

ASX ANNOUNCEMENT

14 April 2014

Exploration recommences Santa Ines Project, Salta, Argentina

PepinNini Minerals is pleased to announce the resumption of exploration field activities at its Santa Ines Project in Salta Province Argentina where the company is attempting to discover large porphyry copper-gold or gold-molybdenum-copper systems similar to the Escondida Copper Mine or Lindero Gold Deposit which are located to the north west and south east of the project area respectively.

The Santa Ines Project lies within the NW trending Archibarca mega-lineament, which is one of several major structural corridors that are fundamental in the control of the distribution of porphyry-epithermal deposits in the Andean Belt (See Figure 1).

The planned exploration activities are designed to complete and elaborate on the previous mapping, sampling and ground work undertaken in December 2013 (*previous announcements to the ASX on 12 December 2013 & 28 February 2014*).



The work will include the expansion of detailed geological mapping and geochemical sampling across the tenement holdings as well as geophysical surveying in the form of induced polarisation (IP) chargeability surveys across two promising target areas “El Obsequio” (The Gift) and “La Recompensa” (The Reward) (Figure 2).

El Obsequio Prospect covers the artisanal copper workings where grab samples have returned up to 21.1% copper, 0.9 g/t gold, and 34.9 g/t silver (*ASX release 15 June 2012*). The prospect area covers a complex magnetic anomaly where 3 dimensional (3D) inversion modelling suggests a substantial magnetic source deepens to the northwest (Figure 3). Mapping and sampling across the prospect in December 2013 reinforces the existence of narrow mineralised structures with grab samples reporting up to 3.26% copper, 0.8 g/t gold, and 12.5 g/t silver (*ASX release 28 February 2014*). Both east-

west and north-south IP survey lines are to be completed across the shallowest portion of the modelled magnetic anomaly in the proximity of the surface mineralisation and historic mine pits in the attempt to identify a more substantial chargeability target at depth.

La Recompensa Prospect was identified during December 2013 as a large (800m x 1400m) ground magnetic anomaly across part of the tenement holdings where detailed mapping and surface geochemical sampling is yet to be undertaken. 3D inversion modelling of the ground magnetic data has indicated a sizable magnetic source which deepens to the west. Both east-west and north-south IP lines will be completed across the shallower portion of the modelled anomaly in an attempt to detect chargeability anomalies worthy of drill testing.

Exploration activities will be undertaken by consultants CSA Global who have considerable experience in South America and augment their experience by engaging local geophysical contractors and field crews.

This current phase of the exploration program is expected to be completed by early May 2014.

The information in this report that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Phil Clifford BSc who is a member of the Australian Institute of Mining and Metallurgy. Phil Clifford is the Technical Director of PepinNini Minerals Limited and has a minimum of five years relevant experience in the style of mineralisation and type of deposit under consideration and qualifies as a Competent Person as defined in the 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Phil Clifford consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

