



## Phoenix Gold Limited (PXG:AU) Rating Update

This review of Phoenix Gold Limited has been prepared in accordance with the **PortfolioDirect** stock rating framework described on pages 2-4.

**PortfolioDirect**/resources offers strategy and portfolio recommendations for independent investors. The rating framework has been developed to assist investors and their advisers to grade individual stock risk so as to better match stocks in their own portfolios with their personal risk profiles and to take account of the differing risk characteristics of potential investments when structuring their portfolios.

A **PortfolioDirect** stock rating is not intended as a forecast of future share price movements. Share prices will be influenced by a range of factors including, significantly, macroeconomic conditions and the current cyclical positioning of the sector which are not taken into account in determining a stock rating. The **PortfolioDirect** analytical framework separates the view about market direction from the stock risk analysis contained in this review.

The most important driver of a stock rating for a company being reviewed is an assessment whether the company is likely to meet its exploration and development targets within the timeframes sought by investment markets and, when development has occurred, its ability to maintain positive value momentum over future years.

### The Investment Decision Snapshot

<b>Commodity Exposure</b>	<i>What is the mineral to which the company is principally exposed?</i>	Gold in Western Australia
<b>Resource Quality</b>	<i>How does the resource rank on the "Gloss" rating scale?</i>	The company has been given an above average 3.5 grade on the 5 point resource quality rating scale
<b>Investment proposition</b>	<i>Do investment returns depend on (i) a reduction in risk over the medium term, (ii) specific near term events or (iii) a future change in cyclical conditions?</i>	Investment returns will depend on a reduction of risk over the medium term as the company successfully develops its targeted properties
<b>Risk profile</b>	<i>How does the project rank on the PortfolioDirect risk rating scale?</i>	The company has been given a 1.4 grade on the 5 point risk rating scale indicating a relatively low risk profile reflecting its location and likely ease of development
<b>Portfolio positioning</b>	<i>What roles could the company play in a portfolio? Are other companies able to fulfill these roles more effectively?</i>	As a gold development opportunity, there are others from which to choose. Existing mine life expectations will limit its role as a bullion substitute in longer term portfolios. Some takeover appeal may give it an edge in stock selection.
<b>Liquidity</b>	<i>How easily can buyers or sellers of the stock be accommodated?</i>	Liquidity is adequate for a broad range of investors

**Important Information Regarding the Preparation of this Report**

This report is not intended as an offer or solicitation with respect to the purchase or sale of a security. Nothing in this report should be taken as a recommendation. Phoenix Gold has been rated without taking into account the particular objectives, financial circumstances or needs of any particular investor. Before taking any decision based on this communication, an investor should assess his or her own circumstances and seek professional advice.

This report is based on information disclosed publicly by Phoenix Gold at the date of the report, information otherwise available in the public domain at that time and analysis and technical inferences drawn by the staff of E.I.M. Capital Managers Pty Ltd, the publisher of **PortfolioDirect**.

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All opinions and estimates in this communication, including the rating given to Phoenix Gold, constitute judgments by E.I.M. Capital Managers as at the report date and are subject to change without notice. The report publisher is under no obligation to make public any change in view about any matter referred to in this document.

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Phoenix Gold has not had an opportunity to comment on the report or request any amendments prior to its publication.

**Trading in PortfolioDirect Rated Stocks by E.I.M. Capital Managers**

Stocks rated in accordance with the criteria outlined in this communication may be bought or sold by E.I.M. Capital Managers on behalf of clients or funds whose investments are managed by the firm. Specific investment objectives and individual portfolio considerations may result in transactions by E.I.M. Capital Managers that are not consistent with **PortfolioDirect** ratings for individual stocks.

## Stock Rating Criteria

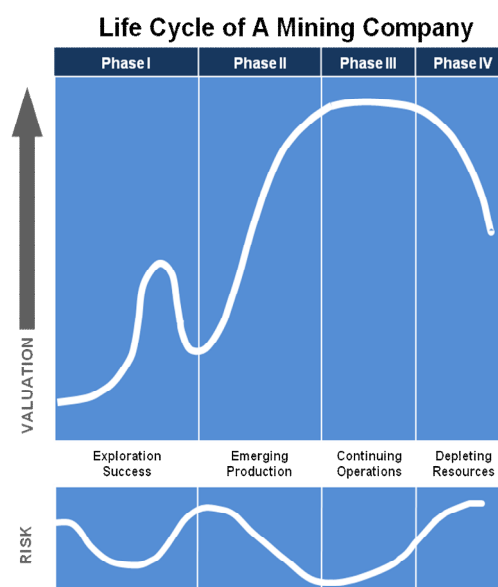
E.I.M. Capital Managers categorises sector investments based on the four phases in the life cycle of mining and oil and gas companies.

