

# ASX Announcement

9 December 2025

## Massive Cu & Zn Sulphides expands Touro Discovery

### HIGHLIGHTS

- Drilling is ongoing at Alvo's Touro Prospect in Central Brazil, where **all 5** diamond holes drilled to date have intercepted massive, semi-massive or disseminated sulphides of Cu and Zn, **confirming visual mineralisation along 750m strike of the 2.2km long by 750m deep target.**
- All holes to date have intercepted mineralisation at shallow depths and deeper electromagnetic conductors which extend 750m below surface are yet to be tested. **Current hole PDT-122 will target the deeper southern conductor.**
- Additional trenching work confirms the continuity of mineralisation on surface.



**Figure 1:** Mineralised intervals at Touro Prospect-recent drilling. From left to right: PDT-119 from 65.5m downhole; PDT-120 from 66.25m (visual estimate of 8% chalcopyrite and 12% sphalerite) and 69.2m (visual estimate of 1% chalcopyrite and 25% sphalerite); PDT-121 from 95m and 101.85m (Visual estimate of 3% chalcopyrite + 1% sphalerite, and 10% chalcopyrite + 5% sphalerite, respectively). Depth refers to base of core in photo. Dark brown mineral is sphalerite (zinc sulphide), golden colour is chalcopyrite (copper sulphide), pale yellow is pyrite (iron sulphide) and bronze colour is pyrrhotite (iron sulphide).

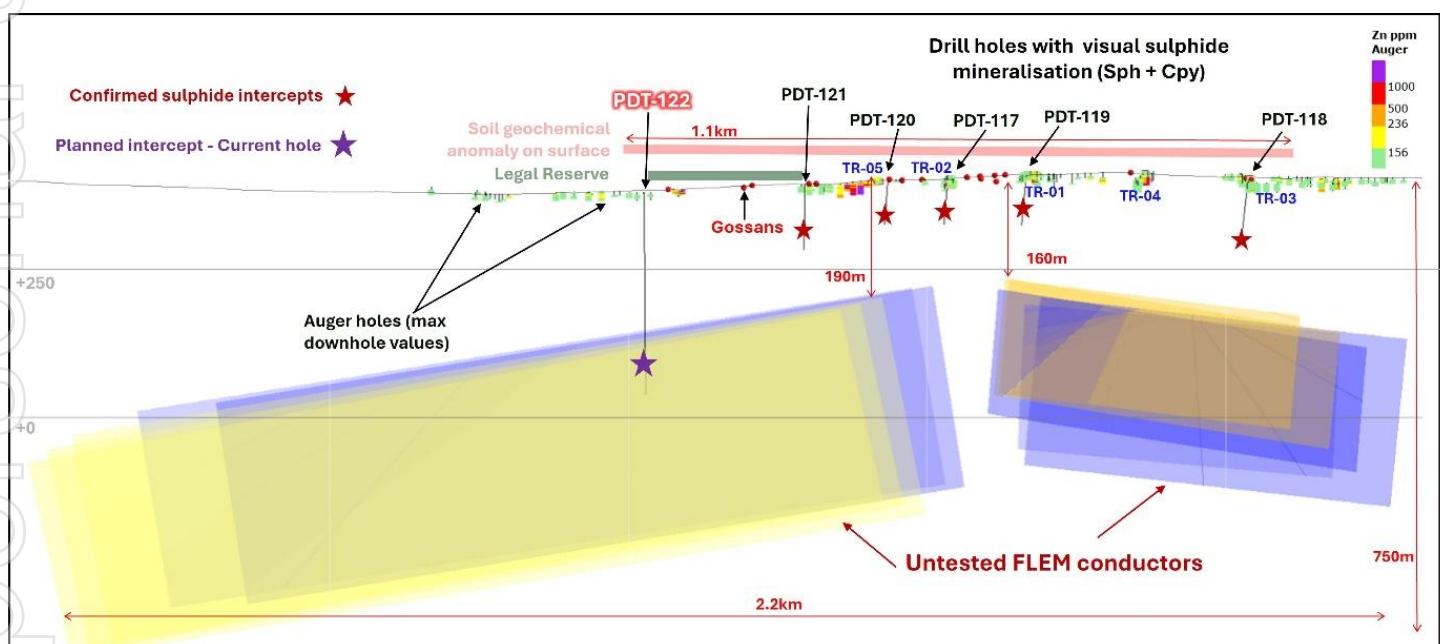
**Cautionary statement:** Visual estimates of mineral abundance should never be considered a proxy or substitute for laboratory analyses where concentrations or grades are the factor of principal economic interest. Visual estimate logs are subjective in nature and potentially provide no information regarding impurities or deleterious physical properties relevant to valuations. Portable XRF is used as an aid in the determination of mineral type and abundance during the geological logging process. Laboratory assays are expected in 6-8 weeks.

**Alvo Minerals Limited (ASX: ALV)** (“**Alvo**” or “**the Company**”) is pleased to update shareholders on the ongoing drill program at the 100% owned, Touro Prospect, located within the wider Palma Copper-Zinc Volcanic Massive Sulphide (VMS) Project in Central Brazil. All diamond holes drilled at Touro have intersected Cu and Zn sulphides, with hole PDT-120 intercepting a broad zone of massive, semi-massive and disseminated sulphides and hole PDT-121 - which was drilled from the west - intercepting multiple zones. All mineralised zones are hosted with the same alteration sequence that stretches for 1.1km along strike on surface - and drilling to date has **tested** approximately 750m of this strike.

## Rob Smakman, Alvo’s Managing Director commented:

*“Our ongoing drilling at Touro continues to impress, with the southern half of the prospect looking promising. Holes PDT-120 and 121 have intercepted some of the strongest massive sulphides yet, and the rig has been moved to test the deeper conductor zone in the south. We are already comparing Touro and its confirmed 750m of strike to our C3 deposit- which has a footprint of 650m on surface*

*“Our on-ground exploration team is targeting to intercept the deeper conductor prior to Christmas.”*



**Figure 2:** Long section at Touro- indicating the depth and strike length of the prospect which at surface is ~1.1km and over 2.2km at depth. Included are the approximate pierce points of holes PDT-117 - PDT-121 and the target intercept for current hole- PDT122.

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## Touro Exploration Update

Drillholes PDT-119, 120 and 121 drilled into Touro have intersected visual massive, semi-massive and disseminated mineralisation, confirming drilled visual mineralisation along 750m of strike.

All holes drilled to date have intercepted sulphides including the copper-bearing mineral chalcopyrite and the zinc-bearing mineral sphalerite, with some traces of galena (lead bearing). The sulphides are all hosted within the hydrothermally altered unit which extends for 1.1km along surface and has been defined by mapping, soils sampling and tested by auger drilling and trenching.

The drilling to date has tested the shallow continuation of this mineralised zone over 750m of strike, with additional tests of the strike extent expected in the new year. The rig has now been moved to test the deeper southern conductor.