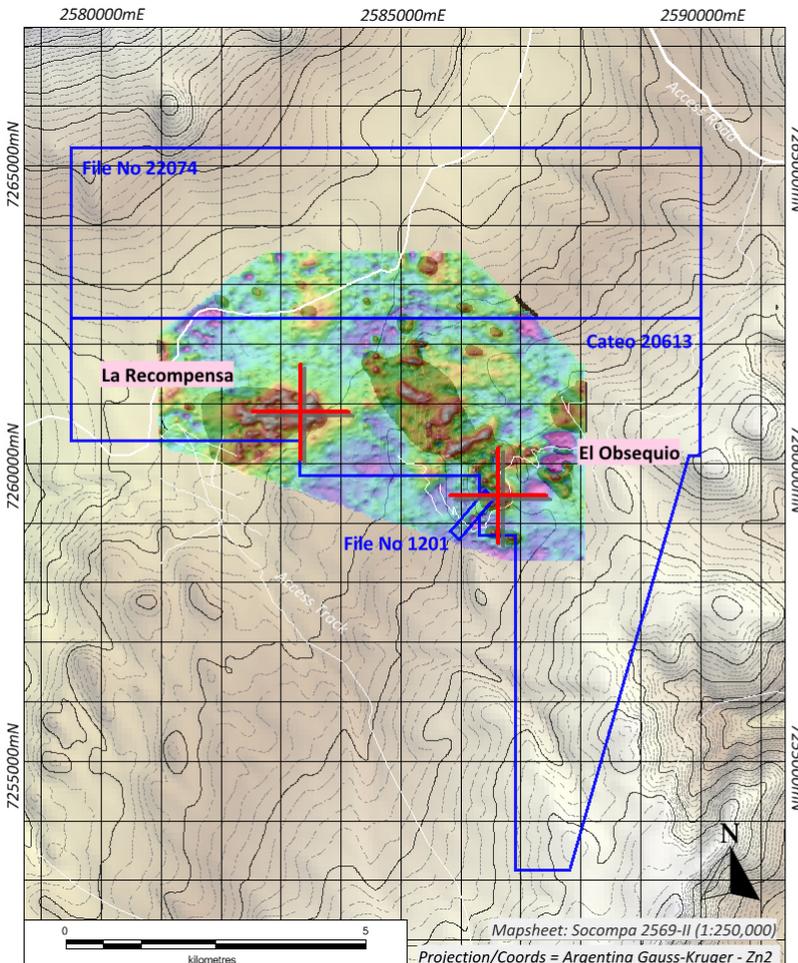
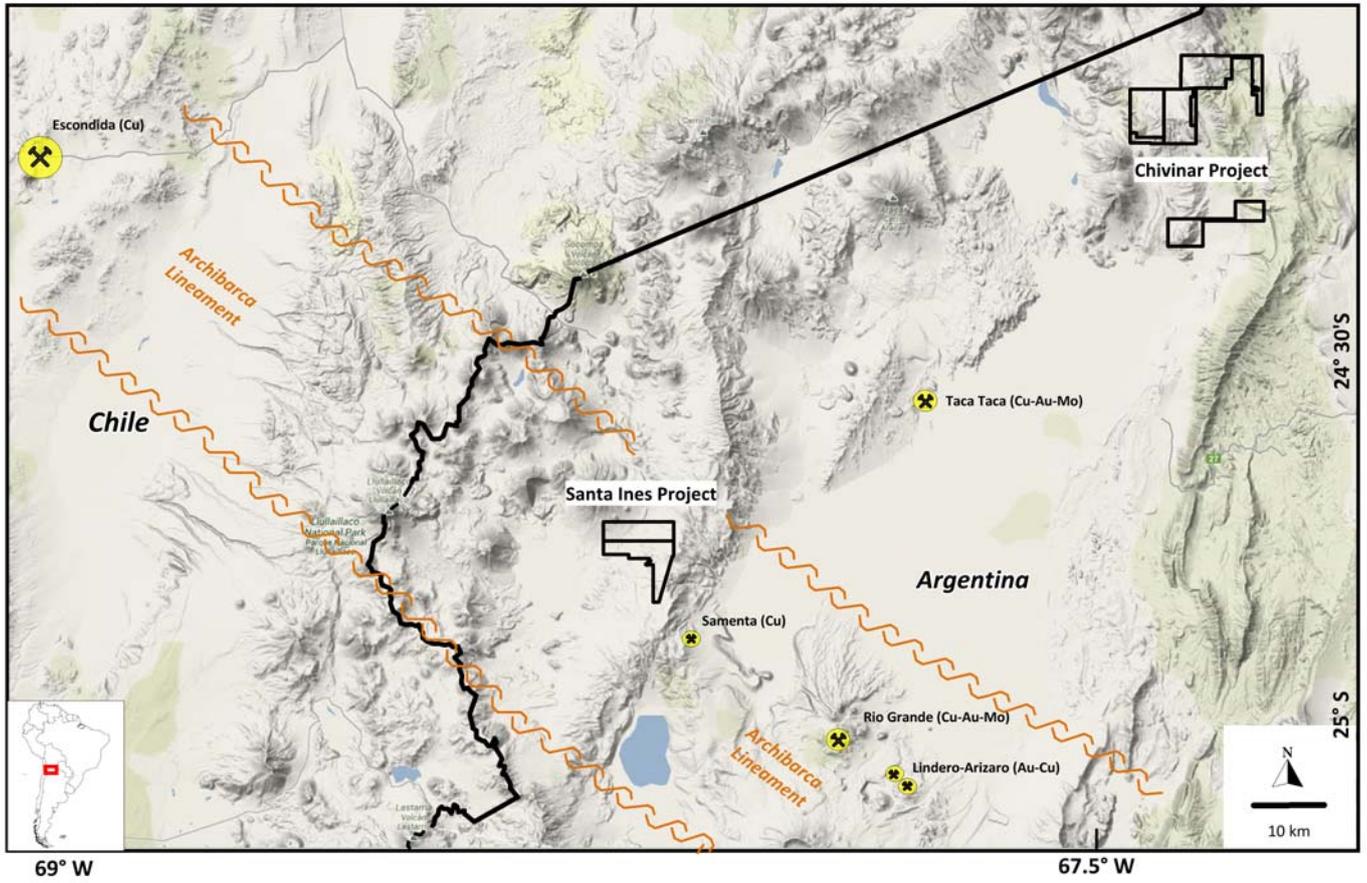
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Note: Additional information on PepinNini Minerals Limited can be found on the website: www.pepinnini.com.au

