



SWITCH from ZIM to AQP, Poss Spec Buy PPD

COMMENT – 21 July 2003

Dear All

We attended the Paydirt Platinum Conference on 14-15 July 2003 in Perth, and about a week before that, a South African lunch with the SA Minister of Mines and SA High Commissioner which elaborated on some of the BEE aspects and changes. We have subdivided this one-off comment into 3 areas, namely, the outlook for commodities such as **platinum, palladium and nickel**; our observations on presentations by **AQP, AXM, CSM, LIM, IGO, PLA, PPD** and **ZIM**; and the **SA** lunch.

Outlook for Commodities

The outlook for platinum and palladium is mainly based on an excellent presentation by Johnson Matthey (JM) who advertised their new website (www.platinum.matthey.com) which contains a lot more newsy items etc than it previously used to. The outlook for nickel is based on a mix of the presentations but mainly on CSM's view of chrome demand in China based on their stainless steel outlook.

Platinum to June 2003

The presentation by JM focused on what had caused the price fluctuations so far this year (to June 2003), namely Chinese jewellery demand stopping at US\$700/oz, funds liquidating their long positions, SARS occurring at the second annual seasonal demand time (there are 3 per year : Chinese New Year, May and October). Then Chinese jewellery demand came back, plus the weakness in the US\$ and Bush's comments about fuel cells prompted the funds to return and drive the price back up to about US\$650/oz.

Platinum to December 2003 and beyond : (Appears to be in short supply, could rise further).

(1) Supply

Platinum supply is short. The 50% increases in the total production from South Africa and Zimbabwe by 2007 are needed to achieve a balance between supply and demand, any hiccup and there is a shortage. If demand wants to rise further faster, then it can't, there is simply **not enough**.

The platinum market has been helped (to remain in balance) by Russian and Swiss sales. However, the Russian selling is believed to have effectively gone. Russian sales were down from 1.3moz in 2001 to 980,000oz in 2002, and the 2002 sales were inflated by repaying a platinum based bank loan. So current sales are believed to be just Norilsk and Far Eastern Russian production.

The platinum deficit increased from 370,000oz in 2001 to 570,000oz in 2002. It has been kept in check by the Swiss reducing their stock levels by 1.5moz over the past few years, to result in a major shortage of above-ground stocks of platinum. JM was leaving their forecast of US\$590/oz to US\$690/oz to the end of 2003, the inference being that the platinum price was expected as to be more likely to rise from US\$650/oz, than fall.

The industry view of some of its participants, was that they could not see what could cause the platinum price to fall to below US\$600/oz, yet alone remain at sub-US\$600/oz for a long-term price projection.

(2) Chinese Jewellery Demand

Based on the imports into HK at the end of May, platinum demand was down 28%, having fallen by 20% to 40% during May due to SARS occurring at a major buying season, and buying being price sensitive at US\$700/oz early in 2003. 2003 was expected to be lower than the almost 1.5moz of demand attained in 2002, and had started to recover with the focus now on the third buying season of October.

Although platinum buying stopped at US\$700/oz, it may not happen this time, as it is a case of margins and Chinese jeweller's reluctance to regularly change their prices (items are sold by weight). As the platinum price rose, they absorbed the reduction in their margins and stopped buying when they were squeezed out, but have since increased their retail price base. The approaching tradability of platinum on the SGX (Shanghai stock exchange) was seen as critical (although the actual timing date in 2003 is still uncertain), since consumption tax is expected to be reduced from 10% to 5%, and the current 17% VAT on platinum was expected to be 100% rebated to jewellers. This should enhance the current margins of jewellers and enable them to sell at higher prevailing platinum spot prices without becoming too squeezed.

(3) Autocatalyst (Autocat) Demand

Current auto-industry inventories were regarded as relatively OK. The switch from Pd-rich to Pt-rich autocats (due to the high Pd price) had taken about 2 years to be implemented, and now that the Pt price was >>>> the Pd price it was regarded as unlikely to be reversed again on a mass scale. Possibly more likely on an individual new model scale, since it involves engine re-design and re-calibration of the entire system.

