

# HIGHLIGHTS

### Chanape Project – Peru

- Inca Minerals Limited ("Inca", "Company") continues its second phase drilling program at Chanape, completing 1,295m in the quarter.
- CH-DDHoo8 (the Company's second deep hole) intersects porphyry. Alteration and mineralisation indicates the hole intersects the flank of the porphyry centre.
- Drill holes CH-DDH006 & 7 intersects strong gold, silver and copper helping define epithermal mineralisation at Breccia Pipe 8. Intersections include:
  - CH-DDH006: 66m @ average 0.93g/t gold, 14.64g/t silver and 0.24% copper from 33m
  - CH-DDH007: 78m @ average 1.1g/t gold, 16.51g/t silver and 0.26% copper from 35m
- Review of historic Chanape mining data reveals significant gold, silver and copper mineralisation associated with extensive breccia veins system. Peak values in wall-rock sampling include:
  - o Gold: 11.2g/t
  - o Silver: 789g/t
  - Copper: 8.76%
- Drill permit (DIA) successfully modified this quarter drilling allowance up to 10,000m and valid to June 2014.
- Dry and wet base-line studies for future drill permit Environmental Impact Assessment Semi-detailed ("EIAsd") is completed this quarter. Once granted EIAsd drill permit to have a drilling allowance of more than 20,000m.



Figure 1: Drill site for CH-DDH006 & CH-DDH007

### Dingo Range Project - Western Australia

- Comprehensive previous exploration review highlights nickel prospectivity of Dingo Range Project.
- Large Ni targets are generated and exploration program formulated.

### Significant Corporate Developments

• SPP raises \$513,000.

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# **EXPLORATION ACTIVITIES**

### Chanape Cu-Mo-Ag-Au Porphyry Project – Peru

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### **Diamond Drilling Program Overview**

Drilling resumed at Chanape this quarter. After a hiatus of approximately one month, during which time the Company's drill permit was greatly up-sized, a total of 1,295m of drilling in six holes was completed (Table 1: Drill hole summary).

- CH-DDH005 which was started in the previous quarter was extended this quarter to drill test a deeper epithermal target.
- Twinned holes CH-DDH006 and CH-DDH007 targeted Breccia Pipe Eight with the purpose of determining the width of the known gold-silver mineralisation.
- CH-DDHoo8 was the first of the Company's deep holes planned to test extensions of the mineralised porphyry (previously identified in CH-DDHoo1).
- CH-DDH009 was designed to test the Water Tank Breccia.
- CH-DDH010 was not completed prior to the Christmas break and was completed in January 2014, having not reached its [epithermal] target at the end of December 2013 quarter.

Hole Number	Month Commenced	Month Completed	Depth (m)
CH-DDH003	August	August	200
CH-DDH004	August	August	150
CH-DDH005	August	August (under old DIA)	98
CH-DDH005	November	November (under new DIA)	132
CH-DDH006	November	November	115
CH-DDH007	November	November	130
CH-DDH008	November	December	729
CH-DDH009	December	December	107
CH-DDH010	December	Interim depth	82
		Report Period Total	1,295
		Drill Phase Total	1,743

Table 1: Drill hole summary (also including holes from the previous quarter)

### **Epithermal Drilling Results**

Five shallow holes testing various epithermal gold/silver targets in the vicinity of the mineralised porphyry (near CH-DDH001) were completed this quarter. Broad intersections of gold, silver and copper intersected in CH-DDH006 and CH-DDH007 were previously announced 10 December 2013 (Table 3).

#### Highlights of mineralisation in CH-DDH006 include:

- 66m @ 0.93g/t gold, 14.64g/t silver and 0.24% copper from 33m
- Maximum gold: 4.73g/t (min. 0.084g/t)
- Maximum silver: 112g/t (min. 2.4g/t)
- Maximum copper: 1.1% (min. 0.03%)



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CH-DDHoo6 was collared in and drilled through a broadly silicified and chloritic tuff volcanics from om to 33.35m then entered the target hydrothermal breccia at 33.35m. The breccia is extensively silicified and sulphidic with common tourmaline. The breccia persists to a depth of 99.4m and has a down-hole width of 66.05m. Significant gold, silver and copper mineralisation closely matches the breccia intersection. CH-DDHoo6 re-entered the tuff volcanics at 99.4m, which continued to the end of the hole at 130m.