Descriptions of the holes to date include:

**PDT-119** - drilled ~120m to the north of the Touro discovery hole PDT-117, the shallow mineralisation was targeted and intercepted from 59-66.5m downhole (see figures 1, 2, 3 & 4). This hole intercepted 2 zones of disseminated mineralisation (~1m) and a short zone of semi-massive sulphides, visually rich in sphalerite (Zn bearing sulphide).

**PDT-120** - drilled ~120m to the south of the Touro discovery hole PDT-117, the shallow mineralisation was targeted and intercepted from 64.5-69.6m downhole (see figures 1, 2, 3 & 5). This hole intercepted multiple zones of massive, semi-massive and disseminated mineralisation, with a 1.8m wide zone of massive sulphide visually estimated to include up to 8% chalcopyrite and 12% sphalerite.

**PDT-121** - drilled ~250m to the south of the Touro discovery hole PDT-117, was oriented towards the southeast due to temporary access restrictions (see figures 1, 2, 3 & 6). Mineralisation was intercepted subparallel to the core orientation (meaning the intercepts are NOT true width), from 88.9 to 119.2m downhole. Multiple intercepts of massive, semi-massive and disseminated sulphides were intercepted, with a 0.6m massive sulphide lens estimated to have 10% chalcopyrite and 5% sphalerite.

**Table 1:** Table of estimated visual sulphides for hole PDT-118. Sulphides include Cpy (chalcopyrite- Cu bearing), Sph (sphalerite- Zn bearing), Ga (Galena- Pb bearing), Po (pyrrhotite- iron bearing) and Py (pyrite- iron bearing). TR= Traces of sulphides (<1%)

Hole #	From	To	Interval	Litho-code	Mineralisation / Sulphide %					Lithotype
					Cpy	Sph	Ga	Po	Py	
PDT-119	59	59.4	0.4	DISS	1%	1%			8%	Disseminated
	63.8	64	0.2	SMS		10%			20%	Semi-Massive Sulphide
	64	65.1	1.1	GBHT				TR	TR	Hydrothermal alteration
	65.1	65.75	0.65	DISS	2%	3%			30%	Disseminated
	65.75	66.5	0.75	GBHT	TR	1%			5%	Hydrothermal alteration
PDT-120	64.5	65	0.5	DISS	2%				8%	Disseminated
	65	65.5	0.5	SMS	7%	3%			25%	Semi-Massive Sulphide
	65.5	67.3	1.8	MAS	8%	12%		65%	3%	Massive Sulphide
	67.3	69	1.7	DISS	1%	TR			5%	Disseminated
	69	69.65	0.65	SMS	1%	25%			25%	Semi-Massive Sulphide

Hole #	From	To	Interval	Litho-code	Mineralisation / Sulphide %					Lithotype
					Cpy	Sph	Ga	Po	Py	
PDT-121	88.9	89.4	0.5	SMS	TR	2%		2%	30%	Semi-Massive Sulphide
	93.8	95.3	1.5	SMS	3%	1%		TR	20%	Semi-Massive Sulphide
	99.7	100.2	0.5	SMS	1%	5%		~40%	5%	Semi-Massive Sulphide
	100.2	101.9	1.7	DISS	8%	1%		12%	2%	Disseminated
	101.85	102.4	0.6	MASS	10%	5%		60%	TR	Massive Sulphide
	102.4	103.3	0.9	DISS	1%	TR		2%	8%	Disseminated
	113.4	114.4	1	SMS	1%	7%	TR	12%	10%	Semi-Massive Sulphide
	114.4	117.3	2.9	DISS	1%	1%		1%	3%	Disseminated
	117.3	117.8	0.5	MASS	3%	2%	TR	55%	5%	Massive Sulphide
	117.8	118.3	0.5	DISS	1%	2%		5%	6%	Disseminated

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Two additional trenches have been sampled and are reported, confirming the surface continuity of mineralisation at Touro (see Figure 3). The trenches T4 and T5 were sampled and analysed internally by Alvo staff, with highlights including;

- 10.2m @ 1,169ppm Zn, 494ppm Cu and 682ppm Pb in Trench 4
- 1m @ 2,135ppm Zn, 279ppm Cu and 275ppm Pb in Trench 5
- 11.9m @ 770ppm Zn, 297ppm Cu and 268ppm Pb in Trench 5

The trenches were dug across the alteration zone, mapped by Alvo geologists and confirm the extent of mineralisation along strike.

Alvo has applied to allow access to an area covering a portion of the Touro Prospect, known as a Legal Reserve (see Figure 3). This is defined by landowners as an area of low environmental impact. Additional licenses are required to access this area and these are expected in 2026.

## Touro VMS Prospect

Touro is a recently discovered VMS prospect featuring a well-defined mineralised trend extending at surface for over 1,100m (Figures 2 & 3). The mineralisation contains numerous gossans on surface containing up to 7.5% Zn, 0.2% Cu, and 1.0% Pb and is supported by coincidence soil and auger geochemical anomalies, trench sampling and 2 large sets of fixed loop electromagnetic (FLEM)

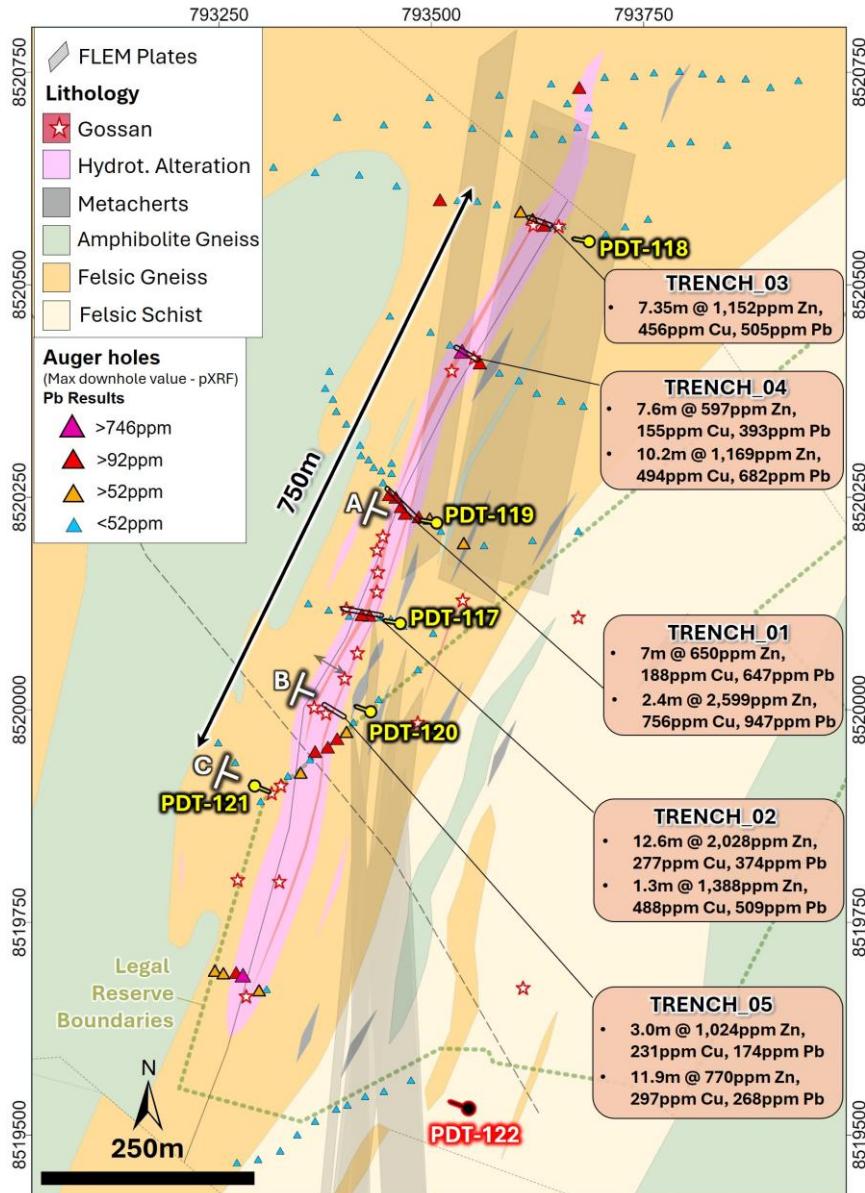
conductors. The FLEM conductors extend over 2,200m along strike and down to 750m below surface and have conductivity thickness values ranging from (northern plates) and for the Southern.