**Phase I:** the exploration phase during which relatively small amounts of capital may be deployed with the prospect of a high return but when investors also risk losing all the funds subscribed prior to the company having an agreed development plan.

**Phase II:** the emerging production phase in which companies are able to demonstrate access to a commercial resource and add value by meeting key development milestones along an agreed development path.

**Phase III:** the phase of continuing operations in which organic volume growth is limited and commodity price movements become the dominant driver of earnings and value.

**Phase IV:** a period typically characterised by falling ore grades and rising costs requiring additional capital to prevent output contracting.



Phase I companies will be scored (on a five point scale) on their potential to confirm a commercially viable development within an acceptable investment market timeframe. The duration of the investment horizon might vary from time to time depending on market conditions but will usually extend to a period of up to 24 months. Judgements will be based on publicly available information, including clarifying conversations with company management, and the resulting geological inferences drawn by E.I.M. Capital Managers analysts.

Phase II companies will be scored on a five point scale on their capacity to deliver positive value momentum (i.e. the ability to generate increasing fundamental value over future years without any reliance on higher commodity prices).

Since Phase III companies, by definition, no longer have any material organic growth prospects, they will generally fail the 'positive value momentum' test. A Phase III company may still play an important portfolio role depending on its relative financial strength, its capacity to withstand periods of cyclical weakness due to the competitiveness of its cost structure and its potential, arising from a large resource base, to operate through multiple economic cycles. Phase III companies will be scored on a five point scale on their absolute value proposition and how they meet these additional criteria.

No inferences about share price performance should be drawn from the rating of an individual stock. Investment returns will be influenced by a range of factors, some of which are included among the **PortfolioDirect** rating criteria, as well as investment market expectations about a range of macroeconomic variables. The **PortfolioDirect** rating does not take account of macroeconomic or investment market conditions that play a role in setting the price levels of securities.

There may be points in the cycle when stocks assessed by **PortfolioDirect** as being relatively risky and given a relatively low score on the **PortfolioDirect** rating scale are capable of producing relatively strong investment returns. This may arise, for example, because of strong leverage to changes or expected changes in market conditions among stocks with unusually depressed share prices or very small current market values.

## Significant Investment Risks

In addition to general equity market risks reflecting unexpected changes in global economic or political conditions, investors in the resources sector may incur further risks specific to investments in the sector.

**Commodity market risk:** Resources sector investment returns are generally more volatile than returns from other equity market sectors due to the earnings of resources companies being exposed to commodity price and foreign exchange movements. Commodity prices can be influenced by a range of factors including economic events, which might affect the volume of commodities used, monetary policies which might affect levels of speculation and changes in output reflecting levels of industry exploration, investment and production disruptions.

**Operational risk:** Companies may fail to meet their development goals as a result of unexpected external influences, including political conditions and natural phenomena, as well as the skill base and operational capabilities of company management. Companies engaged in exploration activities may fail to locate or define mineral deposits of a sufficient size to be commercially viable.

**Funding risk:** Since companies in the resources sector require ongoing funding for development, expansion and maintenance of output, changes in financial market conditions can affect the value of investments adversely through the cost or availability of capital.

**Regulatory risk:** The value of investments in the sector may be affected adversely by changes in government policies relating to the conditions under which mine developments are permitted, including the need for more stringent environmental controls, higher taxation or royalty rates or requirements for local equity participation.

**Small companies risk:** Small or early stage companies generally have less diversified income streams, less stable funding sources and weaker bargaining positions with their counterparties than larger companies. The securities of small companies may also be less liquid than those of larger companies making the purchase or sale of securities more difficult or costly to complete, possibly with an adverse impact on portfolio performance.

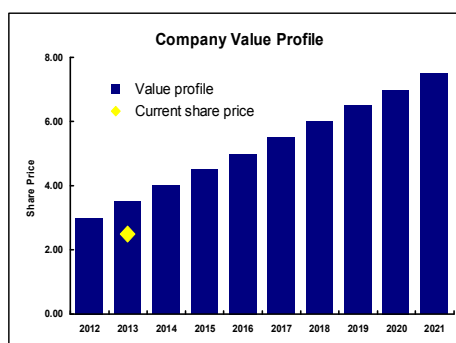
### Rating a Phase II Company

#### What do we mean by 'positive value momentum'?

Positive value momentum - the key criterion for judging Phase II companies - refers to an increase in value over 12 months, 18 months, etc without having to depend on a favourable change in macroeconomic conditions. The ideal company will have a value profile similar to that illustrated in the chart.

