023	No	Change of Directors' Interest Notices (Amended)
15 December 2023	No	Change of Directors' Interest Notices - Release from Escrow
15 December 2023	No	Application for quotation of securities - AMM
12 December 2023	Yes	High-Grade Nickel, Copper Intersected at Bend Nickel Project
7 December 2023	No	Forthcoming Escrow Release
23 November 2023	Yes	AMM to Acquire Lithium Exploration Projects in Brazil
31 October 2023	Yes	Quarterly Activities/Appendix 5B Cash Flow Report
31 October 2023	No	Change in substantial holding
30 October 2023	No	Becoming a substantial holder
27 October 2023	No	Change of Director's Interest Notices x 2
27 October 2023	No	Application for quotation of securities - AMM
25 October 2023	Yes	Results of Entitlement Offer
19 October 2023	Yes	Commencement of Drilling - Bend Nick Project Zimbabwe
9 October 2023	No	Extension of Entitlement Offer closing Date - Updated
9 October 2023	No	Update - Proposed issue of securities - AMM
9 October 2023	No	Extension of Entitlement Offer Closing Date
9 October 2023	No	Details of Company Address

## FINANCIAL

In accordance with ASX Listing Rule 5.3.5 and as noted in section 6.1 of the Appendix 5B, payments of A\$115,000 were made during the Quarter comprising A\$101,000 for salaries and fees for the Company's executive and non-executive directors and payment of A\$14,000 to a related party of a director for investor relations. No other payments were made to any related parties of the entity or their associates.



## USE OF FUNDS

**Table 4:** Use of Funds Table pursuant to ASX Listing Rules 5.3.1 and 5.3.4.

	Prospectus	Dec-21	Mar- 22	Jun- 22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23	Total
Exploration	7,890,000	576,000	892,000	1,267,000	2,041,000	879,000	256,000	229,000	191,000	737,000	7,068,000
Working Capital	1,990,836	627,000	199,000	311,000	372,000	329,000	271,000	397,000	356,000	280,000	3,142,000
Expenses per offer	1,168,952	1,131,000	-	11,000	-	-	-	-	-	-	1,142,000
	11,049,788	2,334,000	1,091,000	1,589,000	2,413,000	1,208,000	527,000	626,000	547,000	1,017,000	11,352,000

## TENEMENT SCHEDULE

In accordance with ASX Listing Rule 5.3.3, Armada Metals advises that it held licenses for the following tenements during the Quarter. No tenements were acquired or disposed during the Quarter, and no new farm-in or farm-out agreements were entered into during the Quarter with respect to these tenements. Each of the tenements listed in the table below are 100% owned by the Company's wholly owned subsidiary, Armada Exploration Gabon SARL.

Permit <sup>1</sup>	Area size km <sup>2</sup>	Granted	Term	End date	Registered Holder	Interest
G5-150	1,230	29 November 2022	3 yrs	29 November 2025	Armada Exploration Gabon Sarl	100%
G5-555	1,495	14 February 2022	3 yrs	13 February 2025	Armada Exploration Gabon Sarl	100%

<sup>1</sup> Exploration permit translates from French 'Permis de Recherche Minière'

➤ No permits were acquired (directly or beneficially) during the Quarter.

## EVENTS SUBSEQUENT TO THE QUARTER END

### Drilling – Bend Nickel Project

Assay results for holes BNDDD003 – BNDDD008 were received during January – refer to the Company Announcements from 15th January 2024 and 30th January 2024.

### Brazil

Subsequent to the end of the Quarter, on 30 January 2024, Armada announced that it has decided not to proceed with the acquisition of the lithium projects in Brazil and focus on its core projects in Zimbabwe and Gabon



This Quarterly Activities Report and Appendix 5B were authorised on behalf of the Armada Metals Limited Board by: Dr Ross McGowan, Managing Director & CEO.

For further information, please contact:

**Dr Ross McGowan**  
*Managing Director & CEO*

Armada Metals Limited  
[ross@armadametals.com.au](mailto:ross@armadametals.com.au)

## BACKGROUND ON ARMADA

Armada was established to define new belt-scale discovery opportunities for key commodities (principally nickel, copper) in under-explored regions of Africa. The Company is supported by a Board and Africa-based technical team, both with a track record of successful African projects. Key members of the Armada targeting team were a part of the team awarded the 2015 PDAC Thayer Lindsley Award for an International Mineral Discovery (as members of the Kamoia discovery team with Ivanhoe Mines).

## BACKGROUND ON RICHARD HORNSEY CONSULTING (PTY) LTD

Richard Hornsey Consulting (Pty) Ltd ('RHC') has been retained by the Company to support the Company's technical team and influence the exploration strategy.

Richard Hornsey Consulting (Pty) Ltd ('RHC') is an African-based consultancy that was established to provide specialist geological consulting services to the mineral exploration and resource sector. Richard Hornsey is the principal of RHC and is a globally recognised expert in Ni-sulphide and PGE exploration and mine development. Before RHC, Richard was engaged full time by MMG Ltd as the Ni Commodity Team Leader with a global exploration mandate. RHC have been retained by the Company to provide (but not limited to) the following: 1) technical consulting in sulphide Ni and PGE metals exploration, geological field services, data compilation and three-dimensional interpretation, and on-site technical reviews and exploration staff mentoring.

## COMPETENT PERSONS STATEMENT

The information in this report relates to mineral exploration results and exploration potential, compiled under the supervision of Mr. Thomas Rogers who is a Competent Person and a member of a Recognised Professional Organisation (ROPO). Mr. Rogers is contracted to the Company as Technical Manager with sufficient experience relevant to both the style of mineralisation and type of deposit under consideration, and to the activity that he is undertaking 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'. Mr. Rogers is a member of the South African Council for Natural Scientific Professions, a ROPO. Mr. Rogers consents to being included in this report and is aware of the information and context of the report.

## FORWARD-LOOKING STATEMENTS

This document may include forward-looking statements. Forward-looking statements include, but are not limited to, statements concerning Armada Metals Limited's planned exploration program and other statements that are not historical facts. When used in this document, words such as "could," "plan," "estimate," "expect," "intend," "may", "potential", "should," and similar expressions are forward-looking statements. Although Armada Metals Limited believes that its expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that actual results will be consistent with these forward-looking statements.



## Appendix 1: Bend Nickel Project Overview

The Bend Nickel Project is located approximately 150km southeast of Bulawayo in Zimbabwe. The project is centred on 805600E / 7719750N (Datum ARC1950 Zone 35S).

The Bend Nickel Deposit ('Bend') is located within the central part of Bend Nickel Project area. Bend is a classic komatiite-style deposit associated with the interpreted base of the ultramafic Upper Reliance Formation.

