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Targeting a new generation of Tier-1 mineral discoveries in Australia and Peru



ASX Announcement | 17 November 2023 | ASX: ICG

ALPACA HILL IOCG DRILLING UPDATE AND FIRST-PASS RECONNAISSANCE EXPLORATION AT FREWENA FRONTIER

Key Highlights

- Diamond drilling progressing at the Alpaca Hill IOCG target and currently at 230m depth with difficult ground conditions.
- Drilling expected to reach the target zone within the next week.
- New ironstone outcrop, called Candy Colette, with highly anomalous base metal pXRF readings, discovered by Inca's field crew on the Frewena Frontier (EL 32689) tenement.
- Preliminary spot pXRF testing of outcropping Cambrian Georgina Basin limestones within Inca's phosphate target at Frewena Frontier returns multiple anomalous phosphate readings.

Further to its ASX announcement of 6 November 2023, Inca Minerals Limited (ASX: ICG; Inca or the Company) is pleased to provide an update on the progress of its maiden diamond drill program at the high-priority Alpaca Hill IOCG target, part of its Frewena Fable Project in the East Tennant Province, Northern Territory.

The Company is also pleased to update shareholders and the market with encouraging initial developments from first-pass field reconnaissance exploration work undertaken by its exploration team at an interpreted basin at the Frewena Frontier tenement (EL 32689) in parallel with the drilling program.

Commenting on the newly identified copper target within EL32689, Inca's Board Chairman, Adam Taylor said:

"Well done to the field team for keeping a keen eye on all aspects of the project. The Frewena group of projects is known for its targets at depth and undercover of hundreds of metres so to be able to find and do some spot pXRF readings of the anomalous ironstone outcrop, at surface that is showing the team very promising results is a significant step forward for us and the project".

Alpaca Hill IOCG Drilling Update

Drilling on the partially Government-funded hole at the Frewena Fable IOCG Project has been underway for a few days. This follows the completion of a water bore, with good water flow at around 7,000 litres an hour to support the diamond drilling component of the program.

The hole comprises a mix of Reverse Circulation (RC) and diamond drill (DD) components. The aim of the RC component is to drill through the less prospective Georgina Basin sediments, followed by diamond drilling through the prospective Proterozoic basement target.

Notwithstanding difficult ground and access conditions and occasional rain which has slowed progress, the drill rig (**Figure 1**) has made good progress, and it is expected that target zone should be reached within the next week.



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Figure 1: Tulla Drilling Rig 6 operating on-site.

The initial Reverse Circulation (RC) pre-collar has been completed to a depth of 212m within the Georgina Basin Sediments. The depth of RC drilling is shallower than the 300m initially anticipated because of bad ground conditions, with excessive water flow occurring at around 170m depth. This required an earlier than planned shift to NQ diamond core drilling.

Initial geology intersected within the Neoproterozoic-to-Devonian intracratonic Georgina Basin comprises argillaceous sandy soils, lateritic clays, highly sorted medium-grained sandstone, siltstone, dolomitic shales, and limestones with cherty interbeds.

As expected, these sediments have not returned any anomalous results. Geological and oxidation variability of the Georgina Basin Sediments is demonstrated by colour changes of the drill chips as shown in the photo collage in **Figure 2**.

Further market updates on the progress of drilling will be provided as appropriate.



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Figure 2: Geological variability of the Georgina Basin Sediments demonstrated by A: Highly oxidised lateritic clays, B: Chert and siltstones chips, C & D: Argillaceous sandy soils (orange/yellow) and highly sorted medium-grained sandstone (white).

FIRST-PASS RECONNAISSANCE EXPLORATION ON THE FREWENA FRONTIER

In addition to progressing the Alpaca Hill drilling, Inca staff have undertaken field reconnaissance at an interpreted basin at the Frewena Frontier tenement (EL 32689) which, based on review and interpretation of open file regional gravity datasets and historical scout drilling, is considered highly prospective for phosphate mineralisation.

Field reconnaissance has involved taking spot reading of outcropping sediments across part of the interpreted basin. The results have been extremely positive, with many pXRF readings showing phosphate levels of more than 500ppm – which are similar to the pXRF readings obtained at surface over the nearby Wonarah Phosphate area.

This is considered to be encouraging particularly for what is a quick “first-pass” testing of the prospective ground. Further and more extensive testing is being planned where systematic orientation lines will be spot-tested with the pXRF across the identified basin to narrow down to the most promising areas prior to drilling.



Whilst undertaking the phosphate reconnaissance fieldwork, Inca staff discovered a previously unknown outcrop of massively altered limestone/sediments which had essentially been converted to an ironstone through hydrothermal activity. Remnant bedding was observed in some of the altered rocks, where they had not been completely obliterated and converted to massive ironstone.