One of the key drivers are diesel-powered vehicles, which can only use 100% Pt-based autocats (I do not know why but I have heard the comment made on numerous occasions), and that demand had risen by 7% in 2002 to 40% of the European market share, and was expected to gradually grow further to a 50% share of the European market in the next 3 to 4 years.

Chinese autocat demand is perceived as becoming a major growth area, with the Chinese gradually implementing the European required emission levels, Euro2 being apparently in force since the beginning of 2003 in the major cities such as Beijing and Shanghai (Europe is on Euro3, but the pgm loading per vehicle is complex.....as a general rule of thumb, 5g of pgm is used per car (often pt-pd-rh, but not always) and the platinum component is a function of engine size, fuel type, manufacturer etc). Sales of light vehicles containing autocats rose by 1million in China in 2002 to 3 million per year. CSM showed a chart depicting Chinese auto-sales as rising by an average 17.5% per annum based on chrome demand.

China is not the only country enforcing stricter emissions from new cars (and hence autocat use and by inference, platinum demand), so is Russia and the old components of Russian too.

Palladium to June 2003.

Palladium has continued to weaken from auto companies still de-stocking, and weak electronics demand, but has started to recover due to fund buying.

Palladium to December 2003 and beyond - Appears to be oversupplied, but prices recovering.

(1) Supply

Auto inventories of Pd are still regarded as substantial (especially in North America), and Russia has indicated that it may sell some of its stockpile this year (2003). In 2002, the US sold 325,000oz from its stockpile, and Norilsk used 6mos of its output for a loan (877,000oz ?) as part payment for Stillwater.

JM expected that the SA/Zim expansions of 70% in Pd (50% in Pt, but higher in Pd because more Pd-rich reefs involved), high inventory levels, and above ground stocks would restrict and overhang any upside recovery in Pd prices to possibly US\$170/oz to US\$180/oz (the JM forecast) in the coming 6mos to December 2003.

(2) Demand

The use of palladium in 2002 fell from 6moz to 4.5moz and the recovery was expected to be limited. Most gasoline autocats are already Pd-dominant, with the major growth area seen as Eastern Europe (currently Pt : Pd, 4 to 1) versus North America's 2.5 to 1. Autocat usage was expected to regrow cautiously, and dentistry usage was thought likely to show a modest recovery, but the shift away from Pd-use in capacitors was regarded as permanent. Having said that, no major studies appear to have been conducted on increased platinum demand from higher autocat usage in China.

Nickel

It was possible to build a picture of the outlook for nickel based on presentations and comments, especially with CSM's detailed view of Chrome demand based on stainless steel expectations in

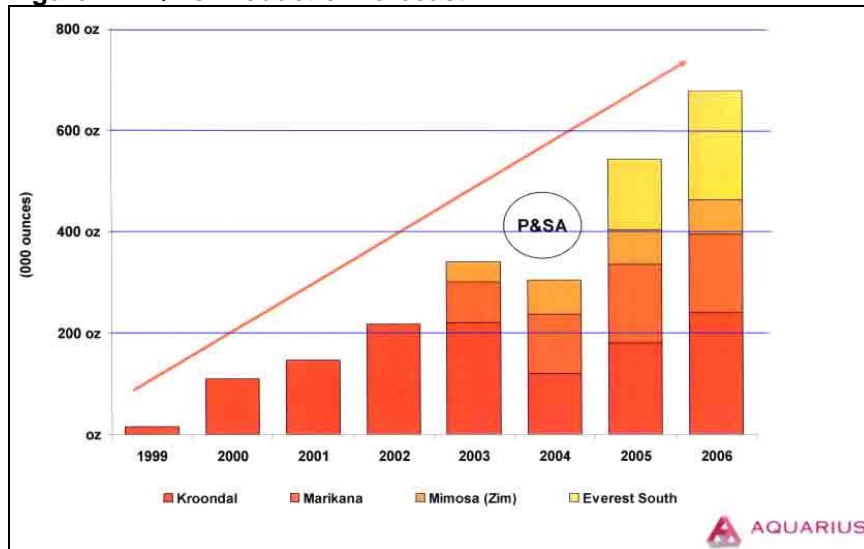
China which showed the %pa growth rates for individual sectors, and the gap between cumulated raw stainless steel expansions and demand. CSM showed a 2002 slide of expected Cr ore demand in Asia rising from 1.1mt in 2002 to 1.63mt in 2007, and in fact it has already risen to 1.6mt in 2003 due to demand from China.