Since this ideal will rarely exist, if ever, portfolios require active management to recognise when the value momentum of individual companies is slowing or likely to stop and a company in the portfolio needs to be replaced.

Positive value momentum will be a function of organic growth potential, duration to production, exploration potential (contributing to mine life extensions), lowered risk, reduced capital spending and the capacity to withstand cyclical declines in raw material prices.



## A Guide to the PortfolioDirect Rating Report

Each **PortfolioDirect** company rating report addresses questions affecting business outcomes and potential investment standing under five separate headings.

### Primary Development Assets

- What are the most important geological or operational attributes of the company?
- Where are the assets located and what is the availability of local infrastructure?
- What potential impact does location have on business outcomes?
- How was ownership achieved - corporate exploration, acquisition or farm-in - and what obligations remain to the vendors or partners?
- Do historical outcomes on or near these exploration properties say anything about likely mineral characteristics on the company's own assets?
- Are there identifiable technical issues that need addressing before further work can be completed?

### Regulatory Standing

- What approvals have been received?
- What additional approvals will be necessary to meet business goals?
- Has the company been in breach of any regulatory requirements at this site or elsewhere on any previous occasion?
- Can the company show a commitment to environmental and social needs?

### Project Potential

- What scale of development is anticipated or, if judgements about this cannot be made presently, what must happen before such a judgement can be made?
- What operational or market constraints might affect the project potential?
- What is the likely range of project capital needs in the event of development?

### Capacity to Meet Targets

- What skills does the company currently have available?
- What additional or alternative skills will be needed for the next stage of activities?
- How does the track record of the existing management impact current judgements about the capacity of the company to meet its targets?
- What financial resources are currently available? Are they adequate for the targets being set?
- Are there unresolved technical, financial or regulatory matters that could impact the achievement of business targets?

### Rating Discussion

- Into which development phase has the company been classified?
- What are the key criteria against which the company is being benchmarked?
- How does the company stand against the rating criteria for a company at this stage of development?
- Are there criteria which have been more or less important in coming to a rating decision?
- Are there matters which might affect the rating in the future?
- Are there any special attributes displayed by the company that might impact on its role in a portfolio?
- How have historic investment returns affected judgements about current and future market risk?

# Company Rating Update

## Phoenix Gold Limited (PXG:AU)

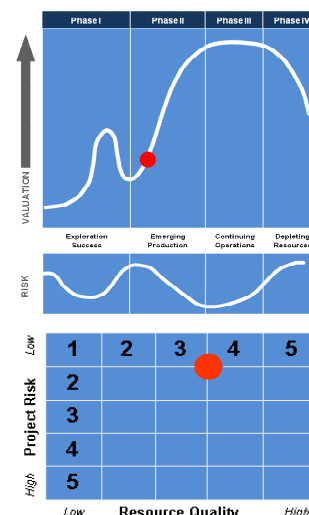
NR 1 1+ 2 2+ 3 **3+** 4 4+ 5

### Recent Events

#### *What has happened to cause a review of the company's PortfolioDirect rating?*

The company announced it was completing mining operations at Kintore West and suspending the sequential development of a number of small related projects in order to preserve cash and focus on the Norton Goldfields Joint Venture at Castle Hill Stage 1 and a proposed heap leach development (ASX 14 April 2015). The company cited excessive dilution from mining practices (translating to higher unit costs) as the primary reason for curtailing mining operations.

The company has entered into an agreement with Evolution Mining under which the latter will subscribe for shares in Phoenix Gold up to a value of A\$9 million for a 19.9% stake in the company (ASX 1 May 2015). Certain of the Phoenix Gold properties are adjacent to tenements being acquired by Evolution Mining. The companies have foreshadowed strategic advantages for both parties in working together to explore the Zuleika shear zone running through their properties.



### What's Different?

#### *How do recent events differ from prior expectations about what will drive company investment returns?*

The cessation of operations at Kintore West removes the potential for positive near term cash flows to fund corporate and exploration activities as the company moves toward finalising its deal with Norton Goldfields and completes the proposed heap leach development.

The earlier **PortfolioDirect** review had highlighted the considerable development flexibility retained by the company. The review recognised that this flexibility had value but also created scope for a negative impact insofar as it could take away from the confidence attaching to an assessment of the investment value proposition.

While the **PortfolioDirect** rating assessment was carried out based on immediate production coming from small scale mining efforts which are now being abandoned, this was not the only value accretive route open to the company and considered in the context of framing a valuation.

