

Wednesday, May 15, 2013

## Defining a new Cobar-style discovery

Copper and precious metals exploration company, Peel Mining Limited (Peel), continues drilling to define a significant high grade copper deposit at its Mallee Bull Project south of Cobar, in Central Western NSW. The Mallee Bull deposit displays all the characteristics of the classic Cobar-style deposits (short strike extent, strong depth continuity and structural controls, almost vertical orientation, and indications of grade increasing with depth).

Drilling continues to increase the vertical extent of the Mallee Bull deposit. Peel recently announced multiple high grade copper-silver-gold intercepts at depth in holes MBDD009W2W1 and 10 and 10W1. The intercept in MBDD009W2W1 of 84m averaging 4.4% copper, 38g/t silver and 0.14g/t gold (for a copper equivalent grade of 5%) is the highest grade mineralisation to date at Mallee Bull, confirming its strong similarities to the large Glencore Xstrata-owned CSA deposit at Cobar, which is Australia's highest grade copper mine.

Mineralisation at Mallee Bull shows good vertical consistency and predictability and seems to be a west dipping sub-vertical body with no plunge. The shoot-like mineralisation has now been shown to continue from about 150m below surface to at least 700m below surface (in MBDD009W2) although the upper part of the mineralised body may continue to the surface in a deeply weathered form.

The current exploration program at Mallee Bull is being funded by CBH Resources (CBH) under a staged farm-in agreement in which CBH can earn up to 50% interest by expenditure of \$8.33M. Currently CBH is close to completing Stage 2 of the agreement at which point it will have earned a 30% interest. The following are the likely activities over the next few months or so on Peel's Mallee Bull Prospect, which is its principal focus:

- **More drilling for about another month.** This will include completion of the current hole (MBDD011 and any additional holes off it) and may involve another deep hole to achieve about another 150m of vertical separation below the deepest current drill intersection (MBDD009W2)
- **Down hole electromagnetic (DHEM) testing** of MBDD011 and other planned diamond core holes
- **Preliminary metallurgical test work** to gain an early understanding of the likely nature and flotation behaviour of the Mallee Bull ore zones
- **Receipt of assays from the recently completed RC drilling program** of 1,670m on IP and geochem targets in the area surrounding Mallee Bull

Peel's extensive Cobar tenements are highly prospective for other Cobar-style polymetallic deposits. Targeted programs on high priority areas include:

- **Extending soil sampling** at several locations around Mallee Bull
- **Planning drilling of various geophysical targets** including the large magnetic anomaly and the IP chargeability anomalies at Butchers Dog near Mallee Bull
- **More drilling at Mundoe Prospect**, 50 km south of Mallee Bull

We see the company now moving into a new phase of evaluation at Mallee Bull as it continues to extend the size of the deposit and also begins to drill it out at closer spacings that will lead to a maiden Resource estimate in early to mid 2014. Now that Peel has its "eye in" from the Mallee Bull discovery, the company's near term exploration in and around Mallee Bull and other high priority targets in its extensive Cobar tenements could deliver further significant results.

**Accordingly, we recommend Peel as a Speculative Buy with high risk.**

PEX \$0.455

Action  
**Speculative Buy**

Risk Assessment  
**High**

### Peel Mining Limited

ASX Code	PEX
52 week range	\$0.06 - \$0.74
Market Cap (\$ M)	55
Shares Issued (M)	119.5
Employee Options (M)	2.9
Cash March 2013 (\$ M)	2.9

### Share price performance



Source: ASX

### Sector – Copper

Peter Arden

Research Analyst

Groundwork Pty Ltd

[groundard1@bigpond.com](mailto:groundard1@bigpond.com)[www.russellresearch.com.au](http://www.russellresearch.com.au)

