



ALPACA HILL DRILLING PROGRESS

Key Highlights

- Disseminated sulphides (pyrite and chalcopyrite) intercepted between 395 and 410m.
- Geology transitions from Sedimentary to altered granite igneous rocks around 368m.
- Drillhole deviated from modelled trajectory and is being corrected.

Further to its ASX announcement of 27 November 2023, Inca Minerals Limited (**ASX: ICG; Inca or the Company**) provides a further update on the progress of its maiden diamond drill program at the high-priority Alpaca Hill IOCG/SEDEX target, part of its Frewena Fable Project in the East Tennant Province, Northern Territory.

As previously reported, initial drilling progress was slower than expected for several previously reported reasons. Drilling is currently at 580 m and approaching the top of the target zone. However, there has been a deviation of the drill hole which would mean that the hole would miss the target if we had kept drilling on the current azimuth and dip (**Figure 1**). The dip of the hole had dropped to 53 degrees at around 570m depth, which is 7 degrees off from the 60 degrees it was set at. The azimuth also swung to over 253 from its original 245 setting. The black trace in **Figure 1** is the actual hole currently being drilled and if continued on this course, it would completely miss the 0.2g/cc target if projected to 1000m. The green trace in **Figure 1** is the modelled hole that was initially planned.

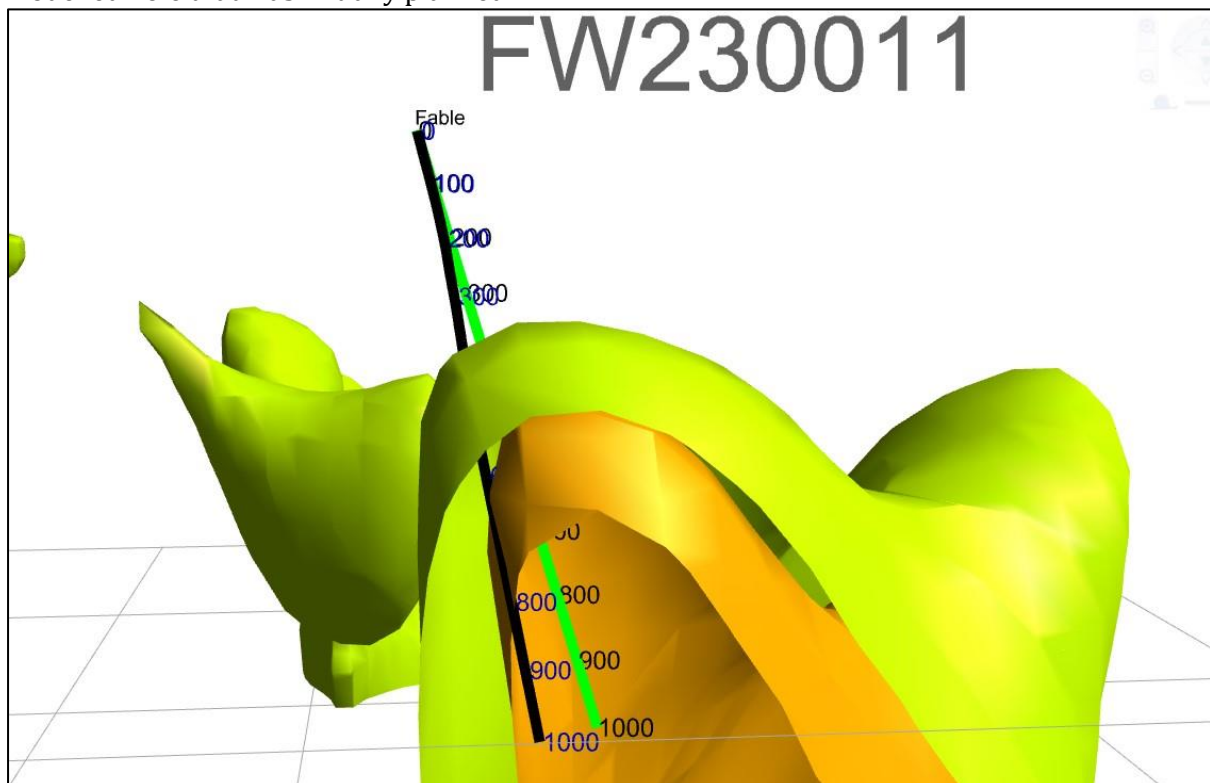


Figure 1: Deviation of Drill Hole FW 230011 from planned trajectory and need to correct.



