ASX Announcement
24 April 2024

ALVO MINERALS
ASX: ALV

High-Grade Copper-Zinc Intersected at C4 Ahead of Resource Update

HIGHLIGHTS

- The **C4 Prospect is a 'Brownfields Discovery'** made by Alvo in August 2023, as part of the broader **Palma Cu-Zn Project** that hosts an existing Inferred Mineral Resource Estimate (**MRE**) of 4.6Mt @ 1.0% Cu, 3.9% Zn, 0.4% Pb & 20g/t Ag**.**
- **Diamond drilling at C4 has delivered thick and high-grade Zn-Cu intercepts, highlights include:**
  - PD4-092: **9.5m @ 7.5% ZnEq*** or **3.1% CuEq** from 167m
    Inc. **3.8m @ 16.0% ZnEq** or **6.6% CuEq** from 168m
  - PD4-093: **8.5m @ 7.3% ZnEq** or **3.0% CuEq** from 211m
    Inc. **3.8m @ 11.7% ZnEq** or **4.8% CuEq** from 215m
  - PD4-096: **31.2m @ 3.4% ZnEq** or **1.4% CuEq** from 117m
    Inc. **6.3m @ 7.9% ZnEq** or **3.2 CuEq** from 117m
  - PD4-098: **9.8m @ 5.8% ZnEq** or **2.4% CuEq** from 122m
    Inc. **3.2m @ 10.2% ZnEq** or **4.2% CuEq** from 125m
  - PD4-099: **5.3m @ 5.4% ZnEq** or **2.2% CuEq** from 70m
    Inc. **1.4m @ 14.8% ZnEq** or **6.1% CuEq** from 72m
- **Results follow discovery hole at C4 of 37m @ 4.6% ZnEq or 1.9% CuEq from 113m (PD4-084).**
- **C4 is open to the west, southwest and northeast, where mineralisation appears closer to surface.**
- **New untested VMS target located 300m NE of C4 identified and progressing towards drill-testing.**
- **A Maiden MRE is being prepared for C4, expected to be reported in combination with an updated MRE for the C1 and C3 deposits in Q2 CY2024.**
  - Updated MRE will include approximately 21,500m diamond drilling at C1 and C3.

*Refer to the detailed explanation of assumptions and pricing underpinning the copper equivalent (CuEq) and zinc equivalent (ZnEq) on page 11 of this announcement and in Section 2 of the attached JORC Code Table (Appendix 1)

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PROJECTS
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Bluebush Ionic Clay REE Project
Ipora REE Project

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ASX Code **ALV**

Alvo Minerals Limited (ASX: ALV) ("**Alvo**" or "the **Company**") is pleased to announce diamond drill results from its maiden drill program at C4 Prospect. The C4 prospect is a brownfields discovery announced in August 2023 with results demonstrating thick intercepts with high-grade zinc-copper zones, consistent with Volcanogenic Massive Sulphide ("**VMS**") mineralisation from the Company's 100% owned high-grade Palma Cu-Zn VMS Project ("**Palma**" or "**the Project**").

Rob Smakman, Alvo's Managing Director commented on the C4 drill results:

"We are very pleased to be able to report our progress on our brownfields discovery at the C4 Prospect, our first major regional exploration success on the Palma VMS Belt.

"Our exploration team has focused on the broad zone of mineralisation around the C4 discovery hole, where we confirmed the thickest intercept across the entire Palma VMS Project. These results have defined multiple stacked lodes including high-grade zones and support our intention to deliver a Maiden MRE for this prospect in the coming months in combination with an updated MRE for the C1 and C3 deposits.

"We are also extremely pleased to have uncovered the potential of the C4-NE Prospect, located just 300m from the C4 Prospect. This is testament to the methodical multi-disciplinary approach of our exploration team on site at Palma, with a combination of mapping, geochemistry and geophysics coming together to advance the target to drill-ready status."

Diamond Drilling at C4 Prospect

The C4 prospect is located approximately 5km SW of the C1 deposit within the Palma Project (refer Figure 1). The maiden diamond drill program at C4 was planned and supported by data collected by Alvo's exploration team, including geological mapping, soil geochemistry, auger drilling and advanced ground geophysics.

Drilling completed by Alvo (17 holes for 4,351m) has defined multiple stacked lodes (refer Figures 2, 3 & 4 and Tables 1 & 2) around the previously reported discovery hole PD4-084[1]. Drilling at C4 focused on the mineralisation in proximity to the main zone where the previously reported discovery hole (PD4-084), returned a broad mineralised zone:

- PD4-084: **37m @ 1.9% CuEq** or **4.6%** ZnEq (0.2% Cu, 4.3% Zn, 1.5% Pb, 36g/t Ag & 0.06g/t Au) from 127m
  - Inc. 2m @ 3.6% CuEq or 8.8% ZnEq (0.4% Cu, 7.9% Zn, 3.6% Pb, 68g/t Ag & 0.05g/t Au) from 132m
  - Inc. 4m @ 2.8% CuEq or 6.9% ZnEq (0.6% Cu, 6.1% Zn, 1.7% Pb, 51g/t Ag & 0.09g/t Au) from 157m

[1] Refer to ALV ASX Announcement 1 August 2023, "New VMS Discovery at Palma Delivers Broadest Base Metals Intercept to date"

Highlights from new assay results received and reported in this announcement include:

- PD4-092: **9.5m @ 7.5% ZnEq*** or **3.1% CuEq** from 167m
  - Inc. **3.8m @ 16% ZnEq** or **6.6% CuEq** from 168m
- PD4-093: **8.5m @ 7.3% ZnEq** or **3.0% CuEq** from 211m
  - Inc. **3.8m @ 11.7% ZnEq** or **4.8% CuEq** from 215m
- PD4-096: **31.2m @ 3.4% ZnEq** or **1.4% CuEq** from 117m
  - Inc. **2.7m @ 7.6% ZnEq** or **3.1% CuEq** from 117m
  - Inc. **6.3m @ 7.9% ZnEq** or **3.2% CuEq** from 142m
- PD4-098: **4.8m @ 5.5% ZnEq** or **2.3% CuEq** from 76m
  - Inc. **2.2m @ 11.2% ZnEq** or **4.6% CuEq** from 79m
- PD4-098: **9.8m @ 5.8% ZnEq** or **2.4% CuEq** from 122m
  - Inc. **3.2m @ or 10.2% ZnEq** or **4.2% CuEq** from 125m
- PD4-099: **5.3m @ 5.4% ZnEq** or **2.2% CuEq** from 70m
  - Inc. **1.4m @ 14.8% ZnEq** or **6.1% CuEq** from 72m
- PD4-099: **7.6m @ 5.0% ZnEq** or **2.0% CuEq** from 106m
  - Inc. **1.9m @ 14.9% ZnEq** or **6.1% CuEq** from 108m

C4 is a 'blind' prospect with no obvious geochemical anomaly with only a distal gossan (remnant VMS mineralisation) mapped in geological mapping. Fixed Loop Electromagnetic surveying ("**FLEM**") and Downhole Electromagnetic surveys ("**DHEM**") defined moderately sized, low-level conductor plates, which when drilled, intercepted massive sulphides. Induced Polarisation ("**IP**") surveys successfully defined broad and extensive chargeability anomalies that are coincident with the wider disseminated and massive mineralisation drilled to date (refer Figures 2-4).