Geological mapping on surface and in the trenches encountered mineralised gossans (which included the zinc bearing alteration mineral gahnite) within a hydrothermally altered contact zone located between mafic and felsic rocks.

Results from detailed FLEM surveys across Touro revealed an extensive anomaly, aligned and coincident with the soil/auger anomaly described above. Inversion of this FLEM anomaly has highlighted 2 sets of conductor plates, a set to the north (ranging from 39-46 Siemens) and a set to the south (75-90 Siemens) which extend beyond the geological/geochemical anomaly. Conductor plates are interpreted to be zones of relatively higher conductance than the surrounds. Massive sulphides are generally highly conductive (especially chalcopyrite and pyrrhotite).

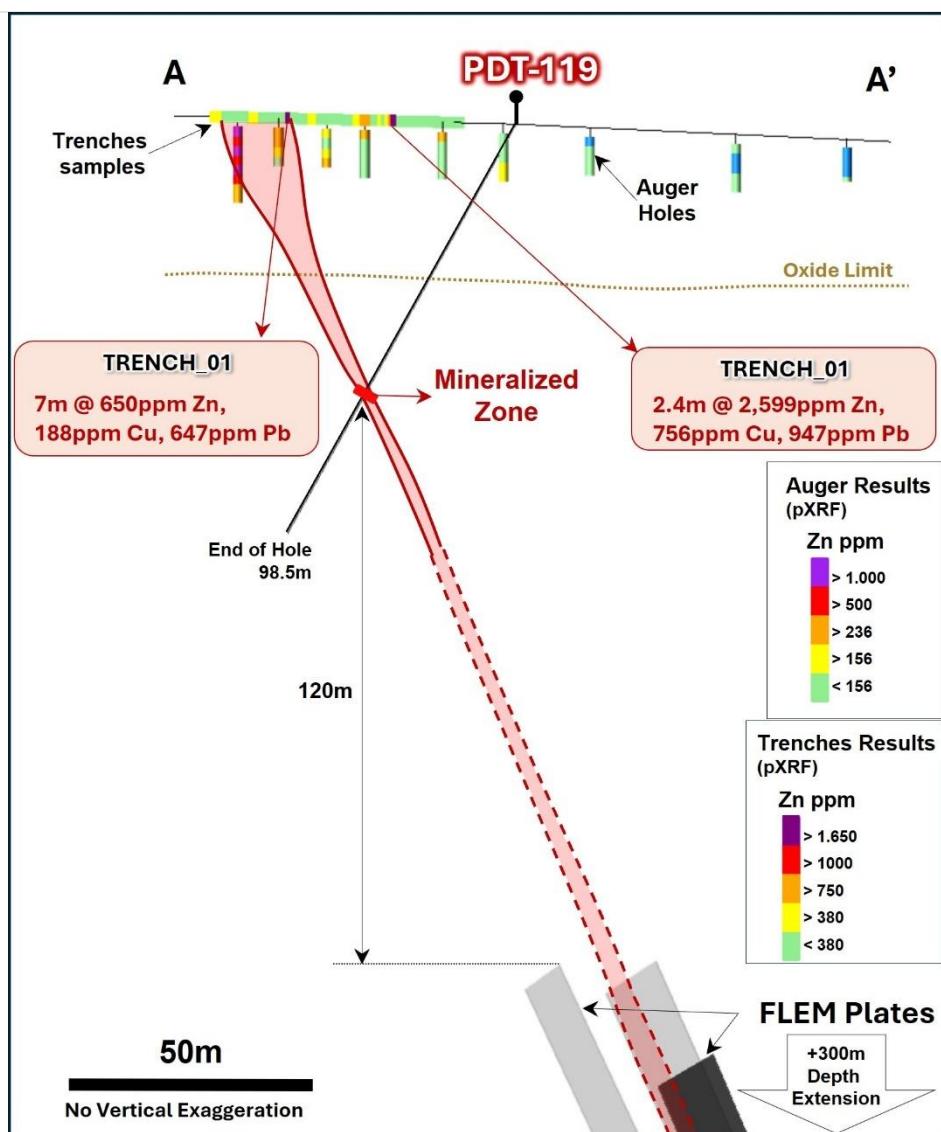
The drill rig will continue drilling until the Christmas break (expected in mid-December).

All holes are being surveyed with a downhole electromagnetic probe, with results and interpretations ongoing.

