

## Highlights:

### Solvent Extraction Pilot Plant, ANSTO

- The successful completion of the Solvent Extraction (SX) Pilot Plant program at ANSTO Minerals is a major milestone for the project, being the final step in the demonstration of the full metallurgical processing flow sheet
- Peak is one of a very few companies outside of China to have produced high purity separated products from a bulk sample of their projects mineralisation
- The ability to produce separated high purity rare earth oxide adds significant value to the project and allows access to wider markets
- Products are available for assessment by off take customers
- The Pilot Plant operation delivers important engineering, operating and cost data to feed into the Pre-Feasibility Study currently in progress

Below: High purity separated rare earth oxides produced from Ngualla mineralisation at ANSTO Minerals



MID+HEAVY



NEODYMIUM -  
PRASEODYMIUM



LANTHANUM



CERIUM

### Rare Earth Prices

- Rare earth prices improved significantly over the Quarter, with Ngualla's main value drivers showing the most improvement. Ngualla's 'basket price' for 1kg of REO produced rose 31% over the period
- The majority (85%) of Ngualla's projected revenue is underpinned by high value and Critical rare earths including neodymium, praseodymium and europium

### Pre-Feasibility Study

- The Pre-Feasibility Study (PFS) is on schedule for completion in the first Quarter 2014 and will include a revised economic assessment and maiden Reserve estimate for the Ngualla Project, which remains on track to achieve rare earth production in 2016.

### Corporate

- The Company has received expressions of interest from several new potential funding partners for the development of the Ngualla Rare Earth Project and remains in advanced discussions with a number of these parties.
- Post Quarter end, a research and development (R&D) rebate of \$1.39 million was received under the Federal Government's Research and Development Tax Incentive Scheme.
- The Company had \$0.9 million cash on hand at 30 September 2013 (prior to and excluding the above rebate).



## Ngualla Rare Earth Project, Tanzania

**Rare Earths, Niobium – Tantalum, Phosphate.**

**Peak Resources – 100%**

Peak is completing a Feasibility Study on the Ngualla Rare Earth Project in Tanzania. Ngualla is a recent discovery and the highest grade of the large undeveloped rare earth deposits.

Fundamental geological aspects of the central Bastnaesite Zone targeted for first production offer distinct advantages for development over other rare earth projects. These include the large size of the deposit, outcropping, high grade mineralisation suitable to open cut mining with low strip ratios, favourable mineralogy amenable to a demonstrated, low cost processing route and the lowest uranium and thorium levels of any major rare earth deposit in the world.



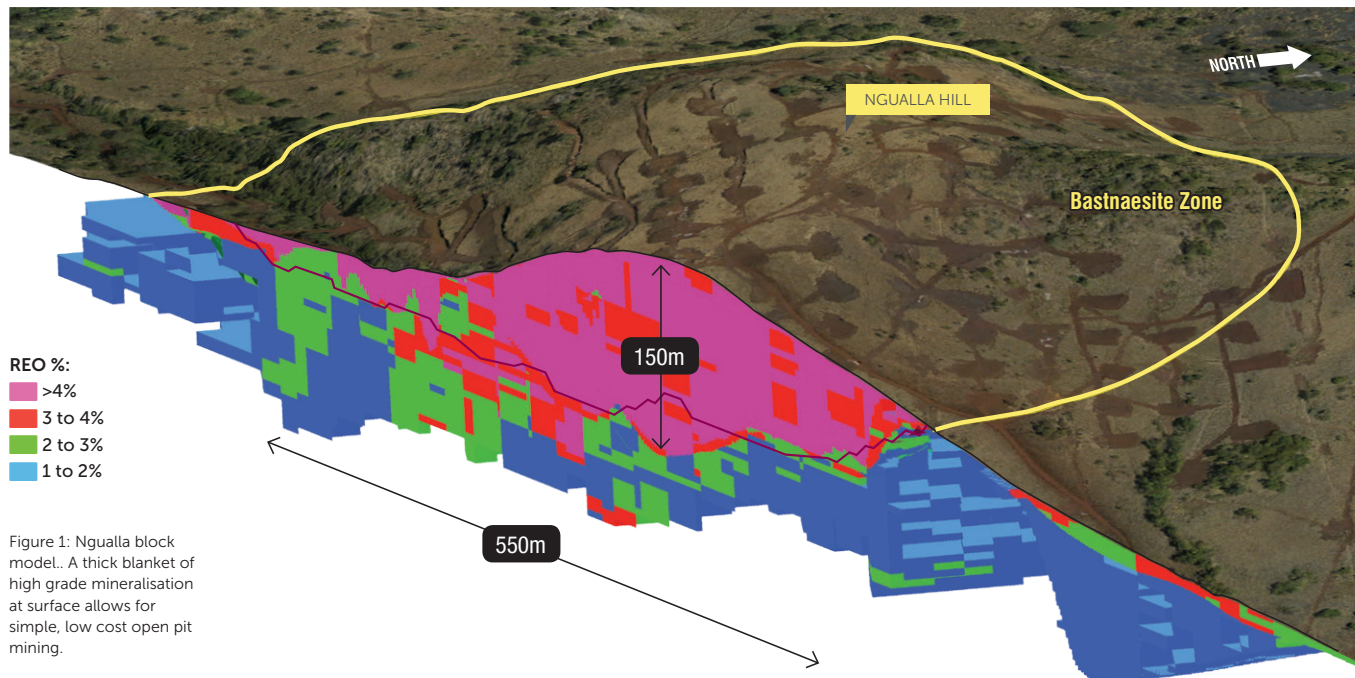
Location of Ngualla Project, Tanzania.