## It started with coincident geophysical anomalies

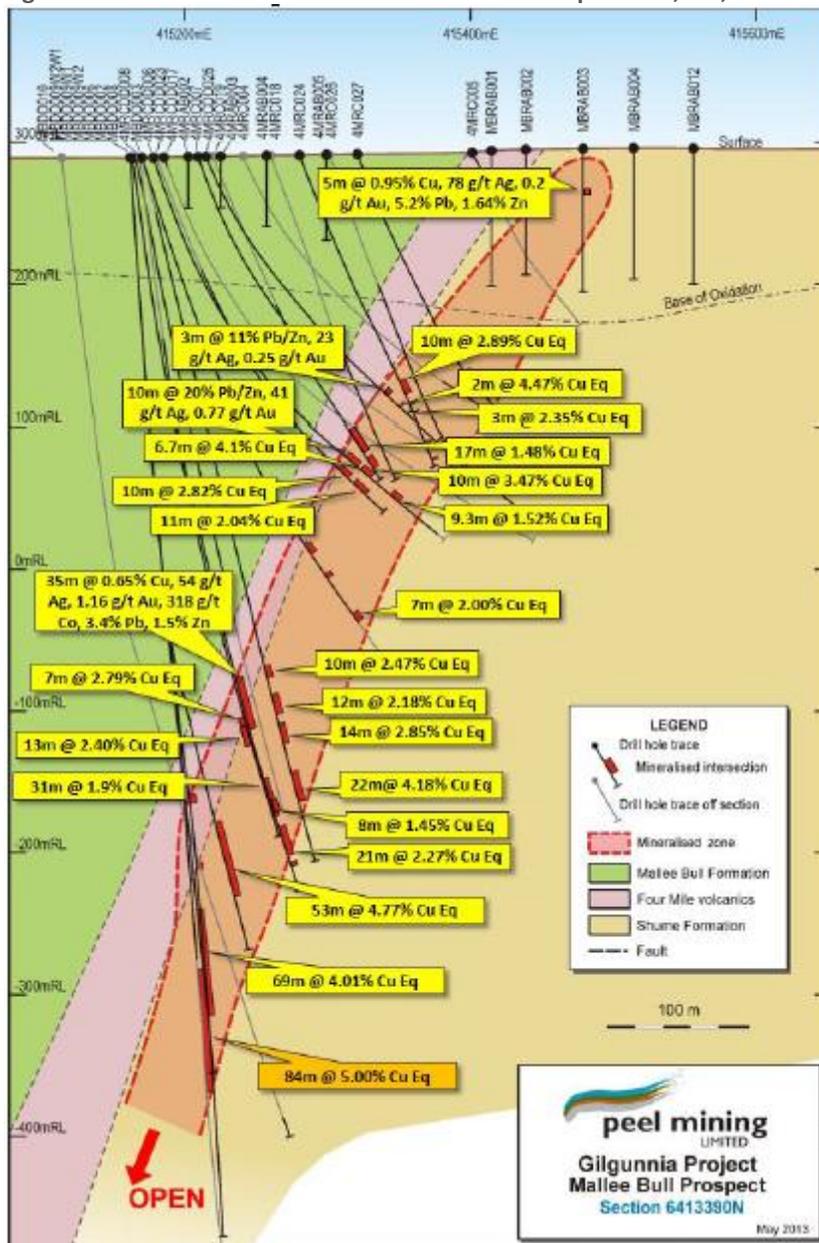
The Mallee Bull deposit is located 100km south of Cobar in Central Western NSW. It is 3km off a major sealed highway and only 15km from the Moomba-Sydney Gas Pipeline.

Peel began targeting the Mallee Bull prospect, a newly recognised coincident EM and magnetic geophysical anomaly located 8km to the east of the May Day gold-silver-lead-zinc-copper deposit mined briefly in the 1990s and adjacent to the historic Four Mile Goldfield in March/April 2011. Initial drilling discovered significant lead-zinc-silver mineralisation but subsequent follow-up drilling in July/August 2011 intersected high-grade Cobar-style copper-silver-gold-lead-zinc mineralisation in massive sulphides. Two further rounds of follow-up RC and diamond drilling intersected massive and/or stringer sulphide mineralisation containing chalcopyrite, galena, sphalerite, pyrrhotite, pyrite and arsenopyrite.

