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abn: 61 120 658 497 asx code: PIM

DECEMBER 2006

QUARTERLY REPORT

31 January 2007

HIGHLIGHTS

Exceptional ASX listing debut in January 2007, with Prime trading up to 250% premium to the 20 cent share issue price.

One loyalty Option to be issued in May 2007 at a price of 1 cent for every two Prime shares held. The options will be listed on the ASX and have an exercise price of 20 cents expiring 31 October 2009.

Detailed low level airborne radiometric/magnetic survey planned to commence on the Lake Mason uranium deposit area in March 2007.

Detailed low level airborne magnetic survey planned to commence at Barrambie vanadium/iron area after completion of the Lake Mason survey.

In line with its objectives, Prime is also identifying overseas mining project opportunities with the view of continuing to increase wealth for all Prime shareholders.

OVERVIEW

Prime Minerals Limited ("Prime") successfully listed on the Australian Stock Exchange ("ASX") on the 4th January 2007 and has since traded up to a 250% premium to the 20 cent share issue price. Prime is a uranium explorer that is also actively investigating resource opportunities with the aim to establish itself as a player in the emerging uranium industry. Uranium is the fuel of the future with rising fossil fuel prices and green house constraints, and in addition, fundamental growth driven by nuclear reactor builds, specifically driven by China, India and Russia. Demand is expected to exceed mine supply for many years.

As stated in the Prime Prospectus, it should be noted that all Prime shareholders registered on a record date in May 2007 will be entitled to participate in a non-renounceable entitlements issue of Loyalty Options on the basis of one option for every two shares held at a price of one cent per option. The options will expire 31 October 2009 and will have a 20 cent exercise price and Prime will apply for official quotation on the ASX.

Prime's 100% owned Lake Mason uranium project is located 40kms southwest of BHP Billiton's Yeelirrie deposit, which is the world's largest calcrete uranium deposit containing 52,000t of uranium (Refer Figure 1). The objective of the radiometric survey is to define surface radiometric uranium anomalies additional to Bolitho Bore, where minor exploration defined a pre-JORC target mineralisation of 170,000kg (374,000lbs) of uranium. A secondary objective is to define litho/chemical and hydrological trap sites where uranium mineralisation has accumulated below the surface, followed by a detailed air core drilling programme.

Prime's Barrambie vanadium/iron project is located near the town of Sandstone in Western Australia (Refer Figure 1). The objective of this survey is to define extensions to the known Barrambie vanadium/iron mineralisation, and to define litho/structural positions favourable to the deposition of gold mineralisation. Prime's Barrambie project surrounds Reed Resources Limited (ASX Code; RDR) JORC compliant Indicated and Inferred mineral resource of 39Mt at 0.49% vanadium oxide and 11% titanium oxide and 22% iron oxide with a reported NPV of A\$379m. Prime's Barrambie project includes 24km of highly magnetic sill and has the potential to host a significantly larger resource.

Prime's Barrambie project also contains numerous gold targets over 25kms of strike with a current pre-JORC target mineralization of 161,522t at 3.34g/t gold for 17,354 ounces. Barrambie contains structural similarities to Troy Resources NL (ASX Code; TRY) nearby Lord Nelson Gold mine, located near the town of Sandstone in Western Australia.

LAKE MASON URANIUM PROJECT REVIEW

Prime has commissioned a detailed low level radiometric/magnetic survey to be flown over its Lake Mason project area, commencing in March 2007. The objective is to define surface radiometric anomalies additional to Bolitho Bore and others for immediate follow up drill testing, and to define litho/chemical and hydrological trap sites where uranium mineralisation may have accumulated below the surface.

Prime holds a 100% interest in two tenements covering some 426km² located approximately 40km SW of BHP Billiton's Yeelirrie calcrete uranium deposit in Western Australia, the largest calcrete deposit in the world containing 52,000t of uranium (Refer Figure 1). Prime's tenements cover the Lake Mason drainage system and surrounding areas, which have formed over predominantly Archaean granitoids and minor greenstones. It is assumed that the Lake Mason and Yeelirrie lake systems evolved during similar climatic conditions over a similar granitoid basement, but historical records show that there has been no systematic exploration over the Lake Mason drainage system for uranium.

Minor previous exploration with shallow air core drilling at the Bolitho Bore has defined pre-JORC target mineralisation of approximately 170,000kg U₃O₈ (374,000lbs) of uranium. This mineralisation is open to the south under the lake, and open to the west (upstream) and east (downstream).