The area where these ironstones were discovered is covered by loose sand and these rocks had recently been brought to the surface by the station owner who had put a ripper through the ground when he recently installed a water tank and related pipework to surrounding stock water troughs.

Figure 3 shows the location of the pXRF test spots over the phosphate and the newly identified Candy Colette targets within the regional Frewena Frontier tenement package.

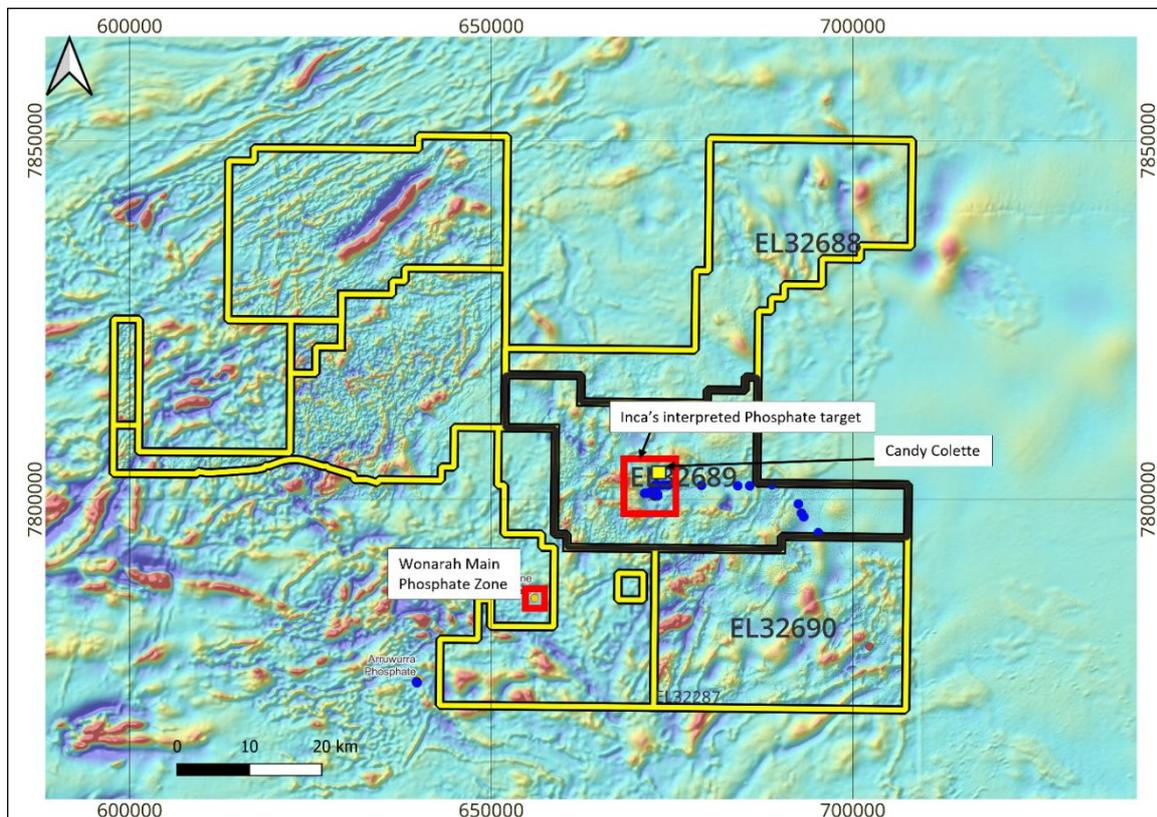


Figure 3: Location of Inca's phosphate project area and the newly identified Candy Colette copper anomaly in EL32689 within Frewena Frontier and other Inca tenements. Also shown is the Wonarah phosphate Development Project area. Image background is regional magnetic image (TMI rtp).

The Candy Colette copper anomaly is defined by highly anomalous copper pXRF readings relative to the general low level background copper in the area.



Figures 4 and 5 are prospect-scale maps of the target areas with spot points labelled by phosphate and copper, respectively. These labels show that the general background copper readings for the area are less than 25ppm compared to the anomalous readings over the copper target where most values are over 100ppm.

The copper target, which also recorded anomalous readings for other important “pathfinder” elements such as bismuth and sulphur, also correlates with highly anomalous phosphorus, with more than 90% of readings over 3000ppm up to 5000ppm and over. It should be noted that that the Candy Colette target also broadly lies at the edge of a regional magnetic high (**Figure 5**), indicative of a change of lithology from the sediments that define the phosphate basin target.