Mineralisation is interpreted as thick and flat lying, with multiple zones stacked within an alteration sequence, located near a contact of a felsic schist and amphibolite unit. This is a classic setting for VMS mineralisation with sulphides dominated by sphalerite (zinc sulphide) and pyrite (iron sulphide), minor galena (lead sulphide), chalcopyrite (copper sulphide) and pyrrhotite (iron sulphide). This suite is different to the sulphide suites present in the C1 and C3 deposits (which are each unique).

Mineralisation extends for approximately 400m east-west and 150m north-south, with mineralisation open to the west, southwest and northeast. Alvo has completed a structural interpretation from the diamond core, confirming a generally flat lying mineralised zone, with massive sulphide mineralisation concentrated on open folds which trend NNE-SSW (refer Figure 5). The structural interpretation supports the geophysical modelling which demonstrates chargeability anomalies on a similar strike orientation.

The sulphide assemblage (lacking significant pyrrhotite and chalcopyrite) has a weak electromagnetic signature, meaning the FLEM and DHEM surveys require detailed interpretation when compared to the surveys completed at C1 and C3. As a result, Alvo relied on the IP survey technique and its 3D interpretation of chargeability completed across C4 which show strong co-incidence with the disseminated mineralisation (refer Figures 2-4 & 6).

The IP method targets disseminated mineralisation and 3D modelling of the chargeability lines completed across the Project has also highlighted further chargeability trends across the wider C4 area.

To the northeast, at a prospect denominated C4-NE, there is another similar IP chargeability anomaly which is described in more detail below (refer Figure 6).

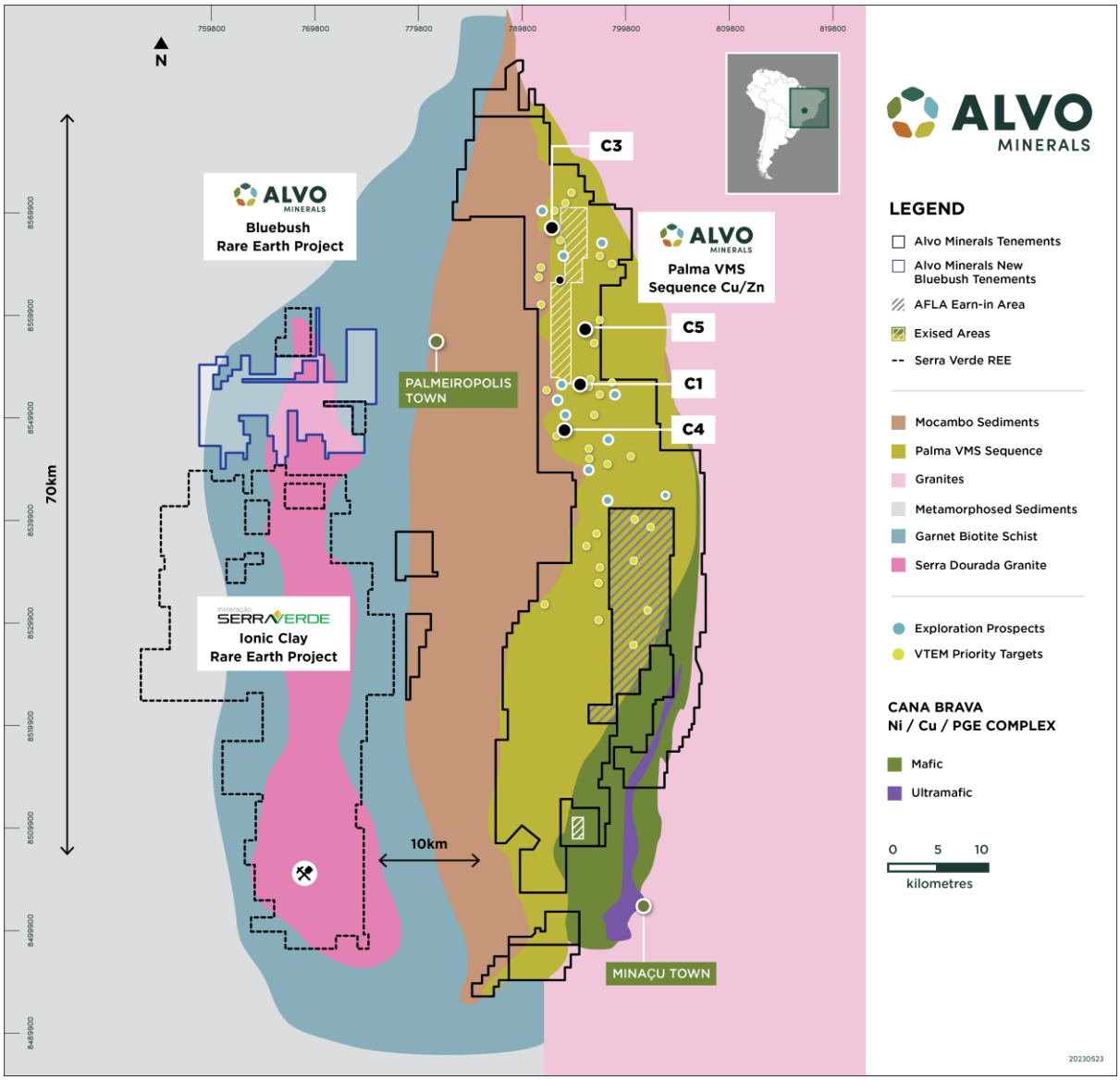

Figure 1: *Palma Project including the C4 Prospect, known deposits (C3 & C1), and emerging exploration prospects.*

