



## Report for the Quarter Ending 30<sup>th</sup> September, 2012

30<sup>th</sup> October, 2012

### Highlights

- ◆ **Musgrave Project**, South Australia: A 200 line kilometre airborne electromagnetic (VTEM) survey was completed within the Cooperinna Block of EL 4587. Twenty-one "Category 1" electromagnetic features have been identified from the survey data. The identification of such distinct strong conductors in the Cooperinna Block from both the VTEM survey and SkyTEM<sup>508</sup> survey flown early this year is very encouraging for the potential discovery of magmatic Ni-Cu sulphide bodies.

Seven cored diamond boreholes totaling 1,660m were completed to investigate six modeled conductive SkyTEM<sup>508</sup> targets within the Byron and Byron South Prospects located within the Cooperinna Block. Encouraging intervals of massive to semi-massive, matrix and disseminated sulphides have been intercepted and are hosted within mafic and felsic lithologies.

- ◆ **Queensland Project**: The Company has agreed to sell six tenements it currently holds in North Queensland for a total consideration of \$850,000 as part of a strategy to divest non-core assets.

Three of the remaining six tenements held by PepinNini in North Queensland cover 415km<sup>2</sup> and are prospective for uranium. The Oasis Project contains shear hosted uraninite mineralisation over a strike extent of 300m with an average grade of 0.1% U<sub>3</sub>O<sub>8</sub> as delineated by Esso Exploration and Production Australia Inc (1977-1979) and Glengarry (2005/2006). The Company is considering divestment options regarding these tenements in view of the Queensland Government.

- ◆ **Curnamona Project**, South Australia: Exploration Licence EL4965 "Mt Victor" which covers approximately 1,218 km<sup>2</sup> was granted. The Sinosteel PepinNini Joint Venture has prioritised the assessment of the potential magnetite resource at the Mt Victor Iron Ore Prospect. A detailed high quality aeromagnetic survey has been completed over the Mt Victor Iron Ore Prospect that will allow new modelling and accurate ground targeting of the Braemar Iron Formation.

A drilling program of 13 reverse circulation (RC) boreholes was completed at the North Dome Rock Prospect located within EL4239. Widespread low-grade copper mineralisation was encountered over a strike length of approximately 1,350m.

- ◆ At the end of the quarter the Company held \$1.53 million in cash.



## ***Project Locations***

### ***SOUTH AUSTRALIA***

#### ***Musgrave Province Project***

Diamond core drilling was undertaken during the quarter to test bedrock conductors identified from the SkyTEM<sup>508</sup> helicopter electromagnetic survey flown across the Cooperinna Block during March 2012. A total of seven boreholes (~1660metres) have been completed to investigate six modelled targets within the Byron and Byron South prospect areas.

Encouraging sulphide accumulations were intersected within four of the holes confirming the dependability of AEM (airborne electromagnetic surveying) as a valuable exploration targeting tool in the search for magmatic nickel – copper sulphide deposits.

Sulphide phases present in drill cores consist of abundant pyrrhotite (iron sulphide) with lesser pyrite (iron sulphide) - chalcopyrite (copper sulphide) - molybdenite (molybdenum sulphide) and are hosted within a garnet-pyroxene mafic granulite as well as brecciated garnet-bearing orthogneiss.



**Borehole DD12COP008 from depth 206 metres: image showing massive to semi-massive pyrrhotite hosted within a pyroxene+garnet granulite. Lithological comparisons can be made between the rocks from the Byron Prospect to those that host the recently discovered Nova Ni-Cu deposit of Sirius Resources in WA.**

The most salient visual intercepts recorded are:

- DD12COP007: 47metres with matrix and disseminated sulphides from a depth of 127metres,
- DD12COP008: 15metre zone with intervals of massive to semi-massive sulphides from a depth of 196metres, followed by 28metres with matrix and disseminated sulphides from a depth of 248metres,
- DD12COP013: 20metres with matrix and breccia sulphides from a depth of 167metres, followed by 4metres of matrix sulphides from a depth of 207metres.

All metreages quoted are down-hole depths as true widths are not known.