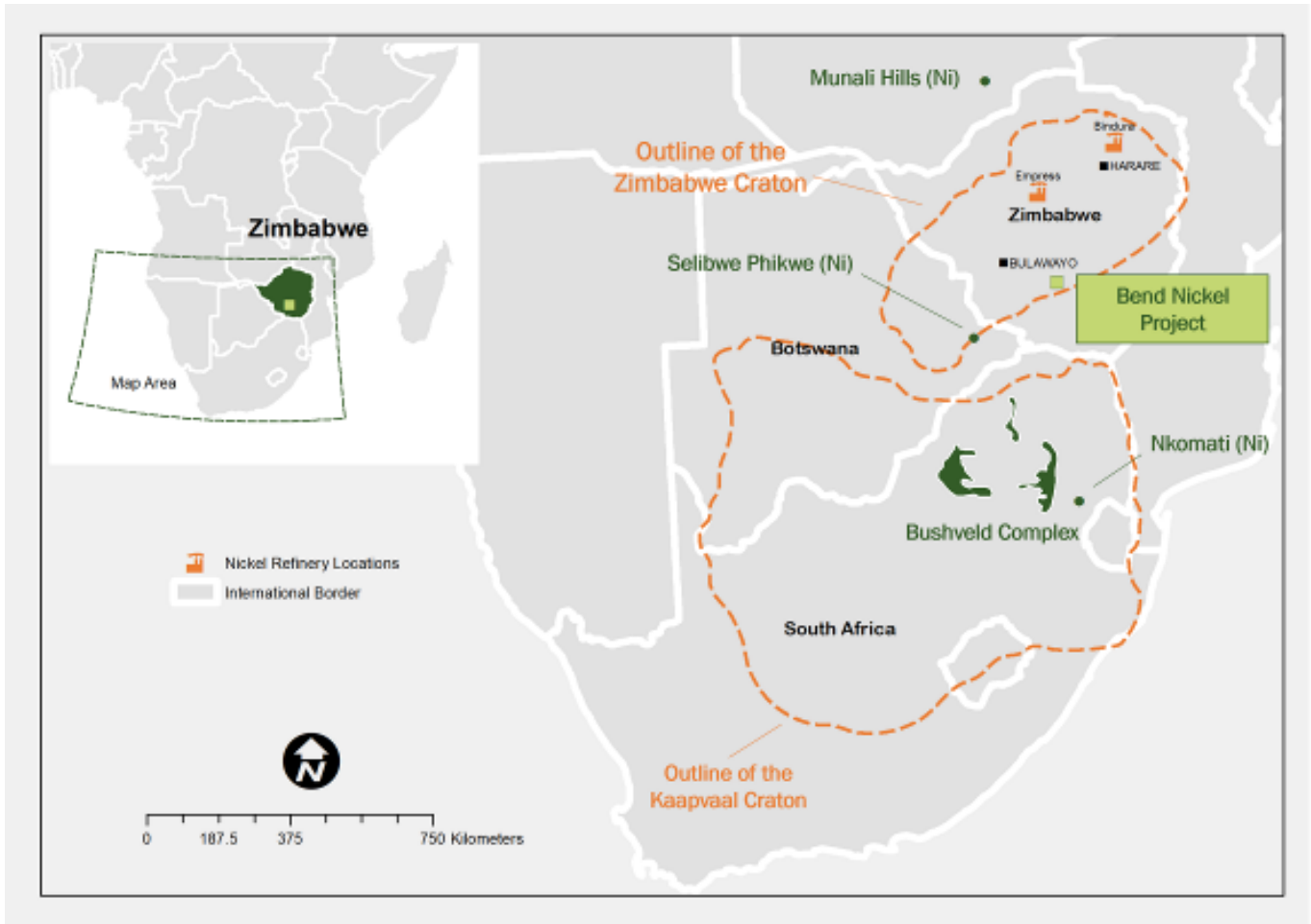


Figure 1.1: Location Map



## Appendix 2: Bend Nickel Deposit – Phase 1 drill hole information

**Table 2.1:** Drill collars - Bend Nickel Deposit (DGPS results. UTM Projection: ARC1950-35S).

Hole Id	Easting	Northing	Elevation (m)	Inclination	Azimuth	Depth (m)
BNDDD001	805481	7719705	1064	-60	220	313.37
BNDDD002	805564	7719632	1060	-90	000	424.65
BNDDD003	805512	7719619	1067	-50	300	195.53
BNDDD004	805675	7719697	1055	-70	180	347.73
BNDDD005	805337	7719601	1081	-55	180	140.34
BNDDD006	805310	7719604	1082	-60	180	154.42
BNDDD007	805389	7719604	1081	-60	180	193.18
BNDDD008	805336	7719802	1085	-52	300	250.61
B1DD001	805550	7719638	1055	-80	180	463.58



## Appendix 3: Armada field logging guidelines

**Table 3.1:** Armada sulphide field logging guidelines\*

Sulphide Mode	Percentage Range
No sulphides	-
Trace	<1%
Disseminated & blebby	1-5%
Strongly disseminated / vein / blebby	5-10%
Matrix / stringer / globules	10-20%
Net-textured	20-40%
Semi-massive	>40% to < 80%
Massive	>80%
Gossanous	-

\* The Company advises that visual estimates of magmatic sulphide mineral abundance should not be used as a substitute for laboratory analyses where metal concentrations or grades are the factor of principal economic interest. Visual estimates do not provide information regarding potential deleterious elements for economic evaluations.

Field observation: four sulphide minerals could be recognised: pentlandite, chalcopyrite, pyrite, and pyrrhotite. Typically, the major sulphide minerals can be individually identified, however where the grain size of these minerals is fine or very fine grained the *total* amount of sulphide is estimated by the Company geologists.

In high-level intrusive and extrusive komatiitic settings other magmatic sulphides such as cobalt and PGEs are associated with increased concentration of chalcopyrite. Visual identification of these minerals in the field has not been possible to date.





## Appendix 4: Bend Nickel Deposit - Initial Interpretations and Discussion

Richard Hornsey, from Richard Hornsey Consulting Ltd ('RHC') Armada's independent magmatic systems consultant has provided support in the initial interpretation of the komatiite system and magmatic processes using direct field observations from core logging (Figs. 4.1 – 4.10), lithochemical data examination and field mapping traverses (Fig. 4.11). The principal observations and interpretations from RHC are discussed below.