Several other areas along this defined channel are covered by either water or non-radioactive sheet-wash sands and sediments that may have obscured a radiometric response in previously flown widely spaced (200m – 400m) airborne surveys. Prime believes these areas of shallow cover offer an excellent opportunity for the discovery of additional blind (buried) or partly blind uranium mineralisation, using very detailed low level radiometric surveying.

A key feature in the targeting of calcrete uranium deposits is the identification of hydrological trap sites within the palaeochannel systems. Prime has also targeted the intersection of the east-west oriented Lake Mason palaeo-channel with the north-south oriented Booylgoo Range greenstone belt, and several significant bends in the channel, as potential trap sites for uranium mineralisation.

BARRAMBIE VANADIUM/IRON and GOLD PROJECT REVIEW

Prime has also commissioned a detailed low level radiometric/magnetic survey over the northern section of its Barrambie project area, following the completion of its Lake Mason survey. The objective of this survey is to define extensions to the known Barrambie vanadium/iron mineralisation (within the titaniferous magnetite horizons), and to define litho/structural positions favourable to the deposition of gold mineralisation.

Prime has an 80% interest in two tenements at Barrambie, located approximately 60 km NNW of Sandstone in Western Australia. The tenements are considered prospective for vanadium-titanium-iron and deposits of gold. The tenements cover 418km² of the Archaean Barrambie Greenstone Belt and enclosing granitoids. The centrally located Barrambie Sill, a layered mafic igneous complex, typically contains a core of concentrated vanadium bearing titaniferous-magnetite.

Reed Resources Ltd ("Reed") holds a vanadium-titanium-iron deposit in the Bay-Cove area, within a narrow 500 m wide, 11 km long mining lease which is centrally located within Prime's Barrambie project. Reed has published a JORC compliant Indicated and Inferred mineral resource of 39.2 Mt at an average grade of 0.49% V₂O₅ and 11.3 % TiO₂ and 22.3% Fe₂O₃ down to 80 metres depth over a strike length of 4.4 kilometres. Coarse airborne geophysical data and previous mapping, drilling and rock chip sampling indicate that Prime's tenements contain 24 strike kilometres of similar magnetic bodies. The new low-level airborne magnetic survey will largely define these bodies.

Previous exploration between 1985 and 1997 at Barrambie has defined the extensions of known gold mineralisation and also discovered new zones of mineralisation. Published pre-JORC target mineralisation spread over several deposits totals 161,522 tonnes at 3.34 g/t Au for 17,354 ounces. The planned airborne survey will help define gold targets within shear zones that are splays off the major north northwest trending Edale Fault, a structural position similar to the Lord Nelson deposit being mined by Troy Resources NL near Sandstone, approximately 80km to the SSE.