Figure 1

Santa Ines Projects : Archibarca Structural Corridor



**Santa Ines Project
Proposed Geophysical Surveying**

-  **Tenure Boundaries**
-  100m topographic contour
20m topographic contour
[Background = Digital Elevation Model]
-  **Ground Magnetic Target**
Shadow = surface expression of 3D magnetic model
[Image = Ground Magnetics RTP (Reduced to Pole)]
-  **Planned Induced Polarisation (IP) Surveys**
[1500m E-W and N-S profiles across 2 Magnetic Targets]

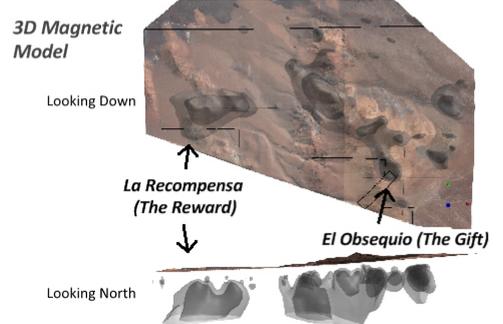
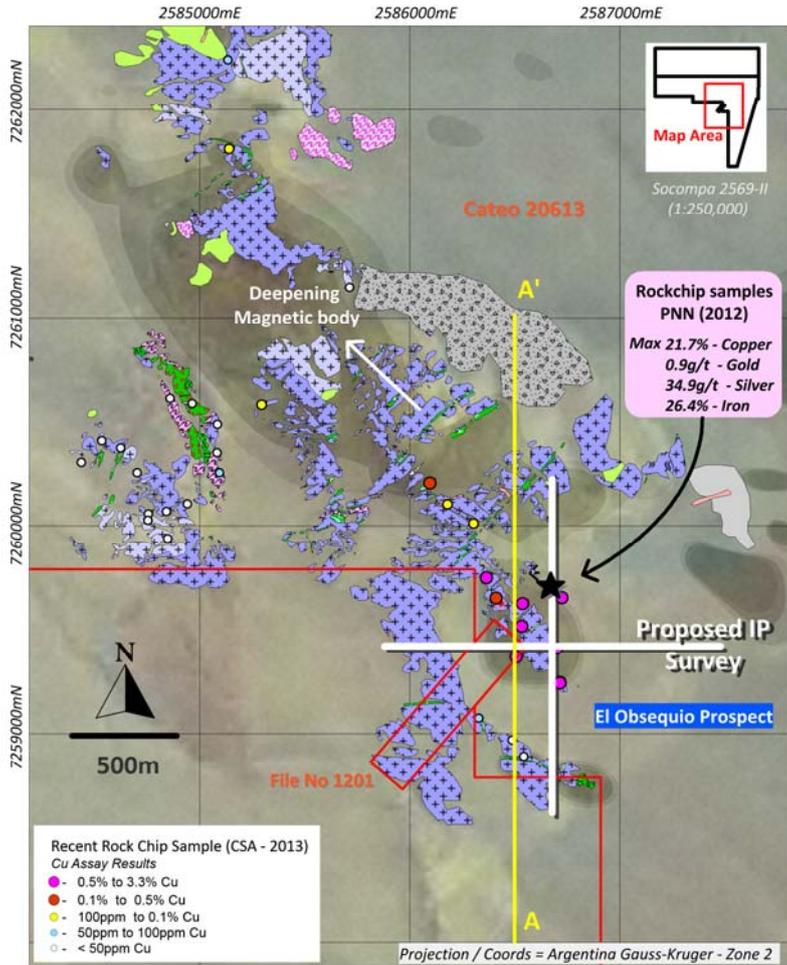


Figure 2



**Santa Ines Project - El Obsequio Target
Planned Exploration Activities**

Stratigraphic Legend

Post - Santa Ines Volcanic Complex deposits

- Mine dump material
- Unconsolidated, mainly volcanogenic deposits (block and ash deposits, bedded sediments)
- Monzonite/trachyte dykes - porphyritic
- Basalt - lava to hypabyssal intrusions

Santa Ines Volcanic Complex (Eocene?)

