

DECEMBER 2009

QUARTERLY REPORT



PEAK
RESOURCES LTD

HIGHLIGHTS

Ngualla Project (Tanzania)

- **Exploration completed on the Ngualla Carbonitite broadened the scope of the project to a Phosphate, Rare Earths, Niobium, Tantalum, Titanium and Base Metals project showing considerable potential for a major discovery.**
- Work confirms major carbonitite structure with extensive zones of mineralisation
- Three styles of mineralisation have been identified. Firstly hard rock primary mineralisation. Secondly, alluvial with one extensive +2000m x +500m area of alluvials and a second undefined alluvial zone. Thirdly, Base Metals, Copper, Lead, Zinc with lesser Molybdenum on the margins and Copper mineralisation within the carbonatite.

Test pits within the alluvials confirm that Phosphate and Lanthanum are developed from surface to the base of the pits (4m) with +1% Lanthanum and +10% P₂O₅ indicating that mineralisation is distributed through the alluvial profile.

- Infill sampling continued to define bedrock anomalism with Lanthanum and Phosphate.
- Approximately 28% of results for REE and associated elements have been received from the Perth laboratory, the results of which continue to highlight and define anomalous areas. Results to date from Phase 2 geochemistry show:

<u>REE</u>	<u>MAX. SOILS</u>	<u>HEAVY RARE EARTH:</u>	<u>MAX. SOILS</u>	<u>NON RARE EARTHS:</u>	<u>MAX. SOILS</u>
Cerium	2.26%	Yttrium	524ppm	Niobium	5740ppm
Lanthanum	1.20%			Tantalum	232ppm
Neodymium	7400ppm			Titanium	4.69%
Proseodymium	2000ppm				

Imweru Gold Project (Tanzania)

- Imweru Gold Project detailed sampling and geological mapping further refines gold target with two parallel gold anomalous trends (+4000m) now at a drill ready stage.
- Imweru Gold Project licence issued by the Minister for Energy and Minerals.

Western Australian Projects

- Field reconnaissance works undertaken at Three Rivers Project.
- Planning for exploration of Yellowdine Nickel Project commences.

Tanzania:
Gold Projects:
• Geita West (Imweru)
• North Mara
• Ikoma
• Igunga

Phosphate & REE:
• Ngualla

Western Australia:
Gold:
• Three Rivers
• Menzies

Nickel:
• Yellowdine

Base Metals:
• Ashburton

Stock Exchange
Australian Stock
Exchange Symbols:
PEK, PEKO, PEKOA

Issued Capital
114,595,794 Shares
23m Dec '10 Options
0.6m Dec '10 Options

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OVERVIEW

The December Quarter has been one of the most active for the Company, focused on exploration in Tanzania.

The issue of the Ngualla licence by the Minister for Energy and Minerals in September enabled the Company to initiate its exploration programmes with the principle aim to develop drill targets for the 2010 field season. The Ngualla Project fieldwork has seen this project evolve from a phosphate target into one which has demonstrated potential for Rare Earths, Niobium, Tantalum, Titanium and Base Metals. Extensive anomalous zones have been identified through soil geochemistry and detailed geological mapping.

Preliminary exploration on the Imweru gold prospect (Geita West Project) consisted of geological mapping which further defined extensive gold mineralised areas. Data generated from this work has been integrated into the existing data base and has been integral for targeting drilling for 2010.

The Company is moving to finalise the acquisition of a more advanced gold project in the Lake Victoria region of Tanzania.

Ngualla Project (Peak earning 80% from Zari Exploration)

Commodities – Phosphate, Rare Earths, Niobium, Tantalum, Titanium and Base Metals.

A Company release to ASX dated 6 January 2010 highlighted the existence of extensive Rare Earths plus Niobium, Tantalum and Titanium. Since then, geochemical data has continued to be integrated into the Company's data base as results from over 1,100 samples are being received from the Tanzanian laboratory. In excess of 400 samples have been on-sent to the Australian laboratory for further analysis. At the time of writing, the Company is in receipt of the majority of Tanzanian assays and approximately 130 samples from the Australian assay laboratory are to hand.

Initial sampling was completed on a 200m x 200m offset grid with four lines sampled on 50m centres. Infill sampling was subsequently carried out within anomalies identified in phase one to close down selected areas to 150m x 100m and 50m x 100m spacing. Samples from the initial geochemical survey were reassayed in Australia as a check with generally good correlation on both sets of results.