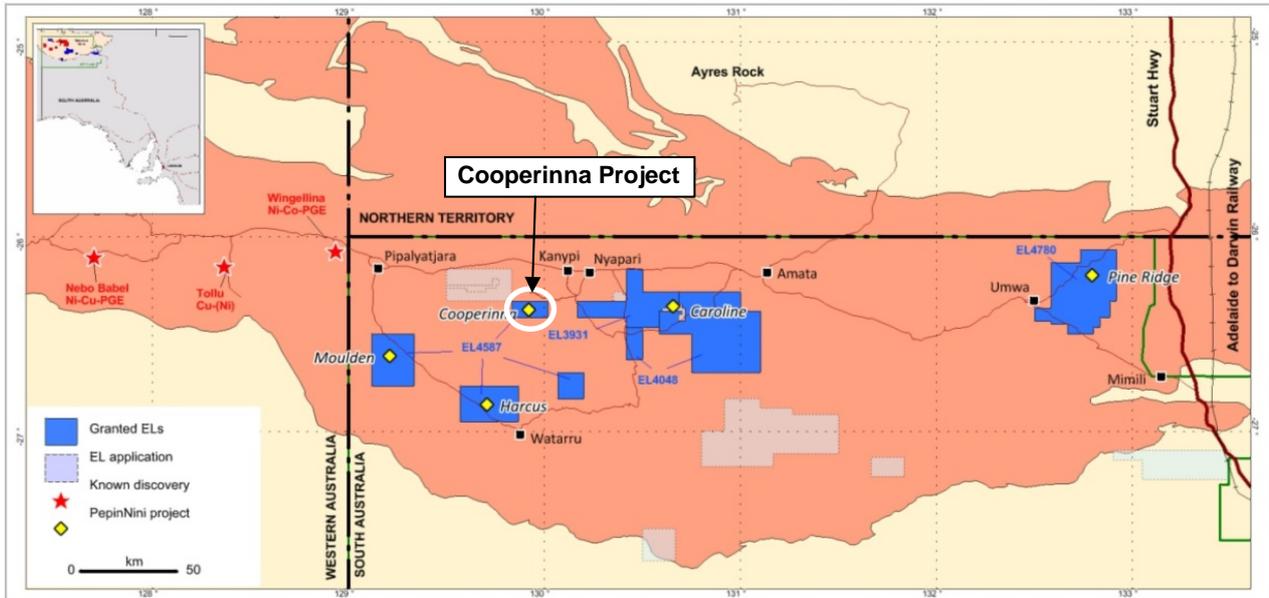
Petrological investigation of drill core samples has concluded that mafic host rocks show mineralogical similarities to Giles Complex igneous intrusions like those that host Ni-Cu-PGE mineralisation at BHP's Nebo-Babel deposit in the Western Musgrave Province.

Garnet-pyroxene granulites incorporated within the zones of sulphide mineralisation are also analogous in age and mineralogy to rocks that host the "Nova" Nickel-Copper Sulphide deposit recently discovered by Sirius Resources within the Albany-Fraser region of Western Australia.

Assay results from three cored holes drilled at the Byron prospect have been received and include concentrations of up to 0.17 g/t gold (Au), 934ppm copper (Cu), 862ppm nickel (Ni) and 52ppm molybdenum (Mo). Although modest, the results are highly encouraging in that they reinforce the potential for a significant discovery within a green-fields tenement that has never been systematically explored by modern exploration methodologies.

Ground electromagnetic surveys to extend the investigation of the bedrock targets at the Byron and Byron South prospects are currently being planned and will comprise fixed loop electromagnetic (FLEM) and down hole electromagnetic (DHEM) to enable higher resolution definition of the conductive zones beyond the limit of the original SkyTEM<sup>508</sup> survey. It is proposed that these surveys are undertaken during November, 2012.

The drilling program is part of PepinNini's ongoing search for magmatic Nickel-Copper sulphide deposits across the Musgrave Province, far north South Australia.



