Report for the Quarter Ending 30th September, 2011
30th October, 2011

Highlights

♦ Sixty three boreholes completed for 3,163 metres of drilling within six prospect areas as part of an extensive shallow reverse circulation (RC) drilling program across the Robinson Range Project located in the Midwest region of WA.

♦ Encouraging Hematite, Hematite-Goethite iron enrichment encountered at PNN Area C. Intersections include;
  - 45 metres @ 59.7% Fe in borehole RC11RR030 from a depth of 6 metres to the base of hole at 51 metres. (intersection includes an interval of 39 metres @ 61.1% Fe from 12 metres to base of hole),
  - Two other holes, RC11RR032 and RC11RR033, each located approximately 200m from borehole RC11RR030 also intersected encouraging iron mineralisation. (RC11RR032 included 4 metres @ 53.6% Fe from 16 metres to base of hole at 20 metres, RC11RR033 intersected 45 metres @ 51.3% Fe from 12 metres to base of hole at 57 metres including 6 metres @ 59.5% Fe),
  - Borehole RC11RR029 located approximately 100 metres from borehole RC11RR030 intersected 10 metres @ 58.0% Fe from 12 metres depth.

♦ Field reconnaissance and surface sampling undertaken over two prospect areas designated as “PNN Area-E” and “PNN Area-F”. More than fifty percent of the 21 surface samples collected from within PNN Area “E” returned assays in excess of 55% Fe and ranged up to a maximum of 66.4% Fe. Nine samples were collected from within PNN Area “F” and returned assays ranging from 32.2% Fe to 66.2% Fe.

♦ Heritage approvals and statutory approvals have been completed for a drilling program to commence investigation of the iron ore potential of the Braemar Iron Formation identified within tenements held jointly by PepinNini Minerals and Sinosteel Corporation in the Curnamona Province of South Australia. A 2,000m RC drilling program designed to test the McDonald Corridor Prospect is scheduled to commence in November.

♦ At the end of the quarter the Company held $4.03 million in cash.
WESTERN AUSTRALIA

Robinson Range Iron Ore Project

PepinNini Minerals Limited (PepinNini) commenced an extensive reverse circulation (RC) drilling program across the Robinson Range Project located in the Midwest region of WA on 30th June, 2011.

The Robinson Range Project comprises seven tenements that cover approximately 700km². 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.

The drilling program is designed to investigate potential supergene iron ore resources at eleven prospect areas located amongst the ~40km strike length of Robinson Range Formation identified within the project area.
Sixty three boreholes were completed during the quarter for 3,163 metres of drilling within six prospect areas. Encouraging Hematite, Hematite-Goethite iron enrichment was encountered at PNN Area C including;

♦ 45 metres @ 59.7% Fe in borehole RC11RR030 from a depth of 6 metres to the base of hole at 51 metres. (intersection includes an interval of 39 metres @ 61.1% Fe from 12 metres to base of hole),

♦ Two other holes, RC11RR032 and RC11RR033, each located approximately 200m from borehole RC11RR030 also intersected reportable iron mineralisation. (RC11RR032 included 4 metres @ 53.6% Fe from 16 metres to base of hole at 20 metres, RC11RR033 intersected 45 metres @ 51.3% Fe from 12 metres to base of hole at 57 metres including 6 metres @ 59.5% Fe),

♦ Borehole RC11RR029 located approximately 100 metres from borehole RC11RR030 intersected 10 metres @ 58.0% Fe from 12 metres depth.

Field reconnaissance and surface sampling has also been undertaken over two new prospect areas designated as “PNN Area-E” and “PNN Area-F”. More than fifty percent of the 21 surface samples collected from within PNN Area “E” returned assays in excess of 55% Fe and ranged up to a maximum of 66.4% Fe. Nine samples were collected from within PNN Area “F” and returned assays ranging from 32.2% Fe to 66.2% Fe.
**NORTH QUEENSLAND**

PepinNini is currently in the process of prioritising targets for follow-up exploration for the North Queensland Project. The Project comprises 14 tenements covering approximately 1,086 kms² prospective for high grade gold and silver, copper, base metals, uranium, phosphate and potash.

**SOUTH AUSTRALIA**

**Musgrave Province Project**

The Musgrave Project is currently targeting nickel-copper sulphide mineralisation and base metal mineralisation in the Musgrave Province of South Australia. PepinNini has four granted exploration licences (EL3931, EL4048, EL4587, EL4780) covering ~5,669 km² and six exploration licence applications (ELA118/96, ELA185/96, ELA278/82, ELA491/94, ELA367/09, ELA368/09) covering ~3,932 km². PepinNini subsidiary PepinNini Resources Pty Limited is earning a 51% interest in EL3931 and ELA278/82 and ELA491/94 under a Farm-in and Joint Venture Agreement with Rio Tinto Ltd subsidiary Rio Tinto Exploration Pty Limited.

During the quarter discussions were continued with the Traditional Owners to progress the grant of ELAs 491/94 and 278/82.

Vacuum drilling and diamond drilling commenced during the quarter within the Cooperinna block of EL 4587.
PepinNini Minerals Limited tenement location in the Musgrave Province, SA.

