



## ASX ANNOUNCEMENT

20<sup>th</sup> April, 2011

### First Argentine Tenement Granted

The first of seven tenement applications in the Argentine province of Salta has been granted to PepinNini S.A., a subsidiary of PepinNini Minerals Limited.

Salta Province is recognised as one of the most mining friendly provinces in Argentina and is a province where mining rights are well regulated. The geology is prospective for copper-gold porphyries; precious and base-metal epithermal systems and breccia-complexes associated with the Andean volcanic belt.

A number of advanced mineral projects have recently been discovered in Salta including:

- ◆ El Quevar Intermediate Epithermal Silver Project (60.5Moz silver) – Golden Minerals Company - in development;
- ◆ Lindero Gold Porphyry Project (2.2Moz gold) - Mansfield Minerals Inc. - in feasibility;
- ◆ Diablillos Au-Ag Epithermal Project (0.6Moz gold, 77.1Moz silver) – Silver Standard Resources Inc. - in feasibility;
- ◆ Taca Taca Cu-Au-Mo Porphyry Project (11.2Blbs copper, 3.77Moz gold, 459Mlbs molybdenum) Lumina Copper Corporation - in pre-feasibility.

The area targeted by PepinNini for copper-gold-silver mineralization is in Salta's Puna region, high-altitude plateau adjacent to the Chile border which forms part of the Atacama Alti-plano. Whilst typically over 4000m in altitude it predominantly has only a moderate relief that is generally easily accessible by 4WD vehicles and a semi-arid environment that is conducive for work all year round.

The region is traversed by an international gas pipeline, high-transmission power lines extending from Salta across to Chile and the Salta-Antofagasta railway, which is currently partially operational.

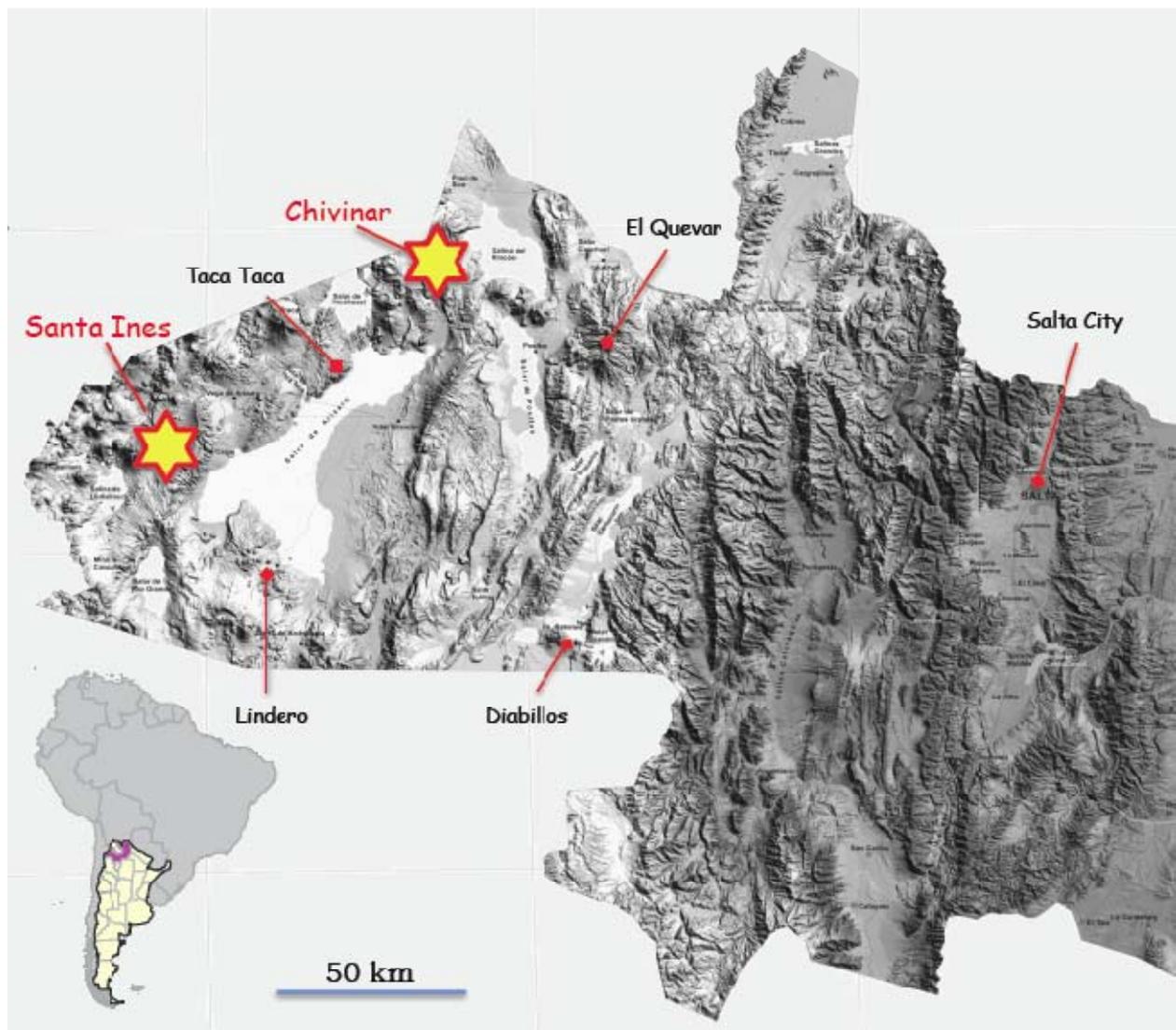
Table 1 summarises the current tenure situation of PepinNini's Salta Project which comprises two separate areas designated as Santa Ines and Chivinar. Figure 1 locates the two areas relative to the significant recent discoveries described above.

