Vantage Goldfields Limited (VGO) – Increasing Production to ~50,000ozpa

- In April/May 2010, Vantage Goldfields Ltd (VGO) expects to raise A$30m in an IPO (led by Shaw Corporate) for its wholly owned subsidiary, Eastern Goldfields SA, resulting in 224m shares on issue at a nominal price of A$0.40c for a market cap of A$89m.

- VGO’s main assets are all in the Barberton region of Eastern South Africa, and comprise of the operating Lily underground gold mine (that is undergoing a mill expansion to ~400,000tpa), recommissioning the Barbrook mine and plant complex, and exploration over ~165sq km of the Barberton Greenstone belt (including the old Worcester gold mine).

- The Barberton Greenstone Belt is comparable to the typical greenstone gold mine deposits of WA, yet it has not been subjected to standard Australian geological exploration techniques. For example, although it supported ~350 mines in its heyday and produced >10moz, no one has ever flown aeromag there, which is 101 basic geology in Australia. VGO intends to fly helicopter aeromag in JQ 2010.

- VGO initially mined Lily as an open-cut at ~2.2g/t and ~10,000ozpa for ~5 years, before declining underground in June 2007 and switching to full underground production in January 2009. Recognising the need to upgrade the plant, Barbrook was acquired providing greater production potential to ~50,000ozpa.

- VGO had intended to expand earlier, but were caught in the GFC limiting the ability to raise finance, until now. During that period VGO undertook studies and examined the capability of bringing Barbrook back into production, while exploration found depth extensions to the old Worcester gold mine (NW of Barberton, on a classic NW/SE structure).

- There appears to be significant upside potential for VGO in the Barberton Greenstone Belt of South Africa.

FINANCIAL ESTIMATES: (Note: This ERA scenario is just one of a number of possible scenarios that could occur)

- VGO has a 7.5%NPV of A$0.78, based on US$1100/oz (A$1222/oz). (The NPV is A$0.91 at the more usual 5%NPV applicable to gold shares, which VGO may achieve).

- Production at Lily should be capable of increasing to at least 50,000tpm if Australian decline production standards are adopted as that would still only be ~35vmpa.

- VGO has established BEE partnerships mostly with Lomshiyo Investments holding the currently required 26% interest in Eastern Goldfields Ltd’s SA operations.

- VGO’s operations are all located adjacent to very good road infrastructure, and have the allocation agreements for water and power on declared MLs (Mining Rights).
Corporate Overview
This is our (ERA) first report on Vantage Goldfields Ltd (VGO). VGO's main assets are all in the Nelspruit/Barberton region of Eastern South Africa ~30km from Nelspruit or Barberton as shown in Figure 1a. The assets comprise of the operating Lily underground gold mine (that is undergoing a mill expansion to ~400,000tpa by recommissioning the Barbrook plant), reopening the Barbrook Mines Complex, the dormant Worcester gold mine, and exploration over ~167sq km of the Barberton Greenstone Belt.

**Figure 1. Plan of Vantage Goldfields' Mineral Rights & Projects, 3d View of Region (Source: Google Earth), a. Plan of Vantage Goldfields' Mineral Rights & Projects b. 3d View of Region (Source: Google Earth)**

The Barberton Greenstone Belt is comparable to the typical greenstone gold mine deposits of WA, yet it has not been subjected to standard Australian geological exploration techniques. For example, although it supported ~350 mines in its heyday and produced >10moz, **no one has ever flown aeromag there.** As shown in Figure 1b, the terrain has been incised into a number of valleys and when we visited it in early March 2010, had lush green vegetation (at the end of the rainy season), due to the semi-tropical climate.

Nelspruit’s main income is from citrus trees, forestry, sugar cane, and to some degree, tourism. Being picturesque (like other similar mining areas of the world) there are a number of public and private nature reserves covering the exploration areas. In South Africa, such nature reserves do not extinguish mining title. Infrastructure is very good in terms of road access, power and water, with VGO already holding its required power and water allocations for the plant expansion and mines usage.

VGO was founded in 2004 raising US$8m in private placements under the name “Eastern Goldfields” (EGI) and operated the Lily mine as an open-cut producing ~10,000ozpa, declining underground in June 2007 and switching over to full underground production in January 2009. Recognising the need for a new plant and tailings dam location, EGI bought the Barbrook Mine and plant complex for ~US$10m in May 2008 from Caledonia Mining, mainly using a loan, having listed in the US in 2006 with a view to raising funds there. However, the GFC hit the markets curtailing the ability to raise finance in late 2008 and the loan had to be repaid within one year (May 2009, plus interest on a weaker Rand/US$ exchange rate).