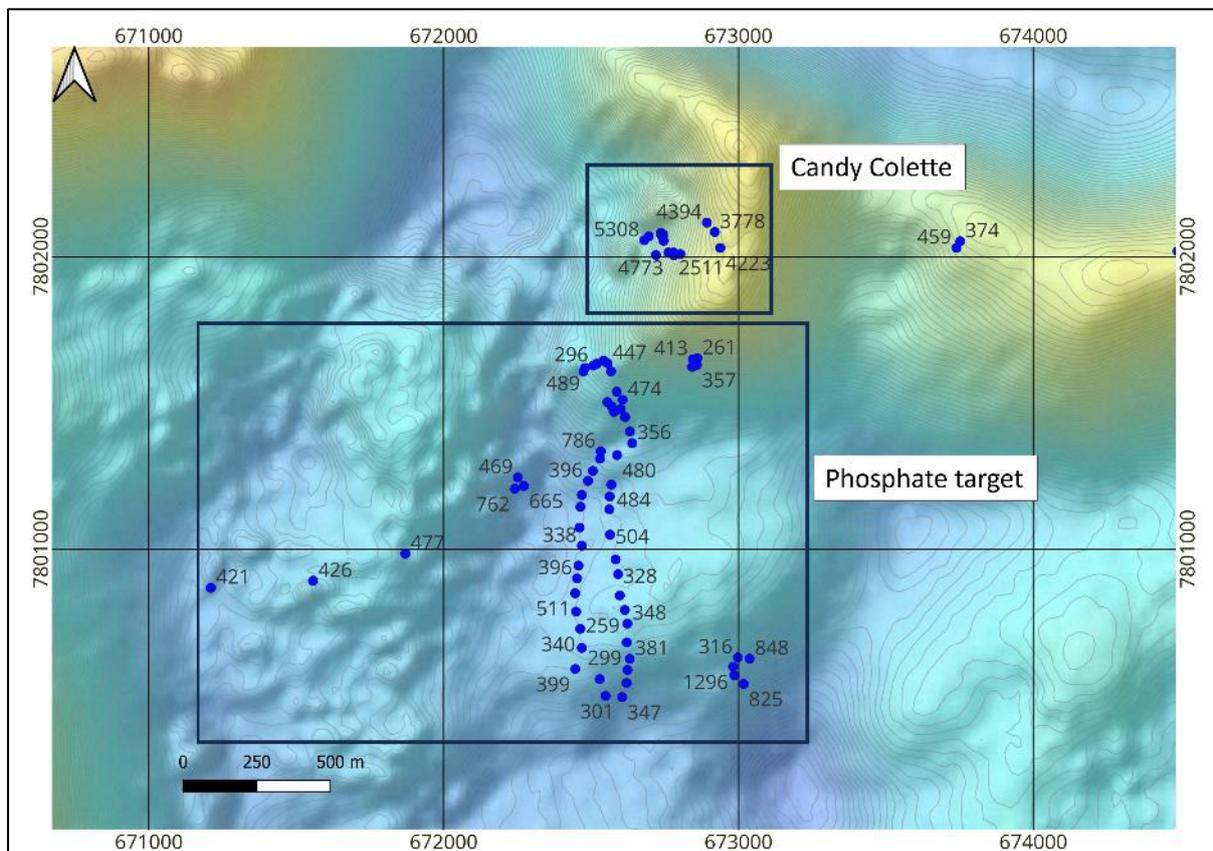


Figure 4: Prospect-scale map of the Frewena Frontier project area showing locations of pXRF spot analysis labelled by phosphate. Phosphate readings within the Candy Colette anomaly are highly anomalous, generally over 3000ppm. Samples are superimposed on magnetics image (TMI rtp) and regional magnetics contours.

