



Report for the Quarter Ending 30th June, 2009

31st July, 2009

Highlights

- ◆ Sixty one boreholes holes for 6,166 metres were drilled at the Crocker Well Uranium deposit during the quarter as part of a program of seventy seven boreholes designed to upgrade Inferred Resources of uranium to an Indicated Category.
- ◆ Detailed magnetic and radiometric surveys were flown over the Crocker Well Uranium Deposit using a helicopter based system and a detailed gravity survey has been completed to better define geological boundaries and to locate possible additional resources of U₃O₈ in the vicinity of Crocker Well.
- ◆ Following metallurgical testwork completed by ANSTO and Amdel Laboratories during the quarter a new revised processing circuit incorporating beneficiation by flotation, solid liquid separation by pressure filtration and a Carbonate strip followed by Sodium Diuranate (SDU) and Uranium Peroxide precipitation has been designed for treating the Crocker Well ore. Overall uranium recovery for processing the Crocker Well ore using the new circuit is 80% representing a significant improvement on the 63% previously used for the 2006 Scoping Study.
- ◆ A Farm-in and Joint Venture Agreement was executed with Rio Tinto Exploration Pty Limited to explore three tenement areas covering 1,382 km² considered prospective for nickel copper sulphide mineralisation and other commodities within the Musgrave Province of South Australia.
- ◆ Five diamond cored boreholes were completed during the quarter within EL 3536 Pine Ridge in the Musgrave Province of South Australia. The intersection of stratabound copper mineralisation within mafic and intermediate gneiss of the Birksgate Complex is encouraging. A regional vacuum drilling program of 534 boreholes totaling 3445.5m was also completed within EL 3536 with 790 regional geochemical samples being submitted for assaying. Coincident base metal anomalies have been identified within the tenement in areas not previously explored and warrant further investigation. Several regions of anomalous rare earth element concentrations have been identified proximal to known granite occurrences.
- ◆ Results from a surface sampling program completed during the quarter have confirmed high-grade gold mineralisation on the Company's north Queensland tenements. Some of the more significant results from the survey include:
 - Gold grades of up to 1,710 g/t (55 oz/t)
 - Numerous samples with gold grades of more than 31 g/t (1oz/t)

- Silver grades of up to 20 oz/t
 - Soil sampling results confirm extensive surface mineralisation
 - New vein systems identified at surface
- ◆ At the end of the quarter the Company held \$11.4 million in cash.