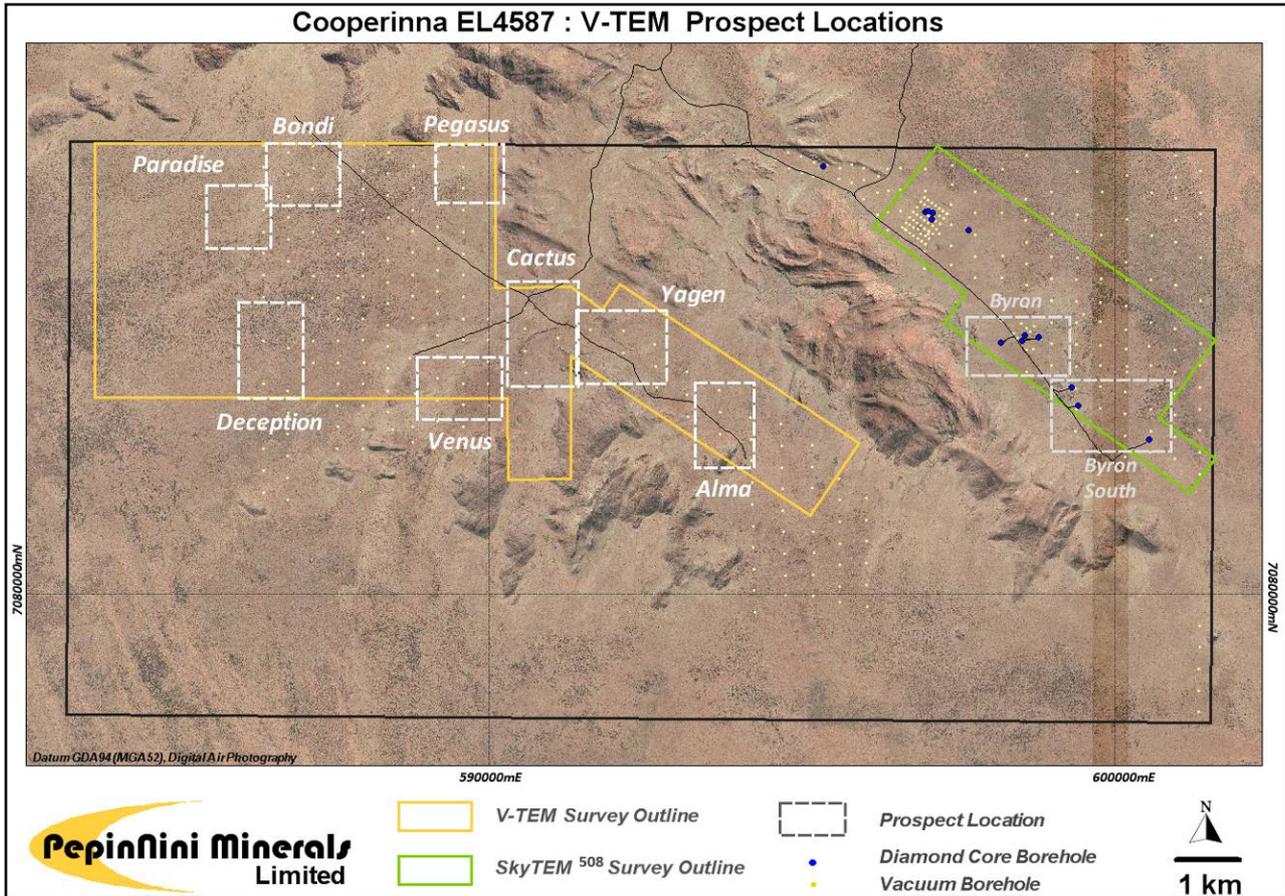
**Figure 1:** Tenement location plan

A 200 kilometre airborne electromagnetic (VTEM) survey was also completed during the quarter. The survey covered a portion of the Cooperinna Block, which lies to the west of targets currently being drilled by the Company in an area that has never before been systematically explored using modern exploration techniques.

Twenty-one “Category-1” electromagnetic features have been identified from the survey data. These conductivity responses form a number of discrete “multi-line” clusters which locate favourably to the conceptual geological model by being spatially coincident to interpreted mafic-ultramafic intrusions and feeder dykes.

