# ASX Announcement
30 October 2024

ALVO
ASX: ALV

## REISSUE OF ASX RELEASE - IONIC CLAYS CONFIRMED AT IPORA REE PROJECT

Further to the ASX release given by **Alvo Minerals Limited (ASX: ALV)** ("**Alvo**" or **the** "**Company**") on Tuesday, 29 October 2024 and a subsequent query from the ASX, the following information has been updated in the attached release:

- *JORC Table 1 Section 1 and 2 (LR 5.7.1)* Additional wording has been included in Section 1 to clarify that the leaching test description is the metallurgical test described in the release. In Section 2, additional wording around how the metallurgical test results were calculated are included.
- *Table 3 updates to azimuth and dip (LR 5.7.2)* All auger holes are vertical. Table 3 has been amended to include Azimuth and Dip.
- *JORC Table 1 Section 2.* Additional wording included in JORC Section 2 explaining that due to the shallow nature of the drilling and the wide spaces of the holes, sections are impractical/irrelevant.
- Removed reference to the Palma MRE as this is not relevant for this release.

Yours faithfully

**CAROL MARINKOVICH**
**Company Secretary**

**This announcement has been approved for release by the Managing Director of Alvo Minerals Limited.**

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ALVO MINERALS
ASX: ALV

# Ionic Clays Confirmed at Ipora REE Project

## HIGHLIGHTS

- Reconnaissance auger drilling at the Ipora Rare Earth Elements (**REE**) Project (“**Ipora”**) intercepted zones of high-grade REEs, with **metallurgical testing confirming ionic adsorption clay-style mineralisation** (“ionic clay”).
- 125 auger drill holes (1,008m) completed across 3 prospect areas at Ipora and intercepted high-grade ionic-clay hosted REEs at the Tapir Prospect, an area covering the Ipora Granite.
- Metallurgical testing has confirmed the REEs are hosted as Ionic Clays, with results from the **standard Ammonium Sulphate wash (pH 4) include extractions up to 90% MRE, averaging 53% MRE**
- Significant results from the drilling at the Tapir Prospect included:
    - **5.5m @ 1,294ppm TREO (27% MREO)** in IPG0079 from 0.5m to end-of-hole (**EOH**)
        - ***Inc:* 2m @ 1,528ppm TREO (28% MREO**) from 4.0m
    - **7.5m @ 853ppm TREO (24% MREO**) in IPG0076 from 0.5m to EOH
        - ***Inc:* 2m @ 1,126ppm TREO (24% MREO**) from 4.0m
- Drilling was widely spaced (up to 500m between holes), aimed at focusing exploration going forward.
- Auger drilling to recommence at Bluebush Ionic Clay REE Project, adjacent to the Serra Verde Ionic Clay REE operation that recently received an investment from the United States Minerals Security Partnership
- Greenfield diamond drilling is ongoing at the Palma Cu-Zn VMS Project.



Alvo Minerals Limited (ASX: ALV) (“Alvo” or “the Company”) is pleased to provide an update on its progress with a reconnaissance auger drill program at the Ipora Rare Earth Element (REE) Project (“Ipora”), located in the Goiás State in Brazil. Ipora is a Project pegged by Alvo for potential ionic clay hosted REEs after recognising the prospectivity of the region.

### Alvo Minerals Managing Director, Rob Smakman, commented:

*“We are excited to report not only high-grades from the Tapir and Tatu Prospects at Ipora, but initial metallurgical tests have confirmed the desirable ionic-clay REE mineralisation style. A total of 125 holes for over 1,000 meters have been completed on a very broad spacing across the Project area.*

*“With modest results from the Tatu and Snapper prospects, we have been able to quickly rationalize our landholding in the area to minimize ongoing costs and we will focus on Tapir and Tatu moving forward.*

*“We are committed to our parallel copper-zinc and REE work programs in Central Brazil with diamond drilling ongoing at the untested regional targets at the Palma VMS Project including Urubu, Anta and C4-NE.*

*“This is a great time for our exploration campaigns in Brazil where we are aiming to make a major greenfield discovery.”*

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**PROJECTS**
Palma VMS Cu/Zn Project
Bluebush Ionic Clay REE Project
Ipora REE Project

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## Ipora REE Project Exploration Update

A total of 1,008m drilled in 125 auger holes have been completed at the Ipora REE Project (see Figure 1). The auger drill reached a maximum depth of 20m and averaged 8m per hole. Drilling intersected regolith, varying from soils to saprolite clay and saprock, as logged by Alvo geologists.

Drilling was designed as a reconnaissance program to broadly cover the majority of the Ipora Project, which includes the Tapir, Tatu and Snapper Prospects. The auger drilling took advantage of open roads in the region, allowing the drill-rig to cover a wide area. Samples collected (on average every 2 metres- for a total of 505 samples) from the surface through the regolith profile is considered an efficient test of the REE potential.

All samples were split on the auger rig, transported back to Alvo's processing facility in Palmeiropolis (at the completion of the drill program), where they were dried and sieved by Alvo staff before being analysed using a portable Xray-fluorescent analyser (pXRF). The results of the pXRF are compiled and interpreted by Alvo geologists and only the highest relative results were selected for laboratory analysis.