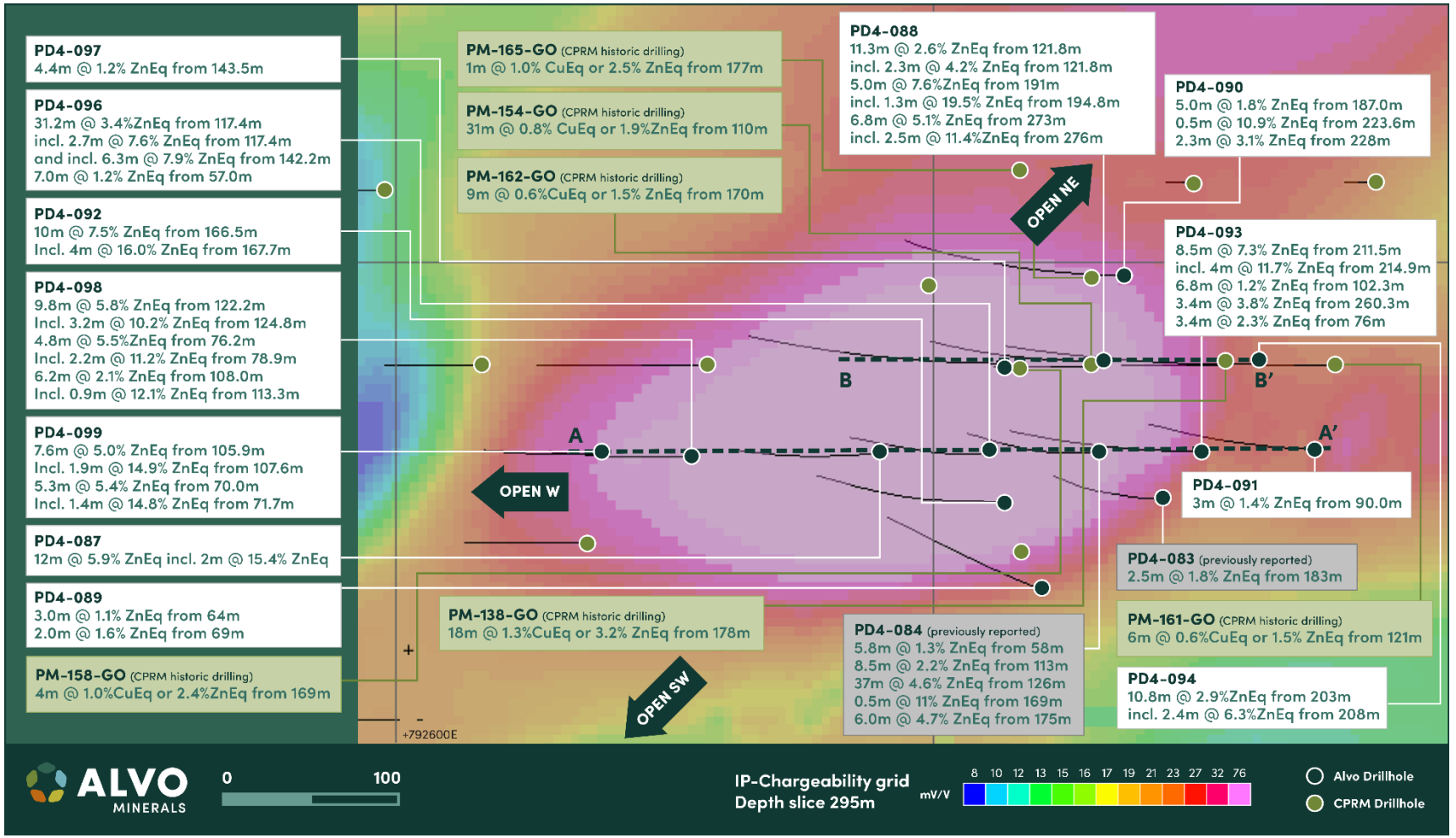

Figure 2: Drill and Geological plan of C4 prospect

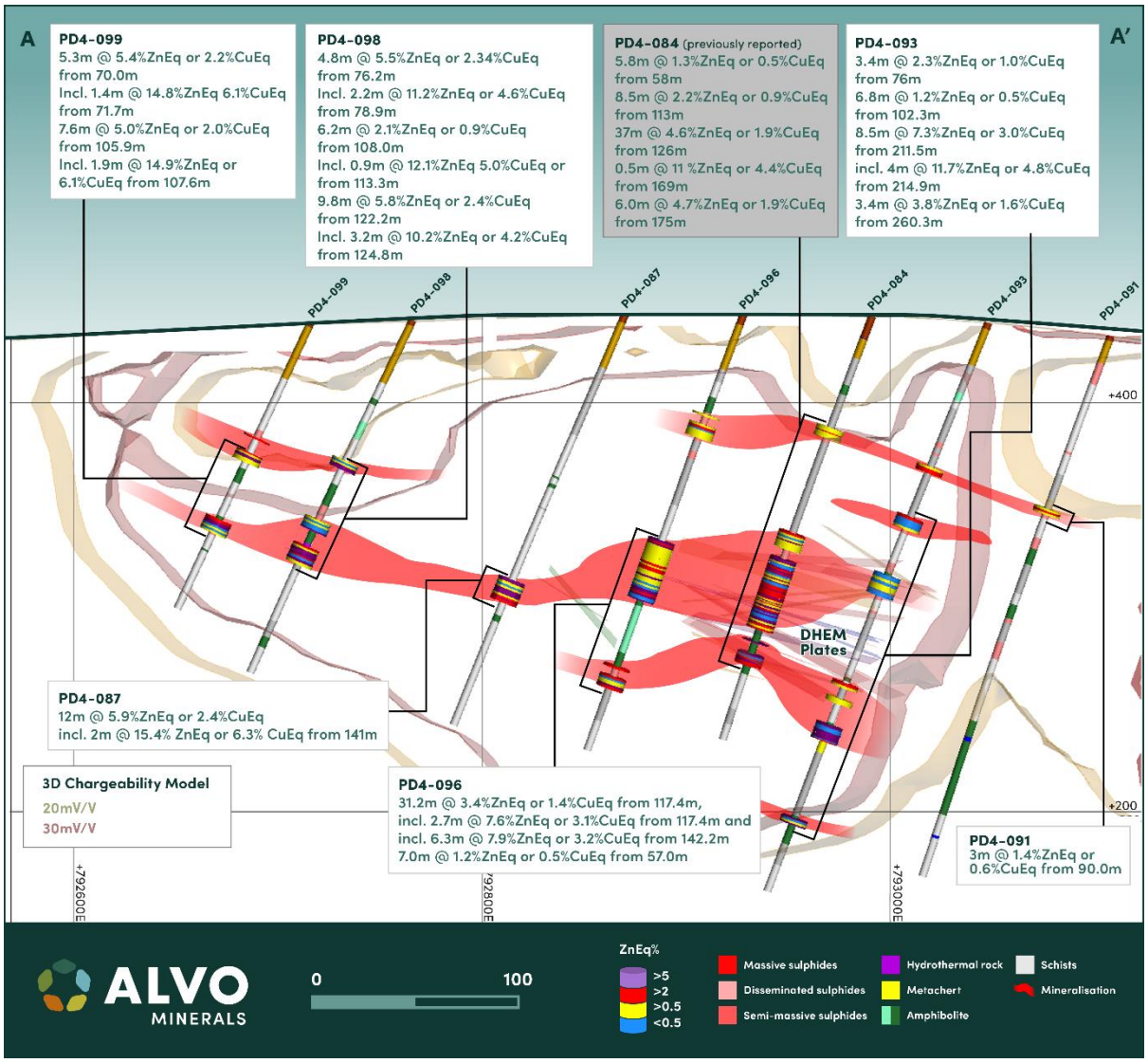

Figure 3: Cross section A-A' showing broad and extensive chargeability anomalies coincident with the wider disseminated and massive mineralisation drilled to date.