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Consequently, the hole is to be wedged to get the direction back on track and to ensure that drilling penetrates the target zone fully, as shown by the green trace line in **Figure 1**. This required action will add a little time to the overall program, but it is critical that with such a deep and important hole, nothing is left to chance and where a problem is identified it is addressed immediately.

Geology, alteration, and mineralisation observations

Further to the last update on the Alpaca Hill drilling (27 November 2023), and notwithstanding the need to wedge the hole to get it back on target, the Company is pleased to be able to report that the observed geology, alteration and mineralisation is positive. In the last ASX release, it was noted that the drilling at about 380m was still in sediments with clear signs of mineralisation and alteration commonly associated with either SEDEX or IOCG type deposits. With drilling having progressed to around 570m, and approaching the target zone, there has been a distinct change in geology with the main rock now being granite. The transition from the sediments to the granitic rocks occurred at around 368m and matched the modelled geophysical gravity data.

Importantly, the granites are altered and weakly metamorphosed, with clear deformation (**Figure 2**) exhibited in places. In addition, strong biotite alteration is also observed. Despite the clear deformation within the granite the rocks are very competent and exhibit little post emplacement structural deformation.



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Figure 2: Strongly altered granite with clear deformational structures at 405m



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In the area between 395 and 410m, disseminated pyrite and specs of chalcopyrite (**Figure 3**) are observed and, critically, these do not occur as infills in joints or as post intrusive veining, but “insitu” or disseminated within the granite itself. This observation is encouraging as it suggests that the ‘deposition” of these sulphides occurred as part of the crystallisation of the granites and is therefore directly associated with the intrusions, most likely with deposition from hydrothermal fluids associated with the magma intrusion.



Figure 3: Visible sulphides within relative fresh granite. Small golden blebs are chalcopyrite and silver-yellow sulphides are pyrite. These occur intermittently between 405 and 410m.

The occurrence of disseminated sulphides in the granite is encouraging. The Company will provide a further update on drilling once the hole has been wedged, corrected and drilling is back on target.

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.



Appendix 1: JORC Compliancy Table

JORC 2012 Compliancy Table

The following information is provided to comply with the JORC Code (2012) exploration reporting requirements.

Section 1 Sampling Techniques and Data
Criteria: Sampling techniques
JORC CODE Explanation
<i>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or hand-held XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</i>
Company Commentary
This announcement relates to the progress of drilling of drillhole FW230011 at the Alpaca Hill prospect, Frewena Fable in EL31974 within Inca Minerals Frewena Project in the Northern Territory. The exploration results contained here relate to logged geology and observed mineralisation.
JORC CODE Explanation
<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>
Company Commentary
This announcement does not relate to samples that were collected and taken from site.
JORC CODE Explanation
<i>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1m samples from which 3 kg was pulverised to produce a 30g charge for fire assay'). In other cases, more explanation may be required, such as where there is a coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</i>
Company Commentary
This announcement does not refer to samples that were collected for further analysis in a standard laboratory. Reported mineralisation in this announcement is based on physical observations.
Criteria: Drilling techniques
<i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. 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>
Company Commentary
The drillhole reported in this announcement was drilled using Reverse Circulation (RC) method for up to 200m, then switching to HQ diamond drilling, and finally reducing to NQ in fresh competent rock. Hole diameter started at 5 ¾ inch, progressively reducing to HQ and NQ core sizes with depth.
Criteria: Drill sample recovery



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JORC CODE Explanation
<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>
Company Commentary
This announcement refers to drillhole FW230011. All diamond core runs were measured by drillers using a tape and recorded in run books. Core recovery is generally 100%, sometimes reducing to about 70% when argillaceous material is washed away by drilling muds.
JORC CODE Explanation
<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>
Company Commentary
Diamond core recovery was generally 100% with occasional core losses where groundwater was encountered, which reduced sample sizes to about 70%.
JORC CODE Explanation
<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>
Company Commentary
Relationship between sample recovery and grade is not applicable for the drill core as it was not submitted for assay. For pXRF analyses, no relationship between sample recovery and grade was established as the pXRF analyses were based on small spots of drill core at a time.
Criteria: Logging
JORC CODE Explanation
<i>Whether core and chip samples have been geologically and geo-technically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i>
Company Commentary
All reported drill core was logged by Company geologists to the standard level of geological detail to support mineral resource estimation, metallurgical and mining studies as required. All drill core was geologically described in terms of rock type, alteration, colour, and visual evaluation of mineralisation.
JORC CODE Explanation
<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography</i>
Company Commentary
Logging was both qualitative and quantitative. Qualitative data collection included recoding of lithology, texture, grain size, structure, weathering levels, alteration, veining, and any identified mineralisation. Quantitative measurements included recording of Magnetic Susceptibility readings using a KT-10 Meter.
JORC CODE Explanation
<i>The total length and percentage of the relevant intersections logged.</i>
Company Commentary