#### Santa Ines

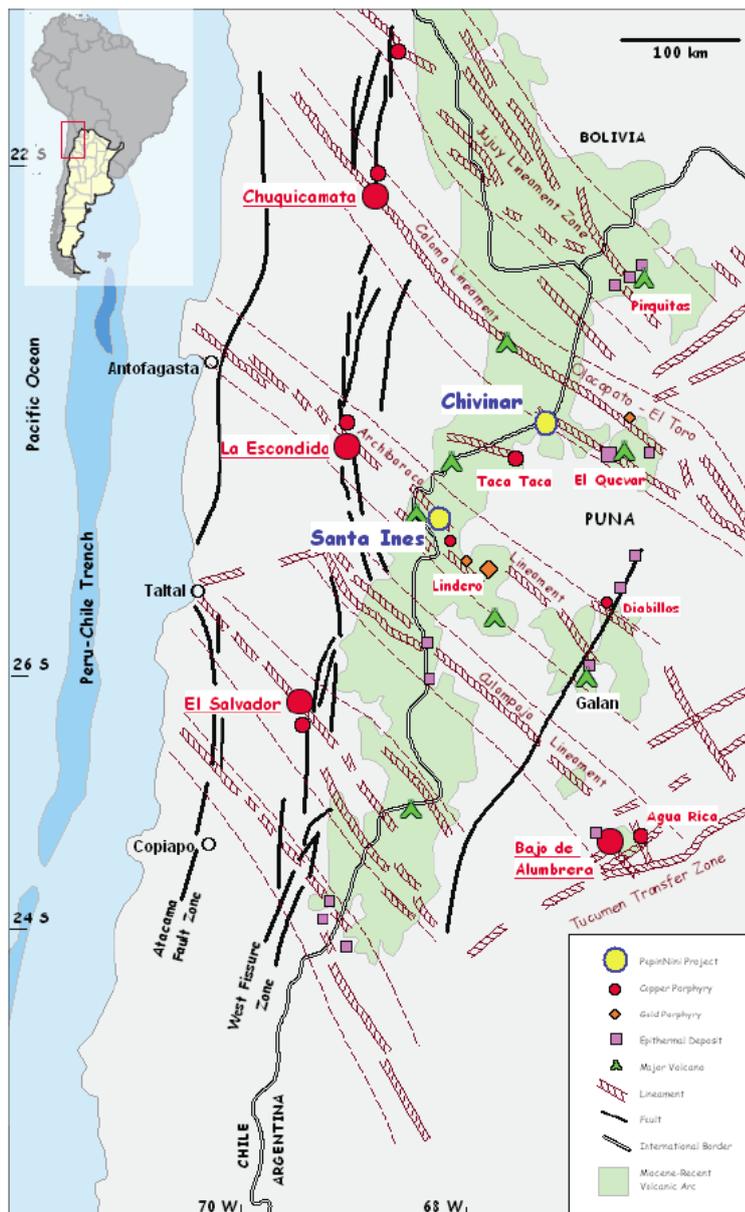
The Santa Ines Project comprises one mina (mining licence) and one cateo application (exploration licence) situated in the Los Andes Department of Salta ~35km south of Socompa and 65km southwest of Tolar Grand. This project logistically benefits by being only 5km from the Salta-Antofagasta railway and is easily accessed using existing roads and tracks.