The favourable characteristics are reflected in the outcomes of the Scoping Study and preliminary economic assessment, which define very low capital and operating costs compared to other rare earth projects.

Ngualla is a leading rare earth project with an estimated NPV of US\$1.77 billion and pre-tax IRR of 60% for an initial 25 years production and an average grade of 5.35% REO. The weathered Bastnaesite Zone can support a mine life of over 50 years at a 10,000tpa REO base case production level.

Peak is moving forward with discussions with suitable strategic partners with the objective of seeing Ngualla fully funded through to production.

The Company continues to fast track the development of Ngualla with the aim of becoming a low cost, long term producer of high purity rare earth oxide products in 2016.



### Ngualla – a quality rare earth project from Resource to Products

RESOURCE	MINERALOGY	METALLURGY	PROJECT ECONOMICS
<ul style="list-style-type: none"> <li>High Grade (5.35% for 25 years)</li> <li>Low strip open pit mining</li> <li>&gt;50 year mine life</li> </ul>	<ul style="list-style-type: none"> <li>Favourable bastnaesite</li> <li>Very low uranium (14ppm) and thorium (42ppm)</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrated process</li> <li>Effective beneficiation</li> <li>Simple sulphuric acid leach</li> </ul>	<ul style="list-style-type: none"> <li>IRR 60%</li> <li>NPV \$1.77 billion</li> <li>Low Opex \$10.18/kg</li> <li>85% revenue from Nd-Pr &amp; Mid+heavy oxides</li> </ul>

## Solvent Extraction Pilot Plant

Operation of the Solvent Extraction (SX) Pilot Plant at ANSTO Minerals near Sydney continued and was completed just after Quarter end with the production of the fourth and final high purity separated rare earth oxide.

The successful completion of the pilot plant is a significant achievement by the Company and a major milestone for the project.

The program commenced in February 2013 with the preparation of a feed for the SX plant from a 1.3 tonne bulk sample of weathered Bastnaesite Zone mineralisation from Ngualla. ANSTO Minerals treated this sample using the simple sulphuric acid recovery process. A 99% purity mixed rare earth carbonate grading 56% REO was produced during this process and independently verified the efficiency of the sulphuric acid leach process for Ngualla's mineralisation.

High purity (+99.9%) separated neodymium-praseodymium and lanthanum oxides were produced during the Quarter to add to the mid and heavy rare earth oxide already produced. The cerium oxide was completed just after Quarter end.