Reconnaissance field mapping has confirmed the recent interpretation of aeromagnetic and geochemical datasets, which constrain the distribution of rocks that potentially host the target magmatic Ni-Cu sulphide bodies at Cooperinna.

PepinNini is awaiting the completion of heritage clearance surveys across the western portions of the Cooperinna block of EL4587 to embark on an aggressive exploration campaign to test the airborne electromagnetic (EM) targets. Work to follow up the priority targets will include an extensive vacuum drilling program, moving loop ground electromagnetic surveying (MLEM), and follow up diamond drilling.



**Cooperinna Block – SkyTEM<sup>508</sup> and V-TEM Prospect location plan**



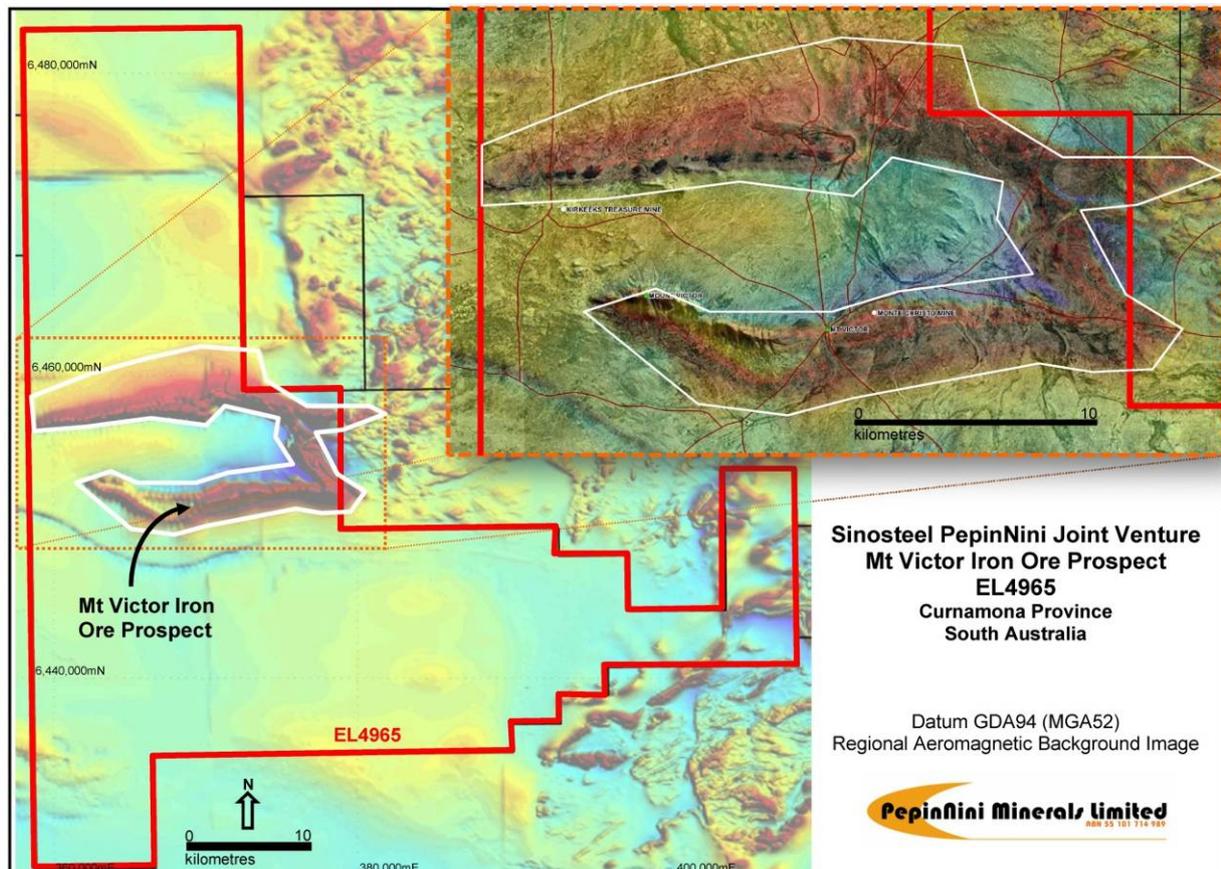
## Curnamona Province Project

Exploration within the Curnamona Province Project area, which includes the Crocker Well Uranium Deposit, is being managed by Sinosteel PepinNini Curnamona Management Pty Ltd (SPCM) on behalf of the Joint Venture partners Sinosteel Corporation (60%) and PepinNini Minerals (40%). The Joint Venture has prioritized the investigation of the iron ore potential of the Braemar Iron Formation.