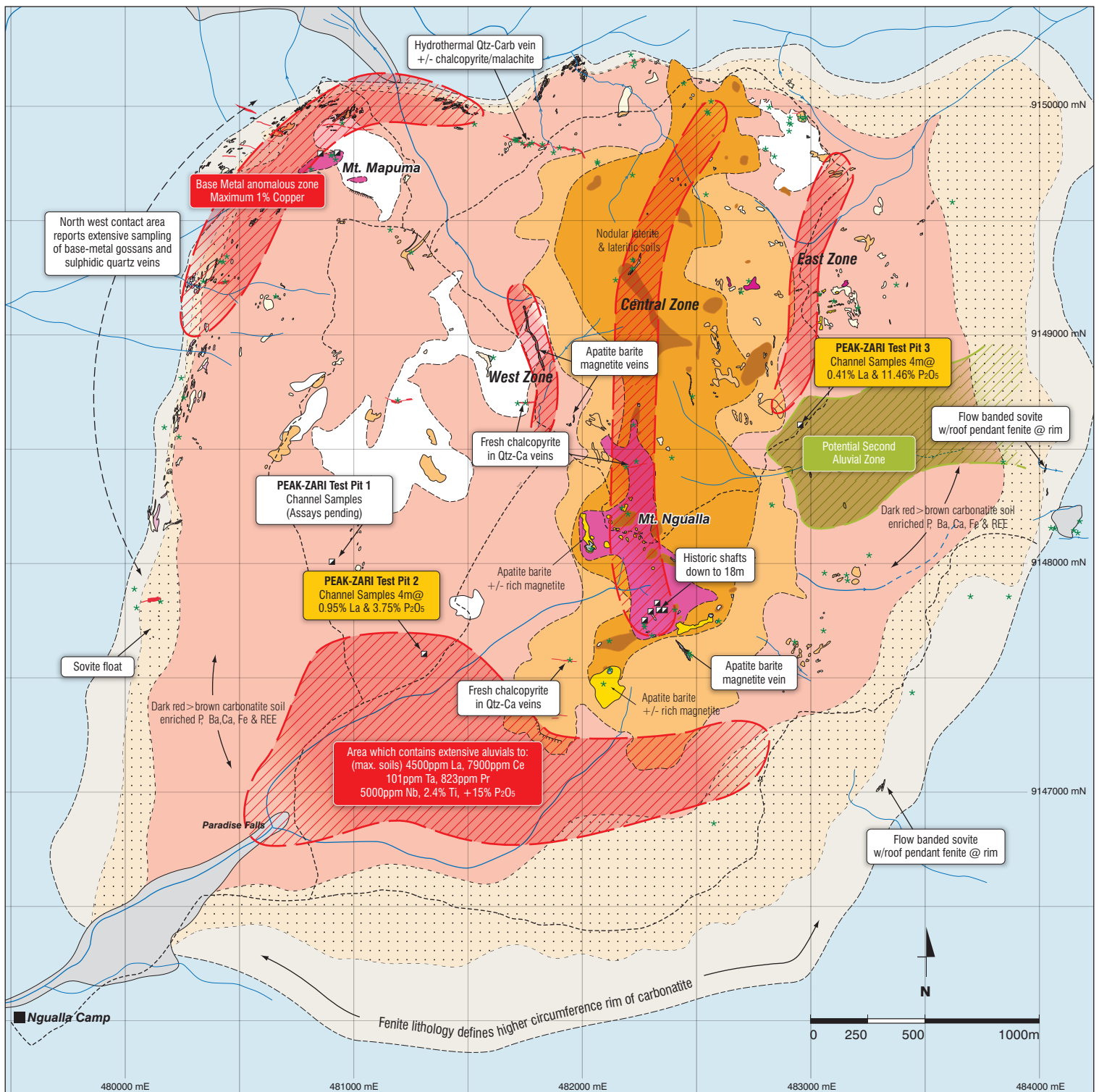


Above: Extensive outcropping of phosphate mineralisation at Ngualla.

Currently, six targets have been identified (see Fig 1). These targets will be further refined on receipt of the balance of Perth results. Of potential significance are two distinct types of mineralisation have been identified, one of which represents bedrock anomalism. They are designated west zone, central zone and east zone as shown highlighted on Fig 1.