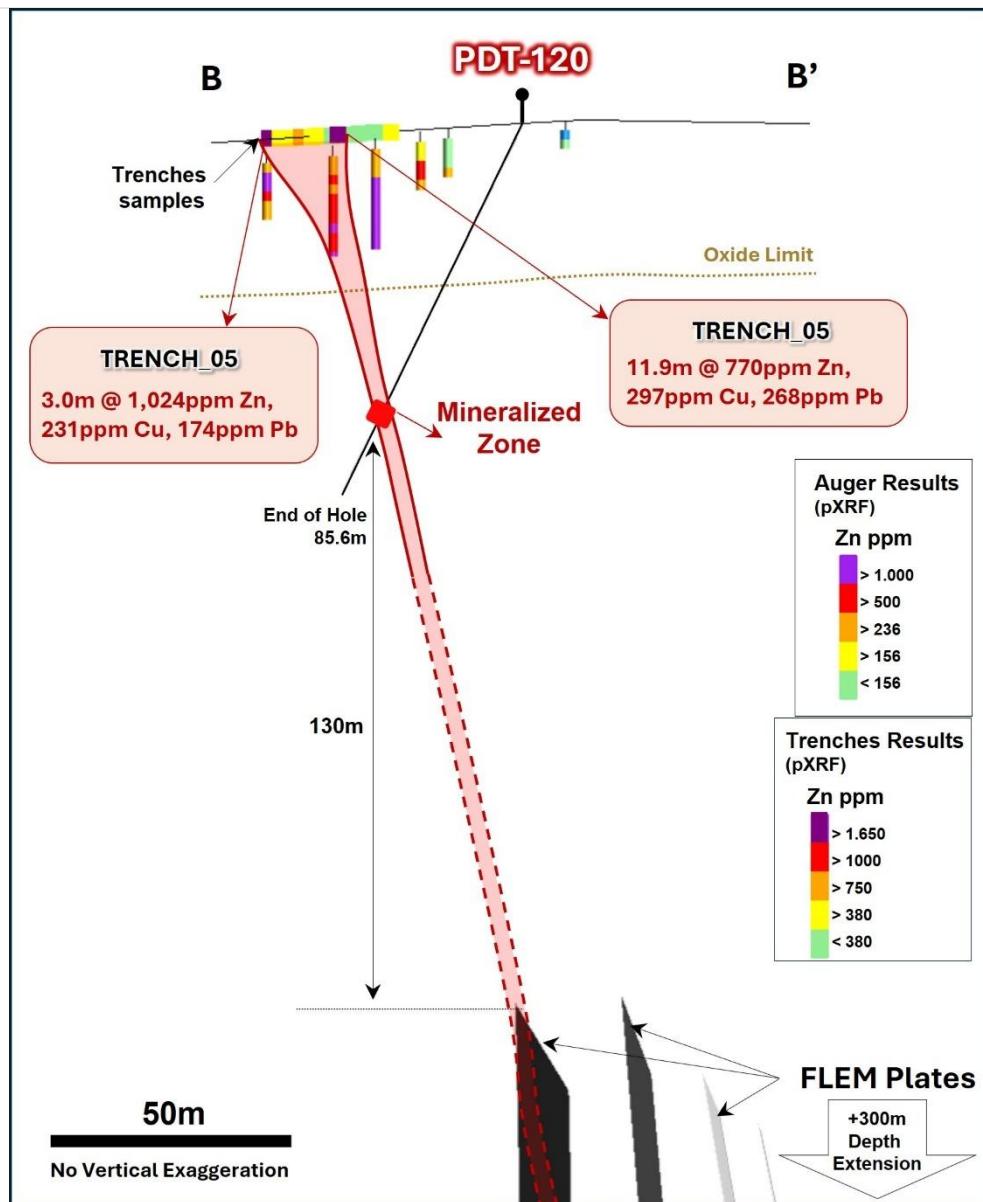


**Figure 3:** Touro Prospect plan including drilling to date, trench locations, geochemical anomaly, gossans and the hydrothermal alteration zone. The FLEM Plates are included in shaded grey. Drilling is underway on hole PDT-122 which is targeting the deeper FLEM conductor below the surface mineralisation

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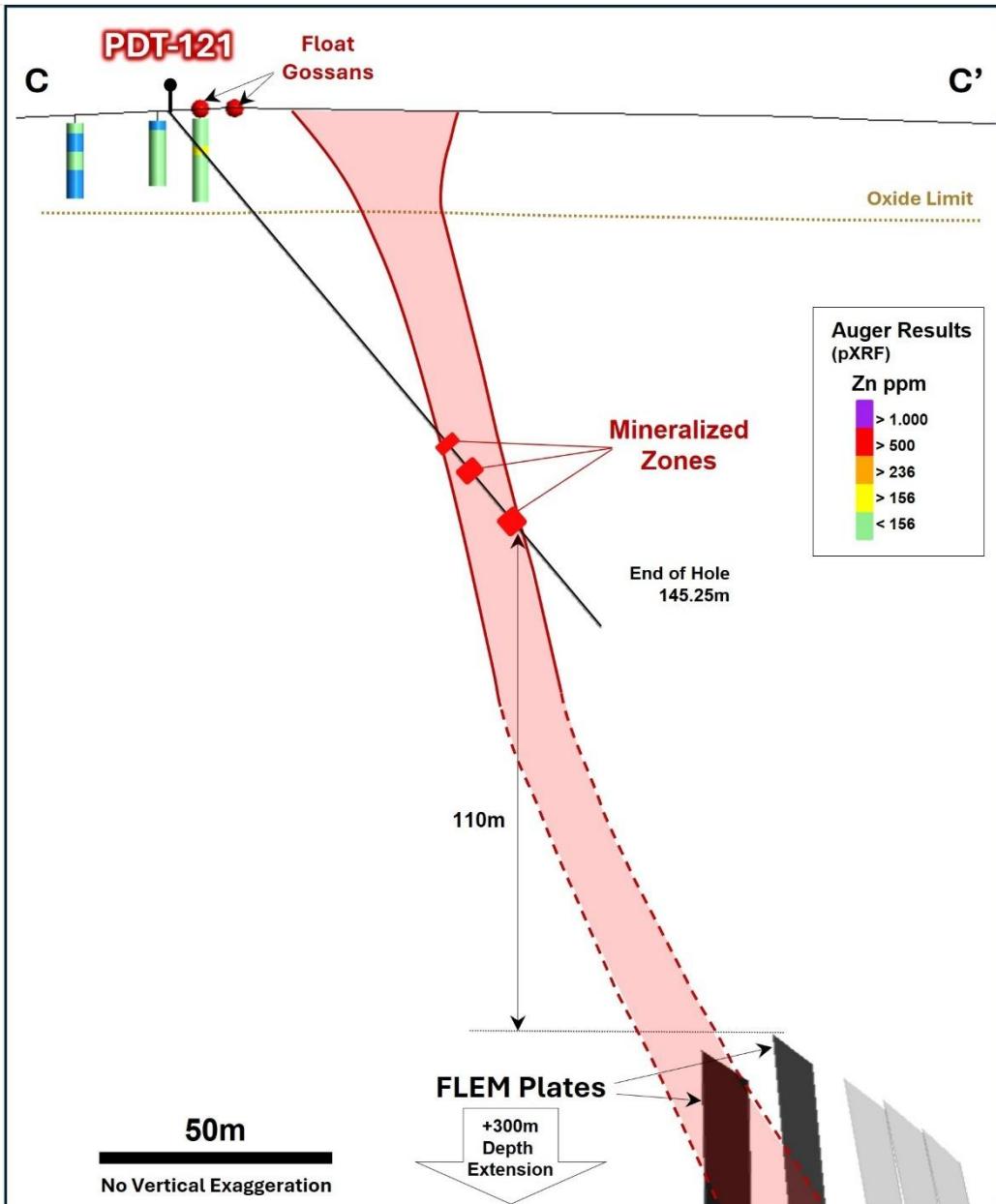


**Figure 4:** Touro cross section through Trench 1 and PDT-119. A mineralised zone which included semi-massive, disseminated sulphides and strong hydrothermal alteration was intercepted from 59 to 66.5m downhole.