Name	File No	Application	Area (ha)	
<b>Chivinar Project</b>				
Guaquero	20438	30/06/10	6,152	Granted 12/4/2011 for 750 days commencing 12/5/2011
Santa Maria	20439	30/06/10	3,599	
Oscara	20440	30/06/10	1,055	
Olajacal	20461	14/07/10	2,643	
Chibinar	20462	14/07/10	9,529	
<b>Santa Ines Project</b>				
Mina Santa Ines	1201	27/09/10	18	
Santa Ines	20613	13/10/10	8,225	

**Table 1:** Salta Project Tenure Summary



**Figure 1:** Location Map (digital terrain) showing PepinNini Project Areas and significant discoveries.



**Figure 2:** Crustal scale NW Lineament control on porphyry-epithermal mineralisation in northwest Argentina

An application for mina Santa Ines was lodged in September 2010 and an application for a large cateo surrounding the mina was lodged in October 2010, which also encompasses the area covered by another abandoned Mina (Chuqui Dos). Currently both tenements are still pending final approval.

Salta Exploraciones S.A. (SESA) holds the area to the immediate south of Santa Ines as a number of minas with reported disseminated Cu-Au-Fe mineralisation and REE bearing breccia. PepinNini has commenced negotiations for a joint venture to explore the entire area with SESA.

The Santa Ines Project lays within a crustal scale NW trending mega-lineament, which in Andean geology are widely recognised as being major long-lived structural corridors that are fundamental in the control of the distribution of porphyry-epithermal deposits. The “Archibarca” NW lineament extends from Cerro Galán (Argentina’s largest ignimbrite caldera complex) in the southeast through to the Pacific coast of Chile.

Known mineralization along this lineament to the immediate southeast of Santa Ines includes Mansfield’s Lindero Gold Porphyry project (2.2 Moz. Au) that is currently in feasibility and advanced Cu-Au exploration projects

including Rio Grande, Arizaro and Samenta. Situated some 100km to the northwest along the same lineament is BHP’s giant Escondida Cu-Au porphyry (~5 billion tonnes at 1% Cu and 0.25 g/t Au) which also was deposited contemporaneously with the Santa Ines Formation event during the Late Eocene-Oligocene.

Santa Ines mina comprises a number of small artisanal diggings consisting of shallow pits exploiting abundant secondary copper and specular haematite mineralisation associated with haematite-silica veining within a broader envelope of albitic alteration. Orientated to the NE this steeply dipping vein system extends across a low outcropping hill. More recent shallow pits indicate that mineralisation is evident for at least 400m across strike whereas along strike it becomes lost under thin cover at the base of a hill after a few hundred metres. Published reports by SEGEMAR (Argentine Geological Survey) describe the mineralisation at Santa Ines as being gold bearing with mineralisation present dominantly as malachite, azurite, chrysocolla

and specular haematite with minor primary mineralisation occurring as chalcopyrite and chalcocite.

There is no evidence of any modern exploration work having been undertaken at Santa Ines and no historical data is available. PepinNini initially intend to target a potentially larger concealed iron-oxide copper-gold target at depth beneath the surface mineralization evident at Santa Ines. Proposed exploration will incorporate the use of geophysical techniques including both potential field and electrical methods to delineate targets for drill testing.