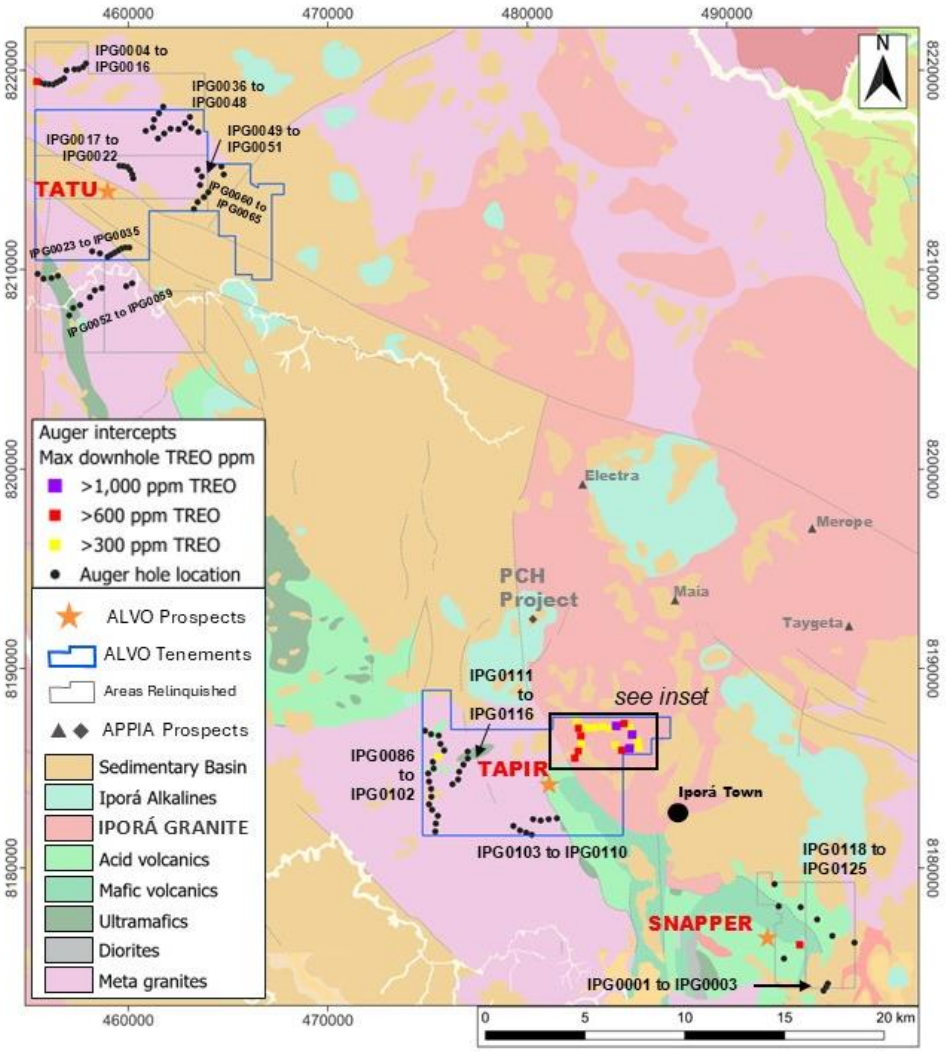


***Figure 1:*** *Ipora Ionic-Clay REE Project with maiden drilling and Prospect locations.*

Based on the results of the pXRF, Alvo submitted 87 samples to the independent SGS lab for analysis, with better results (see Figure 2) from the Tapir Prospect returning results including:

- **5.5m @ 1,294ppm TREO (27% MREO)** in IPG0079 from 0.5m
  - ***Inc:* 2m @ 1,528ppm TREO (28% MREO)** from 4.0m
- **7.5m @ 853ppm TREO (24% MREO)** in IPG0076 from 0.5m
  - ***Inc:* 2m @ 1,126ppm TREO (24% MREO)** from 4.0m
- **5.5m @ 684ppm TREO (22% MREO)** in IPG0082 from 0.5m
  - ***Inc:* 2m @ 1,102ppm TREO (25% MREO)** from 4.0m

Better results from the Tatu and Snapper Prospects returned the following results:

- **9.5m @ 591ppm TREO (23% MREO)** in IPG0016 from 0.5m to EOH Tatu
  - ***Inc:* 4m @ 718ppm TREO (27% MREO)** from 4.0m
- **5.5m @ 703ppm TREO (23% MREO)** in IPG0124 from 0.5m Snapper

A full table of significant intercepts from the independent laboratory is included as Table 1 below.

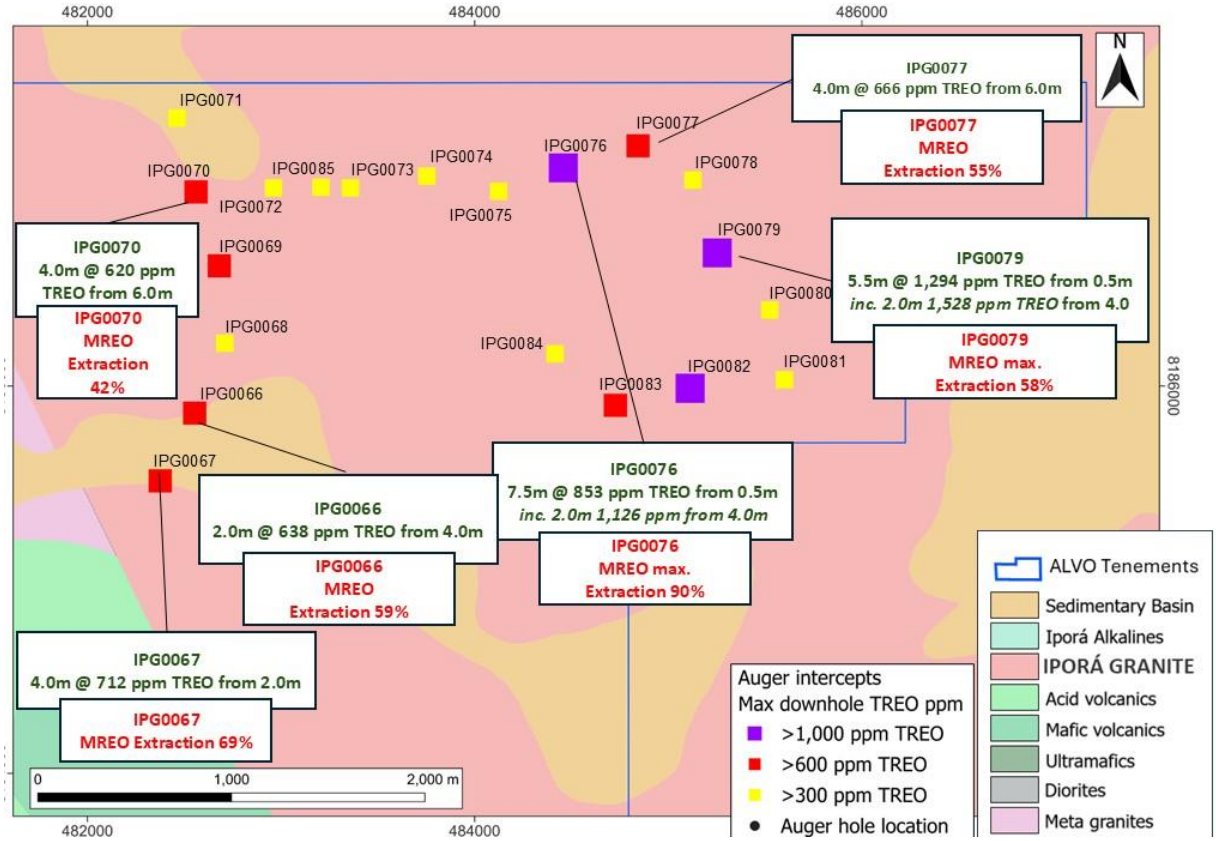


***Figure 2**: Tapir Prospect with auger drill results and preliminary metallurgical sample results.*

Fifteen samples from the more mineralised holes (Tapir Prospect only) were selected for preliminary metallurgical testing using the 'ammonium sulphate solution' (AMSUL) test, considered indicative for the Ionic-clay hosted style of mineralisation. Ionic clays are the preferred hosts of REEs as their potential extraction is considered less harmful to the environment, cheaper and therefore more sustainable than other styles.