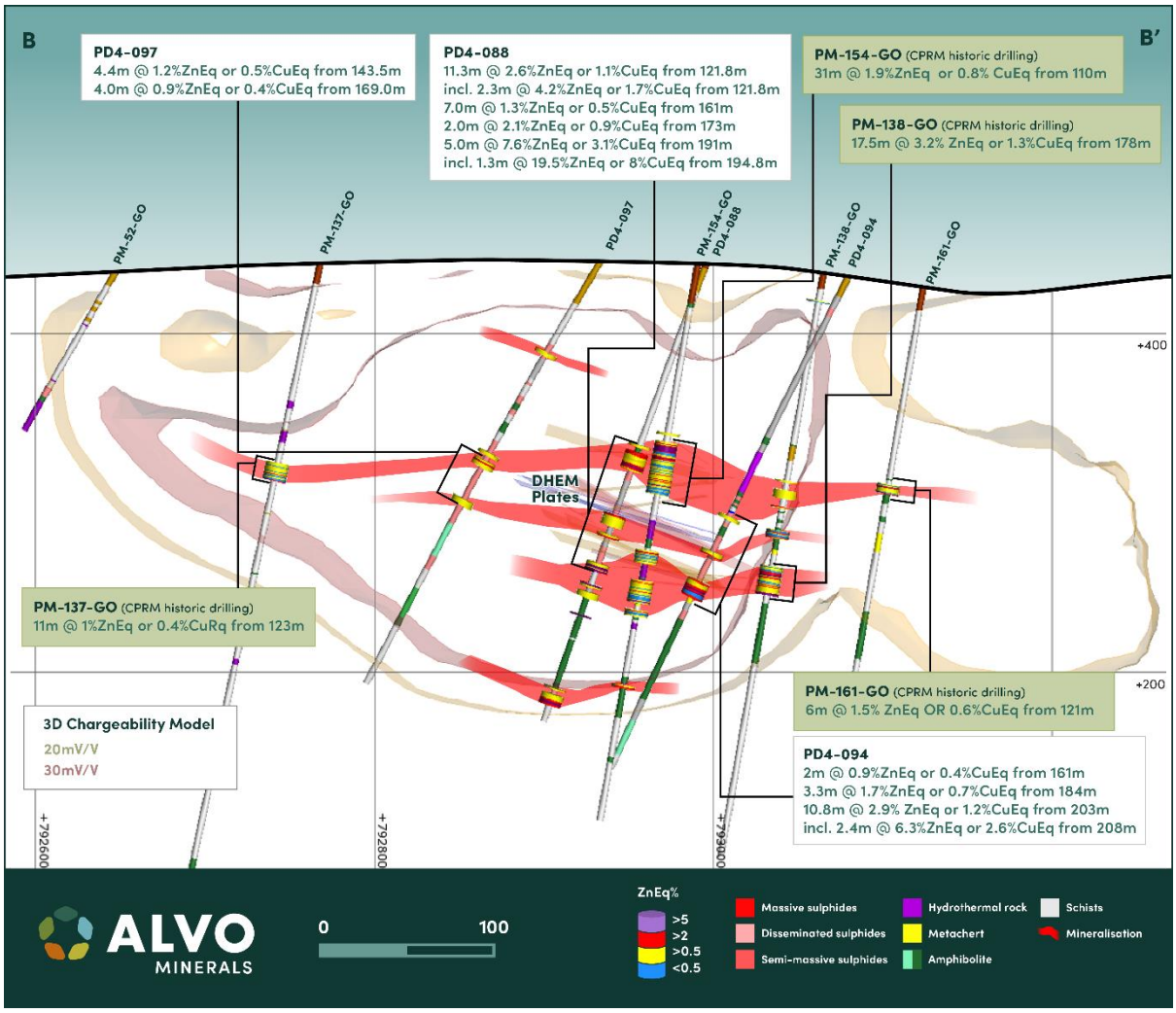

Figure 4: Cross section B-B' showing broad and extensive chargeability anomalies coincident with the wider disseminated and massive mineralisation drilled to date

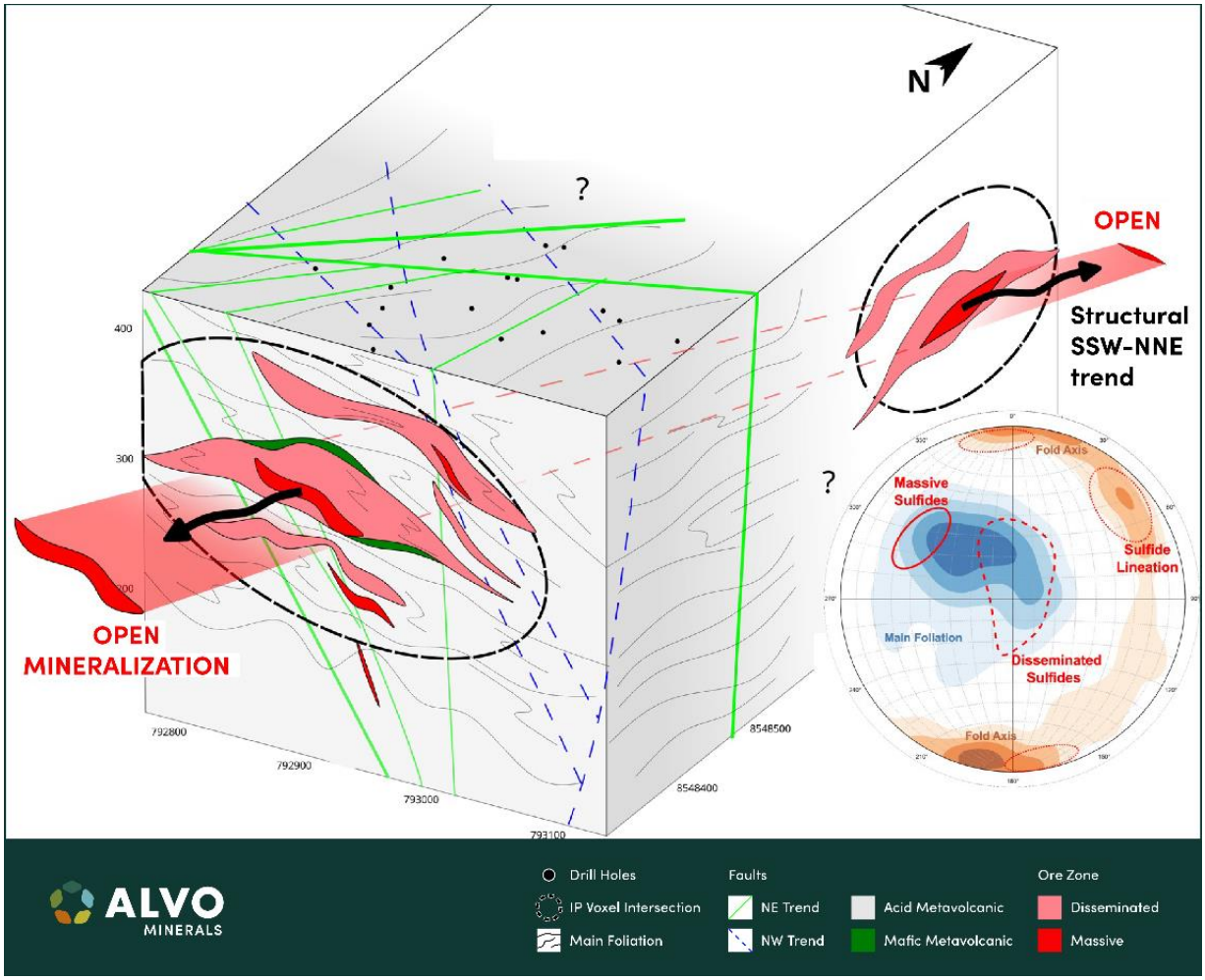

Figure 5: 3D interpreted block model of the C4 mineralisation. Structural readings from oriented drill core. Massive Sulphides mineralisation accumulates along fold hinges that trend NNE-SSW. The disseminated mineralisation accumulates around the massive zones and parallel to the main foliation.