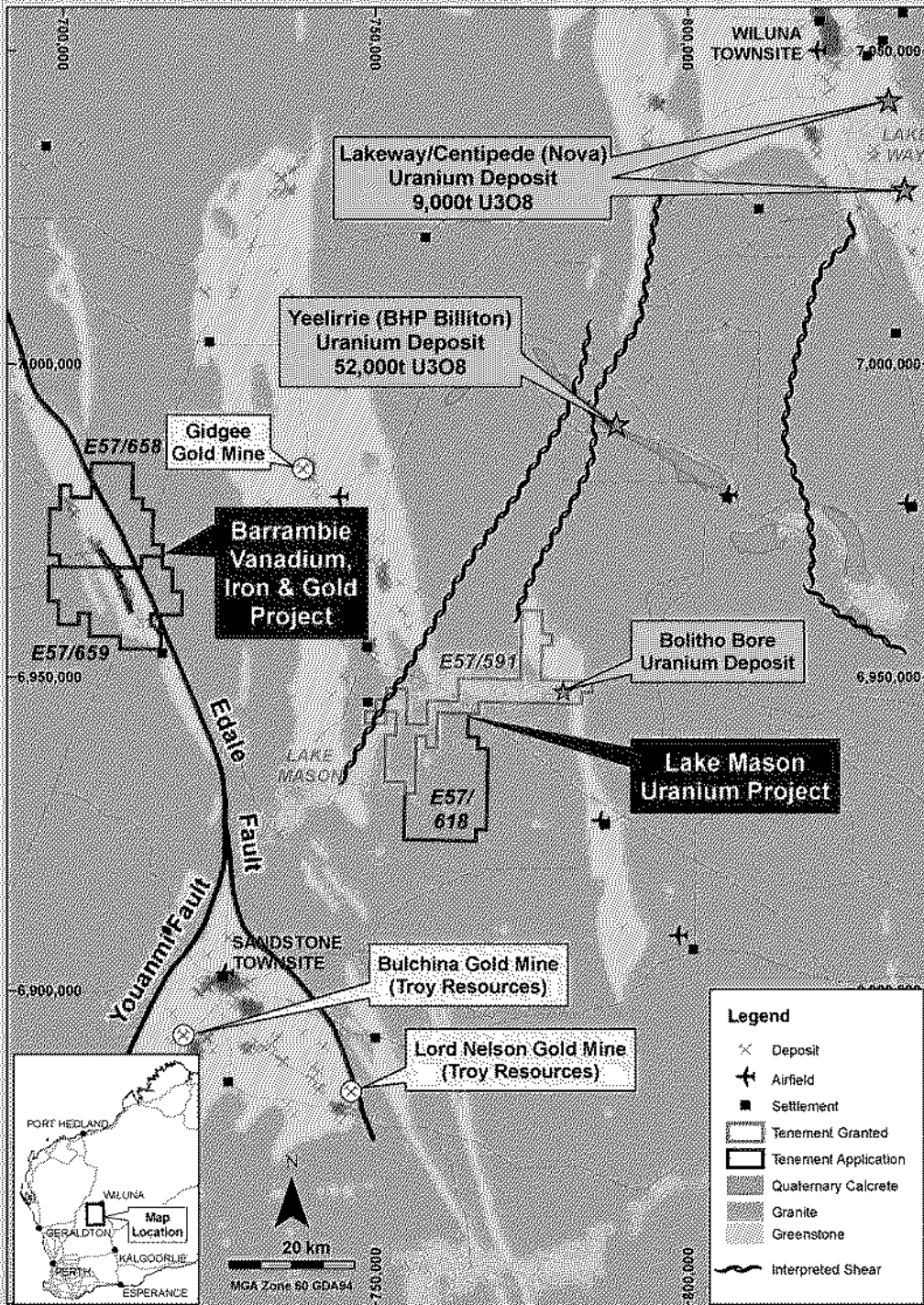
Yours Sincerely,

Vince Hyde

EXECUTIVE DIRECTOR
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PRIME MINERALS LIMITED - Barambie & Lake Mason Location Plan - Figure 1

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

PRIME MINERALS LIMITED

ABN

61 120 658 497

Quarter ended ("current quarter")

31 DECEMBER 2006

Consolidated statement of cash flows

Cash flows related to operating activities		Current quarter \$A'000	Year to date (..... months) \$A'000
1.1	Receipts from product sales and related debtors		
1.2	Payments for (a) exploration and evaluation (b) development (c) production (d) administration	(177)	(234)
1.3	Dividends received		
1.4	Interest and other items of a similar nature received		
1.5	Interest and other costs of finance paid	6	6
1.6	Income taxes paid		
1.7	Other (provide details if material)	(103)	(113)
	Net Operating Cash Flows	(274)	(341)
Cash flows related to investing activities			
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)		
	Net investing cash flows	(274)	(341)
1.13	Total operating and investing cash flows (carried forward)	(274)	(341)

1.13	Total operating and investing cash flows (brought forward)	(274)	(341)
	Cash flows related to financing activities		
1.14	Proceeds from issues of shares, options, etc.	2,200	2,440
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)		
	Net financing cash flows	2,200	2,440
	Net increase (decrease) in cash held		
1.20	Cash at beginning of quarter/year to date	178	2,440
1.21	Exchange rate adjustments to item 1.20		
1.22	Cash at end of quarter	2,097	2,097

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

1.25 Explanation necessary for an understanding of the transactions

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

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

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		

Estimated cash outflows for next quarter

	\$A'000
4.1 Exploration and evaluation	200
4.2 Development	
Total	200

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	597	
5.2 Deposits at call	1,500	
5.3 Bank overdraft		
5.4 Other (provide details)		
Total: cash at end of quarter (item 1.22)	2,097	

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			
6.2	Interests in mining 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	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	32,350,001	12,175,001		
7.4	Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs	32,350,000	12,175,000		
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>	2,200,000		<i>Exercise price \$0.20</i>	<i>Expiry date 31 OCTOBER 2009</i>
7.8	Issued during quarter	2,000,000		\$0.20	31 OCTOBER 2009
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>				

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: Date: 31 JANUARY 2007
(Director/Company secretary)

Print name: VINCE HYDE

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.