The second target has two areas prospective for alluvial material. These areas were partially outlined in the first phase of geochemical work. Subsequent results further confirm and extend the prospective zones with maximum phosphate in soils +20% P₂O₅ and Lanthanum 1.20%. Results received from Australian assay laboratory from phase one exploration highlighted a strong correlation between the Lanthanum and Phosphate and other Rare Earths and associated minerals (Fig 1).

Three test pits were excavated during the second phase of exploration within the alluvial zones. There were two aims; firstly to test the depth of alluvium, and secondly to determine the distribution of minerals through the alluvials. Results are to hand on pits 2 and 3 with results awaited on pit 1. Pit 1 was developed on an area of low order anomalism whereas Pit 2 was on an area of moderate geochemical anomalism and Pit 3 on a second zone considered to be prospective for alluvials (see Fig 1).



PEAK RESOURCES - ZARI

NGUALLA PROJECT TANZANIA

**Figure 1: Geology & approximate locations
of anomaly for various elements**

January 2010 (Grid ARC 1960 Zone 36)

West Zone Max soils	Central Zone Max soils	East Zone Max soils
Nb 3000ppm	Nb 6000ppm	Nb 7000ppm
Pr 507ppm	Pr 952ppm	Pr 578ppm
Ta 99ppm	Ta 187ppm	Ta 187ppm
Ce 4800ppm	Ce 1.01%	Ce 6200ppm
La 2200ppm	La 5500ppm	La 3300ppm
Ti 2.70%	Ti 2.2%	Ti 3.0%
P ₂ O ₅ +10.0%	P ₂ O ₅ +15.0%	P ₂ O ₅ +15.0%

GEOLOGY & FEATURES

- Brown Soils - derived from weathered fenite & tuff / rhyo-dacite.
- Rich dark-red/burgundy soils - derived from weathering & enrichment of carbonatite facies colluvium.
- Massive colloform calcite deposits (Toofa).
- Massive, dark-brown nodular laterite & minor re-healed colluvial laterite.
- Lateritic & intensely Fe indurated soils proximal to laterites & generally also at higher elevations.
- Light tan-brown, weakly laminar, Silicious +/- coarse euhedral magnetite, +/- barite.
- Intense magnetite enrichment as coarse euhedral or crystal-crowded magnetite within light tan-brown silicious apatite-barite veins.
- Phase-1 sovite (carbonatite). Massive often flow banded +/- intense magnetite enrichment.
- Phase-2 Ferrocronatite. Massive, homogeneous as dykes or breccia matrix.
- Phase-3 Ferromagnesian carbonatite; massive, late stage & enriched in REE, Mo, magnetite & phosphorus.
- Porphyritic tuff or rhyo-dacite.
- Fenite 'roof-pendants' at carbonatite contacts.
- Fenite; strongly brittle-brecciated, silica & K altered contact unit.
- Hydrothermal quartz veins; generally east-west, sub vertical to steep dip south.
- Rockchip. "RMTZ" prefix. Taken specifically for rock geochemistry & petrology.
- Creeks & drainage; generally dry, however main creeks are perpetually draining the carbonatite through dry months. Creeks in rich-red soils down to 10m deep.
- Shaft; historic workings by Williamson or Anglo-American. Deepest recorded shaft is ~18m.
- Anomalous Zone.
- Potential Second Alluvial Zone.

- Pit 1** 9148000N/480900E 4m (results not yet available)
Pit 2 9147600N/481300E 4m @ 0.95% Lanthanum 3.75% P₂O₅
Pit 3 9148600N/492950E 4m @ 0.41% Lanthanum 11.46% P₂O₅.

Continuous channel samples were obtained on 50cm width per sample down one wall of each pit.

Bedrock was not reached in any pit with mineralisation shown as being evenly distributed throughout the alluvial material. The results of this work are considered very positive and while subject to further confirmation by analysis carried out in Australia, the Company believes these alluvial areas have high tonnage and grade potential and significantly enhance the Project's prospectivity.



Above: RMTZ-73: Typical gossan from margin of carbonitite.