Figure 2: Chalcopyrite/pyrite/qtz vein at 85.9m (CH-DDH006)

#### Highlights of mineralisation in CH-DDH007 include:

- 78m @ 1.1g/t gold, 16.5g/t silver and 0.26% copper from 35m
- Maximum gold: 17.4g/t (min. 0.08g/t)
- Maximum silver: 257g/t (min. 2.7g/t)
- Maximum copper: 4.1% (min. 0.01%)
- Maximum lead: 1.5% (min.0.001%)

CH-DDHoo7 was collared into the same silicified and chloritic tuff volcanics as CH-DDHoo6. From om to 35m, gold, silver, copper levels are generally low (0.08g/t, 5g/t and 0.1% respectively). At 35m to 47.3m the average gold, silver and copper grades rise considerably (0.82g/t, 12g/t, 0.16% respectively). This indicates that mineralisation extends into the tuff – not seen in CH-DDHoo6. At 47.3m CH-DDHoo7 entered the target hydrothermal breccia. The breccia is extensively silicified and sulphidic with common sericite and tourmaline. The breccia persists to a depth of 111.5m and has a down-hole width of 64.2m. CH-DDHoo7 re-entered the tuff volcanics at 111.5m, which continued to the end of the hole at 130m.

Epithermal drill holes CH-DDH006 & 7 targeted Hydrothermal Breccia Pipe 8. Although Breccia Pipe 8 remains largely open in the east-west direction and at depth, the extent of gold, silver and copper mineralisation is now sufficiently constrained to allow for possible target volume/tonnage and grade calculations.

Hole	Coordinates			וס	Azipauth	Din
	Northing (m)	Easting (m)	Datum	KL	Azimuth	Dip
CH-DDH006	868212	362408	PSAD56	4,605m	30°	40°
CH-DDH007	868212	362408	PSAD56	4,605m	30°	55°

Table 2: Drill Hole Parametres	(CH-DDHoo6 and CH-DDHoo7)

### Porphyry Drilling Results

CH-DDHoo8 was the only hole drilled this quarter that was designed to test for porphyry. Collared west of the discovery hole (CH-DDHoo1) and with an angled drill direction towards the south east, the purpose of the drill hole was to test for a possible west and southwest extension of the known mineralised porphyry (found in CH-DDHoo1). A large chargeability anomaly extending northeast-southwest coincides with this drill-test area.



CH-DDHoo8 intersected argillic porphyry and related hydrothermal breccias between 496m and 728.9m down-hole depth (EOH) as previously announced 20 November 2013 (Table 3). Several thin porphyry dykes were intersected at 496m depth and several distinctive Cu-Mo veins were identified at 530m depth. Multiple hydrothermal breccias and sulphide vein zones were identified between 503m, intensifying with depth to the end of the hole.

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Figure 3: 3D terrain image of the Chanape Project area looking towards the ENE. Drill hole CH-DDHoo8 is positioned SW of CH-DDHoo1. This hole tested the possible south west extension of the known porphyry in CH-DDHoo1.

The Company now has mineralised porphyry in two [out of two] deep holes (CH-DDHoo1 & CH-DDHoo8). Alteration and sulphide assemblages indicate that both holes were drilled into the possible shoulder and flank of the porphyry core (Figures 4a&b). Based on the relative 2-dimensional positioning of the porphyry intersects in both holes, the Company now believes that the porphyry goes to depth in a south west direction and is possibly shallower in the opposing direction. Importantly, should this be the case, the porphyry centre could have an RL above the Chanape valley. This has important positive implications with respect to possible future mining.



