



2 May 2013

## Dual Prospectivity of Chanape Firms

### HIGHLIGHTS

- Proximity to possible economic grade mineralisation lateral to or below drilled section of mineralised monzonite porphyry indicated
- World authority on epithermal gold and porphyry mineralisation, Mr Jeffrey Hedenquist, visits Chanape and inspects diamond core from CH-DDH001
- Multiple phases of inter-porphyry brecciation and porphyry intrusion recognised in core
- Detailed core logging of CH-DDH001 confirms lithology, alteration and mineralisation are typical of Cu-Mo porphyry systems
- Active exploration continues

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### Chanape Exploration Bolstered by Experts' Reports

Following its breakthrough discovery of mineralised monzonite porphyry and the intersection of rich epithermal gold and silver mineralisation in its maiden drill hole (reported in the previous quarter) Inca Minerals Limited [ASX: ICG] ("Inca" or "Company") has actively pursued its 2013 exploration program (as outlined to the Market on 27 February 2013).

As part of this program, two recent independent experts' reports have significantly de-risked the Chanape project and confirmed Inca's view of:

- The genuine opportunity to prove up near-surface epithermal gold-silver resource targets.
- The existence of possible economic grade mineralisation lateral to or below the drilled section of the mineralised monzonite porphyry.
- Aggressively progressing exploration activities to facilitate optimal targeting and thereafter drilling for both the epithermal breccia occurrences and an underlying mineralised porphyry.

The first of the independent expert's reports was prepared by Mr Jeffrey Hedenquist, a recognised world authority on epithermal gold and porphyry mineralisation. Mr Hedenquist completed a site-visit where he observed the Chanape project geology and inspected the diamond core of CH-DHH001. Mr Hedenquist's report, entitled "Observations on the Chanape Au-Ag, and Cu-Ag Prospect, Peru", has excited the Company, re-affirmed its confidence in the Chanape project and facilitated important improvements to the exploration and development program. The full and unabridged summary and recommendations from the Hedenquist report are attached to this ASX announcement as Appendix 1.



A second expert's report has also been recently received by the Company from ExploAndes. An integral part of its 2013 exploration program, the ExploAndes report was commissioned by Inca to provide detailed geological interpretation of drill core from 365m to 600m of CH-DDH001. Importantly, the ExploAndes report confirmed:

- The lithology, alteration and mineralisation in Inca's CH-DDH001 drill core are typical of Cu-Mo porphyry systems.
- Multiple phases of inter-porphyry brecciation and porphyry intrusion within the drill core.

The ExploAndes report (discussed in detail later in this announcement), in conjunction with the recommendations in the Hedenquist report, have enhanced the work to date and will benefit Inca's planned 2013 exploration program. In the Company's view, this has significantly de-risked future exploration and project development.

Consistent with recommendations in the Hedenquist report, a program of detailed surface mapping and geophysics is currently underway in the Chanape "breccia field" (ie > 50 breccia bodies). The purpose of the program is to define gold-bearing epithermal breccia targets (similar to Breccia Pipe Eight that contained both epithermal gold and mineralised porphyry), which in turn, will allow for greater understanding of the deeper drilling requirements of the underlying porphyry.

Results of the Hylogging Spectral Reflectance (hydrothermal clay mapping of 750 samples) that are currently being treated by CSIRO are pending at the time of writing. The results of this work will also be critical for development of optimal drill targets.

## The ExploAndes Report

As detailed earlier, Inca has recently received a report from ExploAndes. The report, authored by Alberto Bustamante, was commissioned so as to provide detailed geological interpretation of drill core from 365m to 600m of CH-DDH001.

Three lithologies were identified within the basal 235m interval of CH-DDH001:

- 365m to 379m: Hornfels (country rock) with propylitic alteration.
- 379m to 472m: Monzodiorite porphyry with early stage potassic alteration over-printed by propylitic alteration.
- 508m to 600m: Monzonite porphyry with early stage potassic alteration over-printed by phyllic alteration.

Two breccia zones were identified within the basal porphyry sequence: the tourmaline-quartz hydrothermal breccia and quartz-tourmaline hydrothermal breccia.