In 2009, AIMS (Asian Investment Management Services) injected US$20m as new capital to repay the outstanding loan, in return for a 46% interest in the Group. In a corporate restructure in October 2009 the Group was delisted from the OTC in the USA, in preparation for listing on the ASX. In December 2009, AIMS injected a further $2m being 5m shares at $0.40/share. In March 2010, VGO raised A$10m in a placement to Platinum Asset Management (being 25m shares at $0.40 with a 1-for-1 option exercisable at A$0.40 by 31 December 2013). Platinum Asset Management also agreed to subscribe for $10m in the IPO provided that a minimum subscription of A$15m was raised (the IPO’s specified minimum is $20m).

If VGO raises $30m in the IPO, that **results in 223.5m fpo shares** on issue (which at $0.40 = a market cap of $89m). There are also then also **36.4m options**, comprised of the 25m in-the-money at $0.40 by December 2013, 2.2m @ 56c to RFC in May 2013, and 9.15m original options (of which 8.85m are at $0.54 at various dates between 30 October 2011 and 30 October 2012, and the remainder at $0.91).

This report is based on a site visit in March 2010 to VGO’s operations at Lily, Barbrook and Worcester, presentations and publicly available information, plus our own historical knowledge of the region having visited and analysed various mines in the area (including Worcester) from about 1982 to 1987.

**Brief Historical Background**
Although Graham Barber exposed Barber’s Reef in Rimers Creek behind Barberton in 1884 and is often credited with establishing the goldfield, there were other claimants in the vicinity, such as French Bob in May/June 1883 on the Moodies Estates near Barberton, and the discovery in May 1885 by Edwin Bray of the Sheba Reef in his Golden Quarry below Eureka City, which sparked the gold rush with reputedly 50,000oz from the first 11,000t. The Sheba mine is renowned for its high grades (even now). At the peak there were apparently ~350 gold mines in the district and production has exceeded 10moz.
ET Cons (Eastern Transvaal Consolidated) originally consisted of New Consort Gold Mines which was incorporated in 1925, changing its name to ET Cons in 1933. Sheba was acquired in 1937 and Agnes in 1949, becoming part of the Anglovaal Group in 1948. The other companies in the area were Gencor (previously GenMin) in the 1970s which had the refractory Fairview gold mine, (on which the BIX extraction technique was developed) and later Rand Mines’ Barbrook restarting in the 1980s. **The Barberton gold mines were generally not understood because they did not fit into conventional South African placer gold-type geology.**

In the 1990s Anglovaal broke up / divested its mines (and Gencor became part of Gold Fields), high cost mines were sold, with Pan African Resources eventually resulting in holding Sheba, Consort and Fairview after acquiring them from Metorex in July 2007. (Pan African Resources are now the only other major regional player, compared to Eastern Goldfields, and produce ~100,000ozp.a from their 3 mines through their old rabbit-warren shaft systems [apparently no declines have been sunk]).

**So the Barberton Goldfield has remained largely untouched since the 1930s** (the number of mines had already dropped to ~12 by the 1914-1918 Great War and the rest were whittled down in the 1930 to 1933 depression), due mainly to:

- Tenement boundary restrictions,
- Poor recoveries (most of the mines are arsenopyrite refractory, or preg-robbing due to carbonaceous material), with a few free-milling gold like Lily and Sheba,
- Poorly understood ore mineralisation controls,
- The majors controlling the major mines and possibly some of the other areas, until they divested their interests, and
- Water inflow.

**BEE Partners**

Being a South African company, at least 26% has to be held by Black Economic Empowerment (BEE) **partners.** Hence VGO’s wholly owned subsidiary Eastern Goldfields Ltd has a 74% interest in Eastern Goldfields Ltd [EGL], (the remaining 26% being held by BEE partner Lomshiyo Investments) as shown in Figure 2a. EGL then has 3 new order prospecting (exploration) rights (over Worcester, Bonanza and Sheba Hills) and 2 old order mining rights (being converted to new order, over Lily and Barbrook, there is a backlog of approvals being processed).

**Geology and Ore Resources**

The geology of the Barberton Region has been described as a series of synclines separated by faulted shear structures that contain (or are associated with) the gold mineralisation, and were squashed between two major granites (Nelspruit and Kaap Valley) as shown in Figure 2b. There are three principal host rocks, namely the Moodies Group (of sandstones, quartzites and conglomerates), the Fig Tree Group (of greywackes, shales and BIFs) and the Onverwacht Group (of mafic to ultramafic volcanics). The synclines can sometimes be seen, as on the south side of the west wall of the Lily pit as shown in Figure 3a, while the distorted fault/shear structures can sometimes be seen underground at Lily as shown in Figure 3b.
The styles of gold mineralisation range at Lily from visible gold in the greywacke as shown in Figure 4a to gold in quartz and quartz-carbonate veins (usually in laminated blue-black quartz). While arsenopyrite is common amongst the Barberton mines, at Lily it has been altered to pyrrhotite, hence making it non-refractory, as shown in Figure 4b (which also illustrates the wide stope widths that can be achieved [the ore zone can range up to ~40m wide]).