**Table 4.1:** Bend Deposit drill hole geological summaries.

Target	Hole Id	Objective	Total (m)	Observations <sup>1</sup>
Bend Deposit	BNDDD001	Twin B7 (MDC <sup>2</sup> , 1976)	313.37	High-MgO adcumulate dunite flow units (Fig. 4.1). Four (4) mineralised flow units – patchy disseminated grading to matrix (Appendix 3 – definitions). Matrix sulphides towards base. Hole terminated in a komatiitic-basalt unit (interpreted footwall to mineralisation).
Bend Deposit	BNDDD002	Twin B6 (MDC, 1976)	447.48	High-MgO adcumulate dunite flow units. Up to five (5) mineralised flow units – with patchy disseminated to net-textured mineralisation revealed. Terminated in dunite sequence above the basal contact. <b>Mineralisation potential - open at depth.</b>
Bend Deposit	BNDDD003	Twin B5 (MDC, 1976)	195.53	High-MgO adcumulate dunite flow units. Five (5) mineralised flow units – thin, patchy disseminated. Terminated in dunite sequence above the basal contact. <b>Mineralisation potential - open at depth.</b>
Bend Deposit	BNDDD004	Twin B8 (MDC, 1976)	347.73	Complex sequence of flow units. Terminated in a dunite sequence above the basal contact. Results from drillhole B8 were not verified due to collar positioning. <b>Mineralisation potential remains open around this drill hole location.</b>
Bend Deposit	BNDDD005	Twin BEND-01 (FEZ <sup>3</sup> , 1992)	140.34	High-MgO adcumulate dunite flow units. Two (2) mineralised flow units – patchy disseminated to matrix. Hole terminated in a komatiitic-basalt unit (interpreted local footwall to mineralisation).
Bend Deposit	BNDDD006	Extend the footprint of deposit mineralisation	154.42	High-MgO adcumulate dunite flow units. Two (2) mineralised flow units – patchy disseminated to matrix grading to semi-massive sulphide mineralisation from ~ 80m. Hole terminated in a komatiitic-basalt unit (interpreted local footwall to mineralisation).
Bend Deposit	BNDDD007	Infill hole to test surface continuity of mineralisation	193.18	High-MgO adcumulate dunite flow units. One (1) mineralised flow unit – patchy disseminated to strongly disseminated. Hole terminated in a komatiitic-basalt unit (interpreted local footwall to mineralisation).
Bend Deposit	BNDDD008	Step out hole. Test contact zone in area outside of the Bend Nickel Deposit.	250.61	High-MgO adcumulate dunite flow units. One (1) mineralised flow unit – patchy disseminated to strongly disseminated. Hole terminated in a komatiitic-basalt unit (interpreted local footwall to mineralisation). <b>Previously unreported mineralisation.</b>
B1	B1DD001	Drill test broad conductive feature - NSAMT Te mode data	463.58	Complex sequence of flow units consisting of interlayered dunites, wehrlites(?) and spinifex-textured pyroxenites (Fig. 4.5). Variable komatiitic sequence with patchy diss. pyrite.

<sup>1</sup> Further data analysis will aid in refinement of the initial interpretation. PXRF lithochemical and physical property measurements on drilled intervals are in progress.

<sup>2</sup> MDC – Messina Development Company

<sup>3</sup> FEZ – Falconbridge Exploration Zimbabwe



## Drillhole Observations (Bend Nickel Deposit)



**Figure 4.1:** BNDDD008 – 43m – typical fine-to medium grained equigranular textured olivine adcumulate with patchy blebby/globular sulphides with magnetite. Field of view from top to bottom ~45mm. Right of view is down the hole (source: Hornsey, 2023).



**Figure 4.2:** BNDDD008 – 43m – example of a vesicular dunite komatiite with chlorite (?) infilled vesicles and patchy carbonate alteration. Provides evidence for extrusive nature of the Bend Nickel Deposit flow units. Field of view from top to bottom ~45mm. Right of view is down the hole (source: Hornsey, 2023).



**Figure 4.3:** BNDDD001 – 72m – example of a dunite-komatiite, fragmented, blocky moderately magnetically susceptible, serpentinised, welded agglomerate. No obvious post-emplacement deformation. Field of view from top to bottom ~45mm. Right of view is down the hole (source: Hornsey, 2023).



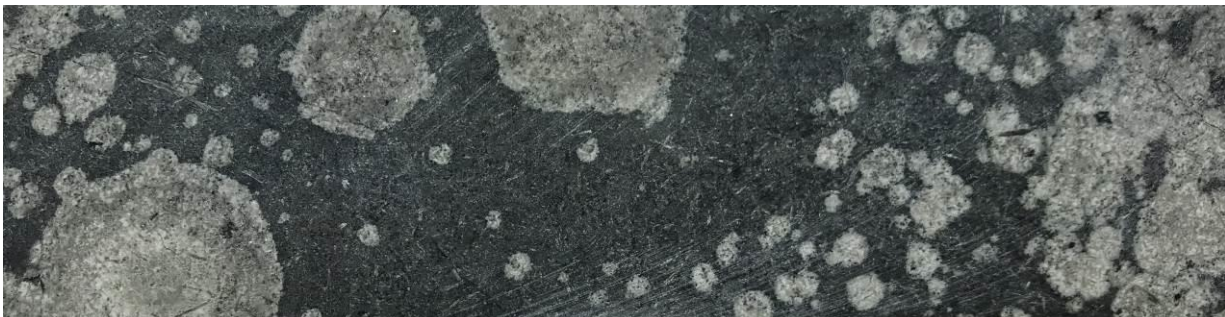
**Figure 4.4:** BNDDD001 - 271m – example of a fine-grained komatiitic basalt with pervasive chlorite alteration. Rounded structures with intensely altered and fractured margins and wider-spaced interval fractures and alteration. Interpreted as pillow lavas (flow-tops). Right of view is down the hole. Field of view from top to bottom ~45mm (source: Hornsey, 2023).



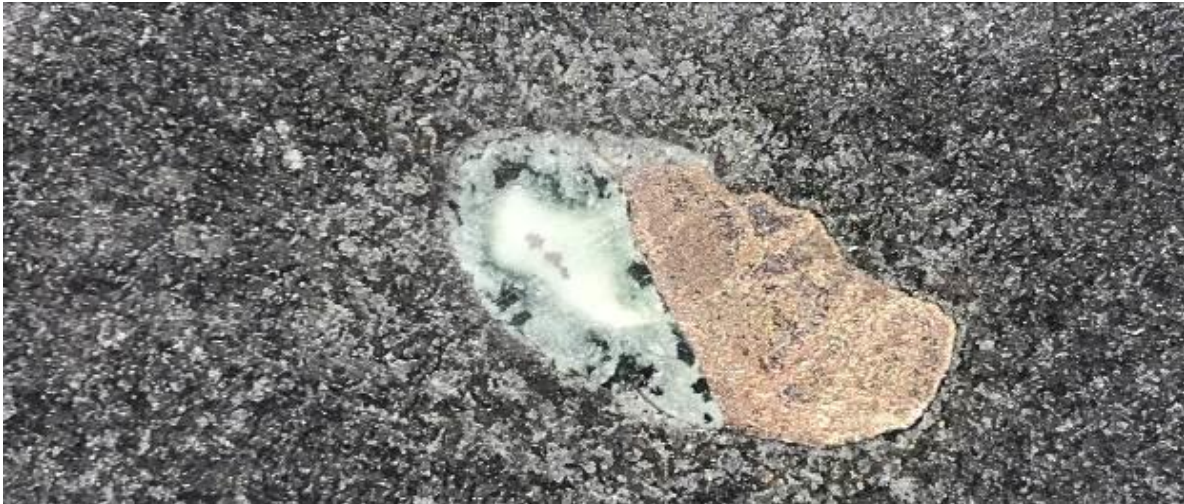
**Figure 4.5:** BNDDD008 – 48m - example of a chilled komatiite margin at the contact of two flow units. Patchy disseminated mineralisation noted in both flow units. Field of view from top to bottom ~45mm. (source: Hornsey, 2023).