### Braemar Iron Formation

Three significant target areas have been identified within the Joint Venture tenements and have been designated as the Mt Victor Iron Ore Prospect (EL4965 Mt Victor), the Macdonald Corridor Iron Ore Prospect (EL4375 Bimbowrie) and the Outalpa Iron Ore Prospect (EL3472 Outalpa & EL4965 Mt Victor). Each of the prospects has the potential to host a very large magnetite iron ore resource which could be beneficiated to a high grade blast furnace feed product at a very competitive cost relative to other magnetite prospects currently under development consideration elsewhere in Australia.

During the Quarter EL4965 Mt Victor covering approximately 1,218 km<sup>2</sup> was been granted. Mt Victor contains potential for a very large magnetite resource within the Braemar Iron Formation. The investigation of the iron ore potential to assess the potential magnitude of the resource and metallurgical characteristics of the magnetite at the Mt Victor Iron Ore Prospect is a priority for the JV. The Nillinghoo Goldfield where most of the previous exploration activity has occurred is also located within the tenement. A number of other gold and copper prospects are located within this part of EL4965.



A detailed aeromagnetic survey has been completed over the Mt Victor Iron Ore Prospect within EL4965 "Mt Victor". The survey acquired approximately 2,462 line kilometres of data at 100 metre spacing at a nominal flying height of 30 metres and covers an estimated 40 kilometres strike length of prospective Braemar Iron Formation.

The quality data will allow modelling and accurate ground targeting of the Braemar Iron Formation. An extensive drilling program is planned to further investigate the potential of the Mt Victor which will commence as soon as all statutory and heritage approvals are obtained.

### **Regional Drilling Project**

A drilling program of 1,954 metres in 13 reverse circulation (RC) boreholes was completed during the quarter at the North Dome Rock Prospect located within EL 4239.

Widespread low grade copper mineralisation was encountered over a strike length of approximately 1,350m corresponding to soil anomalism defined by previous explorers. Mineralisation was intersected in both oxidised and fresh rock. Intersections included;

- 5 metres @ 0.82% Cu and 0.06% Co from a depth of 9 metres in borehole RC12DRN002,
- 5 metres @ 0.68% Cu and 0.04% Co from a depth of 50 metres in borehole RC12DRN004
- 5 metres @ 0.54% Cu and 0.04% Co from a depth of 27 metres in borehole RC12DRN010
- 10 metres @ 0.59% Cu and 0.03% Co from a depth of 57 metres in borehole RC12DRN011

All metreages quoted are down-hole depths as true widths are not known.

In addition to copper, sporadic gold values (max 3.61g/t) have also been obtained. Anomalous levels of cobalt, molybdenum and arsenic are variably associated with the mineralisation.

The copper deposits in the Dome Rock area are considered to be epigenetic and are related to granite occurrences outcropping to the west of the mine area. Copper mineralization occurs within or on the margins of a brecciated and silicified slate and has been exploited by three main shafts.

Historic production recorded from the Dome Rock Mine prior to closure in 1940 was 630 tonnes at a grade of 20% copper. The dumps adjacent to one of the historic shafts have been exploited since the mine closure but production figures are not available.



**Drilling at the North Dome Rock Prospect EL4239 – July, 2012**

## WESTERN AUSTRALIA

### Robinson Range Iron Ore Project

The Robinson Range Project comprises seven tenements that cover approximately 700km<sup>2</sup>. PepinNini has a 50% interest in the iron ore contained within three tenements and a 40% interest in the iron ore contained within the other four tenements and manages exploration on behalf of the Joint Venture partners. PNN Area C is located within exploration tenement E51/1033 held by PepinNini Robinson Range Pty Limited (40%), Resource and Investment NL (ASX:RNI) (40%) and Fe Limited (ASX:FEL) (20%).