**Figure 5:** Touro cross section through Trench 5 and PDT-120. A mineralised zone which included massive, semi-massive, disseminated sulphides and strong hydrothermal alteration was intercepted from 64.5 to 69.65m downhole.

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**Figure 6:** Touro cross section through PDT-121. Multiple mineralised zones which included massive, semi massive, disseminated sulphides and strong hydrothermal alteration was intercepted from 88.85 to 118.25m downhole. Note that PDT-121 is a scissor hole and the mineralisation zone is sub-parallel to the core orientation.

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## The Palma Project

Alvo's 100% owned Palma Cu-Zn Project (see Figure 7) hosts a Total MRE<sup>1</sup> across three deposits of 7.6Mt @ 2.02% CuEq (or 6.2% ZnEq) for 153kt of contained CuEq tonnes (0.7% Cu, 3.4% Zn, 0.6% Pb, 16g/t Ag and 0.03 g/t Au), demonstrating the potential for Palma to emerge as a significant VMS district.

All deposits at Palma remain open along strike and at depth and have potential to expand and upgrade with additional drilling, geological re-interpretation, metallurgy and engineering studies.

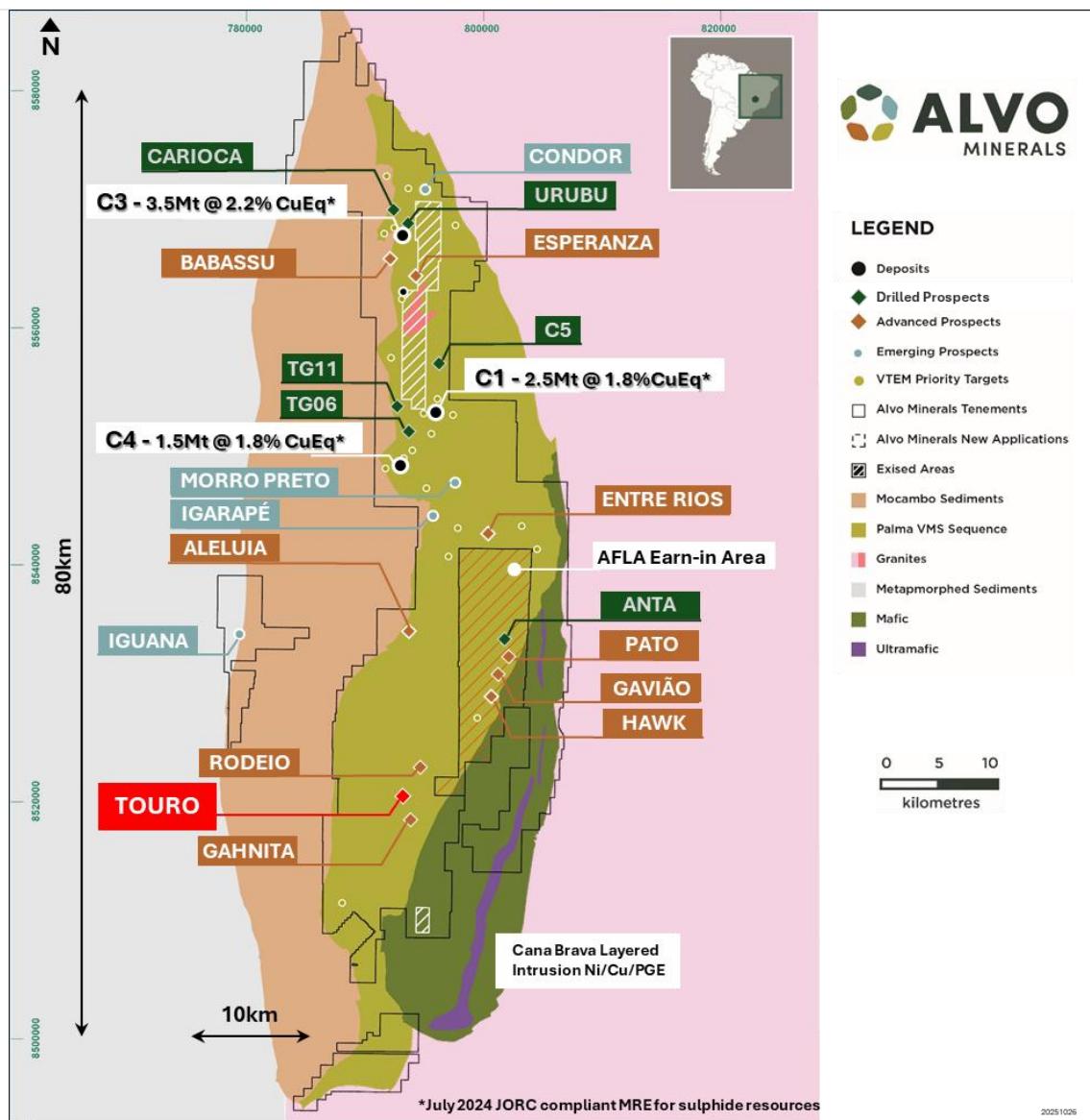
Field work conducted throughout 2025 has comprised auger drilling, soil sampling, geophysical surveys and geological mapping across Palma where Alvo has >1,000km<sup>2</sup> of ground under tenure and >80km of strike of the prospective geological package. Palma hosts VMS style mineralisation where multiple deposits can typically form in similar geological settings (cluster). Alvo's exploration team have defined and are currently advancing over 30 new Prospects.

Ongoing exploration at Palma is designed to integrate the disciplines of geology, geochemistry and geophysics at the different prospects, gradually refining them until the most prospective are ready to be drilled. Alvo is unique amongst its peers as it has an experienced in-house team with access to cutting-edge equipment- allowing for low-cost effective exploration to continue.

## Next Steps

- Drilling at Palma Project targets: Touro - **Underway**, Esperanza and Entre Rios - **Pending**
- Geochemical sampling, geophysical surveying and mapping across exploration prospects at Palma in preparation for drilling - **Ongoing**
- Bluebush and Ipora HREE Project reviews - **Ongoing**
- New Project Copper and Gold project reviews - **Ongoing**

<sup>1</sup> For details of the Palma Mineral Resource Estimate, please refer to ALV ASX Announcement dated 19 July 2024: 65% Increase in Palma Resource to 7.6Mt @ 2.0% CuEq



**Figure 7:** Alvo's Palma Cu-Zn Project is a District Scale VMS with known deposits- C1, C3 and C4.  
Alvo has >1,000km<sup>2</sup> under tenure at Palma- including >80km of strike of the VMS sequence.