The Mallee Bull deposit is interpreted to be a form of volcanogenic massive sulphide (vms) style of deposit that is located on the nose of an anticlinal structure within a volcanoclastic turbidite sequence. The deposit is west dipping sub-vertical body with no plunge (Figure 1).

The company's success at Mallee Bull is a validation of its exploration strategy that recognises the significance of EM and IP geophysical anomalies within significant local geochemical anomalies

Figure 1. Drill hole cross section of Mallee Bull Prospect at 6,413,390N



Source: Peel Mining

Peel entered into a staged farm-in agreement with CBH Resources (CBH) in May 2012 under which CBH could earn up to a 50% interest in EL4761 and ML1361 which contain the Mallee Bull Prospect by expenditure of up to \$8.33M over three years, which includes partial reimbursement for past exploration costs. Peel remains the operator of the project.

CBH has already earned a 15% interest by payments totalling \$2.5M under Stage 1 and is close to having expended an additional \$2.5M to increase its interest to 30% under Stage 2, after which it can elect to go into Stage 3 and increase its interest to 50% by expenditure of an additional \$3.33M in a further 12-month period. CBH can elect to form a joint venture at any stage; the parties can then elect to contribute on a pro-rata basis at that stage or dilute according to an industry standard formula.

Drilling continues to increase the vertical extent of the Mallee Bull deposit. Peel recently announced multiple high grade copper-silver-gold intercepts at depth in holes MBDD009W2W1 and 10 and 10W1 (Figure 1). The intercept in MBDD009W2W1 of 84m averaging 4.4% copper, 38g/t silver and 0.14g/t gold (for a copper equivalent grade of 5%) is the highest grade mineralisation to date at Mallee Bull, confirming its strong similarities to other major Cobar-style deposits, and particularly to the large Glencore Xstrata-owned CSA deposit at Cobar, which is Australia's highest grade copper mine.

#### Other Cobar Prospects

Peel has one of the largest tenement positions in the highly prospective Cobar Mineral Field where the company has a number of advanced prospects that are 100% owned.

The Mundoe Prospect has a 2km long geochemical anomaly but has also only been sparsely drilled in the past by other explorers. Peel carried out a limited drilling program in December 2012 that intersected generally low copper and precious metals grades but further exploration is warranted as the company believes that drilling has only partially tested the targeted area.

Other advanced prospects include Tara and Gilgunnia South.

## Estimate of Potential Resource at Mallee Bull

The company assesses the strike extent of the Mallee Bull deposit to be about 120m currently and we estimate the potential dimensions of the deposit to be up to about 30m thick in the middle (but it seems to taper to very little at the edges) and at least about 550m in the dip direction. These dimensions indicate a mineralized zone containing at least about 2.7 million tonnes (Mt). Assuming an average grade of about 3.5% copper and 45g/t silver, that would contain about 95kt of copper, over 4Mozs of silver and 24kcozs of gold. If the deposit has Cobar-style dimensions of up to 200m of strike length and extends to a vertical depth of at least 1,300m, it could contain more than about 11Mt of mineralisation. Assuming similar average grades, such a deposit would contain about 400kt of copper, 18Mozs of silver and 110kcozs of gold. Our very preliminary analysis indicates that net copper production costs of around \$US1.50/lb (after precious metals by-product credits) could potentially be achieved at Mallee Bull.

Mallee Bull is clearly strongly structurally controlled with zones of massive sulphides and stringer sulphides displaying brecciation textures although the copper-rich mineralization appears to be in generally quite competent ground. The deposit is strongly leached near the surface, where there is a lead – arsenic geochemical anomaly and the high pyrrhotite content of the ore gives rise to the strong magnetic and EM anomalies, which have aided its discovery, especially through the use of down hole EM geophysics. The Mallee Bull deposit appears to be on a small limb that is part of a major but likely very deep magnetic geophysical anomaly (known as the Butchers Dog anomaly) that will ultimately receive significant exploration attention in future.

