

Cobra Resources plc ("**Cobra**" or the "**Company**") is an exploration, development and mining company whose securities are listed on the main market of London Stock Exchange plc. The Company's primary strategy is to focus on the development of advanced resource exploration projects with potential, through the application of disciplined and structured exploration and analysis, to progress towards a sustainable mining operation.

On 7 March 2019, the Company announced that it had signed an acquisition agreement to acquire 100% of the units in the Lady Alice Trust and the entire issued share capital of the Lady Alice Mines Pty Ltd ("LAM"), an Australian exploration company, as a trustee of the Lady Alice Trust (the "Proposed Acquisition").



The Lady Alice Trust is the sole owner of:

- 100% of right title and interest in South Australian Exploration Licence Number 6016 (the "Prince Alfred Licence") a formerly producing copper mine (the "Prince Alfred Mine"); and
- an entitlement to earn a 75% equity interest in 6 large tenements near Wudinna in South Australia (the "**Wudinna Project**") for gold exploration, under the terms of an with Andromeda Metals Limited ("**Andromeda**"), a company listed on the Australian Securities Exchange, and Peninsula Resources Limited.

For further details on the Proposed Acquisition, please refer to the RNS released on 7 March 2019:

https://www.londonstockexchange.com/exchange/news/market-news/market-news-detail/COBR/ 13993652.html

Investment strategy and rationale

With a positive global outlook for both base and precious metals, the directors of the Company (the "**Directors**") believe that the current asset portfolio provides an excellent base from which the Company can potentially add significant value through the application of structured and disciplined exploration.

Further investments may be considered in the following circumstances:

- 1) Where assets in strategic commodities are geologically prospective but undervalued;
- 2) Where technical knowledge and experience could be applied to add or unlock upside potential;
- 3) Where the assets may be synergistic to the current portfolio; or

4) Where project diversification will add strategic growth opportunities within an appropriate time frame.

Through the development of the LAM portfolio, coupled with any opportunistic acquisitions, the Directors believe that the Company will offer exposure to the next forecasted "up cycle" which is likely to result from the recent systematic underinvestment in the mining sector.

PROJECTS – PRINCE ALFRED

The Prince Alfred Mine

Introduction

The Prince Alfred Copper Mine is located approximately 100km north east of the town of Port Augusta in South Australia and thought to be a strata-bound sediment hosted copper orebody. The mineralisation is located within the Yednalue Anticline and is situated in the lower part of the Tapley Hill Formation. The original mine operated during the late 19th and early 20th century, recovering approximately 40,000 tonnes of ore at a ~5% copper to a depth of 170 feet (~51m). No production records are known to have survived from its period of operation.

History

The Prince Alfred Mine was discovered in 1866 and is located 100km north-east of Port Augusta in South Australia. Copper ore with a sprinkling of gold was discovered in a fairly wild and remote area of the Flinders Ranges, and the following year the Prince Alfred Gold Mining Company Ltd was formed in Adelaide. The mine and the company were named after Prince Alfred, Duke of Edinburgh, the first member of the royal family to visit the Australian colonies.

Mining seems to have occurred in three separate episodes between 1869 and 1909, with a gap from 1874 to 1889. Most of the production is likely to have occurred in the 1870s, and the masonry engine and crusher houses were built during that first period of mining. It appears that three separate companies operated the Prince Alfred Mine in those episodes, at least one of them based in Melbourne. It is not unusual for mines in remote areas with high costs to have sporadic periods of production, separated by long silences. It indicates that the mine was only viable at times of high copper prices, and always extremely sensitive to metal price fluctuations.

In 1868 the first company (Prince Alfred Gold Mining Company Ltd) was re-formed as the Prince Alfred Copper Mining and Smelting Company. By early 1869, ore was being extracted from an opencut. Three shafts were put down on the site by July 1869. At first, the ore was taken by dray to Port Augusta, and shipped to the English and Australian Copper Company's smelter at Port Adelaide. By the end of the year, £3,000 worth of copper metal had been produced.