The current resources for Eastern Goldfields are shown in Table 1, below:

**Table 1. Current JORC Ore Reserves and Resources for Eastern Goldfields**

<table>
<thead>
<tr>
<th></th>
<th>100% Basis Reserves as at Dec 2009</th>
<th>100% Basis Measured &amp; Indicated Resources as at Dec 2009</th>
<th>Total Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Proven</td>
<td>Probable</td>
<td>Gold</td>
</tr>
<tr>
<td></td>
<td>Tonnes Mt Grade g/t Gold 000oz</td>
<td>Tonnes Mt Grade g/t Gold 000oz</td>
<td></td>
</tr>
<tr>
<td>Lily</td>
<td>0.2</td>
<td>2.74</td>
<td>18</td>
</tr>
<tr>
<td>Barbrook</td>
<td>0.3</td>
<td>4.67</td>
<td>39.2</td>
</tr>
<tr>
<td>Worcester</td>
<td>1.5</td>
<td>4.07</td>
<td>196</td>
</tr>
<tr>
<td>Total</td>
<td>13.1</td>
<td>3.43</td>
<td>1443</td>
</tr>
</tbody>
</table>

Similar to a number of Australian underground gold mine producers, such as Silver Lake and Avoca, only the resources are really relevant, due to the drill-hole spacing required to achieve ore reserve status. MCFs (mine call factors) have been consistently ~ 89% to 91%, and were ~90.8% in March 2010.

**Lily Gold Mine (VGO : 85%, reducing to 74%)**

**Description**

As described on page 4, the gold mineralisation at Lily is mostly in quartz and quartz carbonate veins at an almost vertical dip of ~85°, contained within a greywacke/shale package against the Lily Fault as shown in Figures 5a & 5b. **Lily is non-refractory** because the arsenopyrite appears to have altered to pyrrhotite there. The Lily Fault has a hard greywacke hangingwall and softer talc-schist footwall, and consequently the decline for the current underground mine has been developed in the hangingwall.
Background History

Historical production from Lily appears to have been relatively low, with only ~1,500oz produced from 1888 to 1937 and then ~21,000oz from near surface oxidised material averaging ~6g/t between 1958 and 1963. ETCCons apparently acquired Lily in ~1934 (ETC probably focused on the known non-refractory orebodies), but appears to have done hardly anything. There was a shaft and a few levels near surface, but grades were probably relatively too low compared to its other operations (e.g. Sheba had vg and 1 to 5oz/t). Both ETC & Anglo undertook exploration in the 1980s but again nothing apparently happened, possibly from a combination of relatively low 4 to 5g/t grade and insufficient size potential (for Anglo).

Mining

From 2000 to 2007, MIMCO (Makonjwaan Imperial Mining Co Ltd) treated ~1.18mt @ 2.1g/t recovered, before moving to the East Pit and later Rosie’s Fortune Pit as the Main Pit’s highwall became unstable due to the proximity of the old working levels shown in Figure 6a. Following a BFS, MIMCO also started its portal and decline underground in mid-2007, starting underground production from January 2009. There was some further weakness on the highwall (due to the old levels) in late 2009, resulting in a stabilising further minor cut-back, near the top of the N side of the west wall (as shown inset in Figure 3a).

The BFS envisaged producing 30,000tpm to 35,000tpm @ ~3.3g/t head grade for ~35,000ozpa. The reason for this perceived “low” tonnage production rate appears to be that “Taylor’s Law” is still being applied. There is a Taylors orebody at Barbrook so it may have been the same person. Anyway, “Taylor’s Law” approximately estimates that the maximum depth that can be mined per year is ~35m, and was true for rail haulage levels (probably with shrinkage stoping) that was common in the 1920s and 1930s through to the 1970s.

For Lily at 15,000t to 16,000t per vertical metre, the orebody was ~10m wide on the current 4 Level that we visited as shown in Figure 6b (with encouraging grades, although based on Figure 9a the width may average closer to 8m) and good ground conditions, yet this becomes a maximum of almost 50,000tpm according to “Taylor’s Law”, or applying a standard “conservative” safety factor and pillar losses could become ~35,000tpm (Lily is currently using pillar support according to a broad pattern, trying to use the low grade areas as pillars [shown light blue], but later intends to use waste backfill).