C4-NE Prospect

The C4-NE prospect presents an exciting undrilled opportunity for Alvo to make a discovery within 300m of the C4 Prospect (refer Figure 6). The work completed to date has included Alvo's multiple disciplinary approach to exploration advancing C4-NE to a point where drilling is the logical next step. The prospect has been developed despite being a blind anomaly and utilises Alvo's in-house team and equipment along with the knowledge of the Palma VMS system, developed over the last 2 years of exploration across the district.

The work completed to date includes:

- **Geological mapping:** Careful attention is paid to lateritic cover which can complicate geochemical anomalies. Areas are also scanned for gossanous outcrops- being direct indicators of remnant sulphide mineralisation. Some anomalous gossans were mapped in the region, but none appear to be directly related to the mineralisation found at this stage.

- Soil Geochemistry: Soil sampling by both the CPRM (Brazilian Government Geological Survey) and Alvo covers the area, however there are only limited anomalies generated from this work – likely due to the extensive laterite cover. Auger drilling can penetrate the laterite and provide a more accurate geochemical test, however with mineralisation being horizontal and at depth, anomalous geochemistry relies on structure and or areas where the mineralisation is closer to surface. In the case of C4, where mineralisation closer to surface to the west, auger drilling returned anomalous Cu, Zn and Pb. At C4-NE, there is a strong and coincident Cu, Zn and Pb anomaly over the C4-NE prospect.

- Geophysical Surveys: Pole-dipole IP lines arranged across the area were used to survey for areas of high chargeability and low resistivity. Interpretation of the chargeability into 3D shapes appears to be strongly coincident with the disseminated mineralisation and highlighted several other highly chargeable areas around C4, including the C4-NE anomaly.

  FLEM and DHEM surveys completed showed moderately sized conductive plates with moderate conductivity thickness properties, strongly co-incident with conductive sulphide minerals like pyrrhotite and chalcopyrite. There is a weak response from FLEM over the C4-NE prospect which was unable to be interpreted into a conductor plate.

Alvo intends to target near surface mineralisation via a drill program at C4-NE in coming months.

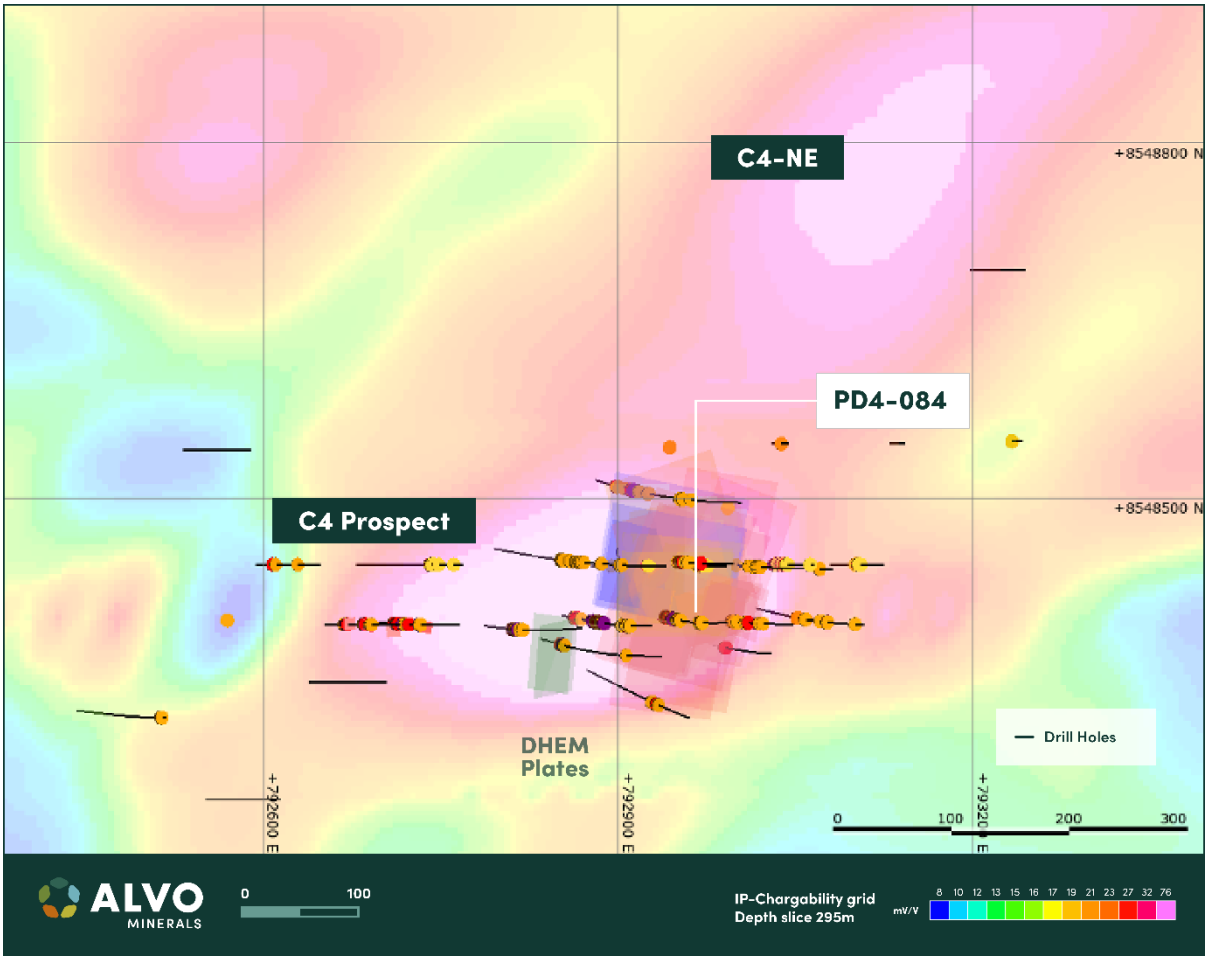

Figure 6: C4-NE location and prospectivity mapping. 3D chargeability anomaly extends from C4, indicating potential for broad disseminated mineralisation.