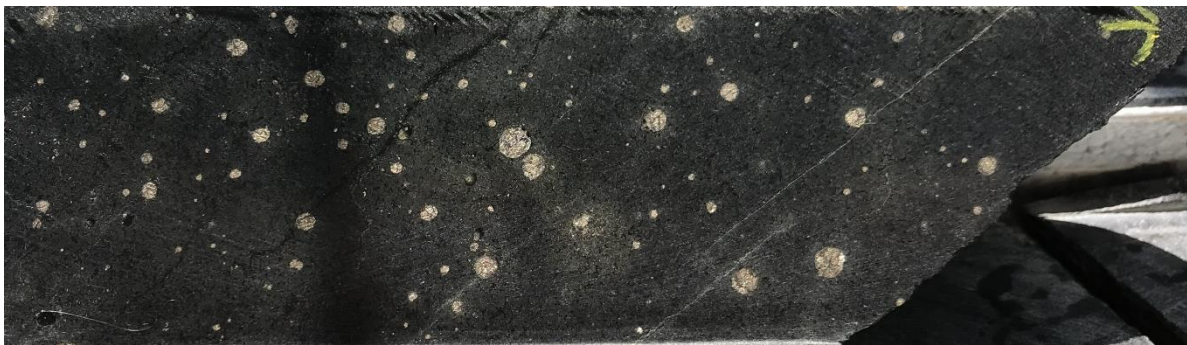
**Figure 4.6:** B1DD001 – 364.00m – pyroxene spinifex (medium grained). Random orientations. NQ core. Right of view is down the hole. Field of view from top to bottom ~45mm (source: Hornsey, 2023).



**Figure 4.7:** BNDDD006 – 110m – komatiitic pyroxenite with fine spinifex texture overprinted by actinolite-tremolite alteration forming around ocelli overprint and locally pseudomorph the spinifex texture. Interpreted ocellar textures provide potential evidence for liquid immiscibility i.e. hybrid rocks. Field of view from top to bottom ~45mm. Right of view is down the hole (source: Hornsey, 2023).



**Figure 4.8:** BNDDD005 – 92.00m – composite sulphide vesicle (globule) sulphide vesicle with pentlandite-millerite(?) surrounding pyrrhotite(?) and magnetite with quartz-carbonate upper zone and alteration halo within a fine-medium grained serpentine-talc-altered dunite. Field of view from top to bottom ~30mm. Right of view is down the hole (source: Hornsey, 2023).



**Figure 4.9:** BNDDD005 – 52.00m – Round sulphide filled vesicles (globules) associated with an acumulate dunite. Field of view from top to bottom ~47mm. Right of view is down the hole (source: Hornsey, 2023). Sample interval returned 1.18m @ 2.49% Ni, 0.31% Cu and 0.026% Co.



**Figure 4.10:** BNDDD006 – 81.00m. Komatiite dunite with leopard textured semi-massive interstitial sulphide & downward penetrating sulphide veins. Right of view is down the hole. Field of view from top to bottom ~47mm. (source: Hornsey, 2023).



## Geological Field Traverses (Bend Nickel Deposit)

The basal portion of the Bend Nickel Deposit dunite komatiite sequence (interpreted as the Upper Reliance Formation) is observed in outcrop at surface. Dunite sequences form pronounced ridges across the deposit area. The basal dunites are interpreted overlying, and in contact with the komatiitic basalt.



Massive columnar komatiite outcrop looking southwest with well-defined radial cooling joints perpendicular to the column margins, penetrating approximately 5cm inward from the column margins



**Figure 4.11:** Bend Nickel Deposit – massive columnar dunite komatiite outcrop 50m west of BNDDDD006 - looking southwest (Fig. 3 displays location). Well-defined cooling joints perpendicular to the column margins. Interpretation of the field observations indicate a steep apparent easterly dip of the flow units (source: Hornsey, 2023).



## Drilling Data - Geological Observations

- At the Bend Nickel Deposit there is a consistent sequence of locally pillow-textured komatiitic basalt overlain by fine-to medium grained adcumulate dunite komatiites. (Figs. 4.1 - 4.3 and Fig. 4.11).
- There is an observed preservation of primary (syn-emplacement) features (Figs. 4.1 – 4.7).
- Pervasive serpentine, chlorite and local moderate talc alteration is interpreted as an indicator that the magmas underwent early-stage alteration possibly due to seawater circulating through the magma flows, or syn-emplacement low-grade metamorphism (Figs. 4.4 and 4.8)
- Locally vesicular textured komatiite zones and welded dunitic agglomerates are observed – this provides evidence that the Bend Nickel Deposit sequence is extrusive and may be proximal to a vent (Figs. 4.2 – 4.3 and Fig. 4.12).
- Flow-top breccias, pillows and spinifex textures are locally observed in the core (Figs. 4.4 – 4.7). This provides evidence for extrusive processes and rapid cooling events.
- All the holes display pervasive, locally intense, serpentine alteration based on visual logging.
- Drill hole B1DD001 intersected a different stratigraphy to the Bend Nickel Deposit. It shares characteristics with weakly channelised, thinner sheet flows, typically on the flanks of developed lava fields (Fig. 4.12).

## Drilling Data – BNDDD001 & BNDDD002 Lithogeochemical Analysis

Various lithogeochemical parameters and ratios were plotted to assess whether they discriminate mineralised versus barren komatiite flows (after Brand, 1999).

- Inductively Coupled Plasma ('ICP') data for BNDDD001 and BNDDD002 display very distinct changes in the komatiite-dunite lava flows overlying the komatiitic basalt (footwall) based on major element MgO, CaO, and Al<sub>2</sub>O<sub>3</sub> values.
- The trace element ICP data show a greater degree of variability within the flow units indicating cyclicity and fractionation trends within the dunite flow units, enabling potential definition of the thickest sections of the stratigraphy.
- Chalcophile elements show a strong correlation to sulphur ('S') content.
- Zr is strongly associated with S, and chalcophile elements, suggesting that crustal contamination played a role in triggering sulphur saturation.
- Ni/Cr, Cu/Zn and Ni/Cr\*Cu/Zn (the 'Kambalda Ratio' – after Brand, 1999) with Cu/Zr [PM] are strongly anomalous with the mineralised stratigraphy and subdued within non-mineralised intervals.
- Correlation of Ni, Cu and other chalcophile elements with the PGEs and Au demonstrates the latter are related to primary magmatic accumulation processes. They are part of the same mineralising event.

## Mineralisation

- Patchy disseminated, blebby grading locally to globular (or capped sulphide vesicles) and locally semi-massive mineralisation occur from the contact of high-MgO olivine komatiitic dunites with komatiitic basalts, and progressively upwards through stacked interpreted flow units (Figs. 4.8 – 4.10).
- Features and relationships logged in the core indicate that sulphide mineralisation is related to primary igneous processes related to extrusion of a contaminated komatiitic magma.
- Ni tenors are high. This indicates potential modification of primary magmatic pyrrhotite-pentlandite-chalcopyrite assemblages upgrading to millerite (based on historical drilling information). The observations require petrographic and assay confirmation to support the interpretations.
- Initial PGE analyses indicate significant precious metal endowment associated with sulphide mineralised intervals.
- The PGE's show little or no fractionation therefore it is inferred that a primary magmatic metal distribution is preserved within individual mineralised flow units or channelised flows.
- Examination of the arsenic ('As') demonstrates generally low tenors within mineralised zones.



## Initial Interpretation

The ore formation model for komatiites is that primitive, pristine magma ascends rapidly from source to surface and is extruded onto or intruded at shallow level into marine sediments and volcano-sediments. The magma/lava flow becomes channelised, forming flow focal points that accommodate large volumes of through-flowing magma that may erode and assimilate the substrate, forming deeper sinuous lava channels (Fig. 4.12).