While definition of the Mallee Bull deposit is only at a very early stage, there are already very strong similarities between Mallee Bull and the large Glencore Xstrata-owned CSA deposit at Cobar, which is Australia's highest grade copper mine.

The company's recent drilling at Mallee Bull intersected the highest grade copper mineralisation to date, indicating the grade may be increasing with depth, and increased the vertical extent of mineralisation

Our preliminary analysis indicates that Mallee Bull may contain at least 2.7Mt of high grade copper mineralisation that may enable relatively low production costs

First mined for its silver-lead-zinc content in 1871, the CSA mine has a total mined and current resource metal inventory of over 1.5Mt of contained copper (from approximately 50Mt averaging 3% copper) and significant additional amounts of lead, zinc, silver and gold which have also been mined at different stages in its history. The mine currently treats about 1.1Mt of copper ore grading around 5.1% copper per annum to produce about 180kt of concentrate grading around 29% copper and containing around 50kt of contained copper. The current Resource is 11.4Mt averaging 5.9% copper and 24g/t silver containing 0.7Mt of copper and 9Mozs of silver in four ore zones. A shaft deepening is being developed for the mine where shoot-like economic mineralisation has been defined to more than 2km below the surface with the major QTS zones, which are the deepest part of the Resource, containing large bodies grading over 10% copper.

A key feature of the mineralisation at the CSA mine is its multiple stacked ore zones. While copper-rich ore bodies predominate in the CSA mine, they occur in close proximity to other polymetallic base and precious metals ore bodies and significant amounts of lead, zinc, silver and gold have been mined extensively in the past, sometimes to the exclusion of copper production. The current ore zones at the CSA deposit occur in four ore zones or systems known as Western, Eastern, QTS North and QTS South. These are a series of depth extensive lenses that contain vein or semi massive to massive chalcopyrite hosted by sub-vertical quartz-chlorite shear zones within a siltstone unit. While Peel has intersected relatively minor zones of lead-zinc mineralisation within the Mallee Bull deposit, it has only seen one main zone of copper-rich mineralisation and has not yet seen any substantial lead-zinc zones. We believe there is a high probability that Peel will discover significant lead-zinc mineralisation and additional major zones of copper-rich mineralisation in step out drilling at Mallee Bull.

## Attractive Development Options

The Mallee Bull Prospect is favourably located with respect to infrastructure and potential processing plants. Located 100km south of Cobar, it is only 3km off a major sealed highway and 15km from the Moomba-Sydney Gas Pipeline so a stand-alone processing plant could be readily built on site. While there is now only limited information available on the large Cobar mining operations because they are all owned by overseas interests, we understand the aging Endeavor mine operated by CBH and now owned by Tokyo Stock Exchange-listed Toho Zinc is approaching the end of its mine life.

The Endeavor mine is located about 46km north of Cobar and 146km north of Mallee Bull. The mine has been operating at well below its rated capacity of about 1.3Mtpa since being affected by the Global financial Crises in 2008, after which production was reduced to 420ktpa. The mine is currently producing at a rate of about 720ktpa. The Endeavor process plant is believed to have a notional capacity of 1.2 – 1.3Mtpa with expansion capacity up to about 1.6Mtpa from its previous configurations. If the Endeavour mine were to remain operating at a reduced rate or were to close in the next few years, the processing plant there would be ideally suited to process Mallee Bull ore.

Concentrate from the Endeavour mine is railed to Newcastle, as is concentrate from other Cobar mines, from where it is then exported through the Newcastle Shiploader facility, which has a current capacity of 0.5Mtpa (that is capable of expansion) and is fully owned by Toho Zinc.