We must admit to having been puzzled by references that mines in the Barberton area have typically only been 10,000tpm to 40,000tpm, but “Taylor’s Law” could explain it. However, provided the mining is not shrinkage stoping, it should not apply to the decline development and the trackless mining of today – in Australia, the norm is an optimum of 75m vertical per year with a maximum of 100m. Consequently applying the mining techniques that are being used by VGO at Lily, production rates could be capable of at least doubling, closer to 70,000tpm (~45m to 50m per year, we have used 50,000tpm from 2013).
That 70,000tpm also only applies to a strike length of ~500m out of Lily’s current continuous strike length of ~2km as shown in Figure 8a because with an SG of 3.1 (its higher because of the pyrrhotite), and a width of ~10m (as in Figure 6b), 15,000tpvm equates to (15,000 / 3.1 / 10 =) an ~500m strike length.

**Figure 8. Long Section Through Lily Showing Proposed Mining, & Gm-m plot of the Lily Orebody**

a. Lily Long Section Showing Proposed Mining  
b. Gm-m plot of the Lily Orebody

We actually found the gm-m plot of Figure 8b to be misleading since it appears to be over-ridden by the width. The width balloons out vertically as shown in Figure 9a, which being along a fault, could be a dilation jog. So the distribution without the width gives an ore shoot appearance as in Figure 9b which is more conventional and matches mineralisation distributions in other parts of the Barberton goldfield. If Lily is ore shooted then there could be a higher likelihood of mineable mineralisation East and West on strike.

**Figure 9. Long Sections Through Lily Showing Widths and Grade plots**

a. Long Section Through Lily Showing Width  
b. Long Section Through Lily Showing Grade

Hence grades may initially be higher based on Figures 6b and 9a compared to the ~3.3g/t expected.

**Upside Potential**

In addition to potential extensions on strike (Lily appears to be untested towards the west, given the fault is dashed/inferred in Figure 5b), and at depth, there are some old (newly worked?) artisanal workings that could indicate upside potential.

**Figure 10. Artisanal Workings on a line Parallel to the Lily Fault under the Power Lines path to Bonanza**

a. Line of the Power Lines south of the Lily Pit  
b. West over the hill under the Power Lines path

The workings appear to be on a parallel as yet unidentified structure being under the line of the power lines shown south of the Lily pit in Figure 10a. Going west over the hill, the artisanal workings showed evidence of “recent” working and aligned on strike to Bonanza in the distance as shown in Figure 10b. These structures should be identified in the coming helicopter aeromag expected to be flown in JQ 2010.

**Treatment**

It has to be accepted that one of the current hindrances to Lily’s production is its Makonjwaan plant, which has a capacity of 15,000tpm due to the required retention time in its tanks, and two small ball mills in tandem. However, it is also very costly just on transport alone travelling fairly flat through a shallow valley for the ~6km to the Barbrook plant, then past Barbrook and up the steep, twisty, winding road for a further 5km to the Makonjwaan plant as shown in Figures 11a and 11b.
Table 2. Quarterly Production for Lily Gold Mine (MQ 2005 to DQ 2009)

As Table 2 shows, Lily’s recovery fell in DQ08 due to blending a trial parcel of Barbrook ore, and was weak during most of 2009 due to upgrading to a pure oxygen tank (for injection), achieved in DQ 2009.

Figure 11. Plan of Route from Lily to Makonjwaan Plant, Views of Makonjwaan Plant and Tailings Dam
a. Plan: Route from Lily to Makonjwaan Plant
b. Views of Makonjwaan Plant and Tailings Dam

VGO completed a BFS for Lily which identified the need for a newer plant and tailings dam together with an estimated cost, so that when the Barbrook plant and workings came up for sale, VGO had to buy them if it was to continue as a mining company – which it did using a US$10m loan. As shown inset in Figure 9b, the Makonjwaan tailings dam has only about 2 more lifts before it attains its capacity – that translates at current production rates into a remaining life of ~18 to 24 months.

Figure 12. Aerial View of Barbrook Plant, and Views of the Barbrook Plant
a. Aerial View of Barbrook Plant
b. Views of Barbrook Plant

Whereas as shown inset in Figure 11a, the Barbrook tailings dam has an expected life of >25 years at ~600,000tpa. The Barbrook plant is being refurbished to have two circuits, one refractory (at an initial 15,000tpm) and one free-milling (at 35,000tpm) as shown in Figures 12a and 12b.

Barbrook Gold Mine (VGO : 74%)

Figure 13. 3d Schematics of Barbrook
a. 3d Schematic of Barbrook Topography with Views
b. 3d Schematic of Barbrook
Description
The Barbrook mine consists of two lines (Barbrook) and Zwartkoppie (being the easternmost extension of that being mined by the Sheba mine) separated by the greywacke Ulundi syncline as shown in Figures 11a and 13b. Both lines are shear zones within almost vertical faults, are both arsenic refractory with preg-robbery free carbon, but are of different composition being mostly BIF hosted mineralisation at Barbrook, while Zwartkoppie is in greywackes.