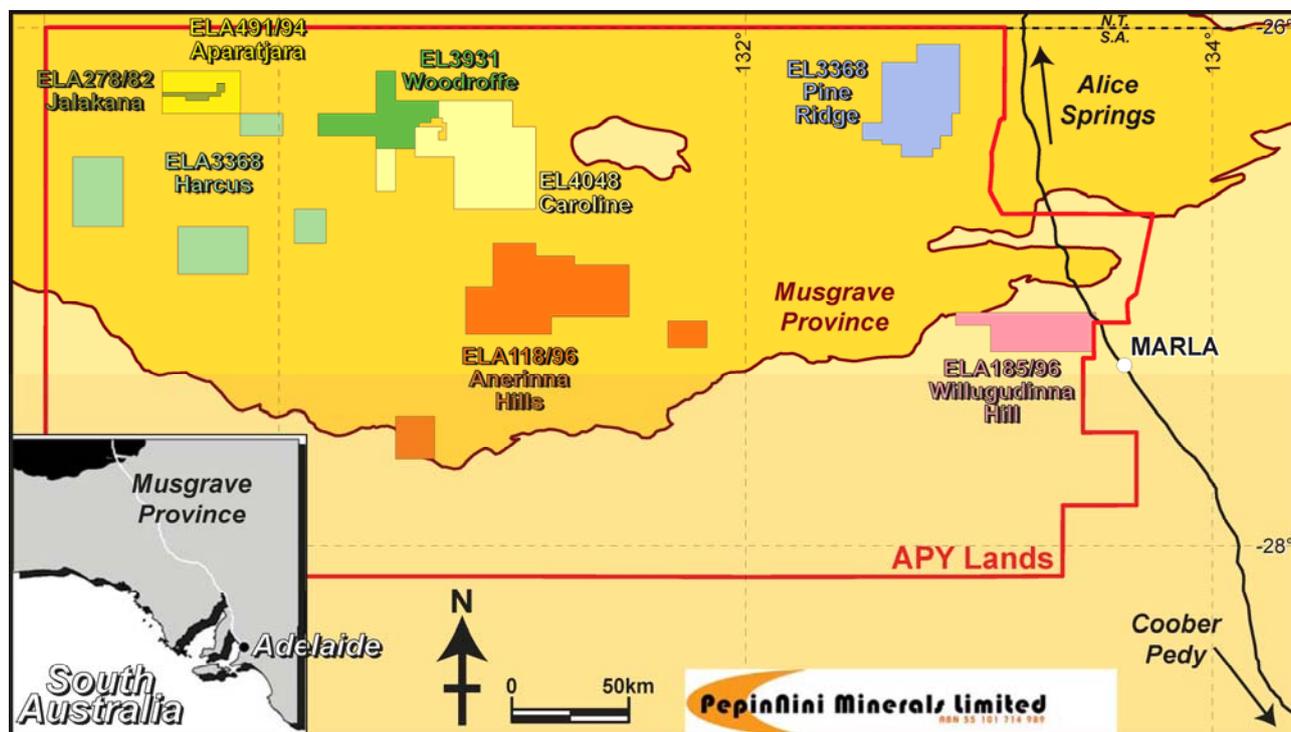
SOUTH AUSTRALIA

Musgrave Province Project

On 11th June, 2009 PepinNini Minerals announced it had entered into a Farm-in and Joint Venture Agreement with Rio Tinto Exploration Pty Limited to explore three tenement areas covering approximately 1,382 km² of ground considered prospective for Nickel Copper Sulphide mineralisation and other commodities within the Musgrave Province of South Australia. The agreement which is subject to consent from the Minister of Mineral Resources and Development (SA) and traditional owners of the Anangu Pitjantjatjara Yankunytjatjara Lands, relates to one granted exploration licence (EL3931 “Woodroffe”) and two licence applications (ELA 278/82 “Jalakana” and ELA 491/94 “Aparatjara”). These tenements are adjacent to granted exploration licences currently being explored by PepinNini.

A regional airborne geophysical survey commissioned by Rio Tinto over the tenement areas identified several conductive bodies that may represent sulphide mineralisation. PepinNini and Rio Tinto consider the targets identified from the aerial EM surveys warrant immediate investigation by detailed ground geophysical surveys and drilling. Subject to obtaining statutory and traditional owner approvals it is the intention of PepinNini to prioritise the investigation of the targets already identified within the tenements. The Company is currently reviewing the geophysical datasets.

With the addition of the three new joint venture tenements the Musgrave Province Project now consists of four granted exploration licences, EL 3368, EL 3536, EL 3931 and EL 4048, and four exploration licence applications, ELAs 278/82, 491/94, 118/96 and 185/96. The tenements comprise fourteen separate areas covering approximately 9,525 km².



Exploration Licence EL4048 – Mt Caroline

Exploration activities in EL4048 are currently focused on targeting nickel-copper sulphide and chromium-titanium-vanadium mineralisation within layered mafic-ultramafic intrusions of the Giles Complex. Base metal mineralisation in felsic and mafic gneisses of the Birksgate Complex are also being targeted by the regional drilling program.

A further two diamond boreholes were completed within EL4048 during the quarter: DD09CAR011 (452.87m) and DD09CAR012 (450.17m). Visible sulphides were intersected in each hole and a total of 117 diamond drill core samples have been submitted for assaying.

Exploration Licence EL3536 – Pine Ridge

During the quarter exploration activities were focused on targeting nickel-copper sulphide mineralisation within the Giles Complex and base metal mineralisation within the Birksgate Complex. Drilling operations utilised the Company owned and operated diamond drill rig and vacuum drill rig. A total of five diamond boreholes were drilled for 1007.98m. All diamond boreholes targeted nickel-copper sulphide mineralisation within prospects previously identified within the tenement.

Lithologies favourable for nickel-copper-chromium-PGE mineralisation and lead-zinc-silver mineralisation were intersected in all diamond boreholes. Of particular significance was the intersection of metasedimentary rocks, calcsilicate rocks, garnet quartzite and bimodal intrusive rocks as similar rocks are associated with Pb-Zn-Ag mineralisation at Broken Hill. Ultramafic lithologies were not associated with significant sulphide mineralisation but have relatively higher