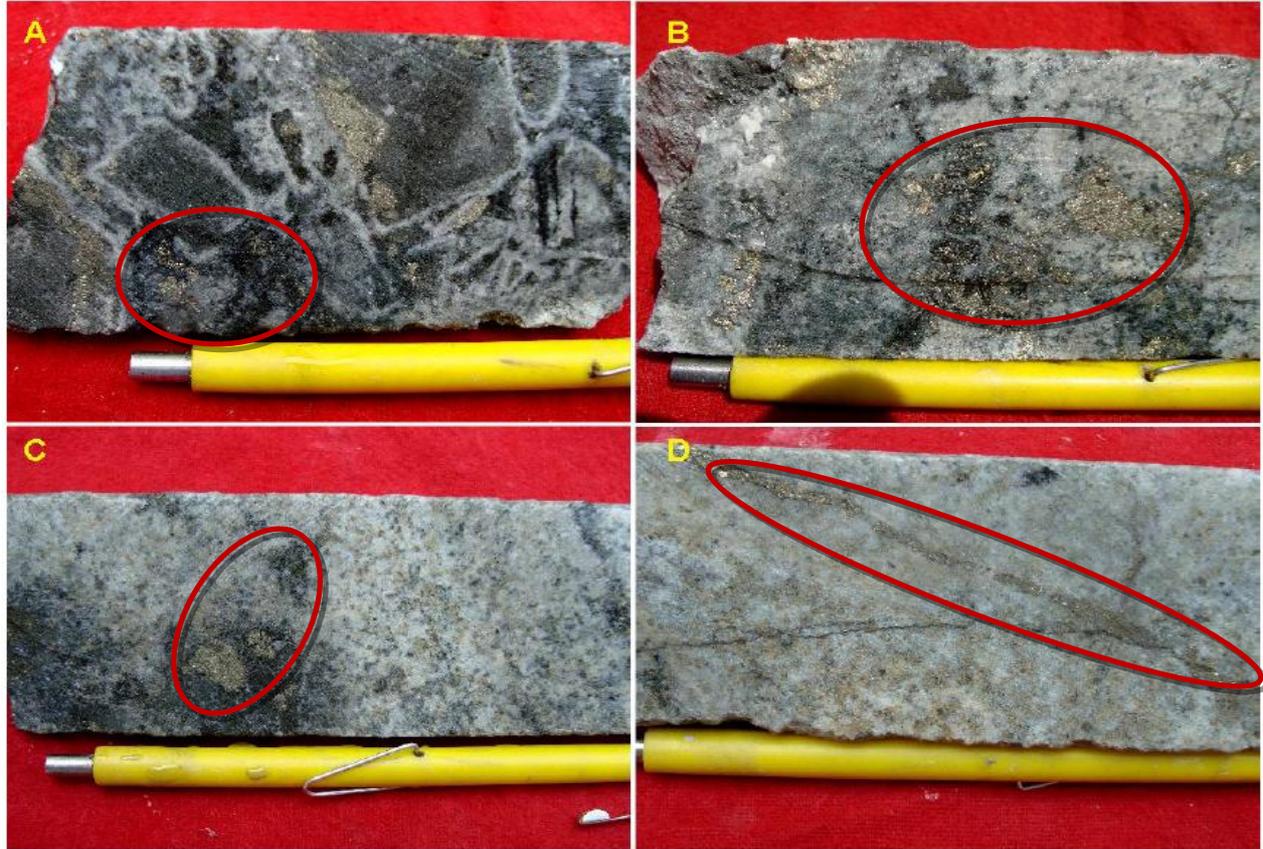


Figure 1: A) Tourmaline-quartz breccia with disseminated pyrite, chalcopyrite and tourmaline in the matrix; B) Quartz-tourmaline breccia with patchy pyrite, chalcopyrite and molybdenite; C) Potassic-altered monzonite porphyry with patchy pyrite, chalcopyrite and molybdenite; D) Potassic-altered monzonite porphyry with phyllic over-printing with pyrite-chalcopyrite veinlets.

Mineralisation contained in the basal section of CH-DDH001 is associated with the two breccia bodies and the monzonite porphyry. Mineralisation in the breccias includes Au, Ag, Cu, Mo and Pb. Both chalcopyrite (Cu mineral) and molybdenite (Mo mineral) occurs in the breccia matrix (Figure 1 A & B). In the monzonite porphyry, chalcopyrite occurs as thin veinlets and disseminations, whilst the molybdenite occurs as disseminations as well as with cross-cutting quartz-tourmaline veins.

Each of the three mineralised lithologies defines a distinct zone of mineralisation (Figure 2). Notable, in Inca's view, is the mineralisation associated with the monzonite porphyry, which has high copper and silver values. It is also the Company's view that possible economic grade mineralisation may be lateral to or below the drilled section of the monzonite porphyry. At present the best intersections (as reported in the Bustamante Report) include: 24m of 0.35% Cu, 146ppm Mo, 9.2 ppm Ag from 574m to 583m including:

- 11m at 0.72% Cu and 18.7ppm Ag from 574m to 582m;
- 10m at 265ppm Mo from 562m to 572m.