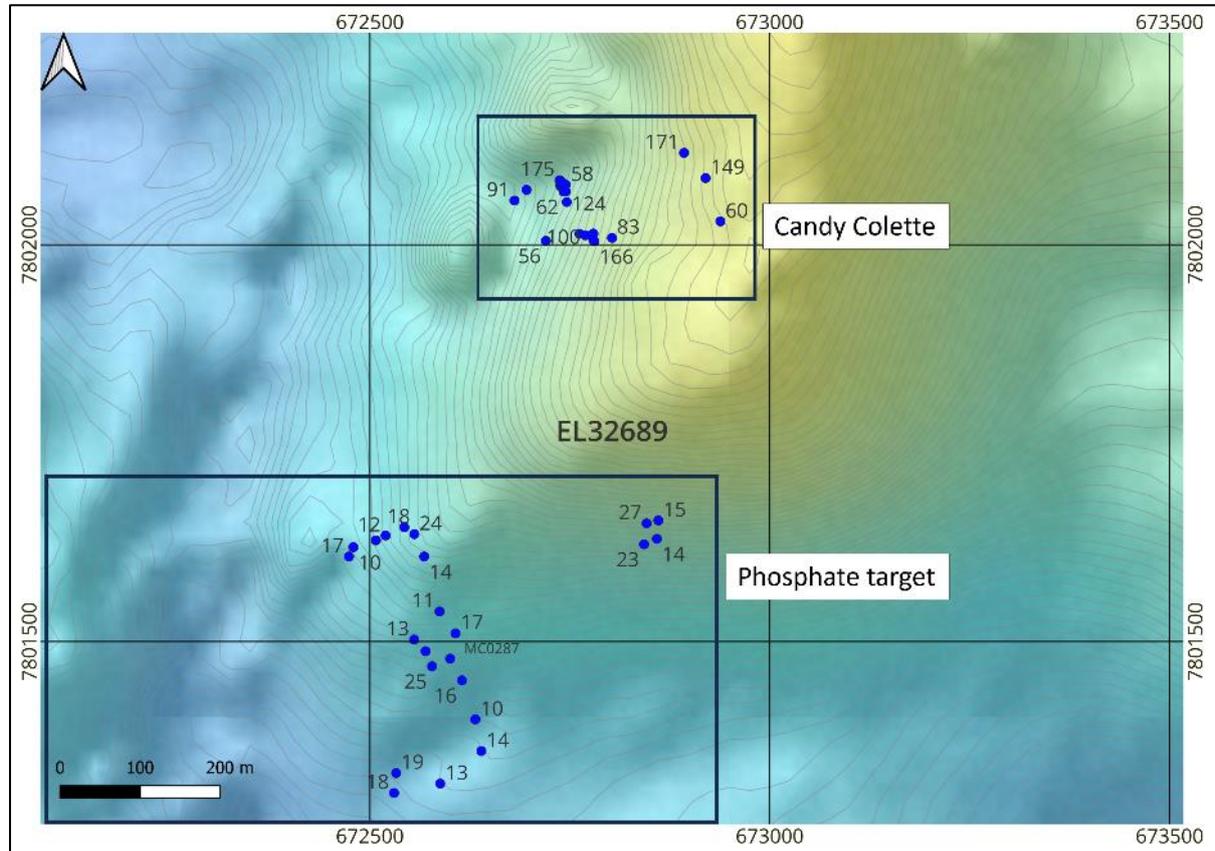


Figure 5: Prospect-scale map of the Frewena Frontier project area showing locations of pXRF spot analysis labelled by copper. The copper background values for the phosphate basin are generally less than 25ppm. Samples are superimposed on magnetics (TMI rpt) and regional magnetics contours. This shows that the copper anomaly abuts a weak magnetic signature which could expand the target even further with more field investigations and prospecting.

The prospect-scale geology of the Candy Colette Anomaly is defined by massive ironstone with specular haematite and manganese with limonite-filled boxworks probably after sulphides.

A photograph of the massive ironstone which defines this target is shown in **Figure 6**. Significantly, this massive ironstone outcrop covers an area of at least 250 by 150m (**Figures 4 & 5**) and displays consistent anomalous results for a number of critical elements including phosphorus (P), molybdenum (Mo), bismuth, iron (Fe), sulphur (S), tin (Sn) and stibnite (Sb).

Table 1 summarises all pXRF readings taken at the Candy Colette anomaly. The ironstones recorded very high iron (Fe) readings with many samples consisting of more than 50% iron. In addition, all samples recorded anomalous copper as well as sulphur. Interestingly, some samples also showed anomalous readings for other elements not expected, including Neodymium (Nd), which is a rare earth, and antimony (Sb). Stibnite, also known as antimonite, is a sulphide metalloid mineral of antimony which is a pathfinder for both copper and gold mineralisation.



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It is noted that rare earths are associated with the major Olympic (Roxby Downs) IOCG deposit in South Australia, so seeing some anomalous Nd readings is considered encouraging. Reference to the pXRF readings (Table 1) also show that there is an apparent association of a number of elements that are considered important indicators for metals that are associated with mineral deposits, including IOCG's, such as copper, bismuth, sulphur, tin, molybdenum, and iron.

Significantly, all spot readings of the ironstones were anomalous for a number of elements and the fact that these metal associations recorded anomalous readings for the same samples is considered most encouraging. For example, the bismuth (Bi) readings were consistently strong and, given that bismuth is a pathfinder element for gold, this is considered important. Likewise, a number of samples returned consistent, although lower, readings for molybdenum (Mo) and tin (Sn), which are generally associated with felsic (granitic) intrusive rocks. Intrusive rocks are the general drivers of mineralising fluids, which lead to the deposition of mineral deposits along redox boundaries and within geological structures.