This announcement has been approved for release by the Board of Alvo Minerals Limited.

## Enquiries

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## About Alvo

Alvo Minerals (ASX: ALV) is an active Australian 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 Copper Zinc Project in Tocantins State, Brazil. Palma has a JORC 2012 Mineral Resource Estimate of 7.6Mt @ 2.0% CuEq or 6.2% ZnEq (0.7% Cu, 3.4% Zn, 0.6% Pb & 16g/t Ag and 0.03g/t Au). This MRE is categorised as Indicated: 3.3Mt @ 2.3% CuEq or 6.9% ZnEq and Inferred: 4.3Mt @ 1.8% CuEq or 5.6% ZnEq.

Alvo is also exploring for Rare Earth Elements (REE) at its two Ionic Clay REE projects near its exploration base in Central Brazil - Bluebush and Ipora.

Alvo's strategic intent is to aggressively explore and deliver growth through discovery, leveraging management's 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.

\* For details of the Palma Mineral Resource Estimate, please refer to Table 3 and ALV ASX Announcement dated 19 July 2024: 65% Increase in Palma Resource to 7.6Mt @ 2.0% CuEq

### Management Team:

**Graeme Slattery** – Non-Executive Chairman

**Rob Smakman** – Managing Director

**Beau Nicholls** – Non-Executive Director

### Projects:

**Palma** VMS Cu-Zn Project

**Bluebush** Ionic Clay REE Project

**Ipora** REE Project

**Shares on Issue:** 195,264,810

**ASX Code:** **ALV**



## References to Previous ASX Announcements

"Prospectus" dated 18 October 2021 issued by Alvo Minerals Limited

"Preliminary Metallurgical Testwork Indicates Excellent Recoveries" dated 9 November 2022 issued by Alvo Minerals Limited

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

"65% Increase in Palma Resource to 7.6Mt @ 2.0% CuEq" dated 19 July 2024 issued by Alvo Minerals Limited

"New Targets at Palma Copper-Zinc Project" dated 22 October 2025 issued by Alvo Minerals Limited

"Zinc-Copper Potential Confirmed at Touro Prospect, Palma" dated 28 October 2025 issued by Alvo Minerals Limited

"Mineralised Copper and Zinc Identified in Trenching at Touro" dated 14 November 2025 issued by Alvo Minerals Limited

"Massive Sulphides Intercepted in First Drillhole at Touro", dated 19 November 2025 issued by Alvo Minerals Limited

"Drilling at Palma C-Zn Project Confirms Touro Discovery", dated 25 November 2025 issued by Alvo Minerals Limited

**Table 2: Significant Intercepts for Trenches 4 and 5 at Touro Prospect, Palma Project**

SAMPLE ID	FROM	Interval (m)	Zn ppm	Cu ppm	Pb ppm	Intercept	Zn ppm	Cu ppm	Pb ppm
TR_TOU_04-01	0	1.6	115	148	469				
TR_TOU_04-02	1.6	0.9	38	40	200				
TR_TOU_04-03	2.5	1.7	361	219	251				
TR_TOU_04-04	4.2	2.4	556	107	520				
TR_TOU_04-05	6.6	1.3	1413	188	654				
TR_TOU_04-06	7.9	2.2	343	140	211	7.6	597	155	393
TR_TOU_04-07	10.1	1.5	77	70	180				
TR_TOU_04-08	11.6	2	126	56	145				
TR_TOU_04-09	13.6	1.3	138	68	145				
TR_TOU_04-10	14.9	1.3	81	51	260				
TR_TOU_04-11	16.2	1.2	102	74	582				
TR_TOU_04-12	17.4	2	80	54	182				
TR_TOU_04-13	19.4	1.6	198	75	123				
TR_TOU_04-14	21	1.3	866	210	386				
TR_TOU_04-15	22.3	1.6	3248	744	548				
TR_TOU_04-16	23.9	1.4	455	284	520				
TR_TOU_04-17	25.3	1.4	330	271	486				
TR_TOU_04-18	26.7	0.7	2610	792	708				
TR_TOU_04-19	27.4	2	922	837	1412				
TR_TOU_04-20	29.4	1.8	463	316	471	10.2	1,169	494	682
TR_TOU_04-21	31.2	1.4	198	157	198				
TR_TOU_05-01	0	1	2135	279	275	1	2,135	279	275
TR_TOU_05-02	1	2	468	207	124				
TR_TOU_05-03	3	2.6	402	178	114				
TR_TOU_05-04	5.6	2	898	253	164				
TR_TOU_05-05	7.6	1.6	493	173	176				
TR_TOU_05-06	9.2	1	627	268	358				
TR_TOU_05-07	10.2	1.7	623	187	226				
TR_TOU_05-08	11.9	2.5	300	249	282				
TR_TOU_05-09	14.4	1.5	1963	629	476				
TR_TOU_05-10	15.9	1.6	750	374	259	11.9	770	297	268
TR_TOU_05-11	17.5	2.3	225	270	104				
TR_TOU_05-12	19.8	1.3	100	175	80				
TR_TOU_05-13	21.1	2.4	237	237	82				
TR_TOU_05-14	23.5	2.3	354	245	150				
TR_TOU_05-15	25.8	2.2	455	194	89				

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**Table 3:** Collar locations for Diamond drillholes at Touro Prospect, Palma Project. Newly reported holes are in bold. Note hole PDT-121 was drilled as a 'scissor hole', hence the different azimuth.

Drill hole ID	EASTING (m)	NORTHING (m)	RL (m)	TOTAL LENGTH (m)	AZIMUTH (°)	DIP (°)
PDT-117	793,460	8,520,097	396	88.30	280	-60
PDT-118	793,686	8,520,550	414	130.3	280	-55
<b>PDT-119</b>	<b>793,499</b>	<b>8,520,222</b>	<b>415</b>	<b>98.5</b>	<b>280</b>	<b>-60</b>
<b>PDT-120</b>	<b>793,427</b>	<b>8,520,002</b>	<b>396</b>	<b>85.6</b>	<b>280</b>	<b>-64</b>
<b>PDT-121</b>	<b>793,303</b>	<b>8,519,898</b>	<b>456</b>	<b>145.3</b>	<b>110</b>	<b>-50</b>