### Rating Impact

#### *What have been the key influences on a rating change?*

The rating is based on the standard **PortfolioDirect** criteria for a Phase II company, namely, the extent (i.e. the size and duration) of future value uplift without relying on any improvement in commodity prices. At the current gold price and exchange rate the company's market value, which is below the assessed value of future cash flows, displays positive value momentum. It would be appropriate for a higher discount rate to be applied to a valuation now that the near term production options have been discarded giving rise to a higher development risk. This is the principal source of a lowered rating.

No specific value has been placed on the arrangement with Evolution Mining. While the 'two heads are better than one' argument may improve the chance of exploration success somewhat, another possibility is that Evolution ends up using its superior bank balance to divert activity away from priorities that would have otherwise been more important for Phoenix Gold.

### Investment Consequences

#### *What is the impact of recent events on the investment prospects of the company and how investors should react?*

In removing the prospect of near term production, the risk profile of the company has risen although the investment proposition continues to hinge on progressive development of a sequence of mines or areas as the company takes advantage of its positioning in a highly regarded gold mining area with a demonstrable history of successful mining activity. The emergence of Evolution Mining as an influence could be seen as making Phoenix a takeover target depending on how successfully its various joint arrangements are conducted. ■



# Company Rating Review

## Phoenix Gold Limited (PXG:AU)

**Development Stage:** *Phase II*

**Selection Criteria:** *Corporate subscriber initiated*

**Rating:** 

**Focus:** *Strong - single commodity/single location*

**Commodity Exposure:** *Gold*

**Location:** *Western Australia*

**Investment Proposition:** *Implementation of value building development strategy.*

**Portfolio Positioning:** *Suitable gold bullion alternative; positive relative value characteristics*

### Recent Events

- In October, the company delivered material mined from the Castle Hill Stage 2 development to the Greenfields mill where it has a long term treatment agreement.
- Norton Goldfields exercised an option to access Castle Hill Stage 1 material by meeting development costs and sharing revenues with Phoenix Gold.
- The company purchased a heap leach processing plant to allow it to treat lower grade ore.
- The company recently completed a capital raising of \$4.7M.

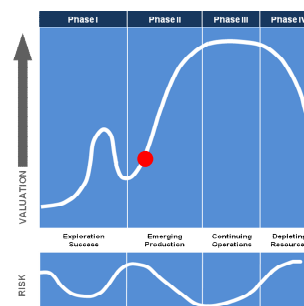
### Primary Development Assets

Phoenix Gold was listed on the ASX in December 2010 as a gold exploration and development company focused on properties adjacent to the Kunanalling shear northwest of Kalgoorlie in Western Australia. Soon after listing, the company acquired additional properties in the region (Blue Funnel, Broads Dam, Red Dam) and used the nearby Greenfields toll treatment mill at Coolgardie in a series of treatment campaigns. This same mill is being used for the current campaign of Castle Hill Stage 2 production.

The company holds 326 tenements in Western Australia covering 529 square kilometres principally clustered on prospects and former workings on the Kunanalling and Zuleika Shear Zones which are geological domains within the Eastern Goldfields. The largest contiguous holding sits east of the historic mining centre of Castle Hill and hosts the sequential developments of the same name. The region has a significant gold endowment close to the past and present mining centres of Mt Pleasant (4Moz contained gold), Kundana (4Moz), Frogs Leg (1.4Moz) and Coolgardie (2Moz) to the south.

*Castle Hill Development, Eastern Goldfields, Phoenix Gold 100%*

The project is located on the northwest trending Kunanalling Shear Zone approximately 50km



### Statistical Risk Measures

<b>Deviation from</b>	
• 15 week moving average	-7%
• 25 week moving average	+11%
• 50 week moving average	+7%
<b>Historical return ranking (1-100)</b>	
• 2011-June 2013	17
• Since 1 July 2013	41
<b>Return volatility<sup>1</sup></b>	0.9X
<b>Liquidity<sup>2</sup></b>	16%