Standard sample preparation at the lab (see Appendix 1) was undertaken before a sample was screened to -4mm. The ionic adsorption clay-hosted rare earth element leach test used a diluted solution of 0.5 molar ammonium sulphate at room temperature and a pH 4 for 30 minutes. Recoveries above 30% are considered by Alvo to confirm the ionic nature of the mineralisation.

High-value **magnet rare earth oxides (MREO)** recovery rates AMSUL test at ambient temperatures achieved the following excellent extractions (after 30 minutes):

- **Neodymium (Nd): up to 92% averaging 55%.**
- **Praseodymium (Pr): up to 97%, averaging 55%.**
- Dysprosium (Dy): up to 68%, averaging 44%.
- Terbium (Tb): up to 75%, averaging 49%.

**Total MREO (Nd, Pr, Dy +Tb): up to 90%, averaging 53%.**

The extractions of the MREOs are considered excellent and especially high for the valuable Nd and Pr elements. A full table of the lab extractions (including Heavy Rare Earth Oxides (HREO) and Total Rare Earth Oxides (TREO) is presented in Table 2 below.

## Ipora Ionic Clay REE Project Location

The Ipora Project is located close to Appia Rare Earth and Uranium Corp's ("**Appia**") (CSE:API) PCH ionic adsorption clay project ("**PCH Project**") which recently released a maiden NI 43-101 Resource of 52.8Mt @ 2,841ppm TREO[1]. The PCH Project is not considered to be ionic clay hosted, however Appia has also recently released results from other prospects on the Ipora granite (the same host as the Tapir Prospect) which have similar grades and recoveries to the REEs described at Tapir[2]

Further work at Ipora will include follow-up mapping to identify additional areas of Ipora Granite. Accessing the Prospect areas will require agreements with landowners which is currently being initiated, with additional follow-up sampling (auger drilling) being planned for early 2025, following the wet season.

## Next Steps and Upcoming News flow

- Diamond Drilling at Palma Cu/Zn VMS Project – **Ongoing**
- FLEM and IP surveys on regional targets across Palma – **Ongoing**
- Geochemical sampling across known exploration prospects across Palma– **Ongoing**
- Drilling update from Bluebush REE Project – **Imminent**

[1] Refer to Appia Announcement dated 1 March 2024: Appia Announces Maiden Rare Earth Mineral Resource Estimate of 6.6 Million Tonnes Indicated Grading 2,513 ppm TREO and 46.2 Million Tonnes Inferred grading 2,888 ppm TREO at the PCH Ionic Adsorption Clay Project in Goiás, Brazil

[2] Refer Appia Announcement dated 20 August 2024: Appia Confirms Outstanding Desorption Results From Its Ionic Adsorption Clay Targets Maia, Electra, Taygeta and Merope in Goias, Brazil

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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

As reported in the announcement "Alvo Acquires REE Project in New High Grade Province" dated 30 January 2024 issued by Alvo Minerals Limited

As reported in the announcement "Diamond Drilling to Commence on Untested Priority Cu-Zn Targets at Palma" dated 1 May 2024, issued by Alvo Minerals Limited

As reported in the announcement "Maiden Drilling complete at Ipora Rare Earths Project", issued by Alvo Minerals Limited

## 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.

***Table 1:*** *Significant Intercepts* from Ipora Auger drilling*

| AUGER HOLE ID | From (m) | Length (m) | $Nd_2O_3$ ppm | $Pr_6O_{11}$ ppm | $Dy_2O_3$ ppm | $Tb_4O_7$ ppm | TREO ppm | MREO ppm | % MREO | Prospect | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| IPG0016 | 4.00 | **2.00** | 136 | 39 | 14 | 2 | 718 | 191 | 27% | TATU | |
| IPG0066 | 0.50 | **5.50** | 63 | 16 | 16 | 2 | 509 | 98 | 11% | TAPIR | End of Hole |
| IPG0067 | 0.50 | **5.50** | 95 | 26 | 18 | 3 | 602 | 141 | 22% | TAPIR | End of Hole |
| IPG0068 | 0.50 | **3.50** | 63 | 16 | 17 | 2 | 480 | 98 | 21% | TAPIR | |
| IPG0069 | 0.50 | **7.50** | 66 | 17 | 19 | 3 | 502 | 105 | 20% | TAPIR | End of Hole |
| IPG0070 | 4.00 | **6.00** | 98 | 26 | 21 | 3 | 608 | 148 | 24% | TAPIR | End of Hole |
| IPG0071 | 0.50 | **3.50** | 55 | 15 | 10 | 2 | 402 | 82 | 20% | TAPIR | |
| IPG0072 | 2.00 | **6.00** | 67 | 18 | 17 | 3 | 493 | 104 | 21% | TAPIR | |
| IPG0073 | 0.50 | **9.50** | 69 | 18 | 14 | 2 | 465 | 103 | 22% | TAPIR | |
| IPG0074 | 0.50 | **7.50** | 58 | 15 | 12 | 2 | 440 | 87 | 20% | TAPIR | |
| IPG0075 | 0.50 | **7.50** | 54 | 14 | 11 | 2 | 377 | 80 | 21% | TAPIR | |
| **IPG0076** | 0.50 | **7.50** | 138 | 38 | 28 | 4 | 853 | 208 | 24% | TAPIR | End of Hole |
| *Including* | 4.0 | ***2.0*** | *178* | *49* | *41* | *7* | ***1,126*** | *274* | *24%* | | |
| IPG0077 | 4.00 | **6.00** | 93 | 25 | 20 | 3 | 605 | 140 | 23% | TAPIR | |
| IPG0078 | 0.50 | **7.50** | 50 | 13 | 11 | 2 | 399 | 75 | 18% | TAPIR | |
| **IPG0079** | 0.50 | **5.50** | 246 | 69 | 31 | 6 | **1,294** | 351 | 27% | TAPIR | End of Hole |
| *Including* | 4.0 | ***2.0*** | *302* | *86* | *32* | *6* | ***1,528*** | *427* | *28%* | | |
| IPG0080 | 4.00 | **4.00** | 72 | 19 | 13 | 2 | 421 | 105 | 25% | TAPIR | |
| IPG0081 | 2.00 | **6.00** | 61 | 16 | 12 | 2 | 429 | 90 | 21% | TAPIR | |
| **IPG0082** | 0.50 | **5.50** | 107 | 28 | 20 | 3 | 684 | 159 | 22% | TAPIR | End of Hole |
| *Including* | 4.0 | ***2.0*** | *190* | *49* | *34* | *6* | ***1,102*** | *280* | *25%* | | |
| IPG0083 | 0.50 | **7.50** | 82 | 21 | 16 | 3 | 519 | 122 | 23% | TAPIR | |
| IPG0084 | 0.50 | **5.50** | 66 | 17 | 14 | 2 | 470 | 99 | 21% | TAPIR | |
| IPG0085 | 0.50 | **5.50** | 57 | 15 | 12 | 2 | 415 | 86 | 21% | TAPIR | |
| IPG0097 | 0.50 | **9.50** | 53 | 15 | 5 | 1 | 355 | 74 | 21% | TAPIR | |
| IPG0124 | 0.50 | **5.50** | 111 | 27 | 25 | 4 | 703 | 167 | 23% | SNAPPER | End of Hole |