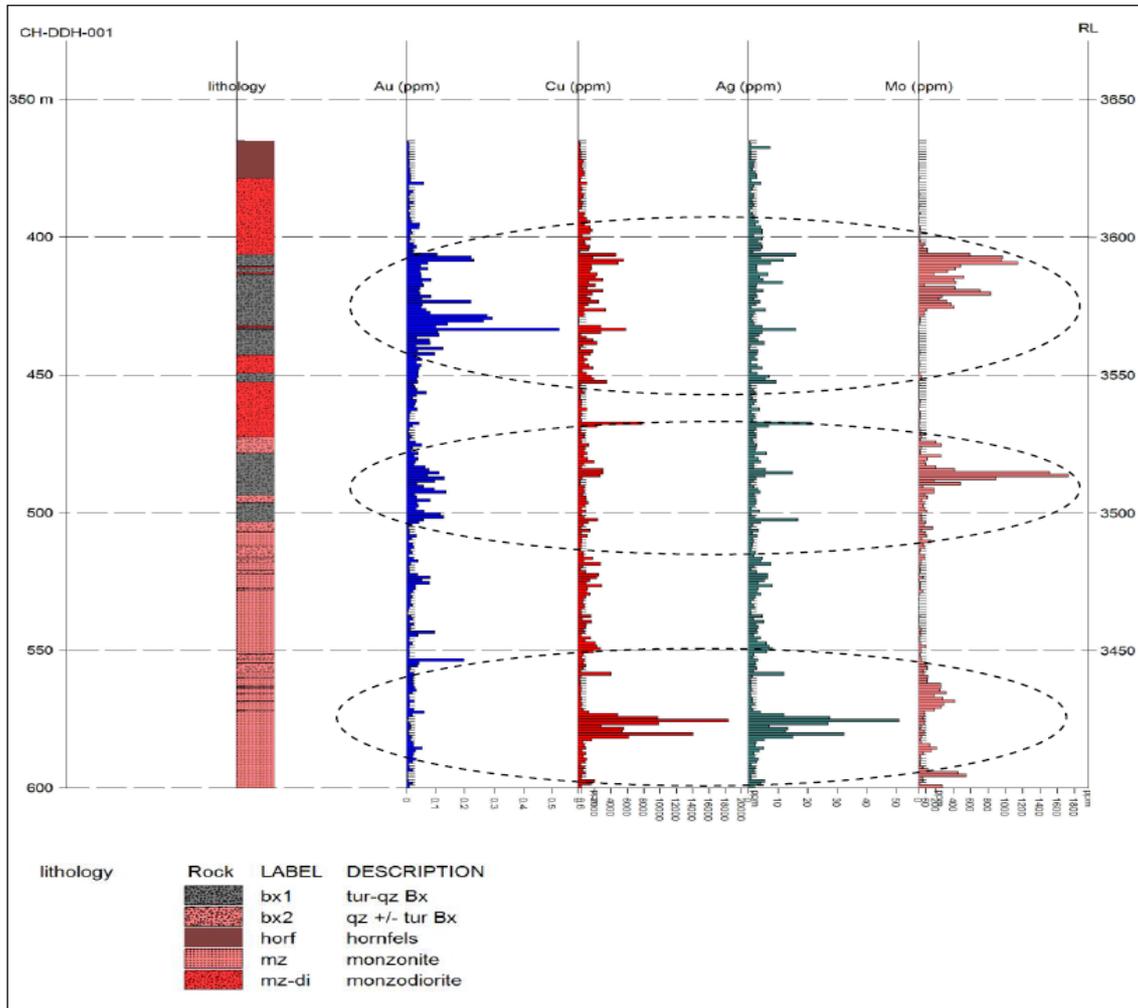


Figure 2: Metal zoning in the basal section of CH-DDH001. Three mineralised zones are recognised, two upper zones associated with the breccia bodies, generally mineralised in Au and Mo ( $\pm$  Cu, Ag) and a lower mineralised zone associated with the porphyry, generally mineralised in Cu, Ag ( $\pm$  Mo).

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The information in this report that relates to Exploration Results is based on information compiled by Mr Ross Brown, Managing Director, Inca Minerals Limited, who is a Member of the Australian Institute of Mining and Metallurgy. Mr Brown is a full time employee of Inca Minerals Limited. He has sufficient experience, which is relevant to the 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 by the 2004 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Brown consents to the report being issued in the form and context in which it appears.

**Appendix 1: Summary from the report entitled “Observations on the Chanape Au-Ag, and Cu-Ag Prospect, Peru” of April 2013 by Jeffrey W. Hedenquist (unabridged)**

Chanape is located in the Central Peru metallogenic belt of polymetallic veins and replacement bodies, typically formed at epithermal levels, plus Cu porphyry and skarn deposits. The Devonian to Cretaceous sedimentary sequences of phyllite to carbonates outcrop on the NW margin of the property and were folded and then unconformably overlain by Miocene andesitic flows and tuffaceous horizons. This was intruded by younger Miocene monzonites, as well as intrusions of dioritic to quartz monzonitic composition, some having intruded during hydrothermal activity (xenoliths of tourmaline and occur in altered intrusions).