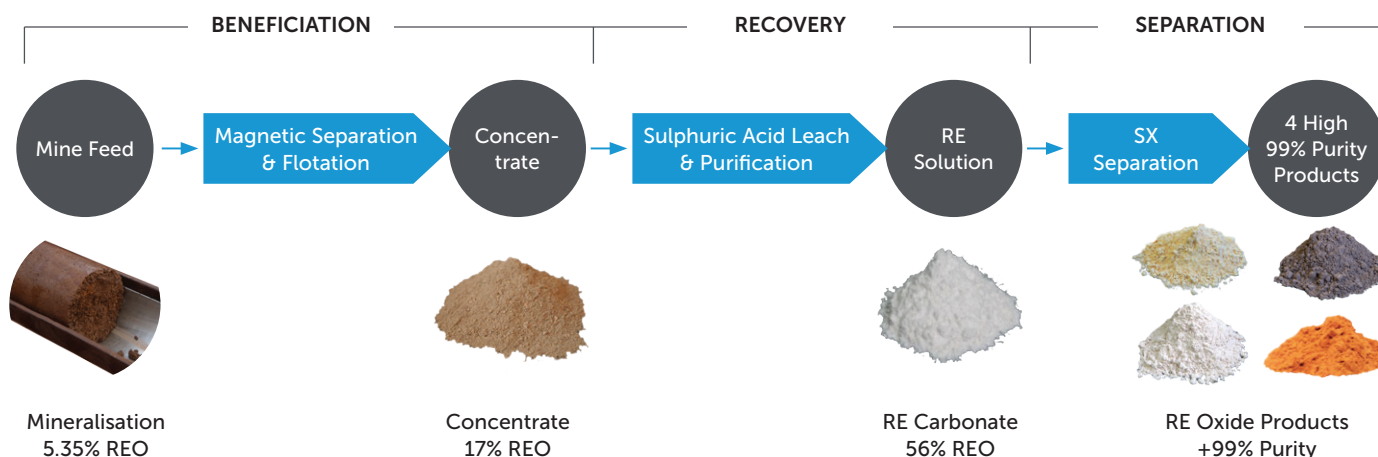
Photo: ANSTO Minerals Rare Earth Separation Facility.

The pilot plant has been a resounding success achieving the following:

- Demonstrating that Peak has the technology to produce high purity, value adding rare earth oxide products from the Ngualla mineralisation
- Provided samples for evaluation by potential off take partners
- Quantified operating data to accurately determine separation plant capital and operating costs

The completion of this final processing stage positions Peak as one of the select few companies outside of China to have practically demonstrated the entire process route from feed mineralisation to high purity rare earth oxide products (Figure 2).

Figure 2: Photographs of Ngualla's mineralisation and products through the mineral process



## Rare Earth Prices and Ngualla's Value drivers

Rare earth prices as listed by Metal Pages (FOB China) improved significantly over the September Quarter, with Ngualla's main value drivers of neodymium, praseodymium and europium showing the most improvement (Figure 3). Ngualla's overall 'basket price' for 1kg of REO product based on the project's in ground rare earth distribution increased 31% to US\$28.08 over the three month reporting period from 1st July 2013.



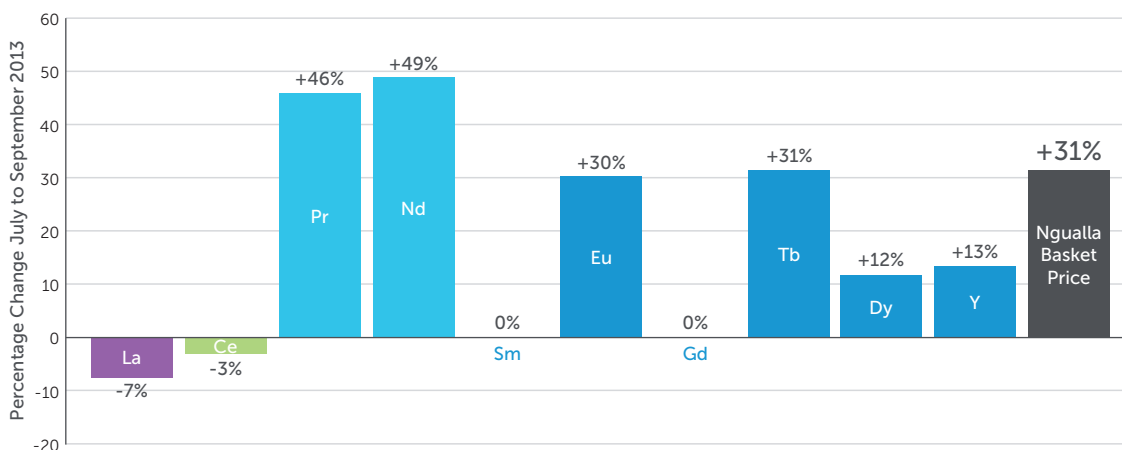


Figure 3: Individual rare earth oxide price changes and Ngualla's 'basket price' for 1kg of product, 1st July to 30th September 2013, Metal Pages FOB China

Neodymium, the largest single contributor at 48% of Ngualla's predicted revenue, increased in price by 49% over the three month period from 1st July 2013.

Neodymium price increases were closely followed by Ngualla's second and third highest revenue contributors (Figure 3) of praseodymium and europium at 46% and 30% respectively.