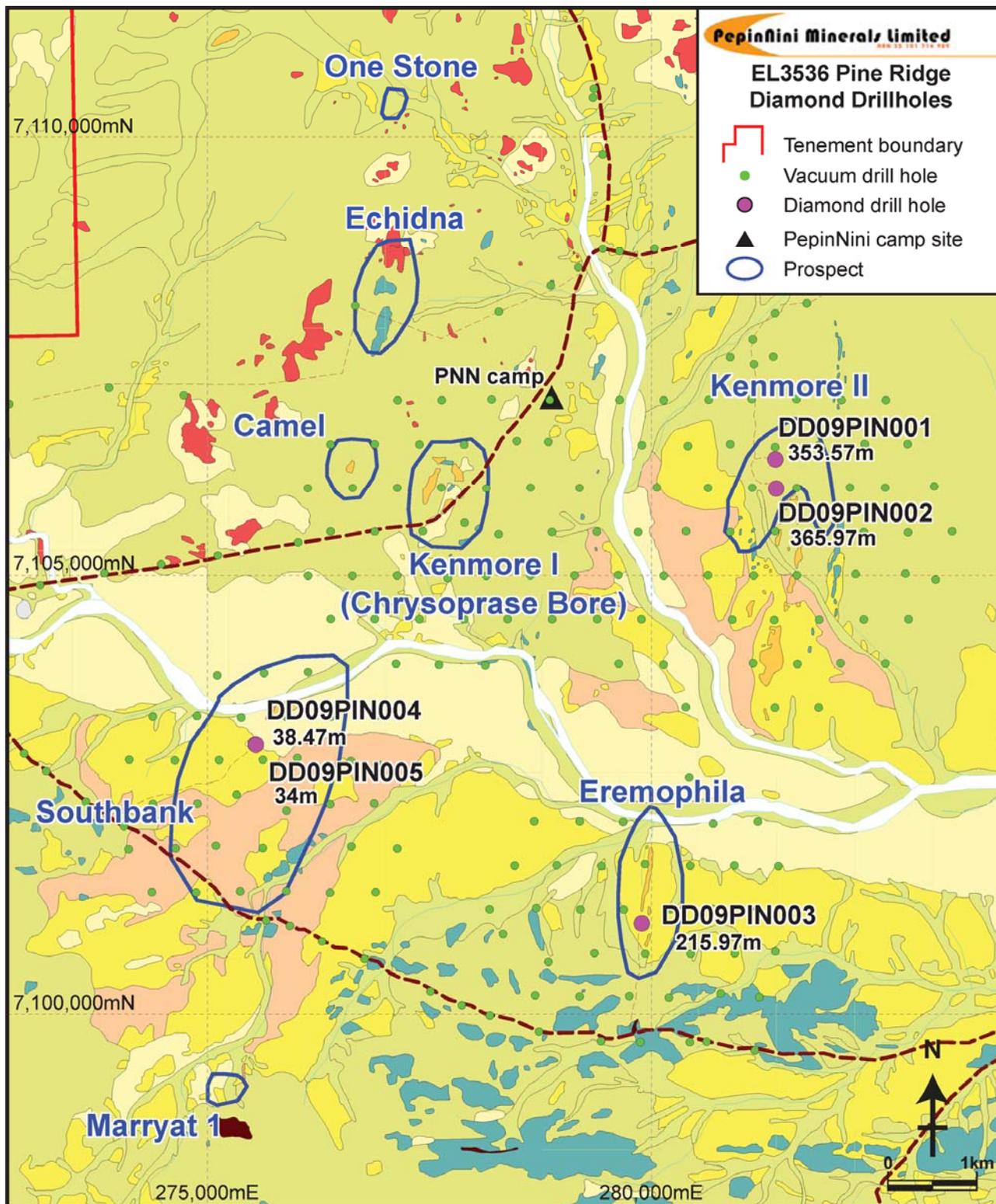
concentrations of chromium and nickel. Maximum assay results from two diamond boreholes (DD09PIN001 & DD09PIN002) drilled within the Kenmore II copper-nickel prospect included:

Borehole DD09PIN001

- 0.74m @ 0.21% Cu from 220.23m
- 2.8m @ 0.20% Cu from 221.89m
- 3m @ 0.27% Cr & 0.17% Ni from 340.7m

Borehole DD09PIN002

- 0.3m @ 0.48% Cu from 124.68m
- 3.0m @ 0.2% Cr & 0.21% Ni from 273.3m
- 1.65m @ 0.4% Cr from 310.5m



Diamond borehole localities and EOH depths, EL3536 Pine Ridge.



The regional vacuum drilling program conducted during the quarter within EL3536 completed 534 boreholes totaling 3445.5m. Hole depths varied between 0.6m and 19.2m with a median depth of 4.8m. A total of 790 samples were collected with the majority of assay results having now been received. Maximum results from the vacuum drilling program to date include:

- Cu 500ppm
- Co 650ppm
- Ni 800ppm
- Pb 95ppm
- Zn 380ppm
- Ag 47ppm
- La+Ce+Y 1160ppm
- Th 205ppm

Nickel and copper anomalies were recorded over the known prospect areas (up to 415ppm Cu at Kenmore II; 650ppm Ni at Southbank; and 435ppm Ni at Kenmore I). Coincident base metal anomalies have been identified within the tenement in areas not previously explored and warrant further investigation. Several regions of anomalous rare earth element concentrations have been identified proximal to known granite occurrences.

Anomalous La, Ce, Y and Th indicate enriched felsic rocks or hydrothermal fluid systems. This has implications for the potential of mineralising systems within the region.

Exploration Licence EL3368 – Mt Harcus

A Heritage Clearance Survey for the Cooperinna Block of EL3368 was undertaken during the quarter. Traditional owners for the region have been identified and Work Program Clearances are planned for the next quarter.

