



## Research Note

### How much can Windimurra make?.....

## PMA

Precious Metals  
Australia Limited

November, 2005

#### CAPITAL DETAILS

ASX code	PMA
Share Price	A\$1.20
Shares on issue	64 million
Options on issue*	14.9 million
Cash	A\$33 million
Market capitalisation	A\$77 million

\*12.9 million exercisable at \$2.00 before Dec 05, 1m exercisable at 15 cents before Nov 07 and 1m options exercisable ranging from \$1.30 and \$2.25 before 2010.

#### PRINCIPAL OFFICES

Level 1 Richardson Street West Perth WA 6005  
 Telephone +61 8 9423 1900  
 Webpage www.pmal.com.au

#### DIRECTORS

The Earl of Warwick	Non-Executive Director
Roderick J H Smith	Managing Director
Ian K Macpherson	Non-Executive Director
Michael J Fry	Non-Executive Director

#### Investment Summary

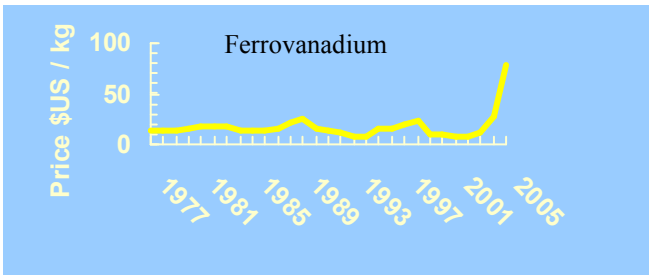
PMA is recommissioning the Windimurra vanadium mine. PMA has current cash reserves of A\$33 million with no debt and the mine has approximately A\$50 million worth of infrastructure and plant and equipment in situ.

The feasibility/optimisation study is expected to be completed in mid 2006 with production to commence by Mid 2007. PMA's pre tax profit are forecasted to be approximately A\$41 million based upon the 8 year average of \$20.8/kg for ferrovanadium and our other assumptions made. The current ferrovanadium price is US\$60/kg. Our assessment is that for every USD above \$20.6/kg average used in our forecast, PMA should receive an additional A\$4.7 million pre-tax profit per annum.

#### Background

85% of vanadium is used in the production of high strength low alloy steels (HSLA) and another 10% is used in the aerospace industry. HSLA steels are replacing carbon steels as the higher strength permits lower design weight which better competes against aluminium products. For instance, lower weight results in energy savings for transportation. Republic of South Africa accounts for about 45% of world production, Russia 23% United States 9%, China 9% and others 14%.

The Windimurra mine was operated by Xstrata AG from 2000 to 2003, and reported to be the largest primary producer of vanadium pentoxide and was operating close to its design capacity. Windimurra produced approximately 10% of world production at a cash cost of US\$1.60/pound. Low vanadium pentoxide prices in 2002 and the lack of long term sales contracts with end users were the main factors in Xstrata AG closing the mine. Current prices of vanadium pentoxide are approximately US\$12/pound and long term average approximately US\$5/pound. In July 2005, PMA acquired 100% of Windimurra from Xstrata AG.



#### Development path and funding

PMA is in final negotiations with an engineering firm to prepare a feasibility/optimisation study which should cost approximately A\$3.5 million and is to be completed by mid 2006. Based upon the cost of the original plant, it is estimated that approximately A\$100 million will be required to recommission Windimurra. It is important to note that much of the old plant and development infrastructure are in situ, as such the capital cost, are substantially lower (by approximately A\$50 million) than a greenfield site.

Production from the world class deposit is achievable within two years. The new plant will include an additional furnace that will convert the vanadium pentoxide to the more commonly used ferrovanadium (FeV) which is used directly by steel mills.

Windimurra's 2002 actual operating cost of producing vanadium pentoxide was less than 20% of the current price, as such it is expected the project will be financed without difficulties. PMA currently has approximately A\$33 million in cash leaving approximately A\$70 million required to fund via debt and equity. In addition, we believe funding of this will be facilitated by the proposed AIM listing. We expect PMA to begin production in the second quarter of 2007.