By 1870, the Prince Alfred Mine was concentrating ore with three small jigs, two of them obtained from Burra, where operations were winding down. At the end of the year, the directors decided the time had come to equip the Prince Alfred Mine with more efficient machinery and a smelter. This was a period of development, with the shafts being sunk to 270 feet (82 metres), 150 feet (45 metres) and 100 feet (30 metres), and the value of copper produced in 1870 trebled to £9,000. In 1871 a reverberatory furnace, fuelled by firewood, was built to smelt copper on site. It had its first firing in June 1871, by which time the engine houses were also under construction.

Construction of the second furnace began in August 1871, and the engine and crusher were at work by 22 November 1871. Evidence on site shows that the machinery was powered by a horizontal steam engine, and crushing and concentrating were done by Cornish rolls and a jig. There is no remaining evidence of how the Prince Alfred Mine was pumped. The following month the second smelter was firing, and work had started on a third. The second smelter was to be a calciner or roaster to drive off sulphur before smelting proper. The third smelter was a backup, to take over when one or both of the others were down for maintenance. By March 1872 the engine was also pumping water from the nearest mineshaft, called the Engine Shaft. The third furnace was fired in April 1872, and the Prince Alfred Mine's infrastructure was completed in almost exactly twelve months from commencement.

The Prince Alfred Copper Mining and Smelting Company was £5,000 in debt by 1872and the bank wanted immediate repayment. The directors wanted to call up all unpaid capital of £4,000 from shareholders and borrow £2,000 with a mortgage on the mine. The only alternative was to wind up the company. The Prince Alfred Mine closed in 1874 and the Prince Alfred Copper Mining and Smelting Company was wound up by July 1874.

The copper price was not the reason for closure, as it was buoyant in 1874, although it would crash three years later. No-one made any suggestion of fraud. There are hints that as the mine went deeper, the copper grade was falling, and sulphide ore, more difficult to treat, was beginning to dominate the orebody.

In 1889 a syndicate began to work on the Prince Alfred Min, pumping out one of the shafts, employing fourteen men, and sending eighteen tons of ore to Port Augusta. In April 1890 the New Prince Alfred Copper Mining Company was formed to take over and work the Prince Alfred Mine. They pumped out the Prince Alfred Mine and worked it on a small scale, installing jigs to concentrate the ore. The concentrate was sent away to Wallaroo for smelting.

The following year another company called the Prince Alfred Copper Mining Company No Liability was formed in Melbourne, equipping the Prince Alfred Mine with its third lot of machinery and new or rebuilt smelters. In 1900 (a bad drought year) a dam was built to supply the mill with water. Previously, the mill's water supply had come from the mine shafts. The Prince Alfred Mine worked on a small scale through the early years of the twentieth century, producing about 12,000 tonnes of ore. However, another worldwide fall in the copper price closed it in 1907, and the Prince Alfred Copper Mining Company No Liability was wound up in 1909.

In the 1950s, the Mines Department reviewed South Australia's copper resources. They investigated the Prince Alfred lode by diamond drilling, but no copper of commercial interest was found.

In 1967, a group of former Broken Hill miners took over the Prince Alfred Mine while the copper price was high and set up a new plant. Their plan was not to re-open the Prince Alfred Mine, but to extract copper from old mine tailings by leaching. They first came to the notice of Carrieton District Council in February 1967, and the following year Council rebuilt the road into the Prince Alfred Mine. They are said to have formed a company called Minerals, Metals Reclamation and Mining Pty Ltd, but the Australian Securities Investment Commission database has no record of a company of that name. A journalist visited the site in 1971 and described a self-sufficient small community built out of recycled bits, with prefabricated former Housing Trust houses powered by a second-hand diesel generator. This tailings reprocessing operation continued until sometime in the 1970s, but it is not known when it closed or how much copper it produced. Mines Department notes record about 600 tons of copper, which was worth \$1,600 per ton at the time.