Curnamona Province Project

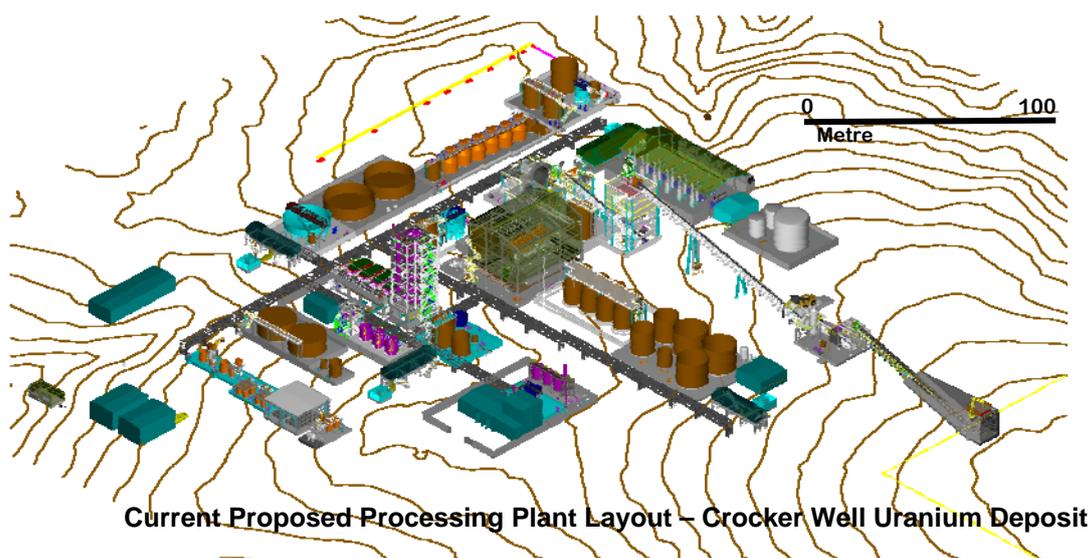
The development of the Crocker Well Uranium Deposit by Sinosteel Corporation (60%) and PepinNini Minerals (40%) is being managed by Sinosteel PepinNini Curnamona Management Pty Limited (SPCM) on behalf of the Joint Venture partners. The project has its own dedicated website at www.crockerwell.com.au. A Bankable Feasibility Study (BFS) for the development of a mine at Crocker Well is currently in progress and the Sinosteel PepinNini Joint Venture has lodged an application for a Mining Lease with the South Australian Government for the development of a uranium mine at Crocker Well.

Process Design

SPCM has reported that additional metallurgical testwork required to finalise the proposed processing circuit for the Crocker Well ore has caused delays in the preparation of the BFS which is now scheduled to be completed in December, 2009. Additional tests were required to be undertaken by ANSTO and Amdel Laboratories during the quarter as conventional counter current decantation was found to be cost prohibitive for solid liquid separation after leaching of the Crocker Well ore. It has been replaced by a more efficient and economical pressure filtration circuit which required additional testing to determine the effect this will have on the overall cost and operation of the processing circuit.

The Solvent Extraction (SX) test work has been completed by ANSTO and a conventional extraction and scrubbing circuit has been chosen. Various options have been considered for the stripping and precipitation circuit which occurs after SX extraction and scrubbing. A conventional process has been selected which consists of a Carbonate strip, then a Sodium Diuranate (SDU) precipitation and finally a Uranium Peroxide precipitation. Dewatering, drying and drum packing are the final steps in Crocker Well flow sheet which will enable production of a Uranium Peroxide yellowcake product.

Based on the new revised processing circuit which incorporates beneficiation by flotation, solid liquid separation by pressure filtration, a Carbonate strip, then a Sodium Diuranate (SDU) and Uranium Peroxide precipitation SPCM has reported that the overall uranium recovery for processing the Crocker Well ore can be expected to be of the order of 80%. Additional optimizing tests could lift this above 80%. This represents a significant improvement on the 63% previously used for the 2006 Scoping Study.



Resource Verification

Drilling operations to verify and upgrade sufficient of the currently defined JORC compliant uranium resource from an Inferred category to an Indicated or Measured category to allow for a 300 tpa to 400tpa production of U_3O_8 for approximately 7 years was nearing completion at the end of the quarterly period.

Further drilling is about to commence to investigate potential additional resource targets located in the vicinity of the Crocker Well Deposit.

SPCM have reported the completion of 61 holes for 6,166 metres drilled within the Crocker Well Uranium deposit up to 30th June, 2009 in the current program of 77 boreholes. A JORC compliant resource estimate will be prepared following receipt of all data from the current program.