1. Relative to sector median
2. Turnover for 12 months as % of current shares



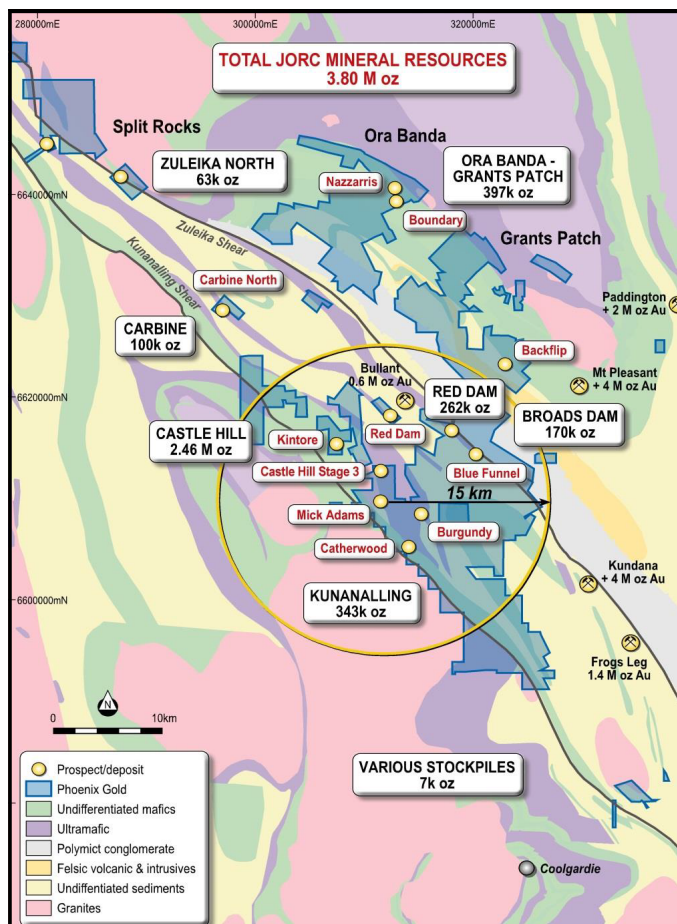
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northwest of Kalgoorlie. The Castle Hill project area is 9km long with 4km recently subjected to intensive exploration activity by Phoenix Gold. The resource is near surface, moderate grade (with some high grade zones), free milling and hosted in an extensive felsic rock termed the Castle Hill Tonalite. The gold occurs in both the tonalite body and host mafic rocks. The bulk nature and shallow nature of the material offer a number of development scenarios which can be operated concurrently. Given the size of the system, the area has been divided into a number of defined blocks to aid resource definition and mine planning. The Castle Hill Stage 1 area is located at the attenuated southern margin of the tonalite body. The Stage 2 area (which includes a number of pits including Kintore) is located approximately 7km to the north northwest.

#### *Kintore Development area (Castle Hill Stage 2)*

The company has commenced gold production from the Kintore open pit which is first of four (Kintore West, Burgundy, Red Dam and Nazzaris) modest scale open cuts to be mined over an initial campaign of two years. Ore is trucked on existing roads to the Greenfields tolling mill in Coolgardie 27 km away. The company used this facility in December 2013 to treat material from the Blue Funnel resource. The company negotiated a new contract for this mill in April (ASX 14 April 2014).



The Kintore pit is designed around two sets of quartz veins (with strikes of 345-350 degrees magnetic and 55 degrees magnetic) within a deformed part of the tonalite body and accumulations of oxidised material within the laterite profile. Previous historical gold mining in the area had focused on a series of mineralised paleochannel accumulations on the margin of the tonalite.

A series of confirmatory drilling programs were completed during the year (ASX 27 May 2014). In September, infill drilling of the second pit target (Burgundy) confirmed earlier exploration work which had defined gold zones associated with two steeply dipping mafic units. Both zones were noted to be open along strike and at depth (ASX 25 September 2014).

Castle Hill Stage 2 (toll treat campaign, initially 2 years) April 2014

0.8 g/t cut off

Measured	-
Indicated	12.36 Mt at 1.84 g/t Au for 733,000 oz contained gold
Inferred	

Reserves

Proven & Probable reserves	4.95 Mt at 1.82 g/t Au for 289,800 oz contained gold
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Initial two year campaign

Mining Inventory to mill	1.303 Mt at 2.24 g/t Au for 87,157 oz contained gold material for heap leach
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#### Heap Leach development plan

The company has advanced its heap leach development plans to the point of purchasing a suitable processing facility and reconfiguring gold resources to account for the treatment of intermediate grade material that would have otherwise been classified as waste.

#### Castle Hill Heap Leach plan

0.4 g/t Au cut off grade

Measured & Indicated 48.89 Mt at 0.6 g/t Au for 896,000 oz contained gold

Proven & Probable reserves 14.96 Mt at 0.58 g/t Au for 280,450 oz contained gold

#### Castle Hill Stage 1 (Norton Gold Joint Venture)

The Castle Hill Stage 1 area was subject to a resource infill program in late 2013 and a resource and reserve revision which lifted company gold reserves to over 1Moz (ASX 27 December 2013, 4 February 2014). The infill drilling showed considerable grade continuity within the steeply dipping tonalite body in this area and extended the mineralised body to 500 metres depth, some 200 metres below previous drilling.