Neodymium and praseodymium are both in high demand for the manufacture of permanent magnets used in the expanding wind turbines, hybrid cars and personnel electronics industries.

These high value and strategic rare earths together contribute 85% to Ngualla's projected annual revenue, are predicted to be in undersupply in coming years and underpin the projects future revenue.

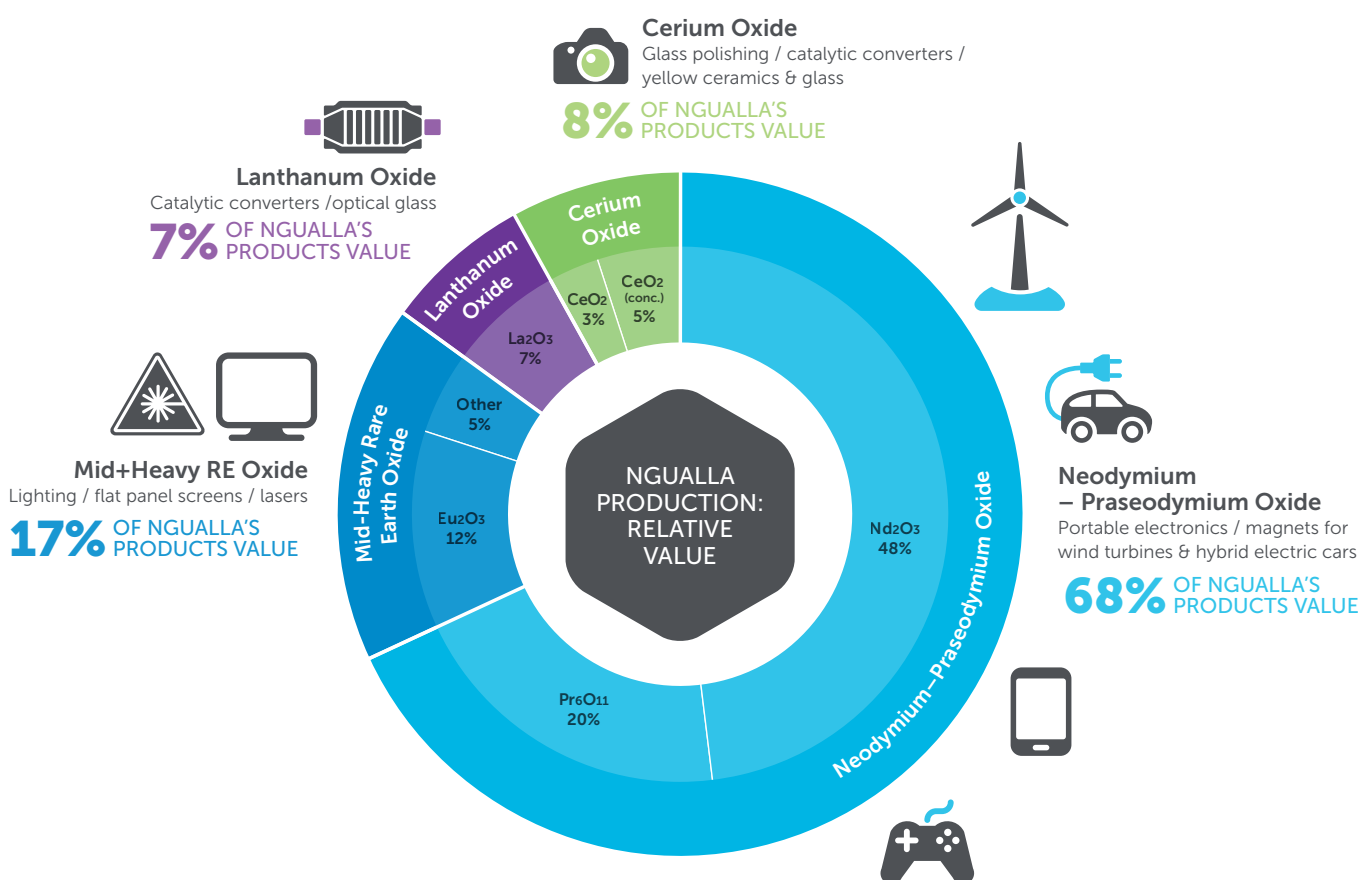


Figure 4: Relative value contributors by product type and constituent REO's. The majority (85%) of Ngualla's revenue is from the mid to heavy and neodymium – praseodymium high purity separated rare earth oxide products. Product Values based on in ground relative distribution of rare earths and product splits as per revised Scoping Study and rare earth prices as per 22nd August 2013 (MetalPages)