Stainless steel demand is still growing at 10% per annum driven by China. The implications are very positive for nickel especially with rumoured problems amongst the existing producers. **Our long-term forecast of US\$3.65/lb for the next 2.5 years, dropping to US\$3.45/lb** (as per our recent LionOre report) **was regarded by a number of people as conservative**, and was not expected to be lower than that average profile from a long-term perspective.

Observations on Stocks (in alphabetical order) :

AQP – Aquarius Platinum – Steady long-term growth coming from Amplat “deal” and Everest
An attributable production forecast was given for the next 3 years to 2006 as shown in figure 1.

Figure 1. AQP’s Production forecast



Aquarius’ production shows a “dip” from Kroondal in 2004, because of the Amplat deal taking effect from 1 November 2003. After 1 Nov, AQP’s production from its No.1 plant becomes ½ IMP (Implat) / ½ AQP for the next 4 years’ at about 140,000ozpa each until 586,000oz Pt have been produced for IMP. After that, AQP’s production from the No 1 plant becomes ½ AMS (Amplat) / ½ AQP.

In the mean-time a second plant (no 2, maybe fractionally larger than the no1 plant, total cost including development expenditure for the 3rd decline expected to be about ZAR750m and financed ½ AQP / ½ AMS) is constructed such that when it is in production from possibly June 2005 (after 18 mths construction), the production is ½ AQP / ½ AMS which returns AQP to its original production level from Kroondal of 280,000ozpa Pt (and also means that AMS receives an attrib 280,000oz Pt too), **but for a significantly longer life (possibly at least 10 years’ longer) to 2016.**

The Waterval block has also been sold to AMS for ZAR110m, reducing AQP’s debt levels even further. Marikana is still getting there, mining the orebody to its maximum usage and life, such that break-even (which is a function of how much the higher recovery “fresh” ore is being treated) was expected to be achieved during the current September quarter of 2003. Mimosa also appears to operate in a “bubble” in Zim, and continues to make steady progress towards its expected 135,000ozpa by y/e at the lowest 4E cash costs in the world of US\$86/oz. The newly acquired Gert Ackerman (from Impala) was reputedly making material improvements to AQP’s operations.

AQP commented in its presentation that it hoped to have made a BEE “deal” in the coming 12 months and use the capital injection to reduce debt and help fund Everest (220,000oz pge per year) in order to attain AQP’s production target of 600,000ozpa by 2006.

AXM – Apex Minerals – Exploring Windimurra

Apex did not present at Paydirt, but we caught up with them to check on their platinum exploration progress. They are in systematic exploration, namely : a/mag to radiometrics to geochem to infill to RC to diamond drill, and have recently completed a major structural re-interpretation of the Windimurra intrusion that dramatically simplifies what appears to have happened. AXM have just

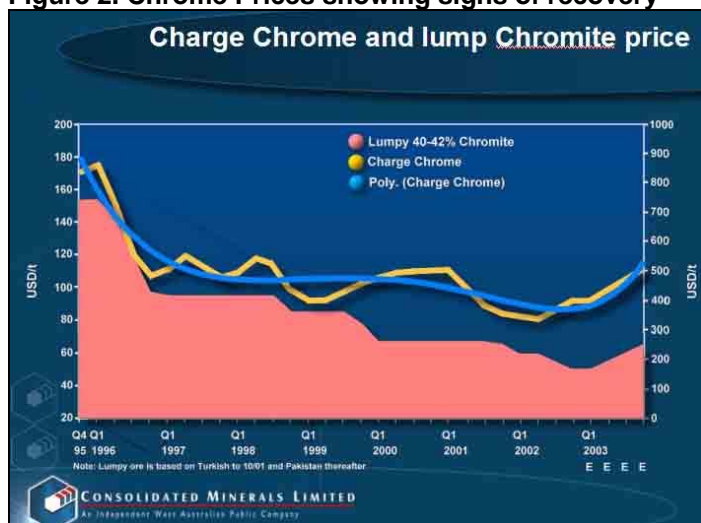
completed a 23-hole RC programme focusing on specific domains or areas delineated from geochem.