Table 1: *Significant intercepts C4 Diamond drilling program*

Hole ID	Prospect	Length (m)	From (m)	ZnEq %	CuEq %	Zn %	Cu %	Pb %	Ag g/t	Au g/t
PD4-089	C4	3.0	64.0	1.1	0.4	0.99	0.04	0.45	12.00	0.00
PD4-089	C4	2.0	69.0	1.6	0.7	1.71	0.05	0.32	8.00	0.00
PD4-089	C4	2.0	79.0	1.1	0.4	1.12	0.06	0.04	0.00	0.00
PD4-090	C4	1.0	98.0	1.1	0.5	1.08	0.05	0.29	4.00	0.00
PD4-090	C4	3.0	114.0	1.1	0.5	0.65	0.29	0.02	1.33	0.00
PD4-090	C4	1.0	121.0	1.1	0.5	0.69	0.27	0.03	0.00	0.00
PD4-090	C4	3.0	180.0	1.2	0.5	0.18	0.51	0.09	2.67	0.01
PD4-090	C4	5.0	187.0	1.8	0.7	0.29	0.79	0.03	4.20	0.05
PD4-090	C4	1.0	211.0	1.8	0.7	1.78	0.01	0.76	9.00	0.02
PD4-090	C4	0.5	223.6	10.9	4.5	11.80	0.10	2.12	35.00	0.20
PD4-090	C4	2.3	228.0	3.1	1.3	2.16	0.62	0.07	13.67	0.03
PD4-090	C4	3.3	244.0	0.9	0.4	0.55	0.14	0.32	11.97	0.01
PD4-090	C4	4.0	260.0	0.9	0.4	0.94	0.06	0.01	0.00	0.01
PD4-091	C4	3.0	90.0	1.4	0.6	1.47	0.04	0.16	6.33	0.00
PD4-092	C4	9.5	166.5	7.5	3.1	7.46	0.28	1.78	39.28	0.05
including	C4	3.8	167.7	16.0	6.6	16.08	0.57	3.59	83.95	0.10
PD4-093	C4	3.4	75.9	2.3	1.0	2.20	0.04	0.97	26.32	0.00
PD4-093	C4	6.8	102.3	1.2	0.5	1.24	0.08	0.13	4.31	0.01
PD4-093	C4	11.0	133.0	0.4	0.2	0.31	0.04	0.23	10.55	0.07
PD4-093	C4	2.5	189.7	2.5	1.0	2.37	0.04	1.09	19.82	0.00
PD4-093	C4	2.7	197.7	1.2	0.5	1.04	0.13	0.22	6.04	0.00
PD4-093	C4	8.5	211.5	7.3	3.0	7.11	0.39	1.40	27.60	0.08
including	C4	4.0	214.9	11.7	4.8	11.44	0.65	2.21	43.85	0.14
PD4-093	C4	3.4	260.3	3.8	1.6	3.65	0.32	0.35	11.35	0.00
PD4-094	C4	2.0	161.0	0.9	0.4	0.03	0.07	1.62	28.00	0.16
PD4-094	C4	3.3	183.8	1.7	0.7	1.58	0.06	0.62	10.54	0.00
PD4-094	C4	10.8	203.0	2.9	1.2	2.35	0.34	0.60	12.11	0.03
including	C4	2.4	208.0	6.3	2.6	4.70	0.94	1.20	28.92	0.10
PD4-095	C4 (west)	NSI								
PD4-096	C4	1.0	52.0	1.7	0.7	1.36	0.09	0.86	28.00	0.03
PD4-096	C4	7.0	57.0	1.2	0.5	1.20	0.05	0.32	8.14	0.04

Hole ID	Prospect	Length (m)	From (m)	ZnEq %	CuEq %	Zn %	Cu %	Pb %	Ag g/t	Au g/t
PD4-096	C4	31.2	117.4	3.4	1.4	3.14	0.18	0.93	25.35	0.15
including	C4	2.7	117.4	7.6	3.1	6.83	0.27	3.10	72.31	0.09
including	C4	6.3	142.2	7.9	3.2	7.78	0.22	2.21	74.10	0.66
PD4-096	C4	1.3	182.8	4.4	1.8	4.56	0.11	0.80	16.00	0.03
PD4-096	C4	6.4	188.0	2.4	1.0	2.42	0.07	0.63	12.38	0.02
PD4-097	C4	2.5	68.0	0.9	0.4	0.99	0.03	0.04	0.00	0.00
PD4-097	C4	2.0	136.0	1.1	0.4	0.63	0.28	0.03	0.00	0.02
PD4-097	C4	4.4	143.5	1.2	0.5	0.62	0.31	0.08	1.88	0.00
PD4-097	C4	4.0	169.0	0.9	0.4	0.85	0.05	0.27	6.00	0.00
PD4-098	C4	4.8	76.2	5.5	2.3	5.09	0.15	2.32	51.09	0.03
including	C4	2.2	78.9	11.2	4.6	10.49	0.20	4.86	108.14	0.06
PD4-098	C4	6.2	108.0	2.1	0.9	1.85	0.05	1.03	32.40	0.01
including	C4	0.9	113.3	12.1	5.0	10.84	0.21	6.26	205.00	0.07
PD4-098	C4	9.8	122.2	5.8	2.4	4.81	0.36	2.51	71.05	0.07
including	C4	3.2	124.8	10.2	4.2	8.46	0.78	3.62	113.25	0.17
PD4-099	C4	1.2	62.0	2.9	1.2	3.03	0.08	0.43	12.00	0.02
PD4-099	C4	5.3	70.0	5.4	2.2	4.96	0.14	2.28	42.61	0.02
including	C4	1.4	71.7	14.8	6.1	13.68	0.30	6.68	122.24	0.06
PD4-099	C4	7.6	105.9	5.0	2.0	4.53	0.12	2.20	58.11	0.04
including	C4	1.9	107.6	14.9	6.1	14.01	0.13	6.97	177.63	0.09

Table of significant intercepts calculated using a 0.1% Cu or 0.5% Zn or 0.1 g/t Au lower cut-off, minimum interval of 0.5m and a maximum of 2m of consecutive internal dilution.

CuEq & ZnEq: Copper and Zinc Equivalent Calculation *The copper and or zinc equivalent grades (CuEq & ZnEq) are based on copper, zinc, silver, lead and gold prices of US$7,782/t Copper, US$3,189/t Zinc, US$1,980/t Lead, US$19.30/oz Silver, and US$1,696/oz (price deck based on 3-month LME as 7/11/22) Recoveries of 81%, 83%, 70%, 50% and 50% respectively (recoveries based on ASX Metallurgical testwork released 9 November 2022). The copper equivalent calculation is as follows: Cu Eq = Cu grade% * Cu recovery + ((Pb grade % * Pb recovery % * (Pb price $/t/Cu price$/t)) + (Zn grade % * Zn recovery % * (Zn price $/t/Cu price $/t)) + (Ag grade g/t /31.103 * Ag recovery % * (Ag price $/oz/Cu price $/t) + (Au grade g/t /31.103 * Au recovery % * (Au price $/oz/Cu price $/t). Reported on 100% Basis.*

Table 2: Collar details of Diamond Drilling reported in this release. Coordinates are in SIRGAS_2000 Zone22S

Hole ID	Prospect	Easting	Northing	RL	Final Depth	Azimuth	Dip	Comment
PD4-089	C4	792,960	8,548,314	439	231.1	290	-65	Discovery
PD4-090	C4	793,004	8,548,496	447	311.5	270	-65	Discovery
PD4-091	C4	793,108	8,548,393	433	280.6	270	-70	Discovery
PD4-092	C4	792,937	8,548,366	442	211.7	270	-60	Discovery
PD4-093	C4	793,048	8,548,393	439	298.9	270	-70	Discovery
PD4-094	C4	793,081	8,548,440	436	325.6	270	-65	Discovery
PD4-095	C4	791,954	8,548,000	414	333.8	270	-60	Discovery
PD4-096	C4	792,928	8,548,392	443	226.7	270	-70	Discovery
PD4-097	C4	792,935	8,548,442	458	288.8	270	-60	Discovery
PD4-098	C4	792,766	8,548,393	446	190.1	270	-65	Discovery
PD4-099	C4	792,716	8,548,393	437	154.4	270	-65	Discovery