## Pre-Feasibility Study

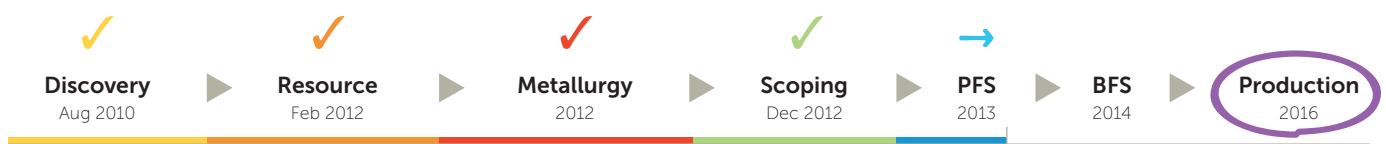
The Pre-Feasibility Study (PFS) is on schedule for completion in the first Quarter 2014.

The completion of Peak's solvent extraction pilot plant at ANSTO provides important engineering, operating and reagent data for input into the PFS and subsequent Definitive Feasibility Studies, significantly reducing the total project risk and allowing more accurate capital and operating cost estimates.

Peak is progressing the Pre-Feasibility Study to determine the optimum development strategy for Ngualla and to incorporate data from the various metallurgical optimisation test work programs, the SX Pilot Plant operation and the new Mineral Resource model.

Key areas under assessment are the size of the operation with respect to annual production rates, the geographical location of the acid leach recovery and SX plants and the optimum method of cerium production.

The Pre-Feasibility Study will include a revised economic assessment and maiden Reserve estimate for the Ngualla Project, which remains on track to achieve rare earth production in 2016.



## Community Responsibility

Peak Resources is committed to improving the communities in which it operates whilst maintaining best practise environmental management. Through provisions of employment opportunities, training, purchase of local products and funding for local building projects, win-win relationships have been established with the local community.

Two teacher's houses for the Ngwala Primary School were completed and handed over during the Quarter and work is already progressing on an additional two houses. Sports equipment was also provided to support the local team.



Clockwise from top left: Completed teachers houses, opening ceremony July 2013, Ngwala football team, foundation work on two additional teachers houses, September 2013.

## Tanzanian Gold Projects (Lake Victoria Gold Field)

### Peak Resources – Option to acquire 100%

Peak maintains an exploration base at Mwanza in the highly prospective Lake Victoria Gold Field region to support the Company's strategy of growing a portfolio of gold properties and to add value to these projects through exploration.

Peak withdrew from the Muhange Option agreement just after the end of the September Quarter but continues to assess additional high potential, 'low entry cost' gold and other commodity projects with the aim of expanding and diversifying the exploration portfolio in Tanzania to leverage off the Company's logistical and knowledge base in country.

## Corporate

The Company has received expressions of interest from several new potential funding partners for the development of the Ngualla Rare Earth Project and remains in advanced discussions with a number of these parties.

Post Quarter end, a research and development (R&D) rebate of \$1.39 million was received under the Federal Government's Research and Development Tax Incentive Scheme.

The Company had \$0.9 million cash on hand at 30 September 2013 (prior to and excluding the above rebate).

### Corporate Structure and Cash on Hand

The corporate structure as at the 30th September 2013 was:

ASX: PEK

OTCQX: PKRLY

Ordinary Shares on Issue: 275.6 million

Cash at hand: \$910,000

52 week range: 10.5c – 22.5c\*

Market Cap: \$31.7 million (at 11.5c)

Listed Options outstanding: 51.7 million

Unlisted Options outstanding: 7.9 million

Liquidity: 0.25million shares per day (av. over 3 mths\*\*)

\* From 01-Oct-12 to 30-Sep-13 \*\* Average from 01-Jul-13 to 30-Sep-13



**Alastair Hunter**

Executive Chairman

The information in this report that relates to Metallurgical Test Work Results based on information compiled and / or reviewed by Gavin Beer who is a Member of The Australasian Institute of Mining and Metallurgy and a Chartered Professional. Gavin Beer is a Consulting Metallurgist with sufficient experience relevant to the activity which he is undertaking to be recognized as competent to compile and report such information. Gavin Beer consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Exploration Results is based on information compiled and/or reviewed by Dave Hammond who is a Member of The Australasian Institute of Mining and Metallurgy. Dave Hammond is the Technical Director of the Company. He has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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'. Dave Hammond consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