- Rhyolite - dykes and lavas (some may be younger than Santa Ines Volcanic Complex)
- Dacite - dykes and high level plugs
- Andesite - intrusions, mainly dykes
- Andesite lava, massive porphyritic or flow-banded
- Andesite volcanic breccias (polymict)
- Mafic Breccia - grade from shear zones to fluidized breccias (age? post-granite, pre-andesite)

Llullailaco Plutonic Complex (Permo-Triassic)

- Leucogranite
- Granite

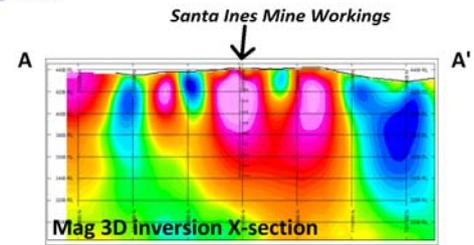
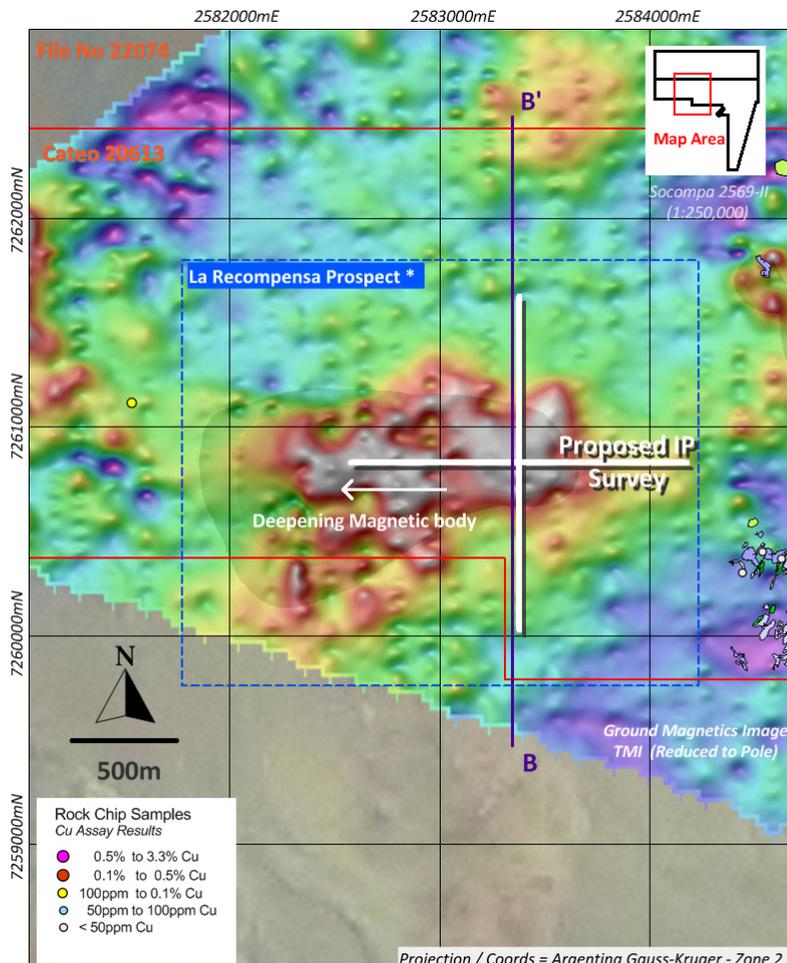


Figure 3



**Santa Ines Project - La Recompensa Target
Planned Exploration Activities**

Stratigraphic Legend

Santa Ines Volcanic Complex (Eocene?)

- Dacite - dykes and high level plugs
- Andesite - intrusions, mainly dykes
- Andesite lava, massive porphyritic or flow-banded
- Mafic Breccia - grade from shear zones to fluidized breccias (age? post-granite, pre-andesite)

Llullailaco Plutonic Complex (Permo-Triassic)

- Leucogranite
- Granite



*** Detailed Mapping & Surface sampling planned across La Recompensa Prospect ***

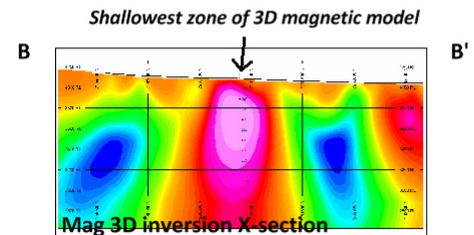


Figure 4