Next Steps and Upcoming News Flow

- FLEM and IP surveys on regional targets across Palma – **Ongoing**
- Geochemical sampling across known exploration prospects across Palma– **Ongoing**
- Maiden Mineral Resource Estimate update for C4 prospect – **Q2 CY2024**
- Mineral Resource Estimate update for C3 and C1 deposits – **Q2 CY2024**
- Auger Drilling at Bluebush REE Project – **Underway**
- Results from Bluebush REE auger and diamond drilling expected shortly – **Imminent and Ongoing**
- Maiden diamond drill programs at high-priority untested regional targets across Palma – **Q2 CY2024**

ENQUIRIES

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References to Previous ASX Announcements

Reference in this report is made to previous announcements including:

As reported in the announcement "Prospectus" dated 18 October 2021 issued by Alvo Minerals Limited

As reported in the announcement "Preliminary Metallurgical Testwork Indicates Excellent Recoveries" dated 9 November 2022 issued by Alvo Minerals Limited

As reported in the announcement "New VMS Discovery at Palma Delivers Broadest Base Metals Intercept to date" dated 1 August 2023 issued by Alvo Minerals Limited

In relation to the MRE and other exploration results or estimates cross-referenced above, these are extracted from the Independent Geologists' Report prepared by Target Latin America and others (the "IGR"), which is included in full in Alvo's prospectus dated 30 July 2021 (the "Prospectus") and which was announced to ASX within the Prospectus on 18 October 2021. Alvo confirms that it is not aware of any new information or data that materially affects the information included in the IGR and that all the material assumptions and technical parameters underpinning the Inferred Mineral Resource Estimate continue to apply and have not materially changed.

Forward Looking Statements

Statements regarding plans with respect to Alvo's exploration programs are forward-looking statements. Forward-looking statements are only predictions and are subject to risks, uncertainties and assumptions which are outside Alvo's control and actual values, results or events may be materially different to those expressed or implied herein. Alvo does not undertake any obligation, except where expressly required to do so by law, to update or revise any information or any forward-looking statement to reflect any changes in events, conditions, or circumstances on which any such forward-looking statement is based.

Competent Person's Statement

The information contained in this announcement that relates to recent exploration results is based upon information compiled by Mr Rob Smakman of Alvo Minerals Limited, a Competent Person and Fellow of the Australasian Institute of Mining and Metallurgy. Mr Smakman is a full-time employee of Alvo and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the "Australasian Code for Reporting of Mineral Resources and Ore Reserves" (or JORC 2012). Mr Smakman consents to the inclusion in this announcement of the matters based upon the information in the form and context in which it appears.

ABOUT ALVO

Alvo Minerals (ASX: ALV) is an active critical minerals exploration company, with an established exploration base in central Brazil.

The Company was founded to explore for base and precious metals, hunting high-grade copper and zinc at its Palma Project, adjacent to the Company's Bluebush REE Project. The Palma Project has a JORC 2012 Inferred Mineral Resource Estimate of 4.6Mt @ 1.0% Cu, 3.9% Zn, 0.4% Pb & 20g/t Ag.

Alvo is also exploring for Rare Earth Elements (REE) at the Bluebush Ionic Clay REE Project in Central Brazil. Bluebush is adjacent to and along strike from the privately-owned Serra Verde Ionic Clay REE Project, which is the only Ionic Clay REE project in commercial production outside of China.

Alvo's Ipora REE Project is an exciting greenfields exploration project targeting the Iporá alkaline intrusive complex, considered highly prospective for REEs, potentially of the highly valued ionic clay type. The Ipora REE Project is located in the State of Goias and is on similar geology and located adjacent to the PCH REE Project (Appia Rare Earths and Uranium Corporation, CSE:API).

Alvo's strategic intent is to aggressively explore and deliver growth through discovery, leveraging managements' extensive track record in Brazil. There are three phases to the exploration strategy – Discover, Expand and Upgrade.

Alvo is committed to fostering best-in-class stakeholder relations and supporting the local communities in which it operates.

JORC Tables

Section 1 Sampling Techniques and Data (Criteria in this section apply to all succeeding sections, note data in this section is extracted from historic reports)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse Nickel that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	• Half diamond core was sampled and submitted for analysis, ensuring representivity of the sample zones. Sampling was typically 1m in mineralised zones unless the geologist determined a different length was appropriate. Areas away from the main mineralised zones may have been sampled as 2m composite samples. • Sampling was supervised by Alvo geologists who selected the sampling zones. • Geologists log the mineralisation as massive, semi-massive disseminated, stringer, brecciated or barren. These logs were used to determine the main mineralisation zones, which dictated the sampling. Mineralisation was also logged as potentially supergene mineralised in the oxidised zone.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• Standard-tube diamond drilling by independent drill contractor. Drillhole diameter was variable- HW for collar and friable material, HQ diameter was generally used until the base of complete oxidation and then the diameter reduced to NQ. All holes are down-hole oriented using Reflex Gyro tool. Drill core is oriented using NQ ACT 3 orienting tool from Reflex.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• Recoveries are recorded by both the driller's assistant (on site) and Alvo field assistant once the core has been received at the core shed. Recoveries are measured by comparing the length of the drill run with the amount of core actually recovered. Recovery has averaged >95% for all drilling to date. • Drillers are penalised for poor recovery and are constantly supervised at the rig to ensure care is taken to ensure high recoveries. • No relationship is believed to exist between recovery and grade.

Criteria	JORC Code explanation	Commentary
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• All holes have been geologically logged by Alvo geologists, to a detail relevant for inclusion in an MRE. Care is taken to ensure metallurgical factors are included (specifically the % of and type of sulphides present). Basic geotechnical logging is standard. • Logging and core processing is both qualitative and quantitative. Core is photographed wet and dry, measured for magnetic susceptibility, conductivity, density, RQD and basic geotechnical logging. All core is structurally logged by geologists to look for planar and linear features. Measurements of these are taken on both oriented and non-oriented core. • All drilling results reported have been logged onsite by Alvo geologists. Logs include hole number, hole location, date drilled, collar, dip and azimuth as well as qualitative data such as rock type, and descriptions of the colour, alteration, weathering, grainsize, mineralisation and texture. • All metreage reported has been logged.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• Drill core is sawn in half and one half (consistently the same half) of the core is sampled. The remaining half is stored by Alvo in its dedicated facility. • Sample size, being generally 1m sample intervals, is appropriate to the material being sampled and considered to be representative.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• SGS Geosol Laboratorios Ltda (**SGS**) are used for multi element and gold analyses on half diamond core. The lab techniques described below are considered appropriate for the style of mineralisation at the Palma Project ○ Half drill core samples are dried, crushed until 75% passing 3mm, homogenised and split with 250-300g pulverised until 95% passing 150# ○ Gold is determined by 30g fire assay ○ Multi element (including Cu, Zn, Pb and Ag) are determined by multi-acid digestion and ICP-OES. Sample results over detection limit (1% Zn, Cu, Pb or 100 g/t Ag) are re-tested using a higher lower detection limit. Samples above 5% Pb are re-tested using a higher detection limit. • The QA/QC data includes standards, blanks, duplicates and laboratory checks. Alvo inserts internationally certified standards at a rate of 1 in 10 samples, blanks 1 in ~25 samples. Duplicates are selected from the crushed samples at a rate of 1 in 20 samples and follow the same assaying procedure. • Alvo has reviewed the QA/QC data for all lab samples and are satisfied the results are within acceptable limits