**Table 4:** Collar locations for trenches at Touro Prospect, Palma Project. Newly reported trenches are in bold.

TRENCH ID	START			TOTAL LENGTH (m)	AZIMUTH (°)	DIP (°)	SAMPLES (n)	END	
	EASTING (m)	NORTHING (m)	RL (m)					EASTING (m)	NORTHING (m)
TR_TOU_01	793445	8520263	393	57.80	135	0	33	793486	8520221
TR_TOU_02	793394	8520119	384	48.80	100	0	32	793441	8520110
TR_TOU_03	793613	8520580	400	28.30	110	0	16	793640	8520570
<b>TR_TOU_04</b>	<b>793528</b>	<b>8520427</b>	<b>407</b>	<b>32.6</b>	<b>120</b>	<b>0</b>	<b>21</b>	<b>793556</b>	<b>8520410</b>
TR_TOU_05	793373	8520006	403	28	105	0	15	793397	8519991

**Table 5: Palma Mineral Resource Estimate, July 2024**

Deposit	Category	Cut-off Grade: NSR**	Tonnes (Mt)	NSR USD	Cu %	Metal Cu (t)	Zn %	Metal Zn (t)	Pb %	Metal Pb (t)	Ag ppm	Metal Ag (Oz)	Au ppm	Metal Au (Oz)	CuEq*** (%)	CuEq (t)	ZnEq*** (%)
<b>C1</b>	Indicated	50	1.3	148	0.7	9,600	2.5	33,900	0.5	7,200	13	540,000	0.01	600	1.7	23,300	4.7
	Inferred		1.2	173	0.5	6,500	3.8	45,800	0.7	8,000	17	640,000	0.01	500	2.0	23,400	6.4
<b>C1 Total</b>			2.5	160	0.6	16,100	3.1	79,700	0.6	12,500	14	1,180,000	0.01	1,100	1.8	46,700	5.5
<b>C3</b>	Indicated	50	2.0	236	1.1	21,600	5.0	97,200	0.2	4,500	15	920,000	0.04	2,200	2.7	53,100	8.4
	Inferred		1.6	144	1.0	14,900	2.0	31,500	0.1	2,100	10	523,000	0.04	1,800	1.7	25,800	5.1
<b>C3 Total</b>			3.5	195	1.0	36,500	3.7	128,600	0.2	6,600	13	1,440,000	0.04	4,000	2.2	78,900	6.9
<b>C4</b>	Inferred	80	1.5	150	0.2	3,200	3.3	50,600	1.3	19,700	28	1,380,000	0.03	1,300	1.8	28,000	5.5
<b>C1+C3</b>	Indicated	50	3.3	200	0.9	31,200	4.0	131,100	0.4	11,700	14	1,460,000	0.03	2,800	2.3	76,400	6.9
<b>C1+C3+C4</b>	Inferred	(50 & 80)	4.3	154	0.6	24,700	3.0	127,800	0.7	29,800	18	2,540,000	0.03	3,600	1.8	77,300	5.6
<b>Total Sulphides</b>			7.6	174	0.7	55,800	3.4	258,900	0.5	41,500	16	4,000,000	0.03	6,400	2.0	153,600	6.2

\* Rounding discrepancies may occur

\*\* The NSR (Net Smelter Return) and Cu/ZnEq values are reported based on copper, zinc, silver, lead and gold prices of US\$8,914/t Copper, US\$3,017/t Zinc, US\$2,173/t Lead, US\$23.3/oz Silver, and US\$1,891/oz gold (price deck based 3-year average Metals Prices). Recovery factor for C3: Cu; 95%, Zn; 86%, Pb; 77%, Ag 74% & Au 70%. Recovery for C1 and C4: Cu; 93%, Zn; 90%, Pb; 86%, Ag 96% & Au 85%. The NSR calculation is as follows: NSR (US\$/t) = [Cu %] \* {Price Cu} \* [RecCu %] + [Zn %] \* {Price Zn} \* [RecZn] + [Pb %] \* {Price Pb} \* [RecPb] + [Ag ppm] \* {Price Ag} \* [RecAg]/31.1035+ [Au ppm] \* {Price Au} \* [RecAu] ]/31.1035 (Adjustments are necessary to normalize to US\$/t basis).

\*\*\*The CuEq calculation is as follow: Cu+(Cu\*((Zn % \* RecZn\*Price Zn) + (Pb % \* Price Pb \* RecPb) + (Ag ppm \* Price Ag \* RecAg) + (Au ppm \* Price Au \* RecAu)) / (Cu % \* Price Cu \* RecCu). ZnEq is calculated with the same formula as CuEq, swapping Cu and Zn.

## Forward Looking Statements

Statements regarding plans with respect to Alvo's projects and its 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.

The information contained in this announcement that relates to information attributed to or compiled from the 'Mineral Resource Estimate' is based upon information compiled by Mr Marcelo Batelochi, a Competent Person and Member of the Australasian Institute of Mining and Metallurgy. Mr Batelochi is a full-time employee of MB Consultaria 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 Batelochi consents to the inclusion in this announcement of the matters based upon the information in the form and context in which it appears.