* The significant intercepts were calculated using values > 300ppm TREO only in consecutive intervals of saprolite samples with thickness >2m. No upper cuts were considered. Weighted averages were calculated for all intercepts.

***Table 2:*** *Preliminary metallurgical extractions from selected auger sampling at Tapir prospect (Ipora Project).*

| Auger Hole ID | From (m) | To (m) | $Nd_2O_3$ % Extraction | $Pr_6O_{11}$ % Extraction | $Dy_2O_3$ % Extraction | $Tb_4O_7$ % Extraction | TREO % Extraction | MREO % Extraction |
|---|---|---|---|---|---|---|---|---|
| IPG0066 | 4.00 | 6.00 | **66** | **70** | 21 | 32 | 34 | **59** |
| IPG0067 | 4.00 | 6.00 | **73** | **75** | 40 | 48 | 47 | **69** |
| IPG0070 | 6.00 | 8.00 | 44 | 44 | 36 | 40 | 30 | 42 |
| IPG0076 | 0.50 | 2.00 | **63** | **65** | 38 | 43 | 34 | **60** |
| IPG0076 | 2.00 | 4.00 | **92** | **97** | **68** | **74** | **65** | **90** |
| IPG0076 | 4.00 | 6.00 | **86** | **87** | **64** | **71** | **61** | **83** |
| IPG0076 | 6.00 | 8.00 | **58** | **56** | **59** | **64** | 46 | **58** |
| IPG0077 | 8.00 | 10.00 | **56** | **54** | **50** | **54** | 37 | **55** |
| IPG0079 | 0.50 | 2.00 | **59** | **58** | **53** | **58** | 43 | **58** |
| IPG0079 | 2.00 | 4.00 | 23 | 21 | 33 | 32 | 18 | 24 |
| IPG0079 | 4.00 | 6.00 | 26 | 22 | 43 | 40 | 21 | 27 |
| IPG0082 | 4.00 | 6.00 | 17 | 19 | 12 | 13 | 18 | 16 |
| IPG0124 | 4.00 | 6.00 | **78** | **79** | **68** | **75** | **55** | **76** |
| IPG0016 | 2.00 | 4.00 | 40 | 38 | 40 | 41 | 21 | 39 |
| IPG0016 | 4.00 | 6.00 | 40 | 36 | 44 | 45 | 26 | 39 |

***Table 3:*** *Collar file of Alvo Auger drilling at Ipora Project*

| HOLE_ID | EASTING (m) | NORTHING (m) | Dip$^0$ | Azimuth | RL (m) | EOH (m) | PROJECT NAME | PROSPECT |
|---|---|---|---|---|---|---|---|---|
| IPG0001 | 494850 | 8173846 | 90 | 0 | 486 | 12.00 | IPORA | SNAPPER |
| IPG0002 | 494974 | 8174029 | 90 | 0 | 483 | 12.00 | IPORA | SNAPPER |
| IPG0003 | 495059 | 8174198 | 90 | 0 | 479 | 6.00 | IPORA | SNAPPER |
| IPG0004 | 457874 | 8220337 | 90 | 0 | 425 | 12.00 | IPORA | TATU |
| IPG0005 | 457732 | 8220162 | 90 | 0 | 412 | 3.50 | IPORA | TATU |
| IPG0006 | 457505 | 8220051 | 90 | 0 | 407 | 8.00 | IPORA | TATU |
| IPG0007 | 457297 | 8220042 | 90 | 0 | 421 | 6.00 | IPORA | TATU |
| IPG0008 | 456897 | 8219997 | 90 | 0 | 418 | 8.00 | IPORA | TATU |
| IPG0009 | 456777 | 8219591 | 90 | 0 | 408 | 10.00 | IPORA | TATU |
| IPG0010 | 456591 | 8219483 | 90 | 0 | 408 | 8.00 | IPORA | TATU |
| IPG0011 | 456409 | 8219388 | 90 | 0 | 401 | 6.00 | IPORA | TATU |
| IPG0012 | 456231 | 8219288 | 90 | 0 | 400 | 10.00 | IPORA | TATU |
| IPG0013 | 456020 | 8219294 | 90 | 0 | 395 | 10.00 | IPORA | TATU |
| IPG0014 | 455803 | 8219309 | 90 | 0 | 384 | 6.00 | IPORA | TATU |
| IPG0015 | 455582 | 8219383 | 90 | 0 | 394 | 10.00 | IPORA | TATU |
| IPG0016 | 455414 | 8219432 | 90 | 0 | 397 | 10.00 | IPORA | TATU |
| IPG0017 | 459553 | 8215210 | 90 | 0 | 411 | 6.00 | IPORA | TATU |
| IPG0018 | 459757 | 8215193 | 90 | 0 | 424 | 8.00 | IPORA | TATU |
| IPG0019 | 459950 | 8215146 | 90 | 0 | 435 | 12.00 | IPORA | TATU |
| IPG0020 | 460085 | 8214998 | 90 | 0 | 436 | 8.00 | IPORA | TATU |
| IPG0021 | 460198 | 8214768 | 90 | 0 | 447 | 10.00 | IPORA | TATU |