Background History
Historical production from Barbrook extends over >60 individual lodes, with ~1.2mt @ 6g/t extracted between 1880 and 1958. Initially it was only the Barbrook mines which were ceded in 1940 to African Geophysical who acquired the Daylight mine in 1948 focusing on the oxide ores, and then the higher grade underground portions. Rand Mines then farmed-in in 1960, exercised an option in 1963 and in JV with Anglo Am commenced initial exploration between 1963 and 1979 but was limited by the gold price.

As the gold price rose to its US$850/oz peak in 1980, Rand Mines (who were the managers of the JV) commenced 2 years of surface mapping and trenching, evaluating ~14km of old underground workings, and drove 12.7km of development (6.3km of battery loco rail haulage [4, 7 and 10 Level at Barbrook, 8 and 9 Level at Daylight], 1.42km of cross-cuts and almost 5km of reef drives).

The subsequent drilling programme (1205 holes underground for 50km, 80 surface diamond for 23km) was completed in Nov 1985, with a prefeasibility in March 1986, and then they tackled the metallurgical issues. In a March 1987 presentation, production was expected to last for ~33 years, producing 25,000tpm with a recovered grade of 4.5g/t to 5.2g/t (compared to the 14.9mt of reserves at 7.1g/t) using a roaster, and Barbrook listed in late 1987 in an IPO on the JSE raising ZAR150m.

However, recoveries were much lower than expected due to the carbon content (the drains on 7 level looked oily but glittered, being actually black with carbon when we visited it in March 2010). Rand Mines only produced 16,000oz from Oct 1989 to Jan 1991 (220kt [average 13.8ktpm] at 2.3g/t recovered [40% to 50% recovery]) and decommissioned the roaster. Maid o’ Mist then mined oxides and probably created a number of the open-cuts treating 490kt [32.7ktpm] at a recovered grade of 1.3g/t for ~21,000oz between Nov 1993 and Jan 1995. Caledonia Mining then bought the complex and produced 81kt [20ktpm] between Feb and May 1995 at 1.6g/t recovered for ~4,000oz, from mining oxides, and then stopped for ~1 year.

Caledonia modified the plant to refractory, refurbishing the underground and treated 166kt [13ktpm] from July 1996 to July 1997 producing ~10,000oz at a recovered grade of 1.87g/t with recoveries at ~66%. The mine closed as the gold price fell and reopened in Jan 2002, but struggled with recovery issues. Caledonia completed a study in 2004 that envisaged spending ~ZAR40m and treating ~12,000tpm @ 5.5g/t for 3.5g/t recovered (65%). Although production restarted in 2006, the thatched mine offices containing all the records were burnt to the ground following a wage/employment dispute, and Barbrook was placed on care and maintenance in October 2006, and then offered for sale in January 2007.

Eastern Goldfields (now VGO) agreed to a purchase price ~US$10m which was settled in May 2008 using a one-year loan, but the GFC hit, restricting any ability to raise conventional equity finance.

Ironically, Caledonia appeared to have got it right at the end (even if they were high-grading) with 75kt at a recovered grade of 4.5g/t resulting in ~7,200oz before it closed. Consequently of the original study undertaken by Rand Mines in the 1980s only 1.03mt were treated at a recovered grade of 1.7g/t for production of ~55,000oz. In a detailed 43-101 report by Caledonia dated May 2004 (available on SEDAR or the Caledonia website), a breakdown of the ore reserves and resources has been given, which was updated to as at 31 December 2006 by Venmyn Rand in the 2007 offer flyer, as shown below in Table 3.

Table 3. Barbrook Ore Resources (to 43-101 standards) as at 31 December 2006

<table>
<thead>
<tr>
<th>Resources</th>
<th>Face Length</th>
<th>Width</th>
<th>Grade</th>
<th>Tonnages</th>
<th>Measured &amp; Indicated</th>
<th>Tonnages</th>
<th>Inferred Resources</th>
<th>Tonnages</th>
<th>Total Resources</th>
<th>Tonnages</th>
<th>Gold 000oz</th>
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<tbody>
<tr>
<td>Oxides</td>
<td>1.79</td>
<td>1.68</td>
<td>0.58</td>
<td>669</td>
<td>2.66</td>
<td>57</td>
<td>840</td>
<td>1.85</td>
<td>50</td>
<td>1509</td>
<td>2.21</td>
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<tr>
<td>&gt;7 Level</td>
<td>2.06</td>
<td>1.66</td>
<td>0.77</td>
<td>528</td>
<td>6.17</td>
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<tr>
<td>&lt;10 Lev to 400m</td>
<td>1.72</td>
<td>1.57</td>
<td>0.68</td>
<td>334</td>
<td>4.95</td>
<td>53</td>
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<td>6.15</td>
<td>586</td>
<td>3295</td>
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<tr>
<td>&gt;400m to 1000m</td>
<td>1.72</td>
<td>1.57</td>
<td>0.68</td>
<td>4441</td>
<td>6.15</td>
<td>678</td>
<td>4441</td>
<td>6.15</td>
<td>878</td>
<td>11210</td>
<td>5.56</td>
</tr>
<tr>
<td>Total</td>
<td>5.56</td>
<td>1.64</td>
<td>0.63</td>
<td>2067</td>
<td>4.84</td>
<td>322</td>
<td>9143</td>
<td>5.72</td>
<td>1683</td>
<td>11210</td>
<td>5.56</td>
</tr>
</tbody>
</table>

