→ *Ralph Havenstein, CEO Anglo Platinum*

THE PLATINUM HIGHWAY – WHERE DOES IT LEAD?

by Ralph Havenstein

In the next 100 years, platinum can achieve what gold has already done for South Africa, but it must be done responsibly, according to the CEO of Anglo Platinum.

In 1886, George Harrison discovered the Witwatersrand goldfields. In the 118 years since then, we have mined more than two billion ounces of gold from this massive ore-body, making South Africa the source of half the gold the world has ever produced. The value of all this gold, in today's terms, is over $800 billion. Anglo Platinum's chief executive, Ralph Havenstein, notes that it is tempting to conclude that little of this money went to the betterment of society as a whole.

"In those heady days soon after the discovery of gold, many millions were made and lost. Those were the times of the wealthy Rand Lords – Oppenheimer, Rhodes, Barnato – who many believed at the time had acquired inordinately large fortunes at the expense of everyone else," he notes.

Havenstein points out that Johannesburg, long a glorified mining town, is now full of wealthy people who have never seen a gold mine, let alone worked in the mining industry, and although Johannesburg's success has been sustainable due to the development of world-renowned mining and processing industries, technologies, and skills, he says there are many instances of non-sustainable community development, citing Welkom in the Free State an example.

Gold mining in South Africa gave birth to an effective financial system and robust economy used not only for developing new mines in other parts of South Africa and in other minerals, but that formed the basis for the many secondary and tertiary industries that typify a modern, developed economy.

Now Havenstein questions whether the "Platinum Highway", a 150 km continuation of platinum group metals (PGM)-bearing reefs outside Pretoria, can accomplish what gold has done for South Africa. He is keen that the pitfalls of non-sustainability are both understood and avoided. He notes that the platinum industry has played "little brother to gold" although, since 2000, the exports of the two industries have been comparable – at around R30 billion each – and is confident that platinum will soon overtake gold. What is driving this interest in platinum and its sister metals? According to Havenstein the answer lies in the "unique blend" of the applications of platinum. Not only is it a noble metal with a special allure in jewellery, platinum also possesses – together with its sister metals palladium, rhodium, and others – a bewildering array of catalytic and high-temperature characteristics. Thus a unique combined strategy of developing both "created" and "derived" demands has been adopted.

Havenstein states that demand is created in jewellery applications, where the industry, through the intervention of the Platinum Guild International, influences consumer market "pull" through promotions and advertising, and has been very successful over the last 10 years, spectacularly so in China. Jewellery sales worldwide now represent 37% of platinum demand.

The "derived" demand comes from the myriad industrial uses of the catalytic and high-temperature characteristics of PGMs; the largest demand being the use of platinum, palladium, and rhodium in catalytic converters where the PGMs convert car pollutants into less harmful gases. "In 2003, autocatalyst consumption represented 38% of platinum demand," says Havenstein. He goes on to explain that the other 25% represents a diverse range of industrial uses from high-temperature moulds for glass manufacture to anti-cancer drugs and the possible future use of platinum in fuel cells to lessen environmental impacts.

Havenstein notes that South Africa is uniquely positioned to take advantage of these innovations, producing 76% of the world's platinum, and 100% of platinum used as primary product. In the rest of the world platinum is a by-product of nickel and palladium production. "This has important implications for the viability of platinum mining in South Africa, and places a duty on us to ensure that the world trusts the future availability of platinum," Havenstein says. This begs the question as to whether the cost of production in South Africa can be divorced from the market price, especially in the light of a continuing strong Rand. However, although unlikely that, like gold, platinum could be mined at a depth of 5 km (due to the high temperatures in the Bushveld Complex), Havenstein believes that a 3 km mining depth is possible over the next 100 years, with the potential of one billion ounces of platinum group metals, worth over $900 billion in today's terms. This figure excludes the contributions of chrome, manganese, and vanadium.

Until recently, the platinum industry was merely scratching the surface of this vast treasure trove in the Bushveld, which paradoxically includes some of South Africa's poorest regions along with some of its most beautiful scenery. It is Havenstein's contention that if "other Johannesburgs are to be developed over the next 100 years, the platinum industry needs to ensure that sustainable benefits are delivered, especially to the local surrounding communities." Havenstein notes that the government and the mining industry have successfully negotiated the Mining Charter, which has led to the Mining Scorecard, where the primary aim is to maximise the positive side of mining in South Africa. Comparing the Mining Scorecard with the Global Reporting Initiative's sustainability parameters, and the concomitant "fit", he says it is clear that South Africa leads the way in the approach to sustainable development issues.

Urging all South Africans to apply the principles of the Mining Scorecard, Havenstein states that in Amplats it is applied in the following specific areas to foster transformation.

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• Human Resources: all employees are offered the opportunity to become functionally literate and numerate, and the historically disadvantaged are provided with career paths. There is also a mentoring scheme for identified talent.

• Employment equity: Amplats aims to have 40% of management comprising historically disadvantaged South Africans by 2009, although the target of 10% females in management is more challenging. There is complete non-discrimination, especially against foreign migrant labour.

• Co-operation with the government, particularly municipalities, in the formulation and implementation of integrated development plans: government, business, unions, and communities need to work together to help rationalise the joint social investment efforts.

• Housing and nutrition: this includes working with local banks to provide finance for employee housing.