Sampling at Crocker Well – 20th June, 2009



Drilling at Crocker Well – 20th June, 2009

Aerial Geophysical Surveys

To better define geological boundaries and to locate possible additional resources of U₃O₈ in the vicinity of Crocker Well detailed magnetic and radiometric surveys were flown during the quarter using a helicopter based system. A detailed ground gravity survey was also completed with the assistance of the helicopter.



Helicopter Geophysical Survey at Crocker Well – June, 2009

WESTERN AUSTRALIA

Peak Hill Gold Project and Robinson Range Iron Ore Project

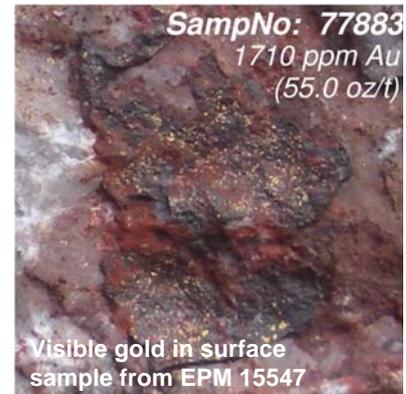
During the quarter PepinNini continued to maintain the status of the Robinson Range Iron Ore Farm-In and Joint Venture notwithstanding disagreement between PepinNini and the Receiver and Manager of Grosvenor Gold Pty Limited on that issue.

NORTH QUEENSLAND

Georgetown Inlier/Woolgar Goldfield/Drummond Basin Project

Results from a surface sampling program completed during the quarter have confirmed high-grade gold mineralisation on the north Queensland tenements of PepinNini Minerals. The Company has four granted tenements within the Etheridge Goldfield where previous sampling had reported gold grades of up to 335 g/t. Some of the more significant results from the recently completed survey conducted in April and May include:

- Gold grades of up to 1,710 g/t (55 oz/t)
- Numerous samples with gold grades of more than 31 g/t (1oz/t)
- Silver grades of up to 20 oz/t
- Soil sampling results confirm extensive surface mineralisation
- New vein systems identified at surface