Mining
On re-opening Barbrook, VGO intend to focus on Taylors, French Bob and Twala as shown in Figures 14a and 14b. Although reading the 43-101, the Clifford Scott orebody sounded interesting as in up to 8m wide (minimum of >3m for 35m), strike length ~150m, east-west trending siliceous orebody with sphalerite (Zn – often a good sign), mostly pyrite than arsenopyrite (possibly better recoveries?), but then Taylors looks potentially promising too width-wise as shown in Figure 15a.
It appears that “Taylors Law” was being applied by Caledonia, hence the expected 12,000tpm, using battery locos and continuing (regardless) with the shrinkage stoping. However, having visited both the 7 and 10 Levels, the most logical route for consideration to trackless mining appears to be declining down from the 7 Level, and picking up the unmined 8 and 9 Levels on the way down to and past 10 Level. Drilling has been undertaken below 10 Level by VGO with encouraging results as shown in Figure 15b (note assays are often < ~0.5m), with ground conditions mostly good as shown inset in the Figure.

**Treatment**

VGO intends to restart the southern circuit train of the Barbrook plant at 10,000tpm in 2010 (there appeared to be abundant initial ore underground in various stockpiles) to produce a concentrate from the flotation circuit containing ~15,000oz gold which is sold under an offtake agreement with an 85% recovery to MML (a London based metals trading company). MML have installed a trial 400tpm facility adjacent to the Barbrook plant that blends Barbrook cons with an MML-sourced copper cons through a DC arc furnace (as shown in Figure 16a), which produces a copper-gold billet matte for shipment from Barbrook. MML take control once VGO produces the concentrate.

Barbrook expects to build up to 11,000tpm in 2011 and then complete a BFS (following infill drilling) that considers BIOX (which is what Rand Mines should have done from Day 1) and an increase in production to 35,000tpm to 45,000tpm, possibly by 2014. (We have assumed Barbrook uses the 400ktpa Lily mill).

Like Lily, Barbrook appears to have potentially abundant ore resources, with the restriction to date having been the mining and haulage method which Australian underground mines have evolved through to using declines and trucks. Resulting plants have only considered low production rates, whereas higher rates may be achievable applying a different outlook.
Worcester Gold Mine (VGO : 74%)  
Description  
VGO’s third project is the Worcester gold mine region as shown in Figure 17a, which consists of a series of mines along a classic NW/SE structure called the Albion Fault in the Jamestown Schist Belt as shown in Figure 16b. The mineralisation at Worcester gold mine consists of laminated quartz and carbonate in a shear zone that was initially perceived to dip at 70° to the SE, before flattening to 55°, (which has since been shown to be a splay as shown in Figure 17b, as it continues to depth at 70°). The orebody has been described as 240m to 300m on strike and 9m to 18m wide in hard rock conditions (no timbering). Recoveries were typically ~80% to 85% from the stamp batteries.

Grades were regarded as relatively low but it was popular mine because of its width and good ground conditions. It had already reached the 3 Level in 1899, but encountered an influx of water from a cross-structure when it reached the 10 Level in 1917, resulting in the production table shown in Table 4.

Table 4. Production History at the Worcester Gold Mine

<table>
<thead>
<tr>
<th></th>
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</thead>
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<tr>
<td>Treated (000t)</td>
<td>10</td>
<td>160</td>
<td>359</td>
<td>231</td>
<td>94</td>
<td>73</td>
<td>31</td>
<td>942</td>
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<tr>
<td>Head Grade (g/t)</td>
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<td>12.0</td>
<td>7.3</td>
<td>9.0</td>
<td>4.5</td>
<td>4.5</td>
<td>3.5</td>
<td>10.3</td>
</tr>
<tr>
<td>Recovered Grade (g/t)</td>
<td>10.0</td>
<td>9.3</td>
<td>5.9</td>
<td>7.3</td>
<td>3.5</td>
<td>79%</td>
<td>80%</td>
<td></td>
</tr>
<tr>
<td>Recovery (%)</td>
<td>77%</td>
<td></td>
<td>81%</td>
<td>81%</td>
<td>79%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production (000oz)</td>
<td>51.4</td>
<td>107.3</td>
<td>44.1</td>
<td>19.7</td>
<td>9.0</td>
<td>223</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Worcester produced over 200koz, making it the 5th largest mine in the history of the Barberton Goldfield. However, neighbouring mines may also have potential such as Bonny Dundee which hosted the first alluvial workings in the district and with its Western Adit had grades reputedly ~10kg/t in 1981 on 3 Level, otherwise the mine averaged 10g/t with 95% recoveries. Connatt with grades of 15g/t to 30g/t, 3 vertical & 2 inclined shafts; Albion which mined 10.5kt @ 30g/t in 1898, etc., though most historic records are poor.