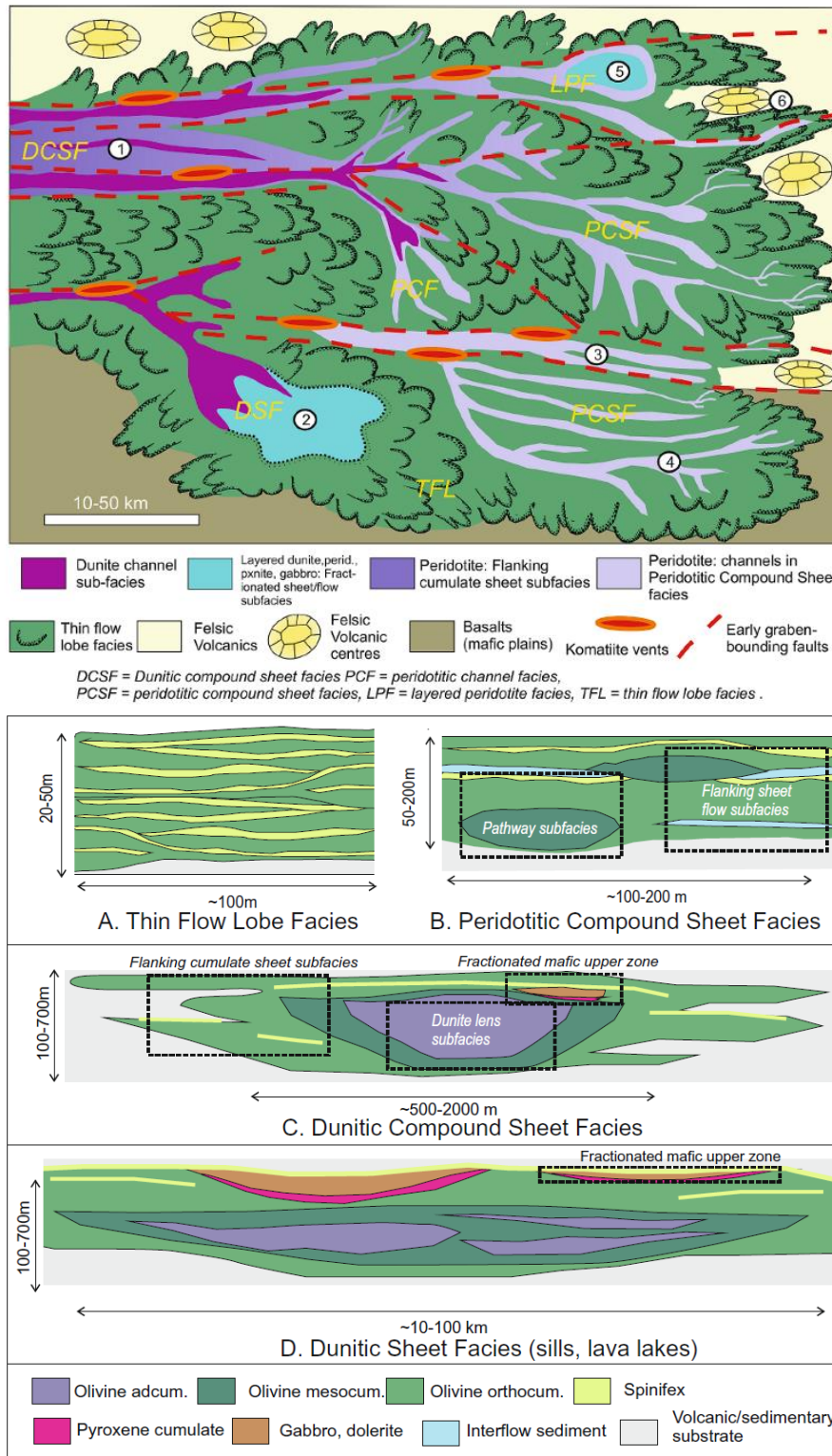
If the substrate is sulphidic or carbonaceous, this process contaminates the lava, leading to sulphur saturation and sulphide liquid immiscibility. The sulphide liquid scavenges nickel from the magma due to its chalcophile characteristics. The sulphide liquid becomes concentrated as disseminated, net-textured or massive bodies, often with very high metal tenors due to the elevated nickel content of the ultramafic komatiites.

Field observations have demonstrated the following:

- The initial program has confirmed that the Bend Deposit is a primary Ni-Cu-PGE-sulphide deposit related to a high-level intrusive-extrusive komatiitic lava flow field.
- Extrusive magma-channels have accumulated sulphide mineralisation. Individual flow units (within a broader flow field) appear to be stacked within what may have been a major channel reactivated and utilised by multiple magma fluxes.
- The target horizons are both zones of disseminated mineralisation within channelised lava flows located near or above the basal contact of the komatiitic flows (Type-2 – refer to Deposit Analogues – Data Comparison and Glossary for further explanation) and massive sulphide accumulations typically at the basal contact (Type-1).
- The Bend Nickel Deposit komatiite exposure is amenable to mapping and komatiite facies analysis (Fig. 4.12) supported by lithogeochemical mapping using a PXRF.

These descriptions and interpretations suggest that the basic requirements for economic mineralisation are present at the Bend Nickel Project. Mineralisation intersected to date is analogous in scale and genesis to Kambalda Dome Type-2 deposits. Type-1 deposit potential is considered high.

These observations require petrographic and whole-rock assay confirmation to support the interpretations.



**Figure 4.12:** a) Schematic model for terrane-scale (>10km) komatiitic flow field showing potential genetic relationships between the different facies associations and ore-forming environments b) Schematic representation of the relationship of komatiite rock types comprising the idealised flow facies associations. The Bend Nickel Deposit is interpreted as C. Dunitic Compound Sheet Facies ('DCSF') (diagrams after: Gole and Barnes, 2020).





## Deposit Analogues – Data Comparison

The initial program has confirmed that the Bend Deposit is a primary Ni-Cu-PGE-sulphide deposit related to a high-level intrusive-extrusive komatiitic lava flow field. The table below displays key components of komatiitic-type deposits with comparative observations to known deposits.