Within a series of proposed pit shells at Castle Hill Stage 1, the company identified some 10.68Mt of mill feed containing 542,000oz and a further 12.16Mt of lower grade material containing 142,900oz that would be suitable for a heap leach operation. The pit shells were derived using a gold price of A\$1,310/oz and a cash operating cost (including royalty) of A\$891/oz (ASX 27 December 2013). The work was subsequently refined in the presentation of a definitive study in February 2014 (ASX 10 February 2014) which then led to a final investment decision by the company.

In February 2014, the company granted Norton Gold, the operator of the nearby Paddington gold mill, a six month option for a mine and an ore sale agreement. Under the agreement, Phoenix Gold must prepare "feasibility studies" on specific open pit areas using Paddington cost information. As part of this agreement, Norton Gold will undertake mining, transportation of ore to Paddington and processing, with ore parcels sold on a price equal to "50% of any surplus" set off the prevailing gold price and agreed cost inputs. The announcement specified detailed cost information for the Mick Adams-Kiora and Wadi mining areas.

In August 2014, Norton Goldfields exercised the option thereby advancing the joint development plan. In October, Phoenix Gold noted that both parties were proceeding to finalise the terms of a Licence to Mine and Ore Sale Agreement (ASX 16 October 2014).

#### Castle Hill Stage 1, Norton Gold JV

0.8 g/t cut off

Measured & Indicated Resource 25.73 Mt at 1.5 g/t Au for 1,211,000 oz contained gold

#### Reserves

Proven & Probable reserves 10.68 Mt at 1.71 g/t Au for 588,380 oz contained gold

#### Initial 18 month campaign

Mining Inventory to mill 2.33 Mt at 2.03 g/t Au for 142,000 oz contained gold  
material for heap leach 2.0 Mt

#### Exploration of high grade shear targets

The data compilation, resource extension and related work have allowed the company to identify a number of high grade shear hosted target areas in the Broads Dam area within the prospective Zuleika Shear Zone. Any discovery here could provide a source of satellite feed that could be used to augment the mill feed from Castle Hill.

This trend is host to a number of very high grade underground mines including Bullant (0.6Moz) and Frogs Leg (1.4Moz) located 20km further to the south. The operator of the Bullant mine was subject to a successful takeover offer from Norton Goldfields in April 2013 (ASX 17 April 2013). In 2008, the Frogs Leg Mine had a measured and indicated resource grade of 6.8 g/t Au.

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In the March quarter, the company set exploration targets at Ora Branda, Kunanalling and North Zuleika as one of its immediate priorities, highlighting the Broads Dam prospect. (ASX 29 April 2014).

Some 4,347 metres of exploratory RC drilling were completed in the September quarter with most holes (29) at Red Dam, a prospective target close to the Zuleika Shear and the site of the third pit of the Castle Hill Stage 2 development.

The drilling was defined as exploratory given the available information and the potential for exploration surprise relating to the continuity of a central high grade zone and opportunities to extend the resource to the north. The drilling achieved its objectives and pointed to a potentially larger pit with underground development potential focused on two zones of quartz-carbonate veining on the contact of mafic and volcanoclastic rocks (ASX 7 October 2014).

### **Regulatory Standing**

Western Australian exploration licences are issued for eight year periods with set requirements on expenditure and progressive tenement reduction. Tenements can be renewed after the eight year period has passed provided conditions have been met.

The Castle Hill projects are located on granted Mining Licences which have a life of 21 years. In February 2014, the company noted that it had applied for a range of miscellaneous licences to allow access and road haulage between satellite areas. The company notes that these applications have either been granted or are in the process of being granted.

The tenements covered by the Norton agreement are Mick Adams-Kiora (M16/24, M16/40, M16/152, M16/189, M16/195 and M16/533) and Wadi (M16/24 and M16/526).

### **Project Potential**

In February 2014, the company released the details of a definitive feasibility study for an eight year project with an average annual gold output of 130,000 ozs, project capital costs of \$136M and a lead time of 18 months. Against a background of weak resource sector capital markets, the company opted for a staged development requiring significantly less pre-production capital and resulting in an accelerated cash return to the company.

In February, the company described Castle Hill stage 1 as involving an initial 18 month campaign with Norton Gold which could deliver a net cash contribution to Phoenix Gold of A\$17.5M based on a gold price of A\$1,400/oz and monthly ore deliveries of 150,000t (ASX 21 February 2014).