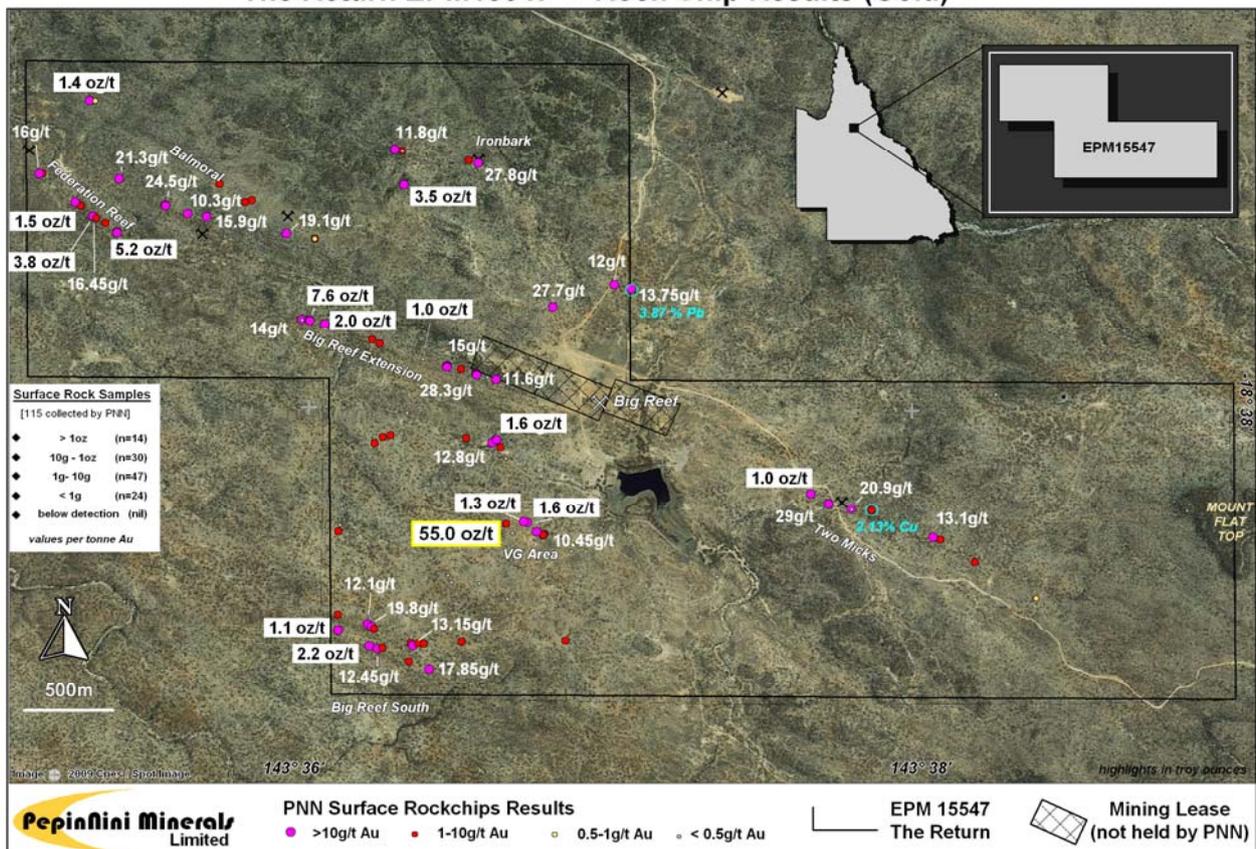
EPM 15547 – The Return

Rock chip sampling by PepinNini in late 2008 reported gold grades of up to 32.7 g/t on EPM 15547. In April 2009, an additional 90 samples were collected to further assess the potential of this tenement and define the extent of the outcropping reefs and prospective zones for drilling.

Several new vein systems have been identified. Rock chip samples have returned gold values ranging from 0.1 g/t (country rock) up to 1710 g/t (55 ounces). Significant silver grades of up to 20 oz/t were also assayed.

PepinNini is planning a detailed heli-mag survey to assist in defining further structural targets and is planning to undertake a drilling program within the tenement later in 2009.

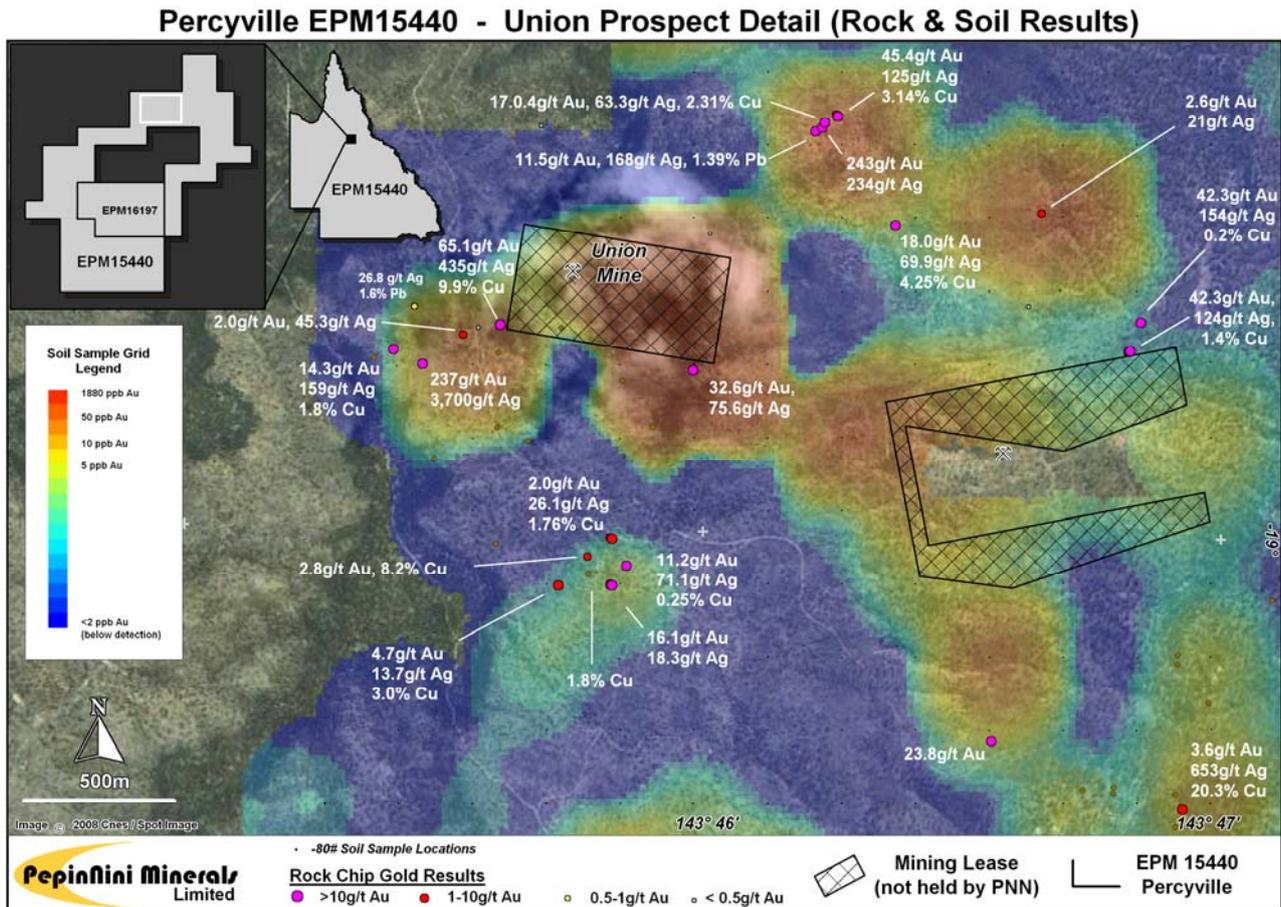
The Return EPM15547 - Rock Chip Results (Gold)