## Appendix: 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	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li><i>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.</i></li> </ul>	<p>Trenches and channel sampling</p> <ul style="list-style-type: none"> <li>Trenches were dug with a backhoe, perpendicular to the general mineralised trend to a depth of between 1-3m.</li> <li>The trenches were sampled along horizontal and oblique channels ranging from 1 to 2 meters in length.</li> <li>North wall was sampled on each trench.</li> <li>Each sample, weighing approximately 3 kg, was bagged on site and taken to Alvo's Core shed.</li> </ul> <p>Diamond drilling</p> <p>Mineralisation is logged by Alvo geologists who have experience in the style and type of mineralisation being explored for. They are adept at recognising different sulphide species and have tools (such as portable XRF analyser) available to confirm when in doubt.</p>
Drilling techniques	<ul style="list-style-type: none"> <li><i>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).</i></li> </ul>	<p>Diamond Drilling</p> <p>Standard-tube diamond drilling by independent drill contractor (Willemitta Sondagens from Minas Gerais, Brazil). 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 Sprint-IQ™ tool. Drill core is oriented using NQ ACT 3 orienting tool from Reflex.</p>
Drill sample recovery	<ul style="list-style-type: none"> <li><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li><i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>Drillers are penalised for poor recovery and are constantly supervised at the rig to ensure care is taken to ensure high recoveries.</li> <li>No relationship is believed to exist between recovery and grade.</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Logging</i>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>• The total length and percentage of the relevant intersections logged.</li> </ul>	<p>Diamond Drilling</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> <li>• All metreage reported has been logged, but not all metres will be sampled as the mineralisation is visual.</li> </ul> <p>Trenches</p> <ul style="list-style-type: none"> <li>• The trenches were geologically logged by Alvo geologists (lithology, alteration, weathering, colour and structural readings).</li> <li>• The logging is both qualitative and quantitative in nature, the level of which could be used to support an MRE by adding surficial context to the geological model.</li> <li>• All trenches were logged</li> </ul>
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> <li>• If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>• If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>• For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>• Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>• 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.</li> <li>• Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<p>Diamond drilling</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• Sample size, being generally 1m sample intervals, is appropriate to the material being sampled and considered to be representative.</li> </ul> <p>Trenches</p> <ul style="list-style-type: none"> <li>• Once samples arrive at the core shed, samples are dried for 24 hours in an oven at 60 °C.</li> <li>• After drying, the samples were disaggregated and sieved through a 1 mm screen (18 mesh).</li> <li>• The material retained on the sieve was crushed by percussion using an iron mortar and pestle until approximately 75% of the sample mass was smaller than 1 mm, then combined with the fraction that had previously passed through the 18 mesh.</li> </ul> <p>The resulting composite sample was thoroughly homogenized, and a sub-sample was sieved through a 45# mesh. Approximately 50 g of this fine fraction was then transferred to plastic bags and placed in a test stand and analysed by a portable X-ray fluorescence (XRF) instrument (SciAps X-555 analyser 3-Beam geochemical scan, using soil mode). After the reading, the samples were placed into secure storage for future work.</p>
<i>Quality of assay data and laboratory tests</i>	<ul style="list-style-type: none"> <li>• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>• For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including</li> </ul>	<p>Trenches</p> <ul style="list-style-type: none"> <li>• The pXRF assays were carried out on dried and milled samples (-45 mesh), which were placed in plastic bags, and analysed using a portable XRF instrument (SciAps X-555 analyser, three-beam geochemical scan in soil mode). After analysis, the samples were securely stored for future reference. Before each batch of sample readings, the instrument is checked for precision, using four standard</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i></p> <ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	reference materials for Zn, Cu and Pb (Geostats standards GBM916-11, GBM317-12, GBM919-12 and GBM920-7). <ul style="list-style-type: none"> <li>• <b>The Competent Person emphasises that portable pXRF readings are not a replacement for comprehensive laboratory analysis and only reflect elemental concentration at specific points, rather than the entire rock. While they assist in geological interpretation, verifying metal presence and selecting which samples should undergo full laboratory analysis, they offer only an approximate concentration</b></li> </ul>
<i>Verification of sampling and assaying</i>	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All significant intercepts are calculated in house and checked by at least one geologist.</li> <li>• No twinned holes or parallel trench samples were completed.</li> </ul>
<i>Location of data points</i>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Specification of the grid system used.</i></li> <li>• <i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Alvo is using GPS to locate the drill holes.</li> <li>• Alvo is using GPS to locate the start and end points of the trenches and tape and compass for the sample locations.</li> <li>• All location data has been recorded in SIRGAS 2000 UTM zone 22S.</li> <li>• Topographic control is adequate for the exploration at Palma.</li> </ul>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>• <i>Data spacing for reporting of Exploration Results.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Diamond drilling locations are variable with collar locations targeted to minimize vegetation disturbance whilst still achieving the geological targeting.</li> <li>• Drill spacing to date is considered insufficient to estimate a Mineral Resource under the JORC 2012 guidelines.</li> <li>• Trenches were located perpendicular to the main mineral trend, separated by ~250m.</li> <li>• Trenches are not close enough for establish geological and grade continuity for use in a MRE.</li> <li>• No compositing applied.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>• <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Hole PDT -121 was drilled as a 'scissor hole' and the orientation of this hole is sub-parallel to mineralisation. This was done for logistical access reasons. This hole will have exaggerated mineralisation widths.</li> <li>• Where possible, drilling is oriented to intercept anomalies as perpendicular as possible. No bias is believed to have occurred. Sampling lengths will be generally 1-2m downhole, unless there was a specific geological control required by the geologist.</li> <li>• Mineralisation orientation is unknown and therefore true widths are also unknown. Reported widths are downhole widths.</li> </ul> <p>Trenching</p> <ul style="list-style-type: none"> <li>• No bias in the sampling, a consistent size of sample was collected from even sized channels on the north wall of the trenches.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>• <i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Samples are collected daily and transported by company staff to a locked core shed.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No audits of the techniques or data has been undertaken at this stage.</li> </ul>

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

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Touro is located on Granted Exploration Permit, 100% owned by Perth Minerals Ltda a subsidiary of Alvo Minerals Ltd. Touro prospect is located on exploration tenements 861.021/2022 and 860.386/2022.</li> <li>The areas are subject to the Government and Land-Owner Royalties which are variable by substance.</li> <li>Alvo is confident the tenements are 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.</li> </ul>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li><i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>Regional exploration was mainly completed by the CPRM (Brazilian Government geological Survey) and included regional geological mapping, wide spaced soils and stream sediment sampling.</li> <li>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 wider Palma area which highlighted multiple conductors. These may be related to massive sulphide accumulations, however most of these potential conductors were not followed up.</li> </ul>
<i>Geology</i>	<ul style="list-style-type: none"> <li><i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>Touro lies within the Palma polymetallic project, 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 metamorphic volcanic unit and meta-sedimentary schist and comprises pyrite, pyrrhotite, sphalerite, chalcopyrite, galena, occurring as disseminated, brecciated, semi-massive and massive form.</li> </ul>
<i>Drill hole Information</i>	<ul style="list-style-type: none"> <li><i>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:</i> <ul style="list-style-type: none"> <li><i>easting and northing of the drill hole collar</i></li> <li><i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li><i>dip and azimuth of the hole</i></li> <li><i>down hole length and interception depth</i></li> <li><i>hole length.</i></li> </ul> </li> <li><i>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 these.</i></li> </ul>	<ul style="list-style-type: none"> <li>Relevant information is reported in Tables 2, 3 &amp; 4.</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>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.</i></li> <li><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>No significant drilling results are reported.</li> </ul>
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <li><i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li><i>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').</i></li> </ul>	<ul style="list-style-type: none"> <li>No drilling relationships are known at this time, downhole widths are reported- true width unknown.</li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>See diagrams reported in the announcement.</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>No diamond drill results are being reported.</li> <li>Maps are prepared showing the high and low zones of anomalism, highlighting the anomalies as they relate to the geological setting.</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li>● <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>● Extensive exploration data and information has been completed at the Palma Project and previously reported. A summary is provided below;</li> <li>● 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.</li> <li>● 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 the 1980's mainly around the C4 target. Lara/Votorantim drilled 11 holes into targets they defined from the VTEM survey.</li> <li>● 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.</li> <li>● Alvo estimated a JORC compliant MRE for the C1, C3 and C4 deposits (2024).</li> <li>● 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).</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li>● <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li>● <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>● Alvo plans to continue testing Touro with additional drilling as well as new and existing Prospects with diamond drilling.</li> <li>● Alvo will continue 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.</li> <li>● 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 and indicating additional targets for drilling.</li> <li>● Alvo has a truck mounted mechanical Auger drill rig allowing fast and effective Geochem sampling across the companies tenure.</li> <li>● Alvo routinely completes geochemical soil sampling across the tenure, geologically maps and occasionally trenches prospects to better understand the under-surface geology and geochemistry.</li> </ul>