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Significant intercept tables are prepared by Alvo personal and checked by at least one other geologist. • No twinned holes are being reported. • All data is received from the laboratories and uploaded into excel spreadsheets where it is checked and uploaded into cloud storage. Once QA/QC procedures have been completed, the data is loaded into an Access database. • No adjustments to the data were made. Weighted averages were used to calculate significant intercepts. For duplicates, the first sample is recorded for intercepts.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Alvo is using differential GPS to locate and record the drillhole collar locations. All drillholes are downhole surveyed using the Gyro tool from Reflex. • All location data has been recorded SIRGAS 2000 UTM zone 22S. • Topographic control is adequate for the exploration at Palma.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• Drillholes were variably spaced with holes typically 50-100m apart on section and the 2 main sections drilled 50m apart.- • Drill spacing is currently considered sufficient to estimate a Mineral Resource under the JORC 2012 guidelines. No compositing has been applied to the results (beyond weight averaging the results).
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• Drilling was oriented to intercept mineralisation as perpendicular as possible. No bias is believed to have occurred however geological and geophysical evidence suggests folding and faulting has occurred. Sampling lengths were generally 1m downhole, unless there was a specific geological control required by the geologist. C4 is interpreted as generally planar in overall geometry (horizontal or shallowly dipping) and the intercepts are therefore interpreted to be approximately true width. • Ongoing structural interpretation has noted faults and open folds in the drilling which may have altered the geometry. All intercepts recorded are downhole intervals and interpreted to be approximately true width.
Sample security	• *The measures taken to ensure sample security.*	• Drillcore is transported from the field to a locked facility by Alvo or drilling staff daily. Samples are prepared in the coreshed by Alvo staff and transported to the lab by a dedicated transport company.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No audits of the techniques or data has been undertaken at this stage.

Section 2 Reporting of Exploration Results (Criteria listed in the preceding section also apply to this section)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The C4 prospect is located on exploration tenement 860.317/1984 which is a part of the agreement Alvo has with the CPRM (Geological Survey of Brazil). Alvo has the right to explore and eventually transfer 100% of this and other tenements, subject to several staged payments, drilling and payment of 1.71% royalty (above statutory government royalties). • Alvo is confident the tenement is in good standing and no known impediments exist for further exploration or eventual mining, apart from normal statutory reporting, local access agreements and state and federal approvals.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Exploration was mainly completed by the CPRM. The work was completed to a high standard for the time and Alvo was able to estimate an inferred JORC compliant Mineral Resource Estimate based on the information and work completed by the CPRM (on the C1 and C3 deposits). The interpretation of this historical work has guided some of the drilling and exploration to date which has been successful in upgrading and extending the geological potential.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Palma polymetallic project is located principally in the Palmeiropolis volcano-sedimentary sequences (PVSS), composed of a series of bimodal volcanic rocks and associated sedimentary units, regionally metamorphosed to amphibolite facies. The mineralisation is of a Volcanogenic Massive Sulphide (VMS) type, occurring at or near the contact between a metamafic volcanic unit and meta-sedimentary schist and comprises pyrite, pyrrhotite, sphalerite, chalcopyrite, galena, occurring as disseminated, brecciated and massive form.

Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *hole length.*
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*
		• See Table 2- Collar table. All drilling is included in Table 2.

Criteria	JORC Code explanation	Commentary
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• The significant intercepts were calculated using minimum sample length of 0.5m, with up to 2m of consecutive dilution, samples included with values > 0.2%Cu or >0.5% Zn or >0.1g/t Au. No upper cuts were considered. • Weighted averages were calculated for all intercepts. • Copper equivalent grades are reported. Parameters for this calculation are; ***CuEq and ZnEq: Copper and Zinc Equivalent Calculation*** *The metal equivalent grades are based on copper, zinc, silver, lead and gold prices of US$7,782/t Copper, US$3,189/t Zinc, US$1,980/t Lead, US$19.30/oz Silver, and US$1,696/oz Gold ((price deck based on 3-month LME as 7/11/22) Recoveries of 81%, 83%, 70%, 50% and 50% respectively,(recoveries based on ASX Metallurgical testwork released 9 November 2022). The copper equivalent calculation is as follows: Cu Eq = Cu grade% * Cu recovery + ((Pb grade % * Pb recovery % * (Pb price $/t/Cu price$/t)) + (Zn grade % * Zn recovery % * (Zn price $/t/Cu price $/t)) + (Ag grade g/t /31.103 * Ag recovery % * (Ag price $/oz/Cu price $/t) + (Au grade g/t /31.103 * Au recovery % * (Au price $/oz/Cu price $/t). Reported on 100% Basis.*
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• At C4, mineralisation is interpreted as being overall planar (horizontal or shallowly dipping) and the intercepts are therefore interpreted to be approximately true width. • The downhole depths are reported
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• See diagrams reported in the announcement
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• All results are reported above the cut-offs described above. Not all of the holes are sampled.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• Extensive exploration data and information has been completed at the Palma Project and previously reported. A summary is provided below: • Airborne geophysics. There have been several combined aeromagnetic and radiometric surveys which cover the area, generally flown by Brazilian Government Agencies. These are generally broad spaced and useful for regional context. In 2008, private groups Lara Minerals and Voltorantim SA flew an heli-borne VTEM survey across the area which highlighted multiple conductors. These may be related to massive sulphide accumulations, however most of these potential conductors were not followed up. • Drilling: Drilling by the CPRM was completed in the '70's and '80's and is included in this summary for the C1 and C3 prospects. CPRM also drilled other targets at C2, C4 and C5 where they discovered mineralisation. CPRM also drilled several targets that did not intersect economic mineralisation. JICA drilled 7 holes in

Criteria	JORC Code explanation	Commentary
		the 1980's mainly around the C4 target. Lara/Votorantim drilled 11 holes into targets they defined from the VTEM survey. ● Metallurgical testwork: The CPRM completed several phases of metallurgical testwork including bench and pilot plant scale. This testwork is summarised in the Prospectus issued by Alvo Minerals Ltd in 2021. No testwork was completed on C4 mineralisation to date. ● Alvo estimated a JORC compliant MRE for the C1 and C3 deposits (2021). ● Ground geophysics has been completed by Alvo across these prospects. Surveys have included fixed loop electromagnetic surveys (FLEM), Downhole electromagnetic surveys (DHEM) and Induced Polarisation Surveys (IP).
Further work	● *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* ● *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	● Alvo will continue diamond drilling across the wider Palma Project ● Alvo has started exploring other prospects in order to upgrade them to drill ready prospects. There are multiple prospects that have high geological probability of hosting mineralised sulphides. ● Alvo has in-house electromagnetic and Induced polarisation survey equipment and is performing FLEM, DHEM and IP surveys. It is expected these surveys will enhance the drilling program by delineating possible extensions of the highly conductive mineralisation. ● Alvo has purchased a truck mounted mechanical Auger drill rig allowing fast and effective Geochem sampling across the companies tenure. ● Alvo routinely soil sampling across the tenure, geologically maps and occasionally trenches prospects to better understand the under-surface geology and geochemistry.