Figure 4a: A schematic cross-section showing the relative positions of the porphyry intersections in CH-DDH001 and CH-DDH008. The horizontal distance between the porphyry in CH-DDH001 and CH-DDH008 is approximately 225m

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#### Figure 5: Selection of core photos of CH-DDHoo8





At 664.1m: Hydrothermal breccia with late-stage chalcopyrite and pyrite veins and replacements effecting both altered clasts and tourmaline matrix.

At 724.3m: Highly silicified, quartz veined breccia with disseminated chalcopyrite, <u>molybdenite</u>, <u>pyrite</u> "blebs" occurring as late-stage replacements.

At 727.2m: Quartz monzonite porphyry with sutured quartz veins with chalcopyrite and pyrite.

### Gold-Silver-Copper-rich veins in Historic Data at Chanape

The Company also completed examining mining records from past production at Chanape this quarter. The primary sources of data are hard copy mining plans provided to the Company by the previous concession holder. Inca undertook literature research to examine the *bona fides* of these plans and is satisfied that the data is genuine. The data shows that three veins systems were mined: Fulvia, San Antonio de Chanape ("San Antonio") and 10 de Julio, all of which occur within the Chanape Project area.

Although ore reserves and total production are as yet unknown, these veins were mined for their gold, silver, copper, lead and zinc content. The average grade of the largest system, the Fulvia Mine, is reported to be 2.96g/t Au, 408g/t Ag, 0.54% Cu, 0.96% Pb and 1.3% Zn (GeoExploMin, 1997) as previously announced 11 December 2013 (Table 3). Hard-copy data indicate vein widths averaging approximately 1 metre (ranging from om to 1.8m).



Figure 6: Historic mine entrances ("adits") at Chanape. The vein systems (orientation shown with red lines) are sub-vertical. There are more than a dozen such adits in the Chanape Project area.

The widest and most important of the vein systems at Chanape is the Fulvia Vein. Between the 1950's and 1980's this vein was mined by Sindicato Minero Pacococha ("Pacococha") to depths of 250m. It has a contiguous outcrop strike length of 1,500m.



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Results of an underground rock chip sampling program (which were part of the hard-copy mine data reviewed by the Company) undertaken by Pacococha in the 1980's show significant grades of metals associated with these vein systems (Figures 7a&b). Pacococha's sampling program included at least 528 samples. In a previous announcement 11 December 2013 (Table 3) the Company reported results annotated on to hard copy plans of the vein mines. Of special interest is the elevated grade of copper and gold, as well as the generally high grades of silver in the 10 de Julio Mine. Copper grades in the rock chip sampling program by Pacococha range from below detection to a peak value of 8.76% Cu. Gold values range from below detection to a peak value of 789g/t Ag.

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The above mentioned assay results were generated from sampling not conducted by the Company. The Company is not aware of the sampling or treatment method of these samples. Moreover, the Company has not mapped the exposed mineralisation sampled by Pacococha. The data highlighted in text and graphically reproduced in Figures 7a&b should be considered historical data, as yet unverified by the Company. The historic copper grades are in excess of those reported to date by the Company in its own surface rock chip sampling and diamond core sampling programs conducted elsewhere in the project area; the grades of these vein deposits are consistent with the geological model of Chanape and reflective of the longevity of mining operations as evidenced by the extensive drives and adits of the three vein mines.

The results of Inca's own phase 1 and phase 2 mapping (previously announced and summarised in the September 2013 Quarterly Report on 31 October 2013) include an analysis of structural geology. A strong correlation (parallelism) exists between the distribution and orientation of mineralised breccias, faults and fractures. The Fulvia, San Antonio and 10 de Julio vein systems are parallel to sub-parallel to the "breccia trend" Consequently, the mineralised vein emplacement at Chanape is likely to be related to breccia emplacement, and thus, also related to porphyry emplacement.



Figure 7a: Location plan of the 10 de Julio de Chanape and San Antonio de Chanape mines.