The Company is highly encouraged by both the discovery of this previously unknown ironstone anomaly at Candy Colette in EL 32689 and particularly by the widespread anomalous readings across all samples, plus the fact that multiple important and potential "pathfinder" elements were detected at anomalous levels.

Inca intends to quickly progress further exploration on this new anomaly including prospect-scale geological mapping, sampling and re-interpretation of the available geophysical results produced during the 2021-2022 Airborne Magnetics and Radiometric (AMAGRAD) survey, which covered this area.



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Figure 6: Photograph of the massive ironstone found at the Candy Colette Anomaly with abundant manganese and specular haematite.



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Table 1: pXRF results of the Candy Colette Anomaly for selected elements.

Test No	Latitude	Longitude	P ppm	S ppm	Fe %	Cu ppm	As ppm	Mo ppm	Sn ppm	Sb ppm	Nd ppm	Bi ppm
20	19.8695	136.6513	4394	1641	53.44	171	78	14	94	96	<LOD	425
21	19.8697	136.6515	3778	1572	48.13	149	74	18	84	139	<LOD	250
22	19.8702	136.6517	4223	<LOD	38.49	60	36	13	96	<LOD	830	147
11	19.8700	136.6493	5308	750	50.37	91	101	23	109	<LOD	<LOD	476
12	19.8699	136.6494	3113	757	43.89	105	33	33	125	151	<LOD	152
13	19.8698	136.6499	5536	<LOD	44.48	58	<LOD	<LOD	69	74	<LOD	431
14	19.8698	136.6498	3183	866	50.79	175	<LOD	35	89	<LOD	<LOD	189
15	19.8698	136.6498	3183	368	39.25	112	<LOD	22	116	<LOD	710	119
16	19.8698	136.6498	2952	297	50.17	129	<LOD	37	95	<LOD	599	186
17	19.8699	136.6498	4801	<LOD	49.47	143	<LOD	29	97	128	<LOD	390
18	19.8698	136.6498	5000	136	46.62	130	<LOD	21	76	<LOD	<LOD	354
19	19.8698	136.6498	4698	226	41.82	112	45	23	99	<LOD	<LOD	275
20	19.8698	136.6498	4576	145	36.78	77	<LOD	21	<LOD	81	<LOD	201
21	19.8699	136.6499	5695	210	55.28	62	118	25	103	<LOD	<LOD	664
22	19.8699	136.6499	3783	733	50.68	192	<LOD	39	<LOD	<LOD	<LOD	<LOD
23	19.8700	136.6499	4309	848	59.15	124	64	27	67	132	<LOD	570
33	19.8704	136.6504	3978	574	47.33	83	64	<LOD	98	101	<LOD	274
34	19.8705	136.6502	4647	<LOD	53.94	166	68	<LOD	77	108	643	464
35	19.8705	136.6502	1905	2238	50.18	139	52	28	<LOD	<LOD	<LOD	173
37	19.8704	136.6500	4773	<LOD	58.62	190	70	24	<LOD	<LOD	<LOD	556
38	19.8705	136.6496	4441	242	45.57	56	93	30	84	105	575	241
42	19.8704	136.6501	2554	1691	52.04	100	55	14	101	88	<LOD	353
43	19.8704	136.6502	2511	1041	46.02	130	<LOD	26	110	<LOD	<LOD	107

Disclaimer

The information in this report is based on visual inspection and pXRF spot analysis and is believed to be reliable. However, pXRF results are just a chemical gauge of the actual metal content within the rock and should never be considered a proxy or substitute for actual laboratory analyses where reported concentrations or grades are a factor of principal economic interest. Visual estimates also potentially provide no information regarding impurities or deleterious physical properties relevant to valuations.



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This announcement was authorised for release by the Board of Directors.

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Competent Person's Statement

The information in this ASX announcement that relates to exploration activities for the Frewena Project in the NT, is based on information compiled by Dr Emmanuel Wembenyui BSc (Hons), MSc Applied Geology and PhD Geochemistry who is a Member of The Australasian Institute of Mining and Metallurgy and The Australian Institute of Geoscientists, MAIG. He has sufficient experience, which is relevant to the exploration activities, style of mineralisation and types of deposits under consideration, and to the activity which has been undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Dr Wembenyui is a fulltime employee of Inca Minerals Limited and consents to the announcement being issued in the form and context in which it appears.