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The reported hole was geologically logged to the current hole depth at the time of reporting.
Criteria: Sub-sampling techniques and sample preparation
JORC CODE Explanation
<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>
Company Commentary
The reported drill core went through preliminary assessment onsite and none was cut.
JORC CODE Explanation
<i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i>
Company Commentary
Only diamond core is mentioned in this announcement.
JORC CODE Explanation
<i>For all sample types, the nature, quality, and appropriateness of the sample preparation technique.</i>
Company Commentary
The announcement refers to diamond core from the Frewena Fable drilling, none of which were sampled.
JORC CODE Explanation
<i>Quality control procedures adopted for all sub-sampling stages to maximise "representivity" of samples.</i>
Company Commentary
No samples are reported in this announcement.
JORC CODE Explanation
<i>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.</i>
Company Commentary
No samples are reported in this announcement.
JORC CODE Explanation
<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>
Company Commentary
No samples are reported in this announcement. However, when cutting and sampling are done, sufficient sample sizes will be taken to provide homogeneous and representative material for analysis.
Criteria: Quality of assay data and laboratory tests
JORC CODE Explanation
<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>



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Company Commentary
No laboratory assays are referred to in this announcement.
JORC CODE Explanation
<i>For geophysical tools, spectrometers, hand-held XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i>
Company Commentary
Magnetic Susceptibility readings are recorded using a KT-10 Magsus meter.
JORC CODE Explanation
<i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i>
Company Commentary
No samples are reported in this announcement. However, when cutting and sampling are done, blanks, standards and duplicates will be inserted as part of the company's QAQC procedures.
Criteria: Verification of sampling and assaying
JORC CODE Explanation
<i>The verification of significant intersections by either independent or alternative company personnel.</i>
Company Commentary
No samples are reported in this announcement. No external laboratory checks were completed for this program and no alternative company personnel were engaged to verify the core reported in this announcement.
JORC CODE Explanation
<i>The use of twinned holes.</i>
Company Commentary
No twin holes are involved in this announcement.
JORC CODE Explanation
<i>Documentation of primary data, data entry procedures, date verification, data storage (physical and electronic) protocols.</i>
Company Commentary
All geological logging and observations are stored onto company computers and laptops for QAQC validation to ensure data integrity. The validated datasets are backed up by Company geologists prior to being archived in an online SharePoint platform.
JORC CODE Explanation
<i>Discuss any adjustment to assay data.</i>
Company Commentary
No data were adjusted in this announcement.



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Criteria: Location of data points
JORC CODE Explanation
<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>
Company Commentary
A Garmin handheld GPS was employed to locate the collar of the Frewena Fable hole, FW230011. Surveys, which involve the measurement of Azimuth and Dip were completed using a True North seeking Reflex Gyro Tool.
JORC CODE Explanation
<i>Specification of the grid system used.</i>
Company Commentary
GDA94 / MGA zone 53
JORC CODE Explanation
<i>Quality and adequacy of topographic control.</i>
Company Commentary
FW230011 was located using a handheld Garmin GPS that provides adequate topographical control.
Criteria: Data spacing and distribution
JORC CODE Explanation
<i>Data spacing for reporting of Exploration Results.</i>
Company Commentary
This is a first pass exploration program with no systematic hole spacing. FW230011 was set to target specific geophysical (gravity and magnetics) and geological features as a part of a regional reconnaissance program.
JORC CODE Explanation
<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>
Company Commentary
This a first pass regional program targeting specific geological and geophysical anomalies to provide knowledge of regional mineralisation potential. Hole spacing for future mineral resource estimation is not applicable here.
JORC CODE Explanation
<i>Whether sample compositing has been applied.</i>
Company Commentary
No sampling for laboratory analysis was done. Thus, no sample composites are applicable here.
Criteria: Orientation of data in relation to geological structure
JORC CODE Explanation



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Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.

Company Commentary

No structural measurements were taken as part of this announcement. However, when detail logging is done, the diamond core will be oriented where possible and structures measured to provide unbiased knowledge of structural control on possible large-scale IOCG and/or SEDEX mineralisation. Drillhole FW230011 is a reconnaissance hole designed to drill across geophysical (magnetic, gravity) anomalies as best as practically possible to provide an initial assessment of what the geophysical anomalies represent with assaying of the entire drill core to be undertaken.