The joint venture has delineated an Inferred Mineral Resource for PNN Area C as follows; (*PNN ASX Release 6<sup>th</sup> June, 2012*);

**Inferred Mineral Resource Estimate for PNN Area C (June, 2012)**

Million Tonnes	Cut Off %Fe	Density SG	Fe %	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	P %	S %	TiO <sub>2</sub> %	LOI %
17.7	45	3.6	49.7	13.3	8.5	0.06	0.04	0.29	5.4
4.3	52	3.8	55.2	8.5	6.5	0.06	0.05	0.21	4.7

No field activities were undertaken on the project during the current quarter.

## NORTH QUEENSLAND

PepinNini Minerals has agreed to sell six tenements it currently holds in North Queensland as part of a strategy to divest non-core assets. The tenements cover an area of approximately 310 km<sup>2</sup> near Forsyth and Georgetown. The total consideration of \$850,000 for the sale of the tenements will be paid in two instalments. The first payment of \$600,000 is due on completion of usual conditions precedent for such transactions and the second payment of \$250,000 is due on or before 31st March, 2013.

Three of the remaining six tenements the Company holds in North Queensland cover 415km<sup>2</sup> prospective for uranium. The Company is considering divestment options regarding these tenements following the Queensland Government announcement on 22<sup>nd</sup> October of its lifting of its uranium mining ban.

The principal area of uranium mineralisation within the tenement package is the Oasis Prospect, a north-south trending shear zone hosted in a Proterozoic syenogranite, in which drilling by Esso Exploration and Production Australia Inc (1977-1979) and Glengarry (2005/2006) delineated a coherent, steeply dipping, tabular zone of disseminated uraninite mineralization, up to 15m thick, with an average grade of 0.1% U<sub>3</sub>O<sub>8</sub>, and extending over a 300m strike length to a depth of 175m. Reported drill intersections by Glengarry in 2006 include the following:

**Oasis Uranium Deposit Significant Intersections (lower cut-off 0.05%)**  
(Glengarry ASX Announcement 3<sup>rd</sup> August, 2006)

Hole_No	Easting	Northing	Total Depth (m)	From (m)	To (m)	Interval (m)	U <sub>3</sub> O <sub>8</sub> %	U <sub>3</sub> O <sub>8</sub> (lbs/t)
05LYD001	230573	7918732	100	54	64	10	0.12	2.64
incl				61	62	1	0.25	5.50
05LYD002	230588	7918685	65	34	41	7	0.17	3.74
incl				36	37	1	0.38	8.36
and				39	41	2	0.21	4.62
06LYD003	230536	79187182	101	92	97	5	0.15	3.30
incl				93	94	1	0.26	5.65
06LYD004	230469	79187123	195	170	172	2	0.15	3.30
incl				170	171	1	0.21	4.62

All metreages quoted are down-hole depths as true widths are not known.

## ARGENTINA

### Salta Project

PepinNini have four granted cateos (exploration leases), one granted mina (mining lease) and applications for a cateo and a mina covering approximately 300 kms<sup>2</sup> in the Argentine province of Salta. The Salta Project comprises two separate areas designated as Santa Ines and Chivinar.

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. Several significant copper-gold porphyry and epithermal silver deposits are currently being progressed by other companies to development in the area.

Significant assay results for grab samples collected during the previous quarter from a historic mine working confirms potential for high grade copper and gold mineralization within the Santa Ines Project Area. PepinNini is progressing plans to target this area with detailed surface mapping and ground geophysical surveys to identify priority drill targets. There is no evidence of any modern exploration work having been undertaken at Santa Ines and no historical data is available.