At Corner Well they have clear anomalous zones (>50ppb Pt+Pd) in the right environment (gabbro) and are narrowing their focus. Also at Mulyeron Hill, there are anomalies in the contact zones. Up to 1km wide ultramafic zones have been identified with all the right ingredients, including chrome bands, AXM just has to “jag” an orebody. Falconbridge are also following the same route on Narndee (south of the Windimurra intrusion), except that their main focus is in the region of the old 1m at 5.2g/t pge intersection at 133m below surface, in fresh gabbro.

CSM – Cons Minerals – Chrome making progress, Iron ore drilling about to start

The Paydirt conference included some related companies, such as CSM focusing on Chrome demand in China. The paper included all the raw stainless steel expansions in China to 2007, showing that they could not catch up with expected consumption even by the 2008 Olympics, illustrating the demand for chrome and showing that chrome prices appear to have bottomed by end-2002, and are now gradually recovering, as shown in figure 2 :

Figure 2. Chrome Prices showing signs of recovery



Chinese demand for autos is about 17%pa (which is an excellent statistic for potential autocat demand from China), and stainless steel demand continues to grow at 10% per year pressurising nickel prices (which are a major by-product revenue component for PGE producing companies). In 2002 CSM forecast Chrome demand from Asia rising from about 1.1mt to 1.63mt by 2007, a level which has already been achieved in 2003.

In our opinion, CSM’s decision not to build its own ferrochrome smelter and incur the risk of trying to get it to work, and instead focus on production, was a logical and sensible move. CSM expects to soon receive permission to commence drilling their iron ore prospect, possibly even during the current September quarter 2003.

LIM – LionOre Mining International – Update

Although we have recently completed a report on LIM (9 July 2003), there is still more to add, following their presentation and response to questions based on the slides shown :

Although LIM did expect to list on the ASX in July 2003, it may now be by mid- August 2003.

LIM has intersected mineralisation of up to 2m thick at up to 6%Ni in holes between Waterloo and Amorac at depths of about 250 to 320m (vertical), focusing on a possible link between the two. The strip of SW/NE anomalies further south may be a false indicator (does occur in geophys) related to shallower shale conductors, although the northern anomalies still remain.

A slide referred to some exploration focus on Dalrymple (DRE) ’s tenements (assuming a successful merger), which refers to nickel exploration on 2 prospects of interest, being : the old WMC prospect of Goongarrie – Scotia (north of Kal) based on some occurrences of nickel sulphide (WMC mined 1.1mt at 3.1%Ni from Scotia in 1969 to 1977, and identified 11 nickel targets which were apparently not followed up), and Mt Clifford (south of Waterloo) which has always been elusive but has some encouraging nickel sulphide intersections to follow-up.

IGO – Independence Gold – Update, possible production expansion at Long

We completed a report on IGO in February 2003. Some further indications were given in the presentation and question time :

Basically, new nickel extensions are being made at Long, and IGO are examining increasing the treatment rate. They are also looking for a jv partner to fund their Australian platinum exploration using the data delineated in the WMC database.

PLA – Platinum Australia – Still Australia’s best “hope” for producing platinum – but has risk

The PLA presentation focused on the progress that it has made, and answered something that we had been unaware of. Namely that PLA could not simply produce a con and ship it to South Africa because the platinum recovery in the con drops to ~50%, due to excess middlings, and hence have to take it a further step (at a possible capex cost of A\$80m) in a calcining plant at 400 deg C, to result in an acceptable product.