Descriptor	Bend	Persévérance (Agnew)	Black Swan	Silver Swan	Mt Keith	Cosmos Shoot Cosmos Deeps Mt Goode
<b>Operator</b>	<b>AMM</b>	<b>BHP</b>	<b>Poseidon Nickel</b>	<b>Poseidon Nickel</b>	<b>BHP</b>	<b>IGO</b>
Age	2.7Ga	2.7Ga	2.7Ga	2.7Ga	2.7Ga	2.7Ga
Deposit Type	To be defined	Type I	Type II	Type I	Type II	Type I + II
<b>Geology</b>						
- MgO	18-40%	30-50%	20-40%	20-40%		
- Basal contact	Basalt	Felsic units	Felsic units	Felsic units	Dacite	Felsic
- Lithology	Ol cumulates	Ol cumulates	Ol cumulates	Ol cumulates	Ol cumulates	Ol cumulates-
- Vesicular flow	Yes	-	Yes	Yes	-	-
- Spinifex	Yes	Yes	Yes	Yes	Yes	-
- Hybrid/Ocellar	Yes	-	Yes	Yes	-	-
- Setting*/**	DCSF	DCSF	DCSF	DCSF	DCSF	DCSF?
- Dip Extent	To be defined	1000m	-	75m	500m	Various
- Thickness	To be defined	-	130m	5-20m	0.3m to 10m	Various
- Strike	To be defined	>2000m	350m	1400m	2000m	Various
<b>Mineralisation</b>						
- Style						
Disseminated	Yes	Yes	Yes	-	Yes	Yes MG
Bleb/Globules	Yes	Yes	Yes	-	Yes	Yes MG
Massive	To be defined	Yes	-	Yes	-	Yes Others
- Mineralogy**	Pn ± Mlr ± Cpy	Po, Pn ± Cpy	Py, Mlr ± Cpy	Po, Pn ± Cpy	Po, Pn ± Cpy	Po, Pn ± Cpy
Ni grades	0.2 - >10%	6 - 8 %	0.2 - > 2%	8 - > 16%	Typically <1%	0.5 - >2%
Cu grades	0.1 - >5%	0.2 - 0.4%	-	-	-	-
PGE grades	0.2 - 11g/t Pd 0.2 - 4g/t Pt 0.1 - 0.9g/t Au	Type I ores are PGE depleted <sup>7</sup> .  Type II ores : 0.3-0.8 g/t Pd 0.1-0.5 g/t Pt <sup>2</sup>	PGE depleted <sup>7</sup>  Inconsistent distribution	PGE depleted <sup>7</sup>  Inconsistent distribution	0.9-3.6 g/t Pd 0.3-1.5 g/t Pt <sup>7</sup>	-
Resource/Reserve	To be defined	10.6Mt@2.1% Ni mined <sup>1</sup>  31Mt @ 1.65% Ni in-situ <sup>1</sup>	30.7Mt at 0.58% Ni, 0.01%Co <sup>1</sup>	0.65Mt @ 9.5% Ni <sup>1</sup>	224Mt @ 0.53% Ni <sup>1</sup>	Historical Cosmos Shoot 10.4Mt @ 8.2% Ni - MSS <sup>1</sup> . Cosmos Deeps 10.56Mt @ 7.6% Ni 0.36% Cu + 0.12% Co MSS <sup>1</sup> . IGO Resources <sup>8</sup> . AM6 3Mt @ 2.03% Ni. AM5 3.3Mt @ 2.10% Ni. Odysseus 8Mt @ 2.55% Ni. Mount Goode ('MG') 53Mt @ 0.69% Ni. Total Resource including other proximal shoots 67Mt @ 0.98% Ni.
References		<sup>1</sup> PorterGeo 2024 <sup>2</sup> Barnes et al. (1988) <sup>3</sup> Gole et al. (1989) <sup>4</sup> Duuring et al, (2010) <sup>5</sup> Dowling et al. (2004) <sup>6</sup> Leshner et al (2002) <sup>7</sup> Barnes et al. (2012) <sup>8</sup> IGO Annual Report 2022				

\*Gole and Barnes, refer to Fig 4.12 | \*\*Appendix 4 - Glossary.

- indicates no published information reviewed at the time of reporting.



## Glossary of Technical Terms

Term	Definition	Further Reference
Adcumulate	These textures develop in dynamic regimes of turbulent flow and constant replenishment of lava	Gole and Barnes (2020)
AGG	Airborne Gravity Geophysical Survey	
AMAG	Airborne Magnetic Geophysical Survey	
Au	Gold	
CFF	Compound Flow Field – self organised – controlled by pre-existing substrate lithologies and topography	Gole and Barnes (2020)
CFF PCSF [4]	Peridotitic Compound Sheet Facies Distal weakly channelised thinner sheet flows with channel-hosted mineralisation. Host to smaller Type 1 (Widgiemootha-style)	Gole and Barnes (2020)
CFF TFL	Thin Flow Lobe Facies	Gole and Barnes (2020)
Chalcophile	Sulphide ore loving. Ag, As, Bi, Cd, Cu, Ga, Ge, Hg, In, Ni, Pb, S, Sb, Se, Sn, Te, Tl and Zn	
Cpy	Chalcopyrite – copper sulphide mineral - $CuFeS_2$ (C <sub>pp</sub> also used)	
Co	Cobalt	
Complex Layering	Complex internal layering - with felsic and intermediate volcanic rocks provides evidence for long-lived, perhaps episodically active lava pathways within a komatiite flow field	Gole and Barnes (2020)
Compound Flow	Is the product of a single eruptive event that contains multiple cooling units	Gole and Barnes (2020)
Cooling Unit	A body of rock bounded by cooling surfaces	Gole and Barnes (2020)
Cr	Chromium. Robust indicator of magma influxes and fractionation. Used in the Kambalda Ratio to determine mineralised and unmineralised sequences.	
CSF	Channelised Sheet Flows [CSF] Extensive mineralised linear channels filled with peridotite; graben controlled. Host to Type 1 deposits (e.g. Kambalda)	Gole and Barnes (2020)
Cu	Copper	
DHEM	Downhole Electromagnetic Survey	
Differentiated	Distinct textural variants within the same cooling unit	Gole and Barnes (2020)
Distal	Generally thinner less well channelised and more poorly mineralised	Gole and Barnes (2020)
EM	Electromagnetic Survey	
Facies	The character of a rock expressed by its formation and composition	
Fractionated	Liquid products of fractional crystallisation	Gole and Barnes (2020)
FLEM	Fixed-loop Electromagnetic Survey	
Flow Field	Terrane-scale containing different facies and ore-forming environments	Gole and Barnes (2020)
FT	Flow Top	
FV	Felsic Volcanic	
FVC [6]	Felsic Volcanic Centres – bimodal dacite-komatiite volcanism, distal or proximal to rift-related vents. Host to Type 1 deposits (e.g. Black Swan)	Gole and Barnes (2020)
Harrisite	Moderate cooling rates with high thermal gradients give rise to coarse orientated spinifex and	Gole and Barnes (2020)