The development path for Castle Hill Stage 2 involves the delivery of 600-800Kt of ore grading 1.9-2.4 g/t for at least two years to produce 40-50Koz gold per annum in treatment campaigns with payment on an open book cost plus basis. The agreement also gives the company a first right of refusal to acquire the plant should the owner seek to sell the mill during the term of the agreement.

Based on a gold price of A\$1,350/oz, the company has estimated that production of 80,000-95,000oz of gold should make a net cash contribution of A\$10-12M to Phoenix Gold over a two year period. The analysis assumed toll treating 1.303Mt of material grading 2.24 g/t Au with a metallurgical recovery of 93%. In the process of extracting 1.303Mt of ore for processing, the company would stockpile 0.98Mt of heap leach material.

Permitting is in place for a heap leach operation adjacent to the Castle Hill production area. An initial February 2014 study estimated that a 2Mtpa facility would produce 25,000-30,000oz gold. This equated to an annual net cash contribution of A\$10-12M over an initial four year period based on a gold price of A\$1,350/oz (ASX 15 October 2014). The operating costs of this material are projected to be \$9.50/t or approximately \$700/oz since mining costs are attributed to the cost of the mill feed ore.

On 11 July 2014, the company announced that it had executed an agreement to purchase an idled 2.3Mtpa heap leach processing facility for a total consideration of \$2M. The specifications of

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this facility are being incorporated into a detailed heap leach feasibility study due in December 2014. This study will include specific relocation and refurbishment costs.

The company is currently refining the financial and physical parameters of the proposed heap leach facility given a plant with larger throughput capacity (2.3Mtpa vs 2Mtpa) has now been purchased and mining activity at Castle Hill Stage 2 has commenced generating stockpiled heap leach feed material.

### **Capacity to Meet Targets**

The company has outlined a development plan tailored to current capital market conditions and designed to generate near term cash to maximise the chance of a successful development strategy.

The company is now well advanced in executing the plan it has outlined. Three key elements of the strategy - an agreement to mine with Norton Goldfields, access to the Greenfield mill and purchase of a suitable heap leach plant - have given the company the basis for successful execution of each of the three stages of the development.

Analytically, the principal challenge for the executive team is now delivery of a revised feasibility study for the heap leach development at Castle Hill. At an operating level, there are three targets that will have to be met:

- commencement of the Norton Goldfields joint venture mining activities;
- ongoing production of Castle Hill stage 2 for the Greenfields mill; and,
- completion of the mining campaign at the Kintore pit with transfer of activities to the Burgundy pit in the upcoming June quarter.

The foundation for the effective implementation of the strategy came from the company's capacity to secure and actively manage a large holding of contiguous granted Western Australian mining licences and exploration tenements and the reappraisal of known and new fields based on its own exploration activity. The company has subsequently undertaken the feasibility studies necessary to de-risk the financial and technical parameters of the project.

In May, the company appointed Mr. Grant Haywood as Chief Operating Officer. Mr. Haywood is a mining engineer with 25 years experience most recently with Phoenix Gold managing the definitive feasibility study. Previously, he held senior operating roles with Saracen Resources and Norton Goldfields (ASX 6 May 2014). The Managing Director of the company, Mr. Jon Price, is a metallurgist with over 25 years experience much of which has been in the Kalgoorlie area where he has held senior executive roles relating to the development and operation of underground and open cut mines, including the Paddington and St Ives gold mines.

The executives in charge have the requisite experience to achieve the targets set for the company directly and through the identification and recruitment of appropriate staff.

At the end of September, the company held cash of \$9.7M (ASX 29 October 2014) which included proceeds of \$4.7M from the placement of an entitlement offer shortfall priced at 13c.

### **Rating Discussion**

**PortfolioDirect** has classified Phoenix Gold as a Phase II company. The key determinant of a rating for a Phase II company is the extent (i.e. the size and duration) of future value uplift. Any value uplift will be a consequence, usually, of some combination of organic growth, operational improvement, lower capital needs and a falling discount rate as project risk is reduced through the development cycle. With pre-production capital spending behind it, a company's value profile would normally build with higher output.

These assessments of the value profile are made in a neutral commodity price environment. Where current commodity prices are significantly above underlying industry costs, a lower price (at or nearer the marginal costs of production) will be assumed so as to measure the value proposition. This works against companies operating at the upper end of industry cost curves and

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favours those with the lowest cost outcomes.