At this stage the lab testing works, it is going through a pilot plant with metals recovery results expected possibly at the end of July 2003, and if that is OK then a scale-up to a full-size plant may occur. However, the operating cost was not discussed and when a chunk of the revenue is lost on treatment in South Africa, it may be marginal and a function of pge prices and the A\$’s strength as to whether it is approved.

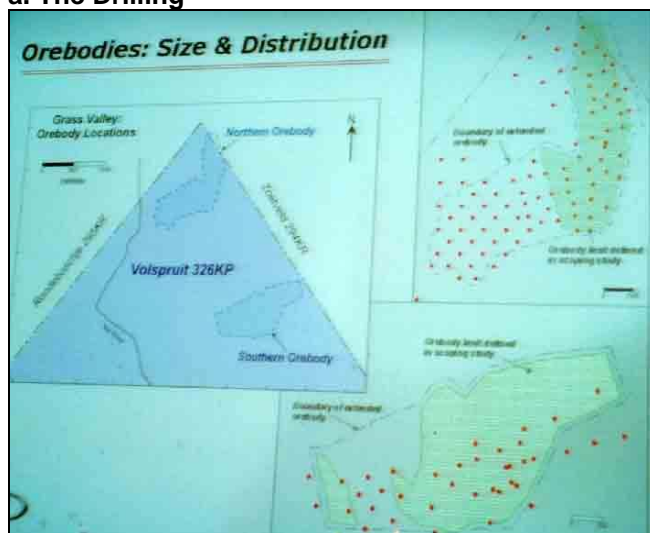
PLA also reported on a new discovery in WA called Byro north of Perth on which it is exploring. Its age is apparently 3bn years, but has yet to be checked. **AXM’s Windimurra was also thought** to be 3.0bn years, but has since been narrowed down closer to 2.8bn years (or about 400m years before Zimbabwe’s Great Dyke, or Munni Munni).

PPD – Pan Palladium – The next one ? - has risk – Possibly a Spec Buy

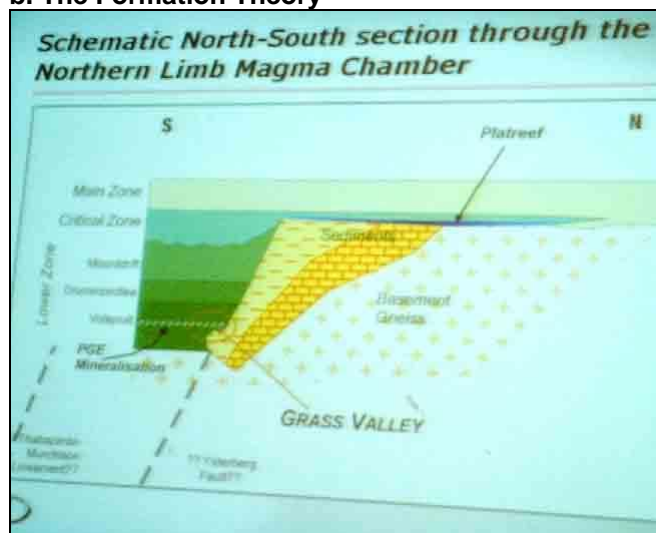
PPD presented an interesting paper on their Grass Valley prospect on the farm Volspruit, south of the old Potgeitersrus in South Africa. The mineralisation was discovered and drilled by RIO, and later drilled by Genmin from 1986 to 1992. It consists of two outcropping orebodies, north and south, with a new resource (possibly 50% higher) expected to be announced by mid-August based on the progress in the barren areas shown in figure 3a (the original scoping study is shown in green shading, and some better holes have apparently occurred in the previously expected to be “barren” areas). (I know the photos are not great, but they were taken from the 2nd row in the audience) :