Although the CSA mine is believed to be currently operating at close to its rated capacity of 1.2Mtpa, Glencore Xstrata are well known for buying and processing ores from other mining operators so there may be an opportunity for the CSA concentrator to be expanded to enable it to process ore from Mallee Bull on a commercial basis.

The company's Mallee Bull Prospect has potential to contain multiple polymetallic deposits, given the strong similarities to the large CSA deposit

The Mallee Bull Prospect has favourable infrastructure with several potentially attractive development options

## Recommended Action

We regard Peel as a very attractive copper-polymetallic exploration opportunity with considerable scope to discover significant copper and associated metals resources at Mallee Bull and elsewhere in the company's extensive tenements that could be very economically attractive to develop given the high grades encountered to date and the favourable infrastructure in the Cobar Region. The company is in an exciting phase of expanding and defining its Mallee Bull deposit and exploring around it for additional deposits, which have the following features:

- **High grade Cobar-style copper mineralisation at Mallee Bull has been defined** to at least 700m below surface but it is expected to have considerable depth extent that means it is likely to be a significantly larger deposit that is also most likely to occur in association with significant other polymetallic mineralisation
- **The most recent drill intersection at Mallee Bull is the deepest and highest grade of copper mineralisation, confirming the Cobar-style characteristics of it with the indication that grade is increasing with depth**
- **The company has a number of other advanced prospects near to Mallee Bull that could potentially host additional Cobar-style mineralisation**, which will be explored by targeted exploration programs including drilling
- **Potential for polymetallic mineralisation associated with the large geophysical anomalies such as Butchers Dog magnetic anomaly** at depth in the Mallee Bull area
- **Attractive infrastructure in the Cobar region gives improved development potential for discoveries such as Mallee Bull**

Accordingly our recommendation for Peel is a **Speculative Buy** with **High Risk**

The company is at an exciting stage at its principal Mallee Bull Project of having started to define a major high grade copper-rich polymetallic deposit that has strong similarities to deposits at the nearby large CSA mine

We recommend Peel as a Speculative Buy with High Risk

## Risks and Share Price Drivers

We identify the following as the main risks:

- Commodity prices and foreign exchange rate outcomes that are different to our forecasts
- Lack of exploration success and/or greater than expected geological complexities
- Adverse weather and operational issues
- Changes to government policy
- Adverse environmental and other regulatory issues
- Cost overruns or operational delays
- Lack of funding to carry out adequate exploration and development
- Adverse acquisitions of other assets that divert management effort and yield inadequate returns

We identify the following as the main share price drivers:

- Continuing drilling success at defining the Mallee Bull Prospect that increases its potential size and confirms that it is a significant and economically attractive deposit of copper-polymetallic mineralization
- Positive RC drilling results from the recent program around Mallee Bull
- Successful definition of a substantial maiden Resource at Mallee Bull followed by scoping and other studies that highlight its potential economic development
- Discovery of additional Cobar-style and other mineralisation in the company's extensive tenements in the Cobar district by successful application of geophysics and geochemistry followed by drilling

The Mallee Bull Prospect has favourable infrastructure with several potentially attractive development options

## Important Information

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Peter Arden, Research Analyst, a Director of Groundwork and author of this report, certifies that all views expressed in this report accurately reflect his personal and professional views about Cobar Mining Limited (Peel) and its securities. No part of his or Groundwork's compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed herein.

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BUY	The stock is undervalued. Total return is expected to exceed 10% over 12 months.
HOLD	The stock is fairly priced, and its total return is expected to be between 0% and 5%.
SELL	The stock's total return is expected to be a loss of 10% or more.
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Classified as High, Medium or Low, being the relative assessment of the likelihood that the forecast performance for the stock won't be achieved, based on an appraisal of disclosed financial information, trading volatility, nature of its operations and other relevant quantitative and qualitative criteria.

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The Financial Services Guide in relation to this publication is available on [www.russellresearch.com.au](http://www.russellresearch.com.au), where details of the Analyst (Peter Arden) may also be found.

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