Geological setting

The Prince Alfred project is located within the Adelaide Fold Belt (Geosyncline) in South Australia. The project is bordered by the Murray Basin Province to the east, and the Torrens Hinge Zone and Gawler Craton to the west. Priess (2000) defines the Adelaide Fold Belt as several sedimentary units that have developed during Neoproterozioc rifting with the distribution of the units controlled by the Delamerian Orogeny (~500 Ma).

The figure below shows the generalised tectonic setting of the Adelaide Fold Belt with the Prince Alfred project located on the eastern side of the Nackara Arc, possibly within the G2 structure corridor The Adelaide Fold Belt is overlain by sediments of Cambrian through to Cenozoic age.

Preiss (2000) describes the Central Flinders Zone as dominated by open dome and basin interference folds and the Nackara Arc (that is host to the Prince Alfred Mine) an arcuate belt of linear, upright, concentric folds to the north and south. The Nackara Arc consists of long linear synclines, separated by an anticline or strike faults with the folds trending N to NNW in the southern part of the Nackara Arc and ENE in the northern parts.



Source: Priess, (2000)

Project Geology and Mineralisation

Geology

The Yednalue Anticline is the main structure in the project area with the Prince Mine located above the unconformable boundary between the Burra and Umberatana Groups. The main lode of the Prince Alfred workings is parallel to bedding and is situated in the lower part of the Tapley Hill Formation of the Burra Group.

These consist of blue-grey well laminated siltstones. Thin bands of coarse sandstone are interbedded with the siltstones. Finely laminated black shales occur immediately east of the mine and are underlain by a tillite. The tillite rests with marked angular unconformity on the underlying rocks of the Burra Group (Binks, 1971).



Source: Department of Energy and Mining, the Government of South Australia, sourced 12 March 2019

Mineralisation

The mineralisation within the Tapley Hill Formation is currently considered to be a stratiform deposit. It is associated with primary sulphide mineralisation in gravel units that are in close proximity to a sideritic band within the lower section of the Formation. Zones of mineralisation have possibly formed from secondary enrichment of lower grade sulphides within the sediments of the lower Tapley Hill Formation. The process of enrichment may be related to mineral rich hydrothermal fluids active during the Delamerian Orogeny or alternatively to post orogenic meteoric waters circulating through the many fractures within the Yednalue Anticline. (Miller, 1999)

Sedimentary hosted copper-cobalt mineralisation associated with syn-sedimentary pyrite is potentially analogous to deposits such as those in the Central African copper belt or in South Australia such as Mt Gunson or Khamsin.

Miller (2001) provides an overview and description of the mineralisation of the Prince Alfred Mine based on field observation. The key points are summarised below:

- The Prince Alfred copper mine occurs stratabound, within Tapley Hill slates that have been slightly fractured by a splay of a regional north- south fault.
- The mine is located on the west limb of an asymmetric south- plunging regional anticline, known as the Yednalue Anticline.
- There are three main workings: From north to south they are (i) the engine shaft workings; (ii) the open cut; and (iii) the main shaft workings.
- The lode near the surface is in siliceous sandstone (previously described and named as "grit");
- Mattawarangala company's Workings
 - The eastern shaft was sunk into a new lode in another sandstone bed. This sandstone is again exposed in the hillside cut where it is ~1 metre wide but is unmineralised.
 - Mineralisation at the surface has been traced over a length of 500m including the portion extending into the Mattawarangala company's leases.
 - The mined-out section is less than 200 m in length.
- Mineralisation is lenticular in form with a maximum width of 7 m in the open cut, tapering either way therefrom.
- The mineralisation is a tabular-like body, constrained to the strike and dip of the slates.
- Mineralisation has been introduced along the broken zone of a transcurrent fault.
- The footwall contact is sharply defined, relatively undisturbed and is mineralised.
- The hanging wall is considerably broken and crushed, more in some places than in others. This has permitted a certain amount of irregular permeation and injection of the broken zones by veins of copper minerals and calcite.
- The mineralisation comprises an accumulation of broken slate extensively injected and filled with sideritic copper mineralisation. Calcite and minor quartz may also be present.
- The sandstone beds generally lie immediately below the mineralisation except in a few places where it becomes part of the mineralisation.
- The primary copper sulphide, chalcopyrite, is predominant and abundant. Except for a few locally concentrated masses the secondary carbonate mineral, malachite, is relatively undeveloped.
- Chalcopyrite is commonly rimmed by a secondary sulphide probably chalcocite.
- In the open stope of the underlying shaft, east of the engine shaft, mineralisation width is approximately 2m.
- Present appearances of the hanging wall suggest that the reason for this apparent overstoping was the presence of narrow veins of ore disseminated into the crushed slate.
- Throughout the workings the mineralisation is patchy in grade, depending on varying amounts of calcite and siderite gangue and of fragments of un-mineralised slate.
- For the most part the mineralisation is of sulphide type, up to the surface. Lack of oxidation and supergene enrichment is evidently due to a high percentage of calcite and very little pyrite in the lode. Some malachite and oxides occur and mainly form as a coating on dense copper sulphide.

Reserves and Resources

The Prince Alfred Mine has no compliant reserves or resources under the guidelines of the Australasian Code for Reporting of Identified Mineral Resources and Ore Reserves, 2012 (the "**JORC Code**"). No historic data from its period of operation was preserved.

Potential Future Development

The target at Prince Alfred is firstly to test the depth extent of mineralisation down dip of the historic workings. Whilst a geologist (Nixon) in the 1950's from the Mines Department of South Australia attempted this by drilling three holes, it is LAM's view that none of these holes were actually drilled in such a manner as to test the depth extent of the Prince Alfred Mine mineralisation. The first hole, DDH1, was not drilled to a sufficient depth, as shown in the figure below, and the second hole DDH2 was drilled to the south of a fault which bounds the mineralisation. The third hole was drilled to the east and was intended to test a gossan unrelated to the Prince Alfred Mine orebody.



The aim would be to test the mineralisation with approximately 5 drill holes (reverse circulation collars and diamond tails). If successful, it would lead to a further programme aimed at defining of a JORC resource. The aim of that programme would be to identify a resource of between 1 to 2 million tonnes of between 2 to 5% copper.

PROJECTS – Wudinna

The Wudinna Project

Introduction

The Wudinna Project lies on the Eyre Peninsular of South Australia and comprises six tenements that total 1928km² in the Central Gawler Craton Gold Province of South Australia. The project includes a cluster of deposits and earlier stage prospects including the Barns Deposit ("**Barns**"), the Baggy Green Deposit ("**Baggy Green**") and the White Tank Deposit ("**White Tank**"). These deposits have Mineral Resources totalling 4.43 million tonnes at 1.5g/t gold for 211,000 ounces using a 0.5g/t gold cut-off grade, comprised of 0.41 million tonnes at 1.40g/t gold for 18,000 ounces of Indicated Resources and 4.02 million tonnes at 1.5g/t gold for 193,000 ounces of Inferred Resources.



Source: SARIG

Metallurgical testing has been conducted on composited samples representing both primary and oxide/supergene mineralised material from Barns and Baggy Green. At Barns, gravity and cyanide leaching of the gravity concentrate and tailings recovered 98.8% of the gold in a supergene sample, and an average of 97.5% of the gold in primary samples. At Baggy Green, recovery in a supergene sample was 94.3% while recoveries for primary samples averaged 98.7%.

History

Between 1996 and 1997, Newcrest Mining Ltd ("**Newcrest**") completed reconnaissance-scale calcrete sampling survey on the tenement (then EL 2188) on which Barns is now located, with initial samples spaced at 1 km. A number of adjacent reconnaissance samples returned anomalous gold values over the Barns area. Infill sampling at 500 m centres completed by Newcrest in 1998 defined a large gold anomaly with a peak value of 31 ppb. The dimensions of the Newcrest anomaly, using a threshold of 2.5 ppb Au, approached 4.5 x 1.5 km.