Four grab samples were collected from around the opening of the Santa Ines Mine during April 2012 and assayed by ALS Global laboratory in Adelaide. Assay results are tabulated below:

Sample	Cu%	Fe%	Au g/t	Ag g/t
1	21.7	26.4	0.91	34.9
2	13.7	23.7	0.17	17.5
3	10.6	10.8	0.12	1.6
4	1.7	8.0	-	3.4

The Santa Ines Project comprises one mina and one application for a cateo covering approximately 82 km<sup>2</sup>. This project logistically benefits by being only 5kms from the Salta-Antofagasta railway and is easily accessed using existing roads and tracks.

The 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, Arizario and Samenta. Situated approximately 80km 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 and adits 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 and phyllic alteration 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.

*The information in this report that relates to Exploration Results and Mineral Resources 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: (08) 8218 5000

**Note:** Additional information on PepinNini Minerals Limited can be found on the website:

[www.pepinnini.com.au](http://www.pepinnini.com.au)

# Appendix 5B

## Mining exploration entity quarterly report

Introduced 01/07/96 Origin Appendix 8 Amended 01/07/97, 01/07/98, 30/09/01, 01/06/10, 17/12/10

Name of entity

<b>PepinNini Minerals Limited</b>
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ABN

<b>55 101 714 989</b>
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Quarter ended ("current quarter")

<b>Sep 2012</b>
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**Consolidated statement of cash flows**

	Current quarter \$A'000	Year to date (3 months) \$A'000
<b>Cash flows related to operating activities</b>		
1.1 Receipts from product sales and related debtors	56	56
1.2 Payments for (a) exploration & evaluation	(630)	(630)
(b) development		
(c) production		
(d) administration	(294)	(294)
1.3 Dividends received		
1.4 Interest and other items of a similar nature received	15	15
1.5 Interest and other costs of finance paid		
1.6 Income taxes paid		
1.7 Other (provide details if material)	5	5
<b>Net Operating Cash Flows</b>	<b>(848)</b>	<b>(848)</b>
<b>Cash flows related to investing activities</b>		
1.8 Payment for purchases of: (a) prospects		
(b) equity investments		
(c) other fixed assets		
1.9 Proceeds from sale of:		
(a) prospects		
(b) equity investments		
(c) other fixed assets		
1.10 Loans to other entities		
1.11 Loans repaid by other entities		
1.12 Other (provide details if material)		
<b>Net investing cash flows</b>		
1.13 Total operating and investing cash flows (carried forward)	<b>(848)</b>	<b>(848)</b>

+ See chapter 19 for defined terms.

**Appendix 5B**  
**Mining exploration entity quarterly report**

1.13	Total operating and investing cash flows (brought forward)	<b>(848)</b>	(848)
<b>Cash flows related to financing activities</b>			
1.14	Proceeds from issues of shares, options, etc.	<b>676</b>	676
1.15	Proceeds from sale of forfeited shares		
1.16	Proceeds from borrowings		
1.17	Repayment of borrowings		
1.18	Dividends paid		
1.19	Other (provide details if material)		
	<b>Net financing cash flows</b>	<b>676</b>	676
	<b>Net increase (decrease) in cash held</b>	<b>(172)</b>	(172)
1.20	Cash at beginning of quarter/year to date	<b>1,704</b>	1,704
1.21	Exchange rate adjustments to item 1.20		
1.22	<b>Cash at end of quarter</b>	<b>1,532</b>	1,532

**Payments to directors of the entity and associates of the directors**  
**Payments to related entities of the entity and associates of the related entities**

		Current quarter \$A'000
1.23	Aggregate amount of payments to the parties included in item 1.2	<b>115</b>
1.24	Aggregate amount of loans to the parties included in item 1.10	

1.25 Explanation necessary for an understanding of the transactions

1. Managing Director, Administration Director and non-executive directors' Remuneration.....	\$105,958
2. Managing Director, Administration Director and non-executive directors' Superannuation.....	\$9,039

**Non-cash financing and investing activities**

2.1 Details of financing and investing transactions which have had a material effect on consolidated assets and liabilities but did not involve cash flows

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2.2 Details of outlays made by other entities to establish or increase their share in projects in which the reporting entity has an interest

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**Financing facilities available**

Add notes as necessary for an understanding of the position.