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Figure 7b: Plan view of sample location (red tags) and corresponding assay results and of rock chip sampling undertaken by Pacococha in the 1980's. Of particular interest is the generally high silver and copper grades in Vein B and Vein A.

### Subsequent Activities – Assay results of CH-DDHoo8

Assay results for CH-DDHoo8 were announced 10 January 2014 and subsequent to the December 2013 quarter. Results show low levels of gold, silver, copper and molybdenum associated with a porphyry margin, as previously announced 10 January 2014. As an angled hole designed to intersect porphyry at depth, the upper sections of the hole are as expected and not mineralised.

Sporadic spot highs of copper (less than 0.1%) occur between 400m and 729m (EOH). These copper occurrences relate to zones of chalcopyrite-veining. A general increase of copper levels with depth is also evident (Figure 8).

Of keen interest is the level of molybdenum mineralisation in CH-DDHoo8. Generally low in the upper sections of the hole, the Mo-levels increase significantly at approximately 66om depth (Figure 8). At this depth the alteration style changes from broadly propylitic and broadly argillic within the monzonite porphyry. Also noteworthy are the absolute values of Mo (generally less than 50ppm within the argillic zone). These levels indicate that CH-DDHoo8 is outside the "porphyry Mo-halo zone" (unlike CH-DDHoo1 that has an average of 120ppm Mo over 220m within the porphyry shoulder).



Figure 8: Molybdenum/Copper profile of CH-DDHoo8. The red profile shows the Mo levels (0-50ppm). The blue profile shows the Cu levels (0-1,000ppm). Mo and Cu levels increase with depth (left to right) and illustrate the proximity of a mineralised Cu-Mo porphyry system.

### **Subsequent Activities - Drill Permitting**

The Company has commenced preparations for a new, much larger drill permit designed to replace the existing drill permit, previously announced 10 January 2014). The existing DIA Permit (valid until June 2014) has an allowance of 10,000m of drilling. The Company has completed the wet-season environmental base line study that is a requirement for a drill permit referred to as a Semi Detailed Environmental Impact Assessment (or "EIAsd"). The EIAsd Permit will provide the Company a drill allowance of  $\geq$ 20,000m once granted. This would provide permitting for uninterrupted drilling well into the future.

### Dingo Range Nickel Project – Western Australia

### **Project Review and Nickel Target Generation**

In December 2013, the Company commissioned Grant "Rocky" Osborne to undertake detailed literature research with the purpose of critically assessing past exploration conducted in the broader Dingo Range Project area and to generate Ni targets in the project area. At the time of writing the results were not available.

### **Project Background**

The Dingo Range Nickel Project is located 80km east of Mt Keith and comprises 11 granted tenements covering an approximate area of 410km<sup>2</sup> (Figures 9 & 10). The tenements cover a large section of the Dingo Range-Mt Fisher Greenstone Belt of the Kurnalpi Terrance within the Eastern Goldfields Superterrane. In late 2012 Rox Resources discovered nickel at their Mt Fisher Project, which is adjacent to Inca's Dingo Range Nickel Project.



During 2013 Rox Resources developed its Mt Fisher Project via drilling and geophysics and was rewarded with their maiden Ni resource of 34,600t Ni at the Camelwood Prospect (1.6Mt @ 2.2%Ni) as announced by Rox 3 October 2013. On 10 January 2014, Rox Resources announced positive Ni assay results from two new discoveries, Musket and Cannonball Prospects. Rox concluded that there is strong regional potential for nickel, a view equally shared by Inca.

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Nickel exploration in Western Australia has been heightened in recent years by two significant discoveries, the Sirius discovery at Nova and the Rox discovery at Camelwood. Notwithstanding the fact that Inca's principal emphasis remains the development of its porphyry deposit at Chanape in Peru, the Company recognises, as many of its original shareholders have done, the potential Dingo Range has for nickel mineralisation – a view with heightened expectancy in light of Rox's Ni discovery in the same area.