	harrisite textures	
Harrisitic-texture	Olivines form large branching grains with complex morphologies and well-developed crystal faces – chevron textured grains might be present	
Kambalda Ratio	Ni/Cr*Cu/Zn (derivation can be referred in Brand, 1999)	Brand (1999)
Komatiite	Magmatic >18% MgO ultramafic rocks with an age ≥ 2.7Ga	Gole and Barnes (2020)
Lithophile	Rock loving elements. Al, B, Ba, Be, Br, Ca, Cl, Cr, Cs, F, I, Hf, K, Li, Mg, Na, Nb, O, P, Rb, Sc, Si, Sr, Ta, Th, Ti, U, V, Y, Zr, W and the lanthanides or rare earth elements (REE)	
Magma	Magma is the natural material from which igneous rocks are formed. It is molten or semi-molten rock that is found beneath the surface of the Earth. It may contain suspended crystals, gas bubbles, and other solid materials. It is produced by melting of solid rocks under high temperature and pressure.	
Mesocumulate	Transitional between ad- and ortho-cumulates	Gole and Barnes (2020)
MF	Massive flow (with regards to flow units / fields)	Gole and Barnes (2020)
MLEM	Moving-loop Electromagnetic Survey	
Mlr	Millerite – nickel sulphide mineral - NiS	
MMP	Major Magma Pathways – self organised – controlled by pre-existing substrate lithologies and topography	Gole and Barnes (2020)
MMP DCSF [1]	Dunitic Compound Sheet Facies [DCSF] Major channels occupied by thick channel-like olivine adcumulate bodies; graben-hosted. - Host to Type 1 (Perseverance) mineralisation. - Host to Type 2 (Mt. Keith) mineralisation. <u>Sub-Facies</u> - Dunite Channel Sub-Facies - Peridotite Flanking Cumulate Sheet Sub-Facies	Gole and Barnes (2020)
MMP DSF [2]	Thick peridotite-dunite sheets on flat basaltic substrates with ponded lava lakes developed in upper portions. - Walter Williams Formation style Olivine cumulates can form protoliths to lateritic Ni-deposits.	Gole and Barnes (2020)
MMP LPF [5]	Layered Peridotite Facies A distal sheeted and layered peridotite bodies with local ponding producing differentiated lake lava sequences. - Host to smaller Type 1 (Murrin Murrin-style) Protoliths to Ni-laterites	Gole and Barnes (2020)
MMP PCF [3]	Peridotitic Channel Facies	Gole and Barnes (2020)
MMP PSF	Peridotite Sheet Facies	Gole and Barnes (2020)
Ni	Nickel	
NSAMT	Natural Source Audio Magnetotelluric Survey	
Orthocumulate	This texture develops where crystals nucleate rapidly in moderately quiescent environments	Gole and Barnes (2020)
Pd	Palladium	
PF	Pillowed flow (with respect to flow units / fields)	Gole and Barnes (2020)
PGE	Platinum group elements (Pt, Pd and Rh)	
Platy-textured	Plate-like or acicular (needle-like) aspects	
PM	Primitive mantle	Hornsey (2023)
Pn	Pentlandite – Fe - Ni sulphide mineral – (Fe, Ni) <sub>9</sub> S <sub>8</sub>	
Po	Pyrrhotite - Fe sulphide mineral (FeS)	
Porosity	Original content of interstitial liquid within a cumulate.	Gole and Barnes (2020)
Proximal	Developed close to the source vents along fault systems	
Pt	Platinum	



PXRF	Handheld Portable X-Ray Fluorescence Analyser	
R Factor	This is a snapshot of where a substance (in this case the metal Ni Cu PGE) when given a choice between two media wants to be. Following or during emplacement the saturation of the magma in sulphide liquid needs to be achieved to capture the metal. High R factors give rise to high tenors	
Rh	Rhodium	
Ribbon-like	Ribbon-like, strongly linear, perhaps sinuous in form	
S	Sulphur	
Siderophile	Iron (earth's core) loving. The siderophile elements include the highly siderophilic ruthenium, rhodium, palladium, rhenium, osmium, iridium, platinum, and gold, the moderately siderophilic <i>cobalt and nickel</i> , in addition to the "disputed" elements mentioned earlier – some sources even include tungsten and silver.	Wikipedia
S immiscibility or S saturation	Can trigger PGE accumulations. In komatiites the onset of S immiscibility is due to local contamination from S-rich sediments – therefore there is inefficient mixing of the magma and low R Factors.	
Spinifex	Rapid cooling produces fine randomly orientated spinifex	Gole and Barnes (2020)
Talc-carbonate	Metasomatism related to amphibolite facies metamorphism	Gole and Barnes (2020)
TF	Thin flow (with respect to flow units / fields)	Gole and Barnes (2020)
Thermal erosion	Thermo-mechanical erosion leads to channelways in the underlying floor rocks	Gole and Barnes (2020)
Ti	Titanium	
Type 1	Disseminated to blebby orebody e.g. Perseverance, Black Swan, W. Australia	Gole and Barnes (2020)
Type 2	Massive sulphide orebody e.g. Mt Keith, Silver Swan, W. Australia	Gole and Barnes (2020)
Vesicular	Formed by gas release in cooling magmas	
Zn	Zinc – used in the Kambalda Ratio to determine crustal contamination	
Zr	Zirconium – this is not found in the mantle therefore elevated Zr provides evidence for crustal contamination of magmas pre- and syn-emplacement.	

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## Appendix 5: Nyanga Project Overview

The Nyanga Project is located approximately 150km southeast of Tchibanga in Gabon. The project is centred on 711350E / 9635630N (Datum WGS84 Zone 32S) (Fig. 5.1).

The Company has developed a multi-target exploration pipeline consisting of eighteen (18) targets. Advanced exploration has so far been focused on the 25km-long Libonga-Matchiti Trend.

Five priority advanced targets are located along the 25km-long Libonga-Matchiti Trend including Libonga North, Libonga South and Matchiti Central. This trend is marked by gabbro to high-MgO peridotite fractionation suite units.

The Ngongo-Yoyo Trend extends for up to 40km from Libonga and Matchiti in a south-easterly direction.

The Company is exploring for intrusion-related magmatic Ni-Cu sulphide deposits.