| HOLE_ID | EASTING (m) | NORTHING (m) | Dip$^0$ | Azimuth | RL (m) | EOH (m) | PROJECT NAME | PROSPECT |
|---|---|---|---|---|---|---|---|---|
| IPG0022 | 460246 | 8214570 | 90 | 0 | 453 | 2.00 | IPORA | TATU |
| IPG0023 | 460047 | 8211105 | 90 | 0 | 428 | 8.00 | IPORA | TATU |
| IPG0024 | 459843 | 8211110 | 90 | 0 | 424 | 10.00 | IPORA | TATU |
| IPG0025 | 459655 | 8211055 | 90 | 0 | 430 | 6.00 | IPORA | TATU |
| IPG0026 | 459485 | 8210953 | 90 | 0 | 419 | 8.00 | IPORA | TATU |
| IPG0027 | 459301 | 8210842 | 90 | 0 | 412 | 10.00 | IPORA | TATU |
| IPG0028 | 459127 | 8210745 | 90 | 0 | 403 | 10.00 | IPORA | TATU |
| IPG0029 | 458957 | 8210644 | 90 | 0 | 398 | 10.00 | IPORA | TATU |
| IPG0030 | 458576 | 8210815 | 90 | 0 | 394 | 6.00 | IPORA | TATU |
| IPG0031 | 458188 | 8210920 | 90 | 0 | 408 | 10.00 | IPORA | TATU |
| IPG0032 | 455453 | 8209788 | 90 | 0 | 405 | 8.00 | IPORA | TATU |
| IPG0033 | 455746 | 8209544 | 90 | 0 | 419 | 10.00 | IPORA | TATU |
| IPG0034 | 456149 | 8209582 | 90 | 0 | 428 | 12.00 | IPORA | TATU |
| IPG0035 | 456471 | 8209686 | 90 | 0 | 434 | 10.00 | IPORA | TATU |
| IPG0036 | 461746 | 8218172 | 90 | 0 | 463 | 8.00 | IPORA | TATU |
| IPG0037 | 461533 | 8217840 | 90 | 0 | 448 | 8.00 | IPORA | TATU |
| IPG0038 | 461287 | 8217523 | 90 | 0 | 436 | 8.00 | IPORA | TATU |
| IPG0039 | 461236 | 8217128 | 90 | 0 | 421 | 8.00 | IPORA | TATU |
| IPG0040 | 460870 | 8216958 | 90 | 0 | 416 | 12.00 | IPORA | TATU |
| IPG0041 | 463507 | 8216905 | 90 | 0 | 463 | 8.00 | IPORA | TATU |
| IPG0042 | 463152 | 8217109 | 90 | 0 | 447 | 4.00 | IPORA | TATU |
| IPG0043 | 463083 | 8217651 | 90 | 0 | 458 | 8.00 | IPORA | TATU |
| IPG0044 | 462840 | 8217340 | 90 | 0 | 444 | 8.00 | IPORA | TATU |
| IPG0045 | 462520 | 8217040 | 90 | 0 | 430 | 4.00 | IPORA | TATU |
| IPG0046 | 462114 | 8217063 | 90 | 0 | 444 | 8.00 | IPORA | TATU |
| IPG0047 | 461794 | 8216823 | 90 | 0 | 424 | 10.00 | IPORA | TATU |
| IPG0048 | 461487 | 8216573 | 90 | 0 | 416 | 6.00 | IPORA | TATU |
| IPG0049 | 463467 | 8215000 | 90 | 0 | 460 | 8.00 | IPORA | TATU |
| IPG0050 | 463676 | 8214671 | 90 | 0 | 491 | 10.00 | IPORA | TATU |
| IPG0051 | 463592 | 8214243 | 90 | 0 | 500 | 8.00 | IPORA | TATU |
| IPG0052 | 460189 | 8209316 | 90 | 0 | 394 | 8.00 | IPORA | TATU |
| IPG0053 | 459889 | 8209166 | 90 | 0 | 412 | 12.00 | IPORA | TATU |
| IPG0054 | 457036 | 8207708 | 90 | 0 | 390 | 6.00 | IPORA | TATU |
| IPG0055 | 457235 | 8208082 | 90 | 0 | 387 | 4.00 | IPORA | TATU |
| IPG0056 | 457582 | 8208222 | 90 | 0 | 390 | 10.00 | IPORA | TATU |
| IPG0057 | 458076 | 8208613 | 90 | 0 | 398 | 8.00 | IPORA | TATU |
| IPG0058 | 458319 | 8208967 | 90 | 0 | 391 | 8.00 | IPORA | TATU |
| IPG0059 | 458667 | 8209074 | 90 | 0 | 405 | 8.00 | IPORA | TATU |
| IPG0060 | 463286 | 8213031 | 90 | 0 | 522 | 10.00 | IPORA | TATU |
| IPG0061 | 463474 | 8213388 | 90 | 0 | 517 | 8.00 | IPORA | TATU |
| IPG0062 | 463787 | 8213634 | 90 | 0 | 520 | 12.00 | IPORA | TATU |
| IPG0063 | 464007 | 8213882 | 90 | 0 | 515 | 6.00 | IPORA | TATU |
| IPG0064 | 464781 | 8214772 | 90 | 0 | 509 | 10.00 | IPORA | TATU |
| IPG0065 | 464662 | 8215172 | 90 | 0 | 504 | 6.00 | IPORA | TATU |
| IPG0066 | 482554 | 8185860 | 90 | 0 | 597 | 6.00 | IPORA | TAPIR |
| IPG0067 | 482376 | 8185510 | 90 | 0 | 607 | 6.00 | IPORA | TAPIR |