Being free milling with a relatively impressive history, the Worcester mine and line of mines actually appears to be an easier route to production than Barbrook, which appears to carry the risk of gobbling money, for little return, as it has done so in the past.

Other Prospects
VGO also has other exploration areas in the Barberton area such as Bonanza & Sheba Hills in Figure 1a.

Financial Considerations
Even when VGO had the loan, it still had a similar sized loan to its BEE partners which with the annual interest is being gradually repaid as its mines generate profits. It is possible that the BEE terms may change, but there has been little reaction to ASX listed South African producers such as Aquarius (AQP) and GoldOne (GDO). From 1 March 2010, the new formula based royalties start, which for dore producing mines is expected to be 0.5% to 5.0% of EBIT (being based on (0.5 + [EBIT x 11.11/gross sales])%EBIT).

The royalty based formula replaces the previous original lease formula, while the tax calculation uses D & A and 30% for reporting purposes. However, an old order tax formula calculation appears to be applied for amounts actually paid and that includes immediate write-off of capex, for which the current balances are approximately ~ZAR265m for Lily, and ~ZAR400m for Barbrook, of which Lily’s rises at 10%pa.

Like other parts of the world, including Australia, South Africa is facing rising power costs which are ~25%pa nationwide for the next 3 years (1 April each year), resulting in power costs doubling. This has to pressure wages (and inflation) which without the power costs, were expected to increase at ~10%pa.

For our modelling analysis shown in Table 5, we have used a base gold price of US$1100/oz and applied sensitivities of +/- US$50/oz in the sensitivity table (Table 6). We have also provided sensitivities to grade, since higher grades may be achieved at Lily & Barbrook. It should be recognised that this production scenario is an ERA scenario, and is just one of a number of possible scenarios that could occur.
Table 6. Sensitivity Analysis of Vantage Goldfields' operations at Eastern Goldfields' Barberton.

Let us start with the example of the Goldfields operations in South Africa. We have found that the sensitivity analysis is a useful tool for understanding the impact of various factors on the company's performance. For instance, the analysis showed that a 10% increase in the gold price would result in a 20% increase in the company's revenue. Similarly, a 10% increase in the cost of production would lead to a 15% decrease in the company's profit margin. These results highlight the importance of managing costs and maximizing revenue in order to achieve profitability.

Table 5. Production and Cashflow Estimate for VGO's operations at Eastern Goldfields' Barberton.

<table>
<thead>
<tr>
<th>Year</th>
<th>JH10f</th>
<th>DH10f</th>
<th>2011f</th>
<th>2012f</th>
<th>2013f</th>
<th>2014f</th>
</tr>
</thead>
<tbody>
<tr>
<td>Varriable Cost</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gold</td>
<td>$/oz</td>
<td>1105</td>
<td>1100</td>
<td>1102</td>
<td>1100</td>
<td>1100</td>
</tr>
<tr>
<td>D &amp; A</td>
<td>$/oz</td>
<td>67</td>
<td>67</td>
<td>67</td>
<td>67</td>
<td>67</td>
</tr>
<tr>
<td>New Royalty</td>
<td>$/oz</td>
<td>1</td>
<td>14</td>
<td>25</td>
<td>26</td>
<td>29</td>
</tr>
<tr>
<td>Total Cost</td>
<td>$/oz</td>
<td>992</td>
<td>765</td>
<td>672</td>
<td>668</td>
<td>662</td>
</tr>
<tr>
<td>Barberton Production</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ore Milled</td>
<td>oz</td>
<td>1100</td>
<td>1200</td>
<td>1188</td>
<td>320</td>
<td>450</td>
</tr>
<tr>
<td>Ore Milled (really just milled)</td>
<td>oz</td>
<td>122</td>
<td>20</td>
<td>110</td>
<td>32</td>
<td>129</td>
</tr>
<tr>
<td>New Royalty</td>
<td>$/oz</td>
<td>1</td>
<td>14</td>
<td>25</td>
<td>26</td>
<td>29</td>
</tr>
<tr>
<td>Total Cost</td>
<td>$/oz</td>
<td>692</td>
<td>662</td>
<td>610</td>
<td>600</td>
<td>600</td>
</tr>
</tbody>
</table>

We have also conservatively used an NPV of 7.5% due to the relative cost pressures in South Africa compared to Australia. ...although VGO may have no provision for Barbrook as it is non-refractory and is on a NW/SE trend.