The Company has commissioned an orientation airborne electromagnetic survey (AEM) to be undertaken over the Caroline Intrusion, the Hanging Knoll Area and the Cooperinna Block. The AEM system to be deployed is the new SkyTEM super low moment system which has recently been imported into Australia from Scandinavia. This system which has never previously been used in Australia is unlike all other heliborne systems as it is calibrated due to its inherent rigid design geometry. The system which is much higher powered than previous versions is designed to be able to resolve both near surface and deep conductors thus making it highly suitable for use in the Musgrave Province. A comparison has been undertaken by CSIRO of the new SkyTEM system with the VTEM system, which is not calibrated. The comparisons indicate that the SkyTEM system records data over later time channels than VTEM thus theoretically allowing it to resolve deeper features even beneath conductive palaeo-drainage.

The Caroline Intrusion is one of Australia's largest ultramafic complexes and is considered highly prospective for nickel sulphide mineralisation. In the past PepinNini has undertaken vacuum and core drilling with encouraging results on EL4048 and EL3931 which surround the central core of the complex which is covered by PepinNini's ELA 367/09 application. The survey as indicated will cover both portions of EL's 3931 and 4048 as well as the entire central core covered by ELA367/09 where outcropping pentlandite was discovered by PIRSA in 2004. The survey will be flown in several optimised orientations on 200m spaced traverses. In addition PepinNini plans to fly an orientated survey over Hanging Knoll which extends over another of PepinNini's applications (ELA368/09) as well as part of EL3931. This area which to date has never been systematically explored is also considered prospective for nickel sulphide mineralisation and stands out as both a magnetic and gravity anomaly with in part mapped sub cropping Giles Complex. Portions of the Cooperinna Block which is currently being explored by vacuum and diamond drilling will also be flown.

If this orientation survey is successful it is envisaged that SkyTEM will provide an excellent exploration tool for future broader use in the under-explored Musgrave Province. Previous AEM systems such as GeoTEM, Tempest and HoistEM have been trialed with limited success over the
tenements and invariably failed to see through areas with overlying conductive palaeo-drainage systems.

In conjunction and as an extension to PepinNini's orientation survey the CSIRO will collect additional SkyTEM data over several areas where alternative systems such as VTEM and Tempest have been flown.

**Proposed orientation SkyTEM survey areas showing 200m orientated flight lines over Hanging Knoll (Area A) and Caroline Intrusion (Areas B and C) on RTP colourdrape magnetic image.**

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**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 priority target areas have been identified within the Joint Venture tenements and have been designated as the Mt Victor Iron Ore Prospect (ELA928/04 Mt Victor); the Macdonald Corridor Iron Ore Prospect (EL4375 Bimbowrie); and the Outalpa Iron Ore Prospect (EL3472 Outalpa & ELA928/04 Mt Victor). Each of the prospects identified have 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.

The magnetite prospects have been identified within outcropping to shallow glacial BIFm of Neoproterozoic age by interpretation of detailed regional magnetic data and geological mapping of the area. The BIFm consists of a series of alternating and interbedded tillitic and magnetite units representing cycles of glacial advances and retreats.

SPCM has received statutory approvals to undertake a Reverse Circulation (RC) drilling program to determine the magnetite potential and to define a possible resource exploration target for the Macdonald Corridor Prospect. Ten RC percussion drillholes to approximately 200m depth are proposed to test interpreted magnetic units of the Braemar Iron Formation within EL4375. Drillholes will be located along two planned traverses.

Modeling of aeromagnetic data indicates the main magnetic units of the Braemar Iron Formation to be approximately 750-800m wide along Traverse 1 and approximately 425-450m wide along Traverse 2.

Five drillholes are planned along each traverse at approximately 100m hole spacing.
Proposed drill traverses on regional aeromagnetic data  
McDonald Corridor Magnetite Prospect

Priority Regional Target Investigation
An extensive aircore drilling program continued during the quarter to test targets generated through interpretation of aeromagnetic data, geochemical sampling and historical data review. An approximately 300m wide zone of highly anomalous Cu+Mo+As+(Ba) values was intersected within three 100m spaced drillholes drilled to test an area interpreted as exhibiting similarities to Havilah Resources Kalkaroo Cu-Au Project (62Mt @ 0.55%Cu & 0.44g/tAu).

Results returned an intercept of 44m @ 0.12%Cu, 32ppmMo, 19.5%Fe, 0.47%Ba from 30m to EOH, including 6m @ 0.21%Cu, 42ppmMo, 21%Fe and 0.04g/TAu. Further work is planned to test the strike and depth extent of Cu-Mo mineralization intersected and to test magnetic stratigraphy within EL4239 associated with a folded structure.

ARGENTINA
Salta Project
With the granting of 4 cateos (Exploration Licences) and 1 minas (Mining Lease) during the quarter PepinNini now have five granted cateos, one granted minas and one application for a cateo covering approximately 330 sq kms 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.

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;

The area targeted by PepinNini for copper-gold-silver mineralization is in Salta’s Puna region, a high-altitude plateau adjacent to the Chile border which forms part of the Atacama Alti-plano. Whilst typically over 4,000m 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.
Historic workings of haematite and secondary copper mineralisation at Santa Ines

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.

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