Figure 3. PPD’s Grass Valley Prospect and Conception

a. The Drilling



b. The Formation Theory

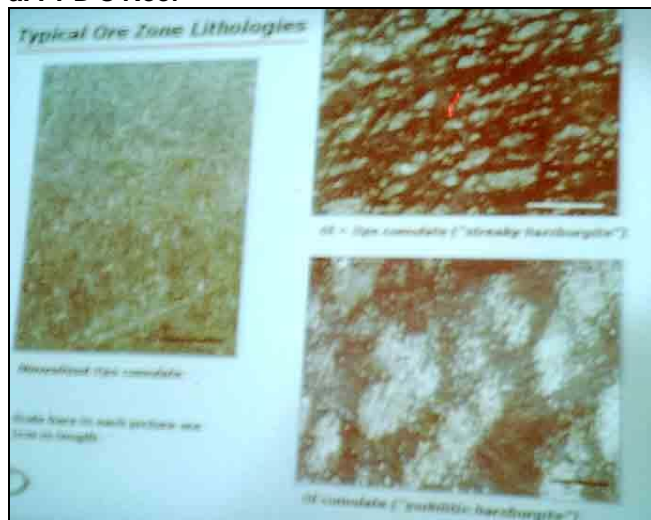


It is PPD’s contention that their PGE reef which they have called Volspruit PGE-Ni reef is not the same as the Platreef usually found in the region since it was formed about 250m years earlier, or about 2.05bn years ago. It has some similarities to Platreef in that it is thick (about 25m thick) and has disseminated chromite (the Cr has not settled out into bands like the Merensky reefs) and can best be described as the “stodge” of the porridge (platinum mineralisation can be described as porridge, freeze the surface and you have Merensky Reef, Platreef is the stodge under the surface). A possible formation is shown in figure 3b.

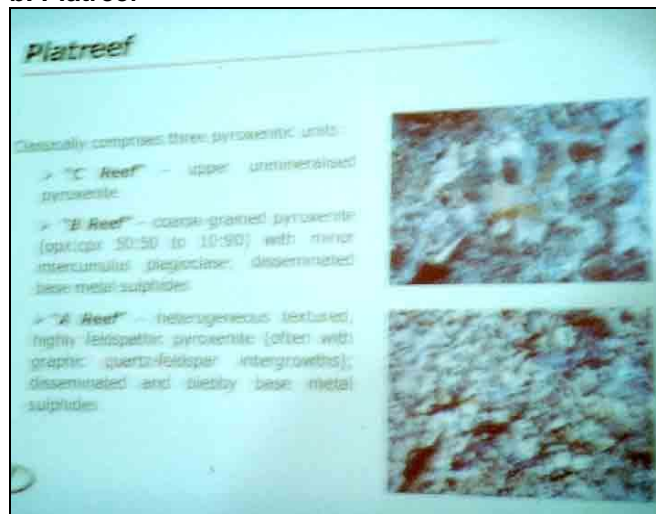
PPD showed rock sections in which theirs appears to be different to Platreef, as shown in figure 4a and 4b. Although both are pyroxenites, PPD described their reef or mineralised zone as consisting of oikocrysts (large crystalline blebs or blobs) of olivine cumulates, compared to Platreef's essentially plagioclase feldspar.

Figure 4. PPD's Reef and Platreef

a. PPD's Reef



b. Platreef



PPD is in JV with Implats over Grass Valley. The different style to Platreef means that metallurgical testing and pilot plant testing are required. No difficulties are envisaged as all the ingredients appear to be there, but the testwork is required. The initial metallurgical tests are scheduled for end July / beginning August 2003, and there is apparently a pilot plant facility (Lakefield ?) available for the next stage of testing.

Grass Valley appears to have two risk areas. *The first appears to be metallurgy (as a double-check) and the second appears to be grade.* The current ore resources as at October 2002 were 59.1mt at 1.3g/t and 0.14% Ni (of which North is 1.5g/t and South is 1.1g/t).

The rule-of-thumb for pge open-cuts is that grades should be about 3g/t in order to be viable. Amplats' Platreef is apparently mainly 5 to 6g/t, but it bulks up to 3g/t. We have never physically visited a Platreef mine, so our comments are based on what we have heard. Apparently there are some minor bands within the Platreef, but no grade control has been attempted because at 3g/t the diluted ore is still economic. PPD were apparently intending to speak to Zimplats because of the possibility of similarities between their mineralisation and the Great Dyke.