**Figure 3:** Historic workings of haematite and secondary copper mineralisation at Santa Ines

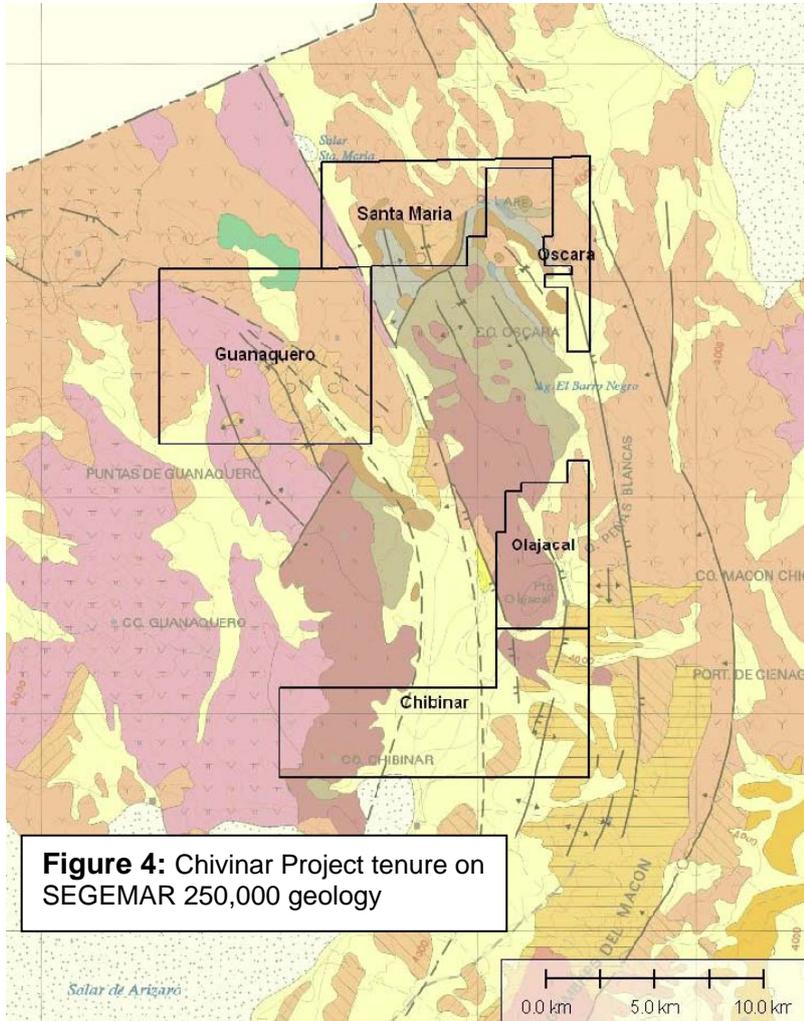
## **Chivinar**

The Chivinar Project comprises 5 cateo applications situated in the Los Andes Department of Salta ~40km north of the Puna township of Tolar Grande. The first of these cateos (Guanaquero No. 20438) was granted on 12 April, 2011.

The geology of the general Chivinar area is centred on the Ordovician Chachas Eruptive Complex, which is characterised by granites, granodiorites and quartz porphyries with associated metavolcanics and pyroclastics.

As with the Santa Ines Project this area is also coincident with a smaller but well-defined northwest lineament that extends from the El Quevar Silver Project in the southeast along a line of three closely spaced Pliocene volcanos and through the northern tenure block before passing across the border into Chile in the northwest where a number of small iron ore deposits have been exploited in the past.

Within the Chachas Complex area itself are various known copper, base metal, manganese and iron-ore mineral occurrences. The copper occurrences are present as minor vein and disseminations within the porphyritic granitic suite but are also associated with the contact of hornfelsed metasediments and overlying Tertiary rhyolites. Significant zones of alteration (generally argillic and pyrophyllitic) are evident in the Aster imagery and are visible along sides of the hills that flank the central valley that divides the Chachas Complex. These zones are often associated with well-developed manganese veining.



**Figure 4:** Chibinar Project tenure on SEGEMAR 250,000 geology

Rare earth bearing hydrothermal breccias on the eastern side of the complex have in the past been targeted for uranium by CNEA (Comisión Nacional de Energía Atómica) and are possibly related to younger volcanic events. Present also on the eastern side are a number of travertine mines.

Whilst the central portion of the older Chachas Eruptive Complex is covered by existing minas and cateos, PepinNini has targeted the flanks of this complex that it considers prospective for structurally controlled mineralisation related to the younger Tertiary overprint. There is no evidence

of any systematic prior exploration in these areas and no existing data is available. A program of systematic exploration using geophysics, detailed mapping and sampling will commence as tenure is granted.

*The information in this report that relates to Exploration Results is based on information compiled by Norman Kennedy BSc MAusIMM. Norman Kennedy is the Chairman and Managing Director of PepinNini Minerals Limited and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration to qualify as a Competent Person as defined in the 2004 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Norman Kennedy consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

**For further information please contact:**

Mr Norman Kennedy  
Chairman and Managing Director, PepinNini Minerals Limited  
Phone: +61 (0)8 8218 5000

**Note:** Additional information on PepinNini Minerals Limited can be found on the website:  
[www.pepinnini.com.au](http://www.pepinnini.com.au)