In early 1999, Newcrest, which was enjoying considerable exploration success in the Cadia district in New South Wales, determined to dispose of EL 2188. Check sampling completed by Adelaide Resources (now Andromeda Metals) validated the existing anomalous gold-in-calcrete results and the company acquired a 100% interest in the property in late 1999.

In 2000, Andromeda (formerly Adelaide Resources Pty Ltd) completed further calcrete sampling over Barns at 400, 200 and 100 m centres. The resulting geochemical feature was a large coherent anomaly with a peak value of 49 ppb gold and included significant areas above 10 ppb. Calcrete samples were collected by hand auger and assayed at Amdel Laboratories using a low-level BLEG technique, giving a lower gold detection limit of 0.05 ppb.

The Barns, Baggy Green and White Tank gold deposits of the Wudinna Project were discovered by drill testing gold of calcrete geochemical anomalies.

The Barns gold deposit was discovered in 2000, with significant intersections including 12 metres at 3.38g/t gold from 67 metres in RCBN-123, and 35.49 metres at 1.80g/t gold from 115 metres in PDBN-134.

Intersections from White Tank, discovered in 2003, include 7 metres at 10.03g/t gold from 63 metres in RHBN-234, and 17 metres at 3.47g/t gold from 60 metres in RHBN-248.

Baggy Green was found in 2004 with notable intersections including 8 metres at 4.79g/t gold from 34 metres in WUD6-770, and 5 metres at 9.01g/t gold from 66 metres in BGRC-865.

Geological setting and mineralisation

Geological Setting

The Gawler Craton preserves a complex and prolonged tectonic history spanning the interval c. 3200 – 1500 Ma. This includes episodes of felsic magmatism, followed by sedimentation and bimodal (felsic and mafic) volcanism, and then by felsic volcanism (Dept Mines, 2019).

As shown in the figure below, the Central Gawler craton gold province forms an arcuate belt wrapping around the southwestern margin of the Gawler Range Volcanics and in part following the boundary between the Mesoproterozoic (c. 1595 – 1570 Ma) and Paleoproterozoic (c. 163 – 1608) rocks (Fraser et al, 2007, Reid & Hand, 2012)).

The Gawler Range Volcanics (GRV) are described by Parker and Flint (2005) being composed of pinkish medium-grained granite with xenoliths of gneiss and foliated grey granodiorite; foliated biotite granite and massive cream-coloured, weakly foliated leucogranite. The GRV were emplaced between 1595 and 1575 Ma and are coeval with the Hiltaba Suite. The GRV are flat lying and relatively undeformed.



Central Gawler Gold province comprises gold deposits such as Tunkillia, Tarcoola, Weednanna and Nuckulla Hill. Fraser et al (2007) characterised the Tunkillia, Nuckulla Hill, Barns, and Weednanna gold deposits with the following:

- The hydrothermal alteration is characteristically zoned around gold mineralisation, with intense sericite pyrite alteration and quartz veining proximal to gold mineralisation and chlorite ± epidote ± hematite alteration distal from mineralisation,
- Alteration was either synchronous with or, in some cases, continued after deformation,
- Gold is associated with pyrite and minor to trace galena, sphalerite, and chalcopyrite,
- Iron oxides are low in abundance in mineralized zones, which correspond to demagnetized zones,
- The prospects/deposits are similar to those of orogenic- and intrusion-related gold deposits

The variation and common characteristics between intrusion related and orogenic gold deposits has been discussed by several authors such as Duuring et al, 2007, and Sillitoe and Thompson 1998. The figure below shows a schematic of the interrelationships of granitoid, intrusion related and orogenic gold deposits of the Yilgarn Craton in Western Australia.