| HOLE_ID | EASTING (m) | NORTHING (m) | Dip$^0$ | Azimuth | RL (m) | EOH (m) | PROJECT NAME | PROSPECT |
|---|---|---|---|---|---|---|---|---|
| IPG0068 | 482710 | 8186221 | 90 | 0 | 576 | 4.00 | IPORA | TAPIR |
| IPG0069 | 482681 | 8186620 | 90 | 0 | 583 | 8.00 | IPORA | TAPIR |
| IPG0070 | 482561 | 8187002 | 90 | 0 | 595 | 10.00 | IPORA | TAPIR |
| IPG0071 | 482462 | 8187383 | 90 | 0 | 602 | 4.00 | IPORA | TAPIR |
| IPG0072 | 482961 | 8187022 | 90 | 0 | 559 | 8.00 | IPORA | TAPIR |
| IPG0073 | 483358 | 8187023 | 90 | 0 | 571 | 10.00 | IPORA | TAPIR |
| IPG0074 | 483753 | 8187083 | 90 | 0 | 607 | 8.00 | IPORA | TAPIR |
| IPG0075 | 484123 | 8187005 | 90 | 0 | 618 | 8.00 | IPORA | TAPIR |
| IPG0076 | 484458 | 8187126 | 90 | 0 | 617 | 8.00 | IPORA | TAPIR |
| IPG0077 | 484844 | 8187240 | 90 | 0 | 599 | 10.00 | IPORA | TAPIR |
| IPG0078 | 485127 | 8187063 | 90 | 0 | 596 | 8.00 | IPORA | TAPIR |
| IPG0079 | 485253 | 8186687 | 90 | 0 | 566 | 6.00 | IPORA | TAPIR |
| IPG0080 | 485524 | 8186392 | 90 | 0 | 576 | 8.00 | IPORA | TAPIR |
| IPG0081 | 485600 | 8186032 | 90 | 0 | 573 | 8.00 | IPORA | TAPIR |
| IPG0082 | 485113 | 8185988 | 90 | 0 | 560 | 6.00 | IPORA | TAPIR |
| IPG0083 | 484727 | 8185900 | 90 | 0 | 580 | 8.00 | IPORA | TAPIR |
| IPG0084 | 484415 | 8186166 | 90 | 0 | 603 | 6.00 | IPORA | TAPIR |
| IPG0085 | 483206 | 8187026 | 90 | 0 | 575 | 6.00 | IPORA | TAPIR |
| IPG0086 | 475384 | 8181826 | 90 | 0 | 564 | 2.00 | IPORA | TAPIR |
| IPG0087 | 475412 | 8182223 | 90 | 0 | 542 | 10.00 | IPORA | TAPIR |
| IPG0088 | 475511 | 8182610 | 90 | 0 | 517 | 12.00 | IPORA | TAPIR |
| IPG0089 | 475226 | 8182914 | 90 | 0 | 511 | 4.00 | IPORA | TAPIR |
| IPG0090 | 475073 | 8183189 | 90 | 0 | 535 | 10.00 | IPORA | TAPIR |
| IPG0091 | 475189 | 8183568 | 90 | 0 | 546 | 8.00 | IPORA | TAPIR |
| IPG0092 | 475178 | 8183966 | 90 | 0 | 539 | 12.00 | IPORA | TAPIR |
| IPG0093 | 475074 | 8184334 | 90 | 0 | 521 | 8.00 | IPORA | TAPIR |
| IPG0094 | 475032 | 8184738 | 90 | 0 | 513 | 10.00 | IPORA | TAPIR |
| IPG0095 | 475303 | 8184988 | 90 | 0 | 524 | 8.00 | IPORA | TAPIR |
| IPG0096 | 475265 | 8185316 | 90 | 0 | 535 | 8.00 | IPORA | TAPIR |
| IPG0097 | 475530 | 8185564 | 90 | 0 | 538 | 10.00 | IPORA | TAPIR |
| IPG0098 | 474871 | 8186878 | 90 | 0 | 536 | 8.00 | IPORA | TAPIR |
| IPG0099 | 475177 | 8186702 | 90 | 0 | 538 | 6.00 | IPORA | TAPIR |
| IPG0100 | 475553 | 8186637 | 90 | 0 | 552 | 6.00 | IPORA | TAPIR |
| IPG0101 | 475642 | 8186219 | 90 | 0 | 546 | 8.00 | IPORA | TAPIR |
| IPG0102 | 475830 | 8185890 | 90 | 0 | 546 | 8.00 | IPORA | TAPIR |
| IPG0103 | 480290 | 8182444 | 90 | 0 | 570 | 10.00 | IPORA | TAPIR |
| IPG0104 | 480668 | 8182380 | 90 | 0 | 552 | 8.00 | IPORA | TAPIR |
| IPG0105 | 481070 | 8182444 | 90 | 0 | 576 | 10.00 | IPORA | TAPIR |
| IPG0106 | 481483 | 8182488 | 90 | 0 | 592 | 8.00 | IPORA | TAPIR |
| IPG0107 | 479301 | 8182104 | 90 | 0 | 594 | 6.00 | IPORA | TAPIR |
| IPG0108 | 479629 | 8181881 | 90 | 0 | 582 | 8.00 | IPORA | TAPIR |
| IPG0109 | 479943 | 8181767 | 90 | 0 | 574 | 6.00 | IPORA | TAPIR |
| IPG0110 | 480221 | 8181667 | 90 | 0 | 562 | 10.00 | IPORA | TAPIR |
| IPG0111 | 476248 | 8184198 | 90 | 0 | 525 | 4.00 | IPORA | TAPIR |
| IPG0112 | 476531 | 8184437 | 90 | 0 | 553 | 6.00 | IPORA | TAPIR |
| IPG0113 | 476585 | 8184823 | 90 | 0 | 554 | 8.00 | IPORA | TAPIR |

| HOLE_ID | EASTING (m) | NORTHING (m) | Dip$^0$ | Azimuth | RL (m) | EOH (m) | PROJECT NAME | PROSPECT |
|---|---|---|---|---|---|---|---|---|
| IPG0114 | 476798 | 8185179 | 90 | 0 | 563 | 10.00 | IPORA | TAPIR |
| IPG0115 | 477016 | 8185486 | 90 | 0 | 575 | 8.00 | IPORA | TAPIR |
| IPG0116 | 477007 | 8185833 | 90 | 0 | 571 | 6.00 | IPORA | TAPIR |
| IPG0117 | 479191 | 8192055 | 90 | 0 | 649 | 20.00 | IPORA | REGIONAL |
| IPG0118 | 492601 | 8178078 | 90 | 0 | 499 | 4.00 | IPORA | SNAPPER |
| IPG0119 | 492390 | 8179185 | 90 | 0 | 512 | 4.00 | IPORA | SNAPPER |
| IPG0120 | 493697 | 8178033 | 90 | 0 | 481 | 10.00 | IPORA | SNAPPER |
| IPG0121 | 494528 | 8177414 | 90 | 0 | 453 | 10.00 | IPORA | SNAPPER |
| IPG0122 | 495288 | 8176592 | 90 | 0 | 463 | 6.00 | IPORA | SNAPPER |
| IPG0123 | 496399 | 8176254 | 90 | 0 | 479 | 6.00 | IPORA | SNAPPER |
| IPG0124 | 493656 | 8176143 | 90 | 0 | 473 | 6.00 | IPORA | SNAPPER |
| IPG0125 | 492865 | 8175453 | 90 | 0 | 503 | 6.00 | IPORA | SNAPPER |