As advised to the market on 6 January 2010 initial sampling was completed on a 200m x 200m grid with selected lines (four) being sampled on 50m spacing. The first results from SGS Perth highlighted extensive anomalous geochemical results for rare earths being:

REE	MAX. SOILS	%
Cerium	10,100 ppm	(1.01%)
Lanthanum	5,480 ppm	(0.54%)
Neodymium	3,130 ppm	(0.31%)
Proseodymium	664 ppm	

Other elements which are non rare earth but may have potentially significant value are:

ELEMENT	MAX. SOILS	%
Niobium	8,050 ppm	(0.805% Nb)
Tantalum	172 ppm	
Titanium	34,700 ppm	(3.47% Ti)

Infill sampling carried out on the bedrock sources for the alluvials are currently being integrated into the Company's data base and continue to confirm these zones. More recent infill results (post January 6 release) continue to report high levels of REEs, Niobium, Tantalum and Titanium include:

Most recent results from Perth:

Anomalism defined by those exceeding the bottom cut for each element as shown:

REE	BOTTOM CUT	RANGE	NO. OF SAMPLES PER ELEMENT
Cerium	2000ppm	2000ppm – 2.26%	78 samples
Lanthanum	2000ppm	2000ppm – 1.20%	44 samples
Neodymium	1000ppm	1000ppm – 7400ppm	70 samples
Proseodymium	500 ppm	500 ppm – 2000ppm	36 samples

Non Rare Earth metals:

Niobium	1000ppm	1000ppm – 5740ppm	35 samples
Tantalum	50 ppm	50 ppm – 232ppm	19 samples
Titanium	1%	1% - 4.69%	51 samples

Heavy Rare Earth:

Yttrium	200ppm	200ppm – 524 ppm	43 samples

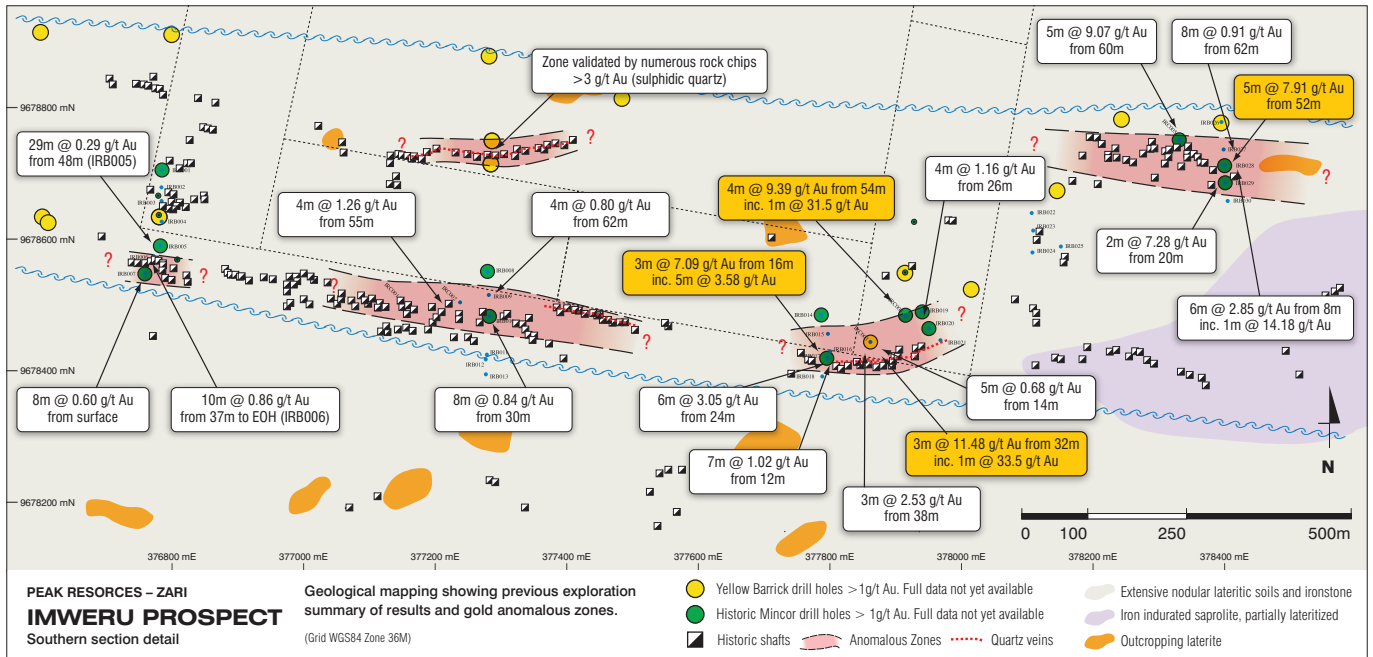
• SGS Perth analysis only used, other than pit samples for Lanthanum which is subject to check analysis in Perth. It is proposed to carry out further studies into heavy rare earth elements prior to commenting on their implications.