PPD does have a relatively very high nickel content at 0.14% to 0.15%, which could reduce the required grade, however, some grade control does appear to be inevitable. Whether it can be done carries some risk, but theoretically should be attainable based on current Australian open-cut gold mining practice. Although the package is 25m thick, it does apparently contain sequences of 5 to 6m at 5 to 6g/t pge. The strip ratios for the two zones which outcrop to 70-80m depth and 150m depth are 2.5 (North) and 6.8 (South), averaging 4.7, but that is a function of what width is chosen.

Grades are essentially platinum and palladium (45 : 55, ie Pd fractionally higher than Pt). On a revenue breakdown in the scoping study, apparently revenues were Pt & Pd (60%), Ni (30%), Gold (5%), Cu (3 to 4%), Rhodium and the rest (1-2%). Currently PPD plans to complete its prefeas (by RSG) by about the 1st week in December 2003, and then go into a full feas. There are rumours in the South African market of higher grade intersections in some of the new drillholes.

ZIM – SWITCH to AQP

Zimplats reported a mixed quarterly just after the Paydirt Conference, highlighting a "melting pot" of promise soured by production problems at a time when IMP have stated that they intend to make an offer to ZIM shareholders of \$4.08/share.

ZIM gave a very upbeat presentation of an operation that appeared to be ticking over with :

- Net 4E cash costs about 25% below budget (being US\$213/oz to March 2003 vs the 02/03 budget of US\$281/oz),

- A ~ 10 year target of 1mozpa of 4E metal, (rivalling major South African platinum producers),
- A new 3mtpa concentrator including the infrastructure for 10mtpa and an additional 190,000ozpa 4E by 2005, with the BFS completed in about September 2003.
- Modules to be added in 190,000ozpa 4E increments.
- Expected June Qtr production of 51,700oz – a new quarterly record.
- The underground not encountering any difficulties, and in fact appearing to make good progress with production targeted to sustain 20,000tpm (remember this is supposed to be a trial mine, and appears to be progressing faster than trial plan).
- A production forecast which showed ZIM as debt-free (on no major increase in production, ie still on ~2.2mtpa, and negligible capex) by 2005, as shown in figure 5, viz :

Figure 5. ZIM Production Forecast to 2006

Forecast results to June 2006						
	Budget June 03	Forecast June 03	% Var	Forecast June 04	Forecast June 05	Forecast June 06
Ore Milled (t)	2,086,450	1,937,119	(7)	2,097,150	2,253,668	2,202,008
Grade (g/t)	3.10	3.20	3	3.25	3.25	3.25
Cons Recovery (%)	84.0	81.8	(3)	83.6	83.5	83.5
4E in Cons (oz)	174,680	162,511	(7)	182,458	198,352	193,800
Smelter rec (%)	99.4	99.2	(0.2)	99.2	99.2	99.2
4E in Matte (oz)	173,670	169,260	(3)	182,413	198,344	192,250
Ounces 4E Despatched	173,750	167,496	(4)	180,943	196,758	192,250
Capital / \$m	4.5	4.0	11	6.1	2.5	1.0
Cash balance / \$m	8.0	14.2	78	11.5	19.7	34.1
Cash Cost \$	281	220	22	236	225	252
Loan Repayment \$ / m	8	8	-	17	8.6	-
Dividend (Mkwiro)	-	6.0	-	-	-	-



And yet the quarterly released about 3 days' later on 17 July 2003, had :

- A furnace break-out occurring on 12 July 2003, resulting in the discharge of matte and slag below one of the tapholes...."an early evaluation indicates that the damage is serious and the furnace may be out of commission for between one or two months".
- The power tariff was backdated to February and is now in US\$ terms which with the new increased tariff increased costs by \$2m, and fuel is imported at a higher US\$ cost.
- Operating costs increasing from \$10m to US\$15.4m per quarter due to a combination of higher throughput as the plant treated an additional 17,500t from the underground, plus additional concentrate stock from earlier repairs to furnace matte tap holes.

The furnace matte tap holes have already had problems and were gradually being fixed. I thought that ZIM/Mwakiro's SMC Complex had two furnaces producing converter matte, so it may not be that "big" an issue, added to which I do not know how many of you have seen furnaces and smelters, but they are not pristine environments (or at least, not the ones that I have seen).