To the limit of drilling, 600 m, there are fragmented intervals of clast-supported material, both monolithic and polyolithic; the fragmentation was caused by hydrothermal brecciation; much of the matrix consists of quartz, tourmaline and sulfides, including arsenopyrite, pyrrhotite and chalcopyrite; tourmaline is also disseminated in clasts along with pyrrhotite and arsenopyrite. At depths below ~400 m, within the monzonite, there are narrow zones of fragmentation, as well as a variety of vein styles, including quartz, pyrite, tourmaline plus minor pyrrhotite, magnetite, hematite and chalcopyrite; early tourmaline is replaced by sulfides. The veins have illite halos where potassic alteration (biotite, magnetite) is cut; much of the wall rock is illite altered. The veins have the appearance of being distal (shallow?) relative to an intrusive source at depth.

There is a complicated paragenesis of sulfides and tourmaline, and there are at least two mineralization stages, shallow epithermal Au-Ag, locally with Cu (an overprint in the same structures?), and deeper Cu-Ag-(Au), the latter with Mo locally; the Mo is a distinct (late?) event, since it can be within Cu-bearing structures, as halos, or in intervals without significant Cu. The shallow, fragmental-hosted Au-Ag±Cu was the target of early shallow drilling; there are numerous fragmental bodies that outcrop, some mineralized, some apparently barren. The alteration mineralogy (illite) as well as local occurrence of high sulfidation-state sulfides (enargite, covellite) suggests a relatively low temperature and shallow paleodepth of formation (less than a few 100s m deep). The discovery of deeper Cu-Ag-(Au)±Mo mineralization at ~400-600+ m may be due to zoning in the system, or may be have been caused by a separate event associated with the veinlet development and local fragmentation. The apparent lack of higher temperature quartz veins suggests that the focus of the system is deeper and/or lateral to the single intermediate-depth drill hole.

The Chanape area shares similarities with other deposits and districts in the Central Peru belt, including the host stratigraphy and Miocene intrusions, marginal polymetallic veins (at Siberia and further to the north) and a complex mineralogy and paragenesis, including abundant arsenopyrite and pyrrhotite. Elsewhere in the region these early-stage minerals were related to an initial hydrothermal fluid that reacted with a phyllic basement. In Morococha and Cerro de Pasco, this event was followed by a more oxidized mineralization pulse; at Morococha, this appears to be the shallow epithermal signature of deeper porphyry centers in the district. Assessment of Chanape is in the early stages, and there is much surface work, both mapping and sampling, that can be done that would be useful, prior to the efficient and effective targeting of relatively shallow Au-Ag±Cu polymetallic bodies and veins, and eventually deeper porphyry-intrusion related Cu-Ag (+Au, Mo?) mineralization.



**Appendix 1: Summary from the report entitled “Observations on the Chanape Au-Ag, and Cu-Ag Prospect, Peru” of April 2013 by Jeffrey W. Hedenquist (unabridged) (Continued)**

Recommendations

- Continue to map the property in detail, and collect representative rock chip samples; where the outcrop is amenable, consider the usefulness to cut representative channel samples of fragmental bodies, extending into the wall rock
- Compile all existing data and information into a GIS software package, in order to overlay and compare disparate information (lithology, alteration, veins and brecciation, mineralization, geophysical results), both in map view as well as in sections
- Relog the High Ridge drill holes that are located on IP sections and which clearly cut resistivity high and low anomalies, as well as chargeability high anomalies, to ground truth these anomalies (e.g., Line 2400N, hole CH-08, the bottom half of the hole in a low resistivity and high chargeability interval; by contrast, adjacent CH-09 drilled into a resistivity high in the middle of the hole). Measure magnetic susceptibility of all drill holes to characterize the pyrrhotite (and locally magnetite) contents
- Plot metal data for all surface samples and old drill holes, to examine relationships, e.g., Au vs Ag, Cu vs Ag, Cu vs Au, Cu vs Mo, As vs Au, As vs Cu, Mn vs Au, etc. Also plot the ratios versus elevation for drill holes. Characterize mineralization events, particularly in drill core, by establishing a paragenetic sequence of alteration and sulfides
- Integrate surface and drill hole geology with the geochemical results from a comprehensive sampling program and the detailed geophysical survey results in order to develop viable shallow Au-Ag±Cu targets. Once several of these targets are assessed, consider the next stage of deeper Cu-Ag drill targets, potentially aiming at proximal intrusion-related stockwork-hosted mineralization; this will likely entail drilling to significant depths
- Future drilling should be done at an angle of ~70°, both for intersection of shallow veins and fragmental bodies, and to define their contacts, as well as for testing deeper targets. Assess the orientation(s) of major structures; geophysical indications are that these may be NE-SE, suggesting a NW or SE orientation for angled drilling

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