• Note: Most results highlighted on Figure 1 are based mainly on Phase 1 exploration and maximum assay results will change on the completion of integration of all data. Further, as more results are received from the Perth laboratory the number of samples and maximum values may change.

Infill sampling within the anomalous base metal zones has given further encouragement. While these targets are important they are not currently a major priority, with the Company's focus to continue on the alluvial and bedrock source for rare earths and associated elements.

Imweru Gold Prospect (Geita West Project, Lake Victoria Goldfield)

During the quarter further field work consisting of geological mapping and data review completed with the aim of further validating existing gold anomalous zones. This program has been successful and better defined two gold trends with a composite strike length of approximately 4,000m new data has been integrated into the Company's data base and will form the basis of drilling in 2010 field season.



Target 1

Open ended gold zone marked by extensive artisanal workings over +/-300m historical drill intersections which include:

HOLE ID	EAST	NORTH	AZ/DIP	FROM	INTERCEPT	G/T GOLD
IGRC 5	378332	9678752	190/-65	60m	5m	@ 8.69g/t
IGRB 29	378402	9678686	180/-60	20m	2m	@ 7.28 g/t
IGRB 27	378398	9678737	180/-60	52m	5m	@ 7.91 g/t

The gold corridor extensions are largely soil covered, however, there is evidence that the structure which hosts this mineralisation extends for approximately 2km.

Target 2

As with Target 1, this zone is marked by intensive artisanal gold workings over +/-1500m with very broad spaced drilling intersecting wide zones of low grade/sub-economic mineralisation in Rotary-air-blast drilling such as IRB-05 376782E/9678590N 180 AZ/-60° DIP intersected from 48m, 28m @ 0.29 g/t gold. This highlights that it is a substantial gold mineralised system. Other encouraging results from this trend include:

HOLE ID	EAST	NORTH	AZ/DIP	FROM	INTERCEPT	G/T GOLD
IRB -16	377801	9678430	180/-60	16m	3m	@ 7.09 g/t
IGRC-4	377915	9678484	184/-60	54m	4m	@ 9.39 g/t

Target 3

Centred on 377397E/9678844N, a rock chip sample of lateritic material with fractured quartz clasts assayed just over 20g/t gold. This sample lies within an area which is largely covered with iron rich soils and no historical exploration or artisanal gold mining were observed.

Igunga Gold (Lake Victoria Goldfield)

No work was carried out within the Igunga Project during the December quarter, though it is proposed to carry out a programme of reconnaissance rotary-air-blast drilling or air core drilling in the June quarter to test anomalies.



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WESTERN AUSTRALIAN PROJECTS

Three Rivers Project EL52/1663 (Peak Resources 100%)

The Three Rivers Project is located about 25 kilometres to the west of Sandfire Resources De Grussa (Doolgunna Project) and approximately 130km NNE of Meekatharra in Western Australia.