EPM 15440 (Percyville) and 16917 (Lower Percy)

Previous sampling defined four prospects on EPM 15440: Union, Spring Valley, Dividend Gully and Freedom. Initial sampling at the Union Prospect produced gold grades of up to 243 g/t and copper grades of up to 32.8%. Subsequent sampling has defined a major zone of quartz gossan with anomalous gold located to the east of the Union Mining Lease. The gossan crops out for more than 1km in strike length and represents a priority drill target.

A regional soil sampling program was completed during the quarter with samples collected on a 250m spaced grid. Results confirm the Union Prospect is highly prospective and a follow-up program is being designed which may initially involve shallow drilling to define zones of blind (non-outcropping) mineralisation.

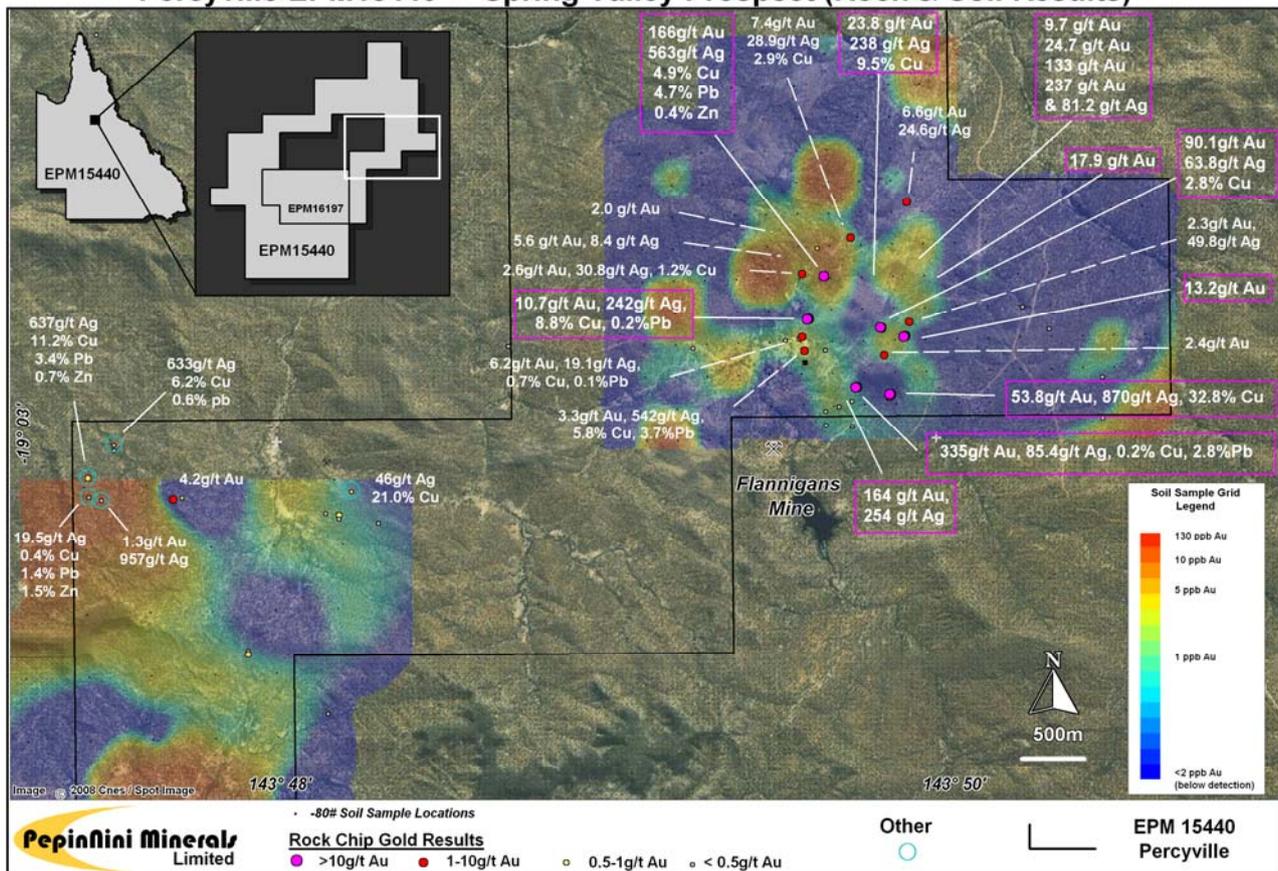


At Spring Valley, a further 23 rock chip samples were collected during the quarter and gold grades ranged from 0.19 to 237 g/t. A soil sampling program was also completed and confirmed the gold potential of the area with the results showing good correlation with rock chip sampling as well as defining two further zones of anomalous gold.