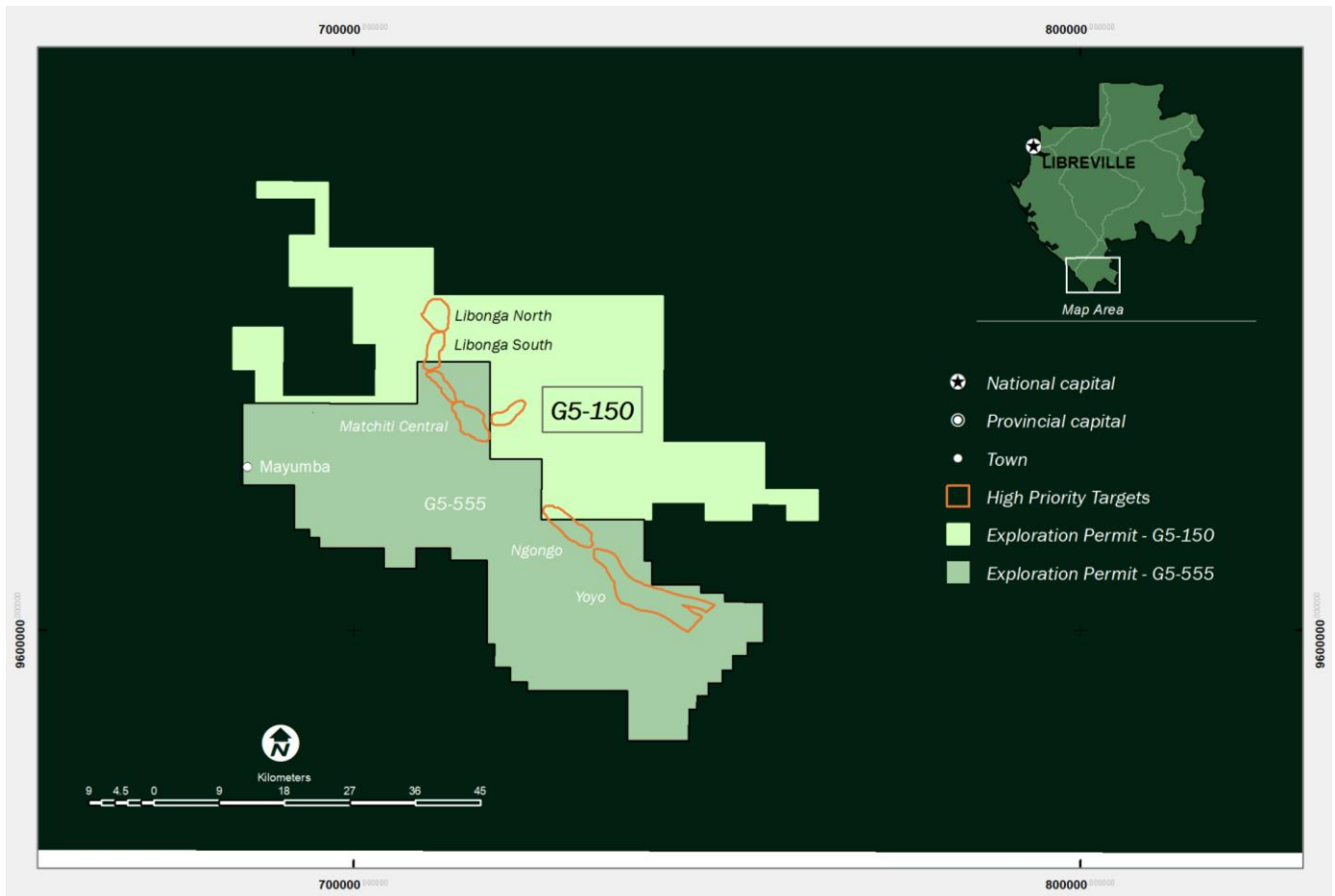


Figure 5.1 – Location map – Nyanga Project, Gabon.

## Appendix 5B

### Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Name of entity

Armada Metals Limited	
ABN	Quarter ended ("current quarter")
75 649 292 080	31 December 2023

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (12 months) \$A'000
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers		
1.2 Payments for		
(a) exploration & evaluation		
(b) development		
(c) production		
(d) staff costs	(62)	(329)
(e) administration and corporate costs	(218)	(984)
1.3 Dividends received (see note 3)		
1.4 Interest received		9
1.5 Interest and other costs of finance paid		
1.6 Income taxes paid		
1.7 Government grants and tax incentives		
1.8 Other (provide details if material)		
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(280)</b>	<b>(1,304)</b>

<b>2. Cash flows from investing activities</b>		
2.1 Payments to acquire or for:		
(a) entities		
(b) tenements	(50)	(50)
(c) property, plant and equipment		
(d) exploration & evaluation	(737)	(1,672)
(e) investments		
(f) other non-current assets		

<b>Consolidated statement of cash flows</b>		<b>Current quarter \$A'000</b>	<b>Year to date (12 months) \$A'000</b>
2.2	Proceeds from the disposal of:		
	(a) entities		
	(b) tenements		
	(c) property, plant and equipment		
	(d) investments		
	(e) other non-current assets		
2.3	Cash flows from loans to other entities		
2.4	Dividends received (see note 3)		
2.5	Other (provide details if material)		
<b>2.6</b>	<b>Net cash from / (used in) investing activities</b>	<b>(787)</b>	<b>(1,672)</b>
<b>3. Cash flows from financing activities</b>			
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	880	2,080
3.2	Proceeds from issue of convertible debt securities		
3.3	Proceeds from exercise of options		
3.4	Transaction costs related to issues of equity securities or convertible debt securities	(102)	(102)
3.5	Proceeds from borrowings		
3.6	Repayment of borrowings		
3.7	Transaction costs related to loans and borrowings		
3.8	Dividends paid		
3.9	Other (provide details if material)		
<b>3.10</b>	<b>Net cash from / (used in) financing activities</b>	<b>778</b>	<b>1,978</b>
<b>4. Net increase / (decrease) in cash and cash equivalents for the period</b>			
4.1	Cash and cash equivalents at beginning of period	2,069	2,785
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(280)	(1,304)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(787)	(1,672)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	778	1,978

<b>Consolidated statement of cash flows</b>		<b>Current quarter \$A'000</b>	<b>Year to date (12 months) \$A'000</b>
4.5	Effect of movement in exchange rates on cash held	39	32
<b>4.6</b>	<b>Cash and cash equivalents at end of period</b>	<b>1,819</b>	<b>1,819</b>

<b>5.</b>	<b>Reconciliation of cash and cash equivalents</b> at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	<b>Current quarter \$A'000</b>	<b>Previous quarter \$A'000</b>
5.1	Bank balances	1,819	2,069
5.2	Call deposits		
5.3	Bank overdrafts		
5.4	Other (provide details)		
<b>5.5</b>	<b>Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>1,819</b>	<b>2,069</b>

<b>6.</b>	<b>Payments to related parties of the entity and their associates</b>	<b>Current quarter \$A'000</b>
6.1	Aggregate amount of payments to related parties and their associates included in item 1	115
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-
<i>Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.</i>		
6.1 Includes payments of directors fees totalling \$101K and \$14K for investor relations		

<b>7.</b>	<b>Financing facilities</b> <i>Note: the term "facility" includes all forms of financing arrangements available to the entity. Add notes as necessary for an understanding of the sources of finance available to the entity.</i>	<b>Total facility amount at quarter end \$A'000</b>	<b>Amount drawn at quarter end \$A'000</b>
7.1	Loan facilities		
7.2	Credit standby arrangements		
7.3	Other (please specify)		
7.4	<b>Total financing facilities</b>		
7.5	<b>Unused financing facilities available at quarter end</b>		
7.6	Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.		



<b>8.</b>	<b>Estimated cash available for future operating activities</b>	<b>\$A'000</b>
8.1	Net cash from / (used in) operating activities (item 1.9)	(280)
8.2	(Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	(737)
8.3	Total relevant outgoings (item 8.1 + item 8.2)	(1,017)
8.4	Cash and cash equivalents at quarter end (item 4.6)	1,819
8.5	Unused finance facilities available at quarter end (item 7.5)	-
8.6	Total available funding (item 8.4 + item 8.5)	
8.7	<b>Estimated quarters of funding available (item 8.6 divided by item 8.3)</b>	<b>1.79</b>
	<i>Note: if the entity has reported positive relevant outgoings (ie a net cash inflow) in item 8.3, answer item 8.7 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.7.</i>	
8.8	If item 8.7 is less than 2 quarters, please provide answers to the following questions:	
8.8.1	Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?	
	Answer: Yes	
8.8.2	Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?	
	Answer: The Company has not yet taken any steps to raise further capital at present but, as an exploration company with an active exploration program the Company's requirement for new capital is always under review. The Company believes that additional capital will be required in 2024 and is confident of raising such capital when required.	
8.8.3	Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?	
	Answer: Yes	
	<i>Note: where item 8.7 is less than 2 quarters, all of questions 8.8.1, 8.8.2 and 8.8.3 above must be answered.</i>	

## Compliance statement

1. This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
2. This statement gives a true and fair view of the matters disclosed.

Date: 31 January 2024

Authorised by: Dr Ross McGowan on behalf of the Armada Metals Limited Board.  
(Name of body or officer authorising release – see note 4)

## Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 6: Exploration for and Evaluation of Mineral Resources* and *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [*name of board committee – e.g. Audit and Risk Committee*]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.