• Procurement: preferred-supplier status is given to local, historically disadvantaged companies. There is a special procurement policy urging black entrepreneurs to compete in the supply chain. Amplats believes these processes will enable the Limpopo and North West provinces to thrive.

• Black Economic Empowerment (BEE): the target is to have 26% of either equity or units of production owned by blacks by 2014. The company has already achieved levels of success in empowerment deals previously deemed impossible or outrageously expensive. Although some question whether true "empowerment" has yet taken place, Havenstein remains convinced that the company is going in the right direction and that broad empowerment and social upliftment will eventually be far more visible than at present. Further, Anglo Platinum believes that the way to reach empowerment goals is through joint ventures transferring critical mining, processing, and management skills, as this is "more meaningful than geared-up equity deals."

• Local beneficiation of mining products: Havenstein notes that no one in the mining industry has yet made much headway with beneficiation, as the focus on the core business has always been the most sustainable option, and downstream diversification has more often than not resulted in value destruction because of a lack of knowledge by the mining industry. Where it best lies is not with the producers, according to Havenstein, who at most should be encouraged to play a supporting and facilitative, rather than an operational, role. Rather, he believes that established beneficiators, such as jewellery designers and fabricators "logically stand to gain from the development of their sector and are best positioned to take the lead."

(The Precious Metals Beneficiation Bill and the Diamond Amendment Bill were passed into law at the end of 2005). Nevertheless, Amplats has begun to encourage platinum beneficiation in South Africa. An example is the PlatAfrika annual platinum jewellery award function, a major event amongst Southern Africa's jewellery fraternity, and centred on jewellery training at the Tshwane University of Technology. Havenstein explains that South Africa already produces over 10% of the world's catalytic converters for cars, possibly rising to 20% in the medium term. Catalytic converters use not only PGMs, but also South African stainless steel. He believes that the platinum-bearing fuel-cell industry may also establish some component-manufacturing capacity here in South Africa.

Unlike gold, the use of platinum and its sister metals is dominated not by jewellery, but by its industrial applications, and therefore the beneficiation of PGMs provides a downstream opportunity to demonstrate South Africa's talent in engineering and technological innovativeness. Regarding sustainable development, Amplats reports the progress of their social and labour ambitions annually as a component of their annual report, although noting that, as engineers, they have only now begun to develop a more refined social conscience. Havenstein elaborates on this point, explaining that the Mining Scorecard is not a matter of "ticking the boxes," but is undertaken in partnership with the government, surrounding communities, employees, suppliers, customers, and business partners. "South African companies are also subject to increasingly intense scrutiny by our international stakeholders, and sustainable development is also a key imperative from their perspective."

The concept of "sustainable development" is not new to South Africa. Sir Ernest Oppenheimer, the founder of Anglo American and an icon in the mining industry, stated: "The aim of this group is, and will remain, to make profits for our shareholders, but to do it in such a way as to make a real and lasting contribution to the communities in which we operate." Havenstein points out that what has changed is the need to both measure and report on what Amplats is doing. In order to manage these requirements, some crucial issues need to be considered, recognising that sustainable development efforts deserve the attention and specific supervision of the executive management. He deems sustainable development a "values-based concept" permeating through everything they do, but notes that it is the executives who need to "pull it all together."

How is business strategy combined with sustainable development? Anglo Platinum considers both sides of the coin – a business strategy cannot be developed without reference to sustainable development, and conversely, planning sustainable development interventions is pointless if they are not slotted into the business strategy. Havenstein deems these both long-term challenges, and states that ultimate ownership and implementation belongs to operational people; the engineers and managers who "make things happen." Engineers and managers have undergone intensive transformational training, including first-hand experience of many of South Africa's economic and social challenges, and have begun to grasp and understand them. An increasing proportion of management's time is now spent on sustainable development issues. Stakeholder engagement efforts at Amplats have also been formalised, requiring careful monitoring if all participants are to benefit. As the engineers and managers co-operate and deal with their stakeholders, Havenstein articulates four key objectives on how this can be accomplished:

• Identify the stakeholders (Amplats' list comprises 14 pages);

• Understand the nature of the engagements with these stakeholders; i.e.: whether by public meetings, the print media, and other methods;

• Keep records of the information generated from these engagements;

• Last, decide what to do with this information. For example, should operational practices be changed, or should new stakeholders who need to be included in future engagements be identified? Here Havenstein notes the emergence of non-governmental organisations and the meaningful role they play in Amplats's quest to build meaningful relationships with stakeholders.

Havenstein concludes by stating that everyone knows that the mining industry wants to move in the right direction and maximise the positive effects of mining on society and the economy while at the same time reducing to a minimum any negative effects, particularly those relating to the environment. This, then, is what sustainable development is all about. As Havenstein puts it, the mining industry has spent the last 100 years "paving the streets and lining pockets with gold," but the next 100 is a platinum highway that will take the mining industry on a journey to meet broader responsibilities as members of South African society.

This article is based on the 2004 Hendrik van der Bijl Memorial Lecture of the Faculty of Engineering, Built Environment and Information Technology of the University of Pretoria, which was given by Ralph Havenstein, the CEO of Anglo Platinum. This annual lecture honours Doctor Hendrik van der Bijl, a well-known engineer and industrialist and former Vice-Chancellor of the University of Pretoria. Doctor Van der Bijl is best remembered for his contribution to the social upliftment of his fellow South Africans. The town of Vanderbijlpark in Gauteng is named after him.