EPM 16289 – Sandy Creek

Initial sampling at Sandy Creek identified a zone of polymetallic mineralisation with high grades of gold, lead, zinc and copper. Further sampling during the quarter has defined a zone of anomalous silver, lead and copper mineralisation located within highly altered sediments along the contact zone with a regional granite. The best recent assays reported were 63 g/t silver, 3.79% lead and 16.7% copper (not same sample).

Percyville EPM15440 - Spring Valley Prospect (Rock & Soil Results)



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: (02) 9417 6212

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

Additional information for the Crocker Well Uranium Project can be found on the website:
www.crockerwell.com.au

Appendix 5B

Mining exploration entity quarterly report

Introduced 1/7/96. Origin: Appendix 8. Amended 1/7/97, 1/7/98, 30/9/2001.

Name of entity

PepinNini Minerals Limited

ABN

55 101 714 989

Quarter ended ("current quarter")

June 2009

Consolidated statement of cash flows

	Current quarter \$A'000	Year to date (... 12... months) \$A'000
Cash flows related to operating activities		
1.1 Receipts from product sales and related debtors		
1.2 Payments for (a) exploration and evaluation (b) development (c) production (d) administration	(2,544)	(7,090)
1.3 Dividends received		
1.4 Interest and other items of a similar nature received	619	1,125
1.5 Interest and other costs of finance paid		
1.6 Income taxes paid		
1.7 Other (PACE drilling refund – SA govt grant)		106
Net Operating Cash Flows	(2,215)	(7,020)
Cash flows related to investing activities		
1.8 Payment for purchases of: (a)prospects (b)equity investments (c)other fixed assets	-	(2)
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) – controlled entity contributing cash		
Net investing cash flows	-	(2)
1.13 Total operating and investing cash flows (carried forward)	(2,215)	(7,022)

+ See chapter 19 for defined terms.

Appendix 5B
Mining exploration entity quarterly report

1.13	Total operating and investing cash flows (brought forward)	(2,215)	(7,022)
	Cash flows related to financing activities		
1.14	Proceeds from issues of shares, options, etc.	3,265	3,265
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 – On market Share Buy-back	-	(270)
	Net financing cash flows	3,265	2,995
	Net increase (decrease) in cash held	1,050	(4,027)
1.20	Cash at beginning of quarter/year to date	10,344	15,421
1.21	Exchange rate adjustments to item 1.20		
1.22	Cash at end of quarter	11,394	11,394

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	115
1.24	Aggregate amount of loans to the parties included in item 1.10	

1.25 Explanation necessary for an understanding of the transactions

Within Item 1.2		
1.	Managing Director, Administration Director and non-executive directors' remuneration	\$115,000
2.	Reimbursement of Directors' expenses	0

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	2,000
4.2	Development	
Total		2,000

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	3,369	344
5.2	Deposits at call	8,025	10,000
5.3	Bank overdraft		
5.4	Other (provide details)		
Total: cash at end of quarter (item 1.22)		11,394	10,344

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 15419 EPM 15523	Statutory partial relinquishment Statutory partial relinquishment	100 sub-blocks 100 sub-blocks	50 sub blocks 15 sub blocks
6.2	Interests in mining tenements acquired or increased	nil	nil	nil

+ 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 Preference +securities <i>(description)</i>				
7.2 Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs, redemptions				
7.3 +Ordinary securities	78,202,499	78,202,499	N/A	N/A
7.4 Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs	(a)10,000,000	(a)10,000,000	35c	35c
7.5 +Convertible debt securities <i>(description)</i>				
7.6 Changes during quarter (a) Increases through issues (b) Decreases through securities matured, converted				
7.7 Options <i>(description and conversion factor)</i>	500,000 200,000 100,000		<i>Exercise price</i> 138cents 130cents 35cents	<i>Expiry date</i> 30 Nov 2010 1 Sep 2011 31 Dec 2010
7.8 Issued during quarter	200,000		80cents	1 Sep 2011
7.9 Exercised during quarter				
7.10 Expired during quarter				
7.11 Debentures <i>(totals only)</i>				
7.12 Unsecured notes <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 or other standards acceptable to ASX (see note 4).
- 2 This statement does give a true and fair view of the matters disclosed.



Sign here:

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Date **Friday, 31 July 2009..**

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 1022: Accounting for Extractive Industries* and *AASB 1026: Statement of Cash Flows* apply to this report.
- 5 **Accounting Standards** ASX will accept, for example, the use of International Accounting Standards for foreign entities. If the standards used do not address a topic, the Australian standard on that topic (if any) must be complied with.

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