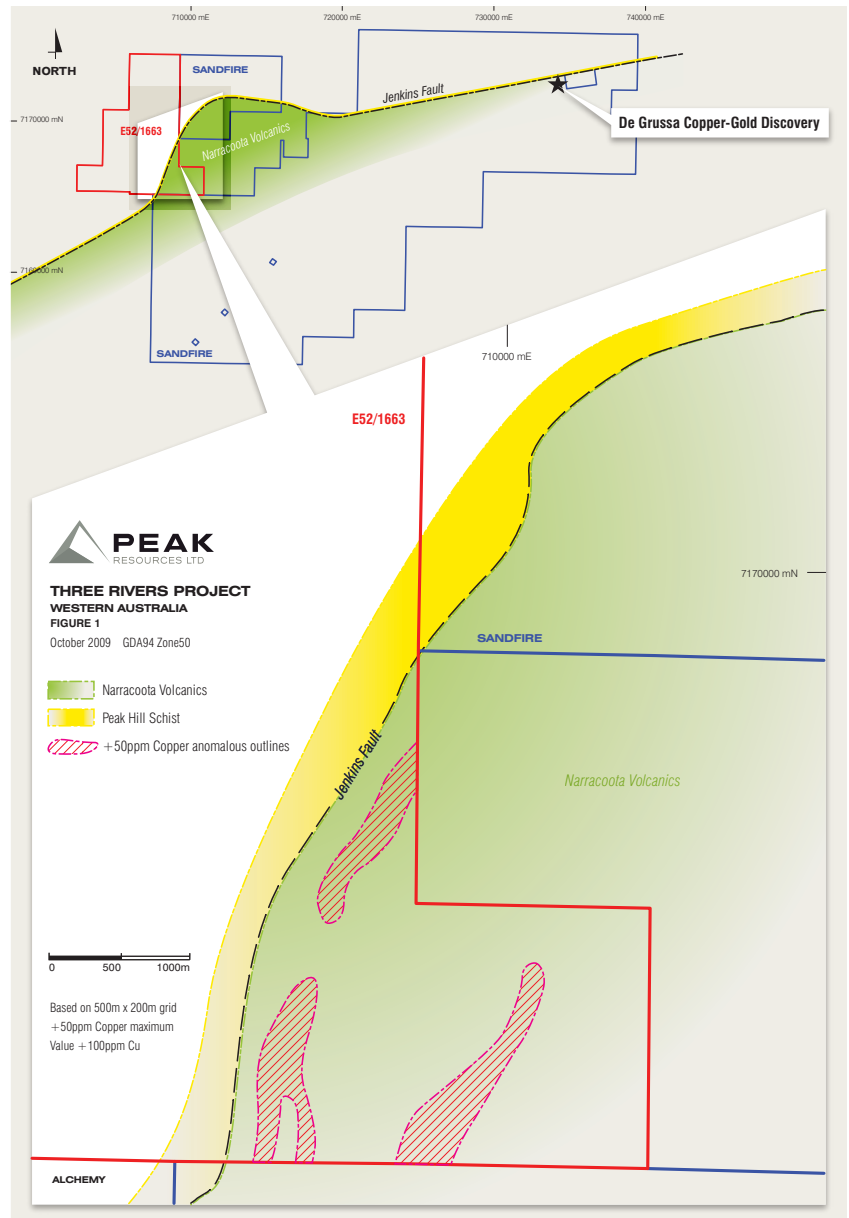
Work during the quarter had been curtailed while the Company sought an extension to the exploration licence.

An extension to the licence was granted in mid November enabling geological mapping to be undertaken.

Earlier studies by Peak had highlighted that the Jenkins Fault passing through E52/1663 and that the Narracoota Volcanics are present. A reassessment of data generated by a broad spaced (200m x 500m) geochemical (soil) survey at the Three Rivers Project showed anomalous base metal values with an area of anomalous copper (refer release date 28 October 2009).

During the quarter the Company undertook field reconnaissance including geological mapping which highlighted extension of the Jenkins Fault passing through the exploration licence. The Jenkins Fault lies on the contact between the Narracoota Volcanics and the Peak Hill Metamorphics.

Peak is currently seeking heritage clearance with the native title holder prior to undertaking a ground geophysical programme. It is intended to use the geophysical programme to generate targets for drilling in the near term.



Yellowdine Nickel Project (option to acquire 100%)

Following the grant of the Yellowdine exploration licence during the December quarter, the Company has completed a review of previous field work. It is intended to commission a geophysical survey over the target area during the March quarter.

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CORPORATE

During the quarter the Company undertook a placement of 10.6 million shares at 8 cents per share to sophisticated investors to raising \$848,000 for exploration activities. A further \$3m was raised in January under an issue to sophisticated investors of 20 million shares at 15 cents

At the end of the quarter the Company had cash on hand of \$1.28 million.

Mr. Alastair Hunter was appointed as Chairman of the Company's board of directors in January 2010.

A handwritten signature in black ink, appearing to read "Mark Maine", is written over a horizontal line.

Mark Maine

Executive Director

The information in this report that relates to Exploration Results is based on information reviewed by Rodney Foster who is a Member of The Australasian Institute of Mining and Metallurgy. Rodney Foster is a 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'. Rodney Foster consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.