So, when it does come, what do you do with the \$4.08 offer from Implats :

- It all comes down to what level of risk you are prepared to take, what your view is of Zimbabwe, and perhaps what your tax status is (see advisers before deciding).
- The \$4.08 valuation is based on a 17.5% constant (effectively real) discount and dropping the platinum price by almost 50% to US\$475/oz on a long-term basis (US\$650/oz in 2003, US\$600/oz in 2004, US\$550/oz in 2005, thereafter US\$475/oz). If you use a 17.5% constant/real discount and drop the main long-term product price of a resource company by 50%, you would probably eliminate virtually the entire resource sector, and yet for ZIM it results in a mid-point value of about A\$4.00.

- Our valuation of A\$3.90/share was based on no expansion, 7.5% real and US\$600/oz Pt, just minor tweaking to attain 1mtpa from underground and 2mtpa from the open-cut at minor capex, until Mugabe goes and then expand (when there should be no problem raising finance).
- There is risk in the costs (although most of our costing is in US\$), because the conversion rate has dropped back to the official 1US\$ = Z\$55 and apparently up to now Z\$3,000 (double Feb 03's levels) on the parallel rate.
- There is risk perhaps in the management as to how many intend to stay, or take the IMP offer and move on. Although having said that AQP's Mimosa is the lowest cost platinum operation in the world and is almost 100% run by indigenous (black) Zimbabweans.
- In a post Mugabe environment, it is almost a case of pick a figure for ZIM's share price, with Implats on record as stating that they are paying about "one-fifth" of what they would normally have to offer, if ZIM was not in Zimbabwe.
- However, there is also the risk that IMP could apply to delist ZIM if it gets over 90% (it would apparently have to apply to the Guernsey Govt).
- But having said all the above, ZIM effectively operates within a "bubble" in Zimbabwe, largely insulated from the world outside, because it is probably the main "game". If Mugabe moved on ZIM, (which we think is politically unlikely and Mugabe appears to make some shrewd decisions), South Africa could move to protect its asset, so that's probably unlikely. We also recall that the Zambian copper mines operated all through Kaunda leaving.

Maybe you should accept half. If you do, then to maintain exposure to the potentially booming platinum sector we recommend **SWITCHING to AQP** (Aquarius Platinum).

Whatever amount of ZIM shares that you decide (if any) to keep (on consulting an adviser) should be made on a long-term (3 to 5 year) viewpoint that could undergo some angst and share price disruption as Mugabe gradually goes.

The South African Lunch and BEE

I attended an ASABC (Australia South Africa Business Council – of which I am a member) lunch on 8 July 2003 with the SA Minister of Mines and the departing SA High Commissioner Zolile Magugu at which some further insights were given on BEE and the Money Bill, namely :

- That within about 2 months (perhaps?) new royalties are to be announced with more rigid guidelines (and apparently not the 50% more to keep a stable rate). This follows submissions from industry pointing out that, for example, there are lower taxes in some countries that apply similar royalties.
- The new royalties do not apply to short-life or marginal operations. The SA Govt does not want to penalise companies resulting in closures, and higher unemployment.
- The 26% is on a per profitable mine basis, not on a per company basis, and **MUST** be funded at current rates (even if it is by loans).
- For not as profitable or short-life mines, the 26% is not enshrined, BEE compliance can still be achieved through complying with the other pillars of the 5 year reform process.
- Mines are also to phase out the single hostels and replace them with family housing for each worker's family... this could result in towns forming but is a very logical solution to the unemployment issue, and helps satisfy returning family values. It could be costly for some of the mines due to the services required, but appears to be a step forward.

Disclosure: Keith Goode, who holds a Proper Authority with State One Equities Ltd ACN 064 904 650, and is a consultant with Eagle Research Advisory Pty Ltd ACN 098 051 677 compiled this comment. At the date of this report, Keith Goode and his associates had interests in some of the shares contained within this report, as may have State One Equities and their associates.

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