**Appendix 5B**

**Mining exploration entity and oil and gas exploration entity quarterly report**

Rule 5.5

## Appendix 5B

### Mining exploration entity and oil and gas 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, 01/05/2013

Name of entity

Peak Resources Limited

ABN

72 112 546 700

Quarter ended ("current quarter")

September 2013

#### 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	-	-
1.2 Payments for (a) exploration & evaluation	(329)	(329)
(b) development	(383)	(383)
(c) production	-	-
(d) administration	(818)	-
1.3 Dividends received	-	-
1.4 Interest and other items of a similar nature received	12	12
1.5 Interest and other costs of finance paid	(12)	(12)
1.6 Income taxes paid	-	-
1.7 Other (provide details if material)	-	-
<b>Net Operating Cash Flows</b>	<b>(1,530)</b>	<b>(1,530)</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>	<b>-</b>	<b>-</b>
1.13 Total operating and investing cash flows (carried forward)	<b>(1,530)</b>	<b>(1,530)</b>

**Appendix 5B****Mining exploration entity and oil and gas exploration entity quarterly report**

1.13	Total operating and investing cash flows (brought forward)	(1,530)	(1,530)
	<b>Cash flows related to financing activities</b>		
1.14	Proceeds from issues of shares, options, etc.	-	-
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>Net increase (decrease) in cash held</b>	(1,530)	(1,530)
1.20	Cash at beginning of quarter/year to date	2,441	2,441
1.21	Exchange rate adjustments to item 1.20	(1)	(1)
1.22	<b>Cash at end of quarter</b>	910	910

**Payments to directors of the entity, associates of the directors, 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
1.24	Aggregate amount of loans to the parties included in item 1.10

## 1.25 Explanation necessary for an understanding of the transactions

1.23 includes salaries, directors fees paid to Directors and payments to Steinepreis Paganin Lawyers & Consultants, an entity related to Jonathan Murray

**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

n/a

## 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

n/a



## Appendix 5B

### Mining exploration entity and oil and gas exploration entity quarterly report

#### 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	315	315
3.2 Credit standby arrangements	-	-

#### Estimated cash outflows for next quarter

	\$A'000
4.1 Exploration and evaluation	160
4.2 Development	366
4.3 Production	-
4.4 Administration	1,142
<b>Total</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	510	437
5.2 Deposits at call	400	2,004
5.3 Bank overdraft	-	-
5.4 Other (provide details)	-	-
<b>Total: cash at end of quarter (item 1.22)</b>	<b>910</b>	<b>2,441</b>

**Appendix 5B****Mining exploration entity and oil and gas exploration entity quarterly report****Changes in interests in mining tenements and petroleum tenements**

	Tenement reference and location	Nature of interest (note (2))	Interest at beginning of quarter	Interest at end of quarter
6.1	Interests in mining tenements and petroleum tenements relinquished, reduced or lapsed			
6.2	Interests in mining tenements and petroleum tenements acquired or increased			

**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> (description)				
7.2 Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs, redemptions				
7.3 <b>*Ordinary securities</b>	275,556,886	275,556,886		Fully Paid
7.4 Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs				
7.5 <b>*Convertible debt securities</b> (description)				

**Appendix 5B**

**Mining exploration entity and oil and gas exploration entity quarterly report**

7.6	Changes during quarter (a) Increases through issues (b) Decreases through securities matured, converted				
7.7	<b>Options</b> (description and conversion factor)	1,000,000 6,250,000 541,667 150,000 51,659,251	- - - - 51,659,251	<i>Exercise price</i> \$1.50 \$0.55 \$0.75 \$0.55 \$0.25	<i>Expiry date</i> 26 May 2014 20 February 2017 24 February 2014 3 March 2018 31 July 2014
7.8	Issued during quarter				
7.9	Exercised during quarter				
7.10	Expired during quarter				
7.11	<b>Debentures</b> (totals only)				
7.12	<b>Unsecured notes</b> (totals only)				

## 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 5).
- 2 This statement does /does not\* (*delete one*) give a true and fair view of the matters disclosed.



Sign here:

Company secretary

Date: 21 October 2013

Print name: Jeffrey Dawkins

## 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.

## Appendix 5B

### Mining exploration entity and oil and gas exploration entity quarterly report

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- 2 The “Nature of interest” (items 6.1 and 6.2) includes options in respect of interests in mining tenements and petroleum 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 or petroleum 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.
- 5 **Accounting Standards** ASX will accept, for example, the use of International Financial Reporting 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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