The rating outcome for a Phase II company depends on responses to two questions: is the company currently cheap on a cash flow valuation basis and will the valuation rise in the coming years. The rise in future valuation is critical to a rating because it signifies the positive momentum needed to underpin future investment returns whatever implied discount rate an investor might be using currently to value the company. The longer the duration of the value improvement, the higher the **PortfolioDirect** rating that will be given.

Some uncertainty remains about the longer term production profile of Phoenix Gold although this arises primarily because of commercial decisions tied to ongoing optimisation and analytical efforts rather than concerns about available resources for processing. Depending on capital market conditions, the company could opt for a larger scale and more capital intensive project. Conversely, the adoption of the less capital intensive heap leach development augments the existing mining activities at Castle Hill offering lower overall unit cost outcomes.

To this extent, the company retains considerable development flexibility. While this optionality has value, it also has the potential for a negative impact insofar as it takes away from the confidence attaching to an assessment of the investment value proposition. There may not be an immediate need to address this uncertainty but it is likely to have a greater bearing in the future as the shorter term, more opportunistic development options are reduced in number.

The **PortfolioDirect** analysis has assumed a continuation of the smaller scale but long life operation consistent with current market conditions. Based on the near term production profile to which the company is committed, development of the heap leach operation and ongoing production campaigns of a similar or slightly reduced size, the project valuation exceeds the current market price of the company. This would provide a correspondingly modest and brief uplift in value before stabilising. There is scope for a more substantial future value uplift depending on the production plan eventually adopted but the rating has discounted this possibility in line with current market conditions.

In contrast to other commodity segments, there is no marginal cost benchmark that can be used to measure downside valuation risk in the gold sector since annual mine production is such a small proportion of the amount of gold available for exchange. The gold price is likely to be driven by macroeconomic factors largely unconnected to the economics of the industry.

The **PortfolioDirect** valuation based on the current gold price does not take account of the possibility that the gold price could fall below a level that would eliminate the absolute value of the investment. **PortfolioDirect** has assessed the value of the Phoenix Gold developments as being approximately equal to the current market value of the company at a gold price around US\$950/oz. At this price, the absolute value proposition underpinning an investment would have been removed.

**PortfolioDirect** uses two further benchmarks to assess the value proposition for a gold mining company. One is relative valuation based on the resource, production and financial characteristics of the company. The current Phoenix Gold market value is below the average for stocks in the sector with a similar set of attributes so Phoenix Gold is attractive from a relative valuation standpoint.

An investor seeking gold-related portfolio exposure may do so with a direct bullion holding or through an equity of a gold producer. An equity would need to have a resource base equivalent to at least five to seven years of production (and ideally 10 or more) to qualify as a gold bullion substitute in a portfolio with a medium term orientation. It also needs a return capable of compensating for the additional equity risk incurred. Phoenix Gold has a sufficiently large resource base for it to be regarded as a suitable portfolio holding for an investor who wished to use gold as a diversifying medium in an investment portfolio. ■

## Abbreviations and Symbols

lb	pound	cif	cost, insurance and freight
oz	troy ounce	fob	free on board
Koz	1,000 troy ounces	fot	free on truck
Mlbs	million pounds	g/t	grams per tonne
kg	kilogram	ppm	parts per million
t	tonne	RC	reverse circulation
kt	1,000 tonnes	RAB	rotary air blast
Mt	1,000,000 tonnes	U <sub>3</sub> O <sub>8</sub>	yellowcake (uranium)
Mtpa	million tonnes per annum	Fe/FeO	iron/iron ore
kL	kilolitre (1,000 litres)	SiO <sub>2</sub>	silica
ML	megalitre (one million litres)	Al <sub>2</sub> O <sub>3</sub>	alumina
GL	gigalitre (one billion litres)	P	phosphorus
ha	hectare	TiO <sub>2</sub>	titanium dioxide
m	metre	ZrO <sub>2</sub>	zirconium dioxide
m <sup>3</sup>	cubic metre	LOI	loss on ignition
km	kilometre	mg/l	milligrams per litre
A\$	Australian dollar	Mj/kg	mega joules per kilogram
\$M	million dollars	EBITDA	earnings before interest, tax, depreciation & amortisation
US\$	United States dollar	EBIT	earnings before interest & tax
MG/GW	megawatt/gigawatt	ROM	run of mine
ct	carat	LOM	life of mine
bbl	barrel	MOU	memorandum of understanding
mbd	million barrels a day	VTEM	Versatile Time Domain Electromagnetic
MBOE	million barrels of oil equivalent		





#### PortfolioDirect/resources

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