Figure 9: Regional Geology plan showing the location of the Company's Dingo Range Nickel Project, Rox Resources' Mt Fisher Nickel Project and the Mount Keith Ni Province.

## **CORPORATE ACTIVITIES**

### Share Purchase Plan

The Company completed a successful Share Purchase Plan (the "Plan") this quarter. The Plan was announced on 13 November 2013 and closed on 18 December 2013 having raised \$513,000 (14,657,190 fully paid ordinary shares at 3.5cents).

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#### Table 3: ASX Announcements of the December 2013 Quarterly Period

Date of ASX announcement	Title of announcement	Competent Person
27/12/2013	Appendix 3Y - Change of Director's Interest	Not applicable
27/12/2013	Appendix 3Y Change of Director's Interests	Not applicable
20/12/2013	Form 604 - Change of Interests of Substantial Shareholder	Not applicable
20/12/2013	Appendix 3Y - Change in Director's Interest	Not applicable
20/12/2013	Appendix 3B - Inca Share Purchase Plan Issue	Not applicable
18/12/2013	Inca Minerals Share Purchase Plan Closes	Not applicable
13/12/2013	Porphyry Intersected in Drill Hole CH-DDHoo8	Ross Brown
11/12/2013	High Gold, Silver & Copper in Chanape Veins - Historic Data	Ross Brown
10/12/2013	Inca Share Purchase Plan - Extension of Closing Date	Not applicable
10/12/2013	Epithermal Drilling Results - Broad Gold, Silver & Copper	Ross Brown
5/12/2013	Drilling Update - Chanape Amended (Administrative) Appendix	Not applicable
5/12/2013	Drilling Update - Chanape	Ross Brown
29/11/2013	Inca Minerals Limited 2013 AGM Results	Not applicable
20/11/2013	Early Drilling Success at Chanape	Ross Brown
19/11/2013	Inca's Share Purchase Plan - DJ Carmichael Research	Notapplicable
13/11/2013	The Inca Minerals Share Purchase Plan	Not applicable
11/11/2013	Drilling Resumes at Chanape	Ross Brown
6/11/2013	Chanape Drilling Permit Granted	Ross Brown
31/10/2013	Inca September 2013 Quarterly Cash Flow Report	Notapplicable
31/10/2013	Inca September 2013 Quarterly Activities Report	Ross Brown
28/10/2013	Inca Minerals Limited - Notice of Annual General Meeting	Notapplicable
28/10/2013	Inca Minerals 2013 Annual Report	Ross Brown
28/10/2013	Projects Update - Peru & Western Australia	Ross Brown
25/10/2013	KGM: KalNorth secures Nickel Rights at Grey's Dam	Ross Brown
4/10/2013	ASX Listing Rule 3.10A - Release of Securities from Escrow	Not applicable



Drill camp at Chanape Porphyry Project - Peru

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Ross Brown Managing Director

#### **Competent Person's Statements**

The information in this report that relates to gold, copper, silver, zinc epithermal and porphyry style mineralisation for the Chanape Project, located in Peru, is based on information compiled by Mr Ross Brown BSc (Hons), MAusIMM, SEG, MAICD Managing Director, Inca Minerals Limited, who is a Member of the Australian Institute of Mining and Metallurgy. 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 in the 2012 Edition of the "Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Brown is a full time employee of Inca Minerals Limited and consents to the report being issued in the form and context in which it appears.

Some of the information in this report may relate to previously released gold, copper, silver, zinc epithermal and porphyry style mineralisation for the Chanape Project, located in Peru, and subsequently prepared and first disclosed under the JORC Code 2004. It has not been updated to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported. The Company is not aware of any new information or data that materially affects the information in this report and such information is based on the information compiled by Mr Ross Brown BSc (Hons), MAusIMM, SEG, MAICD Managing Director, Inca Minerals Limited, who is a Member of the Australian Institute of Mining and Metallurgy. 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 in the 2004 Edition of the "Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Brown is a full time employee of Inca Minerals Limited and consents to the report being issued in the form and context in which it appears.