## Metallurgy

Windimurra is located approximately 80km via sealed road from Mount Magnet. Windamurra is one of the largest proven vanadium bodies in the world with JORC measured resource at 77 million tons grading 0.5% vanadium pentoxide and a further indicated resource of 32 million tons grading 0.47% vanadium pentoxide. There are sufficient resources to support mining operations in excess of 30 years at a production rate of 2.5 million tonnes producing 5,000 tonnes of ferrovanadium. Located in the Murchison District of Western Australia, the deposit is made up of vanadiferous magnetite rich horizons, hosted in lateritic mafic intrusions.

## Financial Analysis

Assuming the following parameters:

Pit resource	77 million tonnes
Annual mine ore throughput	2.5 million tonnes
Annual projected FeV output	5,000 tonnes
Capital development cost	A\$100 million
Metallurgical recovery	78%
Operation costs per FeV kg	US \$9.00
Admin/sales/ship. cost per kg	US\$1.75
Total Costs	US\$10.75
FeV price per kg*	US\$20.6

\*based on the average price over the last eight years.

## Risk and Return Analysis

As this is a recommissioning, PMA is able to plug in actual costs and recovery rates into the feasibility study. We have included a new category on our risk chart to reflect this. The major difference between the previous plant and the proposed new plant is the addition of an electric arc furnace. The technology risk of the additional electric arc is very low. Introducing the additional electric arc allows ferrovanadium to be produced which can be directly marketed to steel mills. Nevertheless vanadium is a more thinly traded and higher volatile metal compared to most other listed mining investments.

We believe that PMA will be in the lowest quartile of costs for production of ferrovanadium as such we regard the project as robust.

The main risk to PMA investors and our forecasts, is the volatility of the ferrovanadium price. Windimurra production along with additional producers from China and Russia will increase the supply of vanadium. Market/sales risk can be reduced should PMA secure long term contracts with steel mills. A conservative price of US\$20.6/kg versus the current price of US\$60/kg has been used. It is not unreasonable to expect that PMA will be able to lock in long term contracts at prices well in excess of US\$20.6/kg.



Risk	Very Low	Low	Moderate	High
Feasibility	✓			
Financial	✓			
Country/Approval	✓			
Mining	✓			
Processing		✓		
Market/sales				✓

### Disclaimer & Disclosure

This publication has been prepared by Cunningham Securities (AFSL No. 258483) Cunningham Securities and its associates declare that they deal in securities as part of their securities business and consequently may have a relevant interest in the securities recommended herein (if any). This may include providing equity capital market services to the issuing company, holding a position in the securities or acting as principal or agent and as such may effect transactions not consistent with the recommendation (if any) in this report.

Cunningham Securities declares that it may have acted as an underwriter, arranger, co-arranger or advisor in equity capital raisings, and will have received a fee for its services, for any company mentioned within this report.

You should not act on any recommendation issued by Cunningham Securities without first consulting your investment advisor in order to ascertain whether the recommendation (if any) is appropriate, having regard to your investment objectives, financial situation and particular needs. Nothing in this report shall be construed as a solicitation to buy or sell a security, or to engage in or refrain from engaging in any transaction. This publication is not for public circulation or reproduction whether in whole or in part and is not to be disclosed to any person other than the intended recipient, without obtaining the prior written consent of Cunningham Securities.

Cunningham Securities believes that the information and advice contained herein is correct at the time of compilation, however we make no representation or warranty that it is accurate, complete, reliable or up to date, nor do we accept any obligation to correct or update the opinions in it. The opinions expressed are subject to change without notice. No member of Cunningham Securities accepts any liability whatsoever for any direct, indirect, consequential or other loss arising from any use of this material. We cannot guarantee that the integrity of this communication has been maintained, is free from errors, virus interception or interference.

### Cunningham Securities

Level 34, Exchange Plaza, 2 The Esplanade. Perth 6000 WA ph: (08) 9421 2122  
AR Cunningham T/A Cunningham Securities Holder of AFSL 258483-ABN 51 660 823 396  
Email: info@cunninghamsec.com.au webpage: www.cunninghamsec.com.au