		Amount available \$A'000	Amount used \$A'000
3.1	Loan facilities		
3.2	Credit standby arrangements		

+ See chapter 19 for defined terms.

**Estimated cash outflows for next quarter**

		\$A'000
4.1	Exploration and evaluation	600
4.2	Development	
4.3	Production	
4.4	Administration	250
<b>Total</b>		<b>850</b>

**Reconciliation of cash**

Reconciliation of cash at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts is as follows.			
	Current quarter \$A'000	Previous quarter \$A'000	
5.1	Cash on hand and at bank	<b>332</b>	<b>504</b>
5.2	Deposits at call	<b>1,200</b>	<b>1,200</b>
5.3	Bank overdraft		
5.4	Other (provide details)		
<b>Total: cash at end of quarter (item 1.22)</b>		<b>1,532</b>	<b>1,704</b>

**Changes in interests in mining tenements**

	Tenement reference	Nature of interest (note (2))	Interest at beginning of quarter	Interest at end of quarter
6.1	Interests in mining tenements relinquished, reduced or lapsed	EPM 17879, QLD Cateo 20461 - Argentina  statutory partial relinquishment Expiry	18 sub-blocks 2,643 hectares	9 sub-blocks 0
6.2	Interests in mining tenements acquired or increased	Mina 21681  Mining licence conversion from Cateo	0	2,643 hectares

+ See chapter 19 for defined terms.

## Appendix 5B Mining exploration entity quarterly report

### Issued and quoted securities at end of current quarter

Description includes rate of interest and any redemption or conversion rights together with prices and dates.

	Total number	Number quoted	Issue price per security (see note 3) (cents)	Amount paid up per security (see note 3) (cents)
7.1 <b>Preference +securities</b> <i>(description)</i>				
7.2 Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs, redemptions				
7.3 <b>+Ordinary securities</b>	<b>115,177,993</b>	<b>115,177,993</b>	<b>N/A</b>	<b>N/A</b>
7.4 Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs	<b>25,475,494</b>	<b>25,475,494</b>	<b>3.2</b>	<b>3.2</b>
7.5 <b>+Convertible debt securities</b> <i>(description)</i>				
7.6 Changes during quarter (a) Increases through issues (b) Decreases through securities matured, converted				
7.7 <b>Options</b> <i>(description and conversion factor)</i>	<b>250,000</b>	<b>0</b>	<i>Exercise price</i> <b>5.5c</b>	<i>Expiry date</i> <b>31 Dec 14</b>
7.8 Issued during quarter	<b>250,000</b>	<b>0</b>	<b>5.5c</b>	<b>31 Dec 14</b>
7.9 Exercised during quarter				
7.10 Expired during quarter				
7.11 <b>Debentures</b> <i>(totals only)</i>				
7.12 <b>Unsecured notes</b> <i>(totals only)</i>				

+ See chapter 19 for defined terms.

**Compliance statement**

- 1 This statement has been prepared under accounting policies which comply with accounting standards as defined in the Corporations Act.
- 2 This statement does give a true and fair view of the matters disclosed.

Sign here:  .. Date: ...Monday 29<sup>th</sup> October 2012..  
(Director/Company secretary)

Print name: Rebecca Holland-Kennedy .....

**Notes**

- 1 The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity wanting to disclose additional information is encouraged to do so, in a note or notes attached to this report.
- 2 The "Nature of interest" (items 6.1 and 6.2) includes options in respect of interests in mining tenements acquired, exercised or lapsed during the reporting period. If the entity is involved in a joint venture agreement and there are conditions precedent which will change its percentage interest in a mining tenement, it should disclose the change of percentage interest and conditions precedent in the list required for items 6.1 and 6.2.
- 3 **Issued and quoted securities** The issue price and amount paid up is not required in items 7.1 and 7.3 for fully paid securities.
- 4 The definitions in, and provisions of, *AASB 6: Exploration for and Evaluation of Mineral Resources* and *AASB 107: Statement of Cash Flows* apply to this report.

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+ See chapter 19 for defined terms.