JORC CODE Explanation

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.

Company Commentary

FW230011 was designed to generate diamond core samples that reflect no bias relative to possible large-scale IOCG and/or SEDEX mineralisation. The drillhole in this reconnaissance program at Frewena Fable is designed to drill across geophysical (magnetic, gravity) anomalies as best as practically possible to provide an initial assessment of what the geophysical anomalies represent with assaying and sampling of the entire Proterozoic drill core.

Criteria: Sample security

JORC CODE Explanation

The measures taken to ensure sample security.

Company Commentary

No samples were collected and taken away from site.

Criteria: Audits and reviews

JORC CODE Explanation

The results of any audits or reviews of sampling techniques and data.

Company Commentary

No sampling is applicable in this announcement.

Section 2 Reporting of Exploration Results

Criteria: Mineral tenement and land tenure status

JORC CODE Explanation

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.

Company Commentary

Tenement Type: EL 31974 (granted).

Ownership: For EL31974, Inca has the right to earn 90% via a JVA Agreement and Royalty Deed (1.5% NSR payable) with MRG and West.



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JORC CODE Explanation
<i>The security of the land tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i>
Company Commentary
The exploration licences are in good standing at the time of writing.
Criteria: Exploration done by other parties
JORC CODE Explanation
<i>Acknowledgement and appraisal of exploration by other parties.</i>
Company Commentary
This announcement does not refer to results by other parties.
Criteria: Geology
JORC CODE Explanation
<i>Deposit type, geological setting, and style of mineralisation.</i>
Company Commentary
The geological setting of the area is that of Palaeozoic Georgina Basin that is regionally mapped as shales and limestones of varying thicknesses. Substantial geophysical surveying undertaken by Geoscience Australia, the Northern Territory Geological Survey, MinEx CRC, and by Inca Minerals Ltd, indicates that Proterozoic basement rocks occur at relatively shallow depths (~150m), with these lithologies considered prospective for IOCG, SEDEX, phosphate, and orogenic style mineral systems.
Criteria: Drill hole information
JORC CODE Explanation
<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"><i>· Easting and northing of the drill hole collar</i><i>· Elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar.</i><i>· Dip and azimuth of the hole.</i><i>· Down hole length and interception depth.</i><i>· Hole length.</i>
Company Commentary
This announcement refers to drillhole FW230011. The drillhole parameters are as follows: <i>Easting: 521648 Northing: 7811199 Magnetic Azimuth: 240 Elevation or RL: 219 Dip: -60 Target hole depth: 700m</i>
JORC CODE Explanation



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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.

Company Commentary

N/A.

Criteria: Data aggregation methods

JORC CODE Explanation

In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations shown in detail.

Company Commentary

No results that involved data aggregation methods are referred to in this announcement.

JORC CODE Explanation

The assumptions used for any reporting of metal equivalent values should be clearly stated.

Company Commentary

No metal equivalent values are referred to in this announcement.

Criteria: Relationship between mineralisation widths and intercept lengths

JORC CODE Explanation

These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known.')

Company Commentary

Only patchy drillhole mineralisation occurring as disseminations are reported in this announcement. Only drill assays on cut core will give an indication of mineralised intervals.

Criteria: Diagrams

JORC CODE Explanation

Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not limited to a plan view of drill hole collar locations and appropriate sectional views

Company Commentary

The coordinates of FW230011 have been reported in this Table. Plan view of this drillhole has been reported in previous announcements.

Criteria: Balanced reporting

JORC CODE Explanation

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.



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Company Commentary
The Company believes the ASX announcement provides a balanced report of its exploration activities and results.
Criteria: Other substantive exploration data
JORC CODE Explanation
<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>
Company Commentary
No other data are required to be presented other than what has been reported in this announcement.
Criteria: Further work
JORC CODE Explanation
<i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i>
Company Commentary
Drilling is required to test modelled gravity and magnetics isosurfaces for mineralisation at depth to determine if the geophysical anomalies identified on the surface vector to mineralisation at depth. Further drilling is also required to better understand the potential of the Frewena Fable gravity and magnetic anomalies within the broader Frewena Project area.
JORC CODE Explanation
<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>
Company Commentary
No extension drilling is being planned but should there be success in FW230011, future drilling is likely to be planned to determine the geometry and size of any potential orebody at depth.