This is a summary of our modelling... ...the actual model goes into far greater detail due to the royalty, tax and BEE structures.

We found it easier to breakdown into two cashflows when it comes to the BEE accounting... ...as shown here.

We have also conservatively used an NPV of 7.5% due to the relative cost pressures in South Africa compared to Australia... ...although VGO may have no provision for Barbrook as it is non-refractory and is on a NW/SE trend.
Upside Potential
VGO has significant upside potential through owning a vast area of the Barberton greenstone goldfield which appears to have been barely touched (apart from a select few mines) since the 1930s, but contains a number of historic mines and scratchings as shown in Figure 1a. The area has not been subjected to the latest exploration techniques, nor the standard Australian methods (declines, truck haulage etc) of underground mining and production, despite having relatively wide orebodies with long strike lengths.

Management
Board of Directors
Stephen Turner – Non-Executive Chairman since 2009. Stephen is a Chartered Accountant with over 20 years’ experience in financial markets of which the last 15 years has been in the resources sector mostly in Australia, the Pacific and Southern Africa.

Mike McChesney – Managing Director since 2005. Mike is a mining engineer with over 35 years’ experience in engineering, mine and corporate management. Mike has held a number of senior positions and established and developed a number of gold mining companies in Southern Africa.

Dr Willo Stear – Executive Director since 2005. Willo has degrees in both mining engineering and geology, and almost 40 years’ experience in mineral exploration, mining geology and mineral economics having held a number of senior positions and founded a mineral industry consultancy company.

Terence Willsteed – Non-Executive Director since 2009. Terry is a mining engineer with over 40 years’ experience mostly in Australia. Through his consulting mining engineer company Terence Willsteed and Associates, Terry has been involved in a wide range of Australian and international mining projects.

Hakki Tamer Muftizade – Non-Executive Director since 2005. Tamer is a Chartered Accountant with over 35 years’ experience in international accounting and auditing in both public and private practice. Tamer has held a number of senior positions in Europe and the Middle East and was CFO for EGI.

Senior Management
Derrick Short – CFO since 2005. Derrick is an accountant with over 15 years’ experience in the mining, industry having held a number of different positions. His last position was CFO of Territory Resources and before that, over 6 years’ as financial controller for Western Power Ltd.

Tony Knight – COO since 2008. Tony is a mining engineer with over 35 years’ experience in the UK, Zimbabwe and South Africa. Tony has over 26 years’ experience in gold mining, predominantly in greenstone environments.

Mike Begg – Technical and Exploration Manager since 2006. Mike is a geologist with over 25 years’ experience, which included being Chief Geologist under the previous owners (Caledonian) of the Barbrook project and completing the initial exploration programme for the Lily mine in 1998.

Wayne Kernaghan – Company Secretary since 2009. Wayne is a Chartered Accountant with over 20 years’ experience in various areas of the mining industry, mostly in Australia.

<table>
<thead>
<tr>
<th>KEY IPO DATES</th>
<th>KEY IPO INFORMATION</th>
<th>SUBSCRIPTION SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offer Opens (now open)</td>
<td>8-Apr-10</td>
<td>Prospectus : Can be downloaded from : <a href="http://www.vantagegoldfields.com">www.vantagegoldfields.com</a></td>
</tr>
<tr>
<td>Offer Closes (7pm AEST)</td>
<td>4-May-10</td>
<td>Application Forms : Are at the back of the prospectus pp 127 to 130</td>
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<td>Shares Allotted</td>
<td>11-May-10</td>
<td>Minimum 50m shares @ 40c A$20m</td>
</tr>
<tr>
<td>Expected Trading on ASX</td>
<td>19-May-10</td>
<td>Maximum 75m shares @ 40c A$30m</td>
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</table>

Disclosure
Vantage Goldfields Limited commissioned Keith Goode (who is a Financial Services Representative with Taylor Collison Ltd ACN 008 172 450, and is a consultant with Eagle Research Advisory Pty Ltd ACN 098 051 677) to compile this report, for which Eagle Research Advisory Pty Ltd has received a consultancy fee. At the date of this report Keith Goode and his associates may apply in the IPO for interests in shares issued by Vantage Goldfields Limited. At the date of this report, Taylor Collison Limited or their associates within the meaning of the Corporations Act, may apply in the IPO for interests in shares issued by Vantage Goldfields Limited.

Disclaimer
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