## 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 Copper Zinc Project.

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 Goiás 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.*<br>• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*<br>• *Aspects of the determination of mineralisation that are Material to the Public Report.*<br>• *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.* | • Alvo auger drilling: Auger geochemical sampling was completed on 1 or 2 metres continuous samples. The samples are homogenised on a tarp and a representative sample of approximately 1kg is bagged and labelled.<br>• Sampling was supervised by Alvo Minerals field technicians who described the material of each sample as soil, saprolite or weathered rock. Sample information is collected in the field on a tablet<br>• Samples were transported back to Alvo's processing facility in Palmeiropolis (at the completion of the drill program), where they were dried overnight in an oven on individual trays and then and screen to -1mm. A sub-sample of the -1mm fraction is then analysed using a portable Xray-fluorescent scanner (pXRF- SciApps 555 model). The results of the pXRF are compiled and interpreted by Alvo geologists and only the highest relative results were selected for laboratory analysis. The pXRF results are not a part of this release.<br>• Once the pXRF results have been compiled and interpreted, original split from the Auger samples which are considered prospective are dispatched to the independent external lab- SGS Geosol in Goiania, where preliminary prep is completed before being dispatched to SGS in Belo Horizonte for analysis |
| *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).* | • Auger drilling was completed using a hydraulic auger drilling machine with a 4.5" auger bit and 2m helicoidal rods. The drilling is open hole, meaning there is a significant chance of contamination from the surface and other parts of the auger hole. Holes are vertical and not oriented. |
| *Drill sample recovery* | • *Method of recording and assessing core and chip sample recoveries and results assessed.*<br>• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*<br>• *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.* | • No recoveries are recorded.<br>• The operator observes the volume of each metre and notes any discrepancy.<br>• 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.*<br>• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.*<br>• *The total length and percentage of the relevant intersections logged.* | • All holes were logged by Alvo Minerals geologists or field technicians, detailing the colour, weathering, alteration, texture and any geological observations. Care is taken to identify transported cover from in-situ saprolite/clay zones and the moisture content.<br>• Qualitative logging only, each hole is photographed along with the samples arrayed in drill order.<br>• All auger drilling is logged onsite by Alvo field technicians. Logs include hole number, hole location, date drilled, collar location, dip and azimuth as well as qualitative data such as rock type, and descriptions of the colour, alteration, weathering, grain size, mineralisation and texture. |
| *Sub-sampling techniques and sample preparation* | • *If core, whether cut or sawn and whether quarter, half or all core taken.*<br>• *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*<br>• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*<br>• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*<br>• *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.*<br>• *Whether sample sizes are appropriate to the grain size of the material being sampled.* | • All the sampling procedures were conducted by Alvo Minerals trained geologists and technicians using a Standard Operating Procedure.<br>• Auger sampling is completed on site. Samples are collected from a modified bucket around the mouth of the hole and then each sample is homogenised and quartered on a tarp, with a sample bagged on site. Samples are then sent to Alvo's central facility in Palmeiropolis for further processing as described above.<br>• Sampling is considered to be appropriate for the material being collected. |
| *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.*<br>• *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.*<br>• *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.* | • The samples were dispatched to SGS in Goiania, where the physical preparation was done. Analysis was completed at the SGS Geosol laboratory in Vespasiano (Belo Horizonte) – Minas Gerais state, Brazil.<br>• The SGS Geosol lab sample preparation includes drying, crushing with P75 of 3mm, homogenised, quartered and pulverized of 300g with P95 below 150#.<br>• The SGS Geosol analytical procedures (ICP95A/IMS95A) include lithium metaborate fusion assays by ICP OES/MS , according to standard industry practices. The elements analysed were: $Al_2O_3$, Ba, CaO, $Cr_2O_3$, $Fe_2O_3$, K2O, MgO, MnO, $Na_2O$, $P_2O_5$, $SiO_2$, Sr, $TiO_2$, V, Zn, Zr, Ce, Co, Cs, Cu, Dy, Er, Eu, Ga, Gd, Hf, Ho, La, Lu, Mo, Nb, Nd, Ni, Pr, Rb, Sm, Sn, Ta, Tb, Th, Tl, Tm, U, W, Y, Yb. Also, Loss on Ignition (LOI) was determined by calcining the sample at 1000°C.<br>• The preliminary metallurgical testing was completed at the same SGS Lab in Goiania. Leaching test method ICM694 uses Ammonium Sulfate Leaching followed by ICPOES/ICPMS analysis. The sample was subjected to leaching at room temperature with 160 ml of a 0.5 mol/L ammonium sulfate solution for 30 minutes. Post-leaching, the pulp was filtered using a vacuum pump, and the residue was rinsed with 80 ml of a 0.1% ammonium sulfate solution. An aliquot of the solution was then taken and diluted 25 times with 2% HNO3.<br>• The diluted solution from the above process was analysed using the method ICPOES / ICPMS . The assays include: Ag, Al, As, B, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Dy, Er, Eu, Fe, Ga, Gd, Ge, Hf, Hg, Ho, In, K, La, Li, Lu, Mg, Mn, Mo, Na, Nb, Nd, Ni, P, Pb, Pr, Rb, Re, Sb, Sc, Se, Si, Sm, Sn, Sr, Ta, Tb, Te, Th, Ti, Tl, Tm, U, V, W, Y, Yb, Zn, Zr. |

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>
<ul>
<li>Quality Control: The laboratory follows strict quality control procedures, ensuring the accuracy and precision of the assay data. Internally, the laboratory uses replicate assays, standards, and blanks to maintain quality.</li>
<li>No sample duplicates. The Standards and Blanks showed acceptable values.</li>
</ul>
</td></tr>
<tr><td>Verification of sampling and assaying</td><td>
<ul>
<li>The verification of significant intersections by either independent or alternative company personnel.</li>
<li>The use of twinned holes.</li>
<li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li>
<li>Discuss any adjustment to assay data.</li>
</ul>
</td><td>
<ul>
<li>Significant intercept tables are prepared by Alvo personal and checked by at least one other Company geologist.</li>
<li>No twinned holes are being reported.</li>
<li>All data is stored in Alvo's cloud based database, which is backed-up daily off site.</li>
<li>Adjustments to the assay data were made- transforming the elemental values into the oxide values. The conversion factors used are included in the table below. Only intervals of saprolite Weighted averages were used to calculate significant intercepts.</li>
</ul>
<table>
<tr><th>Element</th><th>Oxide</th><th>Factor</th></tr>
<tr><td>Sc</td><td>Sc2O3</td><td>1.5338</td></tr>
<tr><td>Ce</td><td>CeO2</td><td>1.1713</td></tr>
<tr><td>La</td><td>La2O3</td><td>1.1728</td></tr>
<tr><td>Sm</td><td>Sm2O3</td><td>1.1596</td></tr>
<tr><td>Nd</td><td>Nd2O3</td><td>1.1664</td></tr>
<tr><td>Pr</td><td>Pr6O11</td><td>1.2082</td></tr>
<tr><td>Dy</td><td>Dy2O3</td><td>1.1477</td></tr>
<tr><td>Eu</td><td>Eu2O3</td><td>1.1579</td></tr>
<tr><td>Y</td><td>Y2O3</td><td>1.2699</td></tr>
<tr><td>Tb</td><td>Tb4O7</td><td>1.1762</td></tr>
<tr><td>Gd</td><td>Gd2O3</td><td>1.1526</td></tr>
<tr><td>Ho</td><td>Ho2O3</td><td>1.1455</td></tr>
<tr><td>Er</td><td>Er2O3</td><td>1.1435</td></tr>
<tr><td>Tm</td><td>Tm2O3</td><td>1.1421</td></tr>
<tr><td>Yb</td><td>Yb2O3</td><td>1.1387</td></tr>
<tr><td>Lu</td><td>Lu2O3</td><td>1.1371</td></tr>
</table>
</td></tr>
<tr><td>Location of data points</td><td>
<ul>
<li>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.</li>
<li>Specification of the grid system used.</li>
<li>Quality and adequacy of topographic control.</li>
</ul>
</td><td>
<ul>
<li>A GPS are used to locate and records the auger drill collars. No auger drill holes are downhole surveyed.</li>
<li>All location data has been recorded SAD69 (South America 1969 Datum) UTM zone 22S.</li>
<li>Topographic control is adequate for the stage of exploration at Ipora.</li>
</ul>
</td></tr>
<tr><td>Data spacing and distribution</td><td>
<ul>
<li>Data spacing for reporting of Exploration Results.</li>
<li>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.</li>
<li>Whether sample compositing has been applied.</li>
</ul>
</td><td>
<ul>
<li>Auger drillholes are variably spaced utilising existing roads as access.</li>
<li>The results reported may be considered in an MRE, although more drilling demonstrating continuity would be required.</li>
<li>No compositing has been applied to the results- apart from weighted averages</li>
</ul>
</td></tr>
</table>

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| *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.*<br>• *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 is shallow and considered as first pass sampling - generally lines are oriented across the assumed geological terrain. No bias is believed to have occurred. Sampling lengths were generally 0.5-2m downhole, unless there was a specific geological control required by the technician.<br>• No relationship between mineralisation and drilling orientation is known at this stage. |
| *Sample security* | • *The measures taken to ensure sample security.* | • The auger samples were collected and split in the field and the remaining material was discarded. The quarter was sent to the SGS Geosol, the pulps returned for storage in Palmeiropolis -TO. |
| *Audits or reviews* | • *The results of any audits or reviews of sampling techniques and data.* | • No audit to date. |

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

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td>Mineral tenement and land tenure status</td><td>• 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.<br>• 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.</td><td>• The Ipora Project is located in Goais State, Brazil. There are a number of tenements in the Project, granted to the name of Alvo's Brazilian Subsidiary.
<table>
<tr><th>Tenement ID</th><th>Phase</th><th>Area (Ha)</th><th>Prospect Name</th></tr>
<tr><td>861.107/2023</td><td>Granted Exploration</td><td>1,040</td><td>Tapir</td></tr>
<tr><td>861.108/2023</td><td>Granted Exploration</td><td>1,604</td><td>Tapir</td></tr>
<tr><td>861.109/2023</td><td>Exploration Application</td><td>1,877</td><td>Tapir</td></tr>
<tr><td>861.110/2023</td><td>Exploration Application</td><td>1,691</td><td>Tapir</td></tr>
<tr><td>861.173/2023</td><td>Application withdrawn</td><td>-</td><td>Snapper</td></tr>
<tr><td>861.174/2023</td><td>Application withdrawn</td><td>-</td><td>Snapper</td></tr>
<tr><td>861.175/2023</td><td>Application withdrawn</td><td>-</td><td>Tatu</td></tr>
<tr><td>861.177/2023</td><td>Application withdrawn</td><td>-</td><td>Tatu</td></tr>
<tr><td>861.178/2023</td><td>Granted Exploration</td><td>1,950</td><td>Tatu</td></tr>
<tr><td>861.181/2023</td><td>Granted Exploration</td><td>1,407</td><td>Tatu</td></tr>
<tr><td>861.182/2023</td><td>Granted Exploration</td><td>1,861</td><td>Tatu</td></tr>
<tr><td>861.184/2023</td><td>Granted Exploration</td><td>1,960</td><td>Tatu</td></tr>
<tr><td>861.185/2023</td><td>Application withdrawn</td><td>-</td><td>Tatu</td></tr>
</table>
• 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.</td></tr>
<tr><td>Exploration done by other parties</td><td>• Acknowledgment and appraisal of exploration by other parties.</td><td>• No known historical work was completed across the tenure apart from broad spaced mapping by the Brazilian geological Survey (CPRM)</td></tr>
<tr><td>Geology</td><td>• Deposit type, geological setting and style of mineralisation.</td><td>• Alvo is exploring the Ipora Project for Rare Earth Elelemtns (REE) of the style hosted by Ionic clays.</td></tr>
<tr><td>Drill hole Information</td><td>• 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:<br>○ easting and northing of the drill hole collar<br>○ elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</td><td>• See Table 3- Collar table. All drilling is included in Table 3.</td></tr>
</table>

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | ○ *dip and azimuth of the hole*<br>○ *down hole length and interception depth*<br>○ *hole length.*<br>● *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.* | |
| *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.*<br>● *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.*<br>● *The assumptions used for any reporting of metal equivalent values should be clearly stated.* | ● The significant intercepts were calculated using values > 300ppm TREO only in consecutive intervals of saprolite samples with thickness >2m. No upper cuts were considered. Weighted averages were calculated for all intercepts.<br>● The metallurgical results reported are presented as % Extractions for both individual elements (as oxides) and Total Rare Earth Oxides (TREO) and Magnet Rare Earth Oxides (MREO). The individual element % are calculated from lab results of the extraction divided by the total assayed values. The TREO and MREO are summed values of the elements, with the extraction is divided by the total assayed value.<br>● TREO Total rare earth oxides are the elements of the lanthanoids series and include Yttrium. They include oxides of La, Ce, Pr, Nd, Sm Pm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Y.<br>● MREO Magnet rare earth oxides include oxides of Nd, Pr, Dy, Tb and Eu and are some of the highest value REEs. |
| *Relationship between mineralisation widths and intercept lengths* | ● *These relationships are particularly important in the reporting of Exploration Results.*<br>● *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*<br>● *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').* | ● Mineralisation orientation is not known at this stage, although assumed to be flat lying.<br>● The downhole depths are reported, true widths are not known at this stage. |
| *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 plan maps reported in the announcement.<br>● No sections are included as the auger results are generally shallow (ave. 8m depth) and separated by up to 500m- scale restrictions render the inclusion of sections impractical. |
| *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 were assayed. All of the holes were anaylsed with pXRF, and only higher grades sent to lab for analysis.<br>● The pXRF analyses are not reported. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| *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.* | • No other data is considered relevant at this time. |
| *Further work* | • *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).*<br>• *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 consider additional geological mapping, geochemical sampling and Auger drilling at Ipora at the end of the wet season (in early 2025). Additional sampling for more definitive metallurgical testing is required for understanding of the exploration potential. |