Source: Duuring et al, 2007

Fraser et al. (2007) demonstrated that the gold systems of the Central Gawler province share similar timing and involved fluids with like properties with the Olympic Dam IOCG province, in support of the existence of a gold metallogenic province. Fraser et al (2007) and Skirrow e al (2007) demonstrate that both the IOCG and gold hydrothermal systems were broadly coeval with magmatism of the Hiltaba Suite and Gawler Range Volcanics, at ~1570 to 1595 Ma.

Project Geology & Mineralisation

Within the Wudinna project area, the geology is described by Drown (2003) as an area covered by Quaternary sediment, which limits surface exposures, and deep weathering profile to greater than 50 m depth (Drown, 2003). The area is dominated by the Archaean Sleaford Complex (in the east) and the Tunkillia Suite (in the west). The Sleaford Complex is described by Parker and Flint (2005) as foliated migmatitic quartz–feldspar–biotite (garnet) gneiss and augen gneiss with possible local BIF, namely the Hutchinson Group within the Project area. The Tunkilla Group rocks are moderately deformed granodioritic gneiss (Drown, 2003). The regolith profiles are described by Mayo & Hill (2016) and Parker et al. (1985) as siliceous and variably calcareous sandy sediments forming old dune ridges.

The Wudinna gold project includes the Barns, White Tank, and Baggy Green prospects. Gold mineralisation is hosted within granodiorites of the Tunkillia Suite that is variably deformed and altered. This has been attributed to the intrusion of the Hiltaba Suite Granites (e.g. see Drown, 2003; Fraser et al, 2007).

The host lithologies for the Barns, White Tank and Baggy Green is granodiorite made up of plagioclase, K-feldspar, quartz and biotite with minor apatite, allanite, magnetite and zircon all within a weak, subvertical foliation. Also present is quartzite and gneiss occurring as blocks within the

granodiorite and minor pegmatites and mafic dykes (e.g. Figure 3 6; Drown, 2003 and Fraser et al, 2007).

Identified at the Barns gold prospect is a zoned alteration system with an outer chlorite-epidotesericite-rutile-hematite and inner zone of sericite-pyrite-gold. The outer zone of alteration is identified with chlorite replacing biotite, plagioclase altered to albite and K-feldspar containing abundant microcrystalline hematite inclusions. The inner alteration zone is of pervasive sericite replacing plagioclase with disseminated pyrite and the k-feldspar generally intact (Drown, 2003; Fraser et al, 2007).

Gold mineralisation at the three deposits is located in shallowly west or northwest dipping shear or fault zones. The mineralisation is weakly sulphidic with pyrite dominant at Barns and White Tank, and chalcopyrite at Baggy Green. Gold mineralisation is hosted in 1 to 10mm-wide quartz pyrite veins within the inner alteration zone, with gold occurring as free particles generally less than ~100µm in diameter. The mineralised veins strike north-south or northeast- southwest and dip moderately to the west or northwest (e.g. Drown, 2003).

A review of the structural geology at the Barns deposit by King (2001) showed that the gold mineralisation may be controlled by NW trending structures and the proximal association of the Hiltaba Suite intrusives, granite and granodiorite. Reverse shearing was noted in drill core with west dipping structures displaying gentle to moderate dips of shears and veins.

A study of the aeromagnetic imagery identified a magnetic low coincident with the Barns mineralisation and is interpreted to be magnetite destruction associated with the propylitc alteration. Lady Alice Mines (2019) undertook a structural review of the Wudinna project in 2018 with the following conclusions:

- The veins at the Barns deposit dip shallowly to the west and their strike is coincident with the main trends in the bedrock geochemistry.
- The Barns mineralisation is west-dipping auriferous zones are either truncated by faulting or simply die out down-dip to the southeast.
- Mineralisation weakens to the north and is constrained in depth probably above a curved flatlying shear-zone.
- At Baggy Green the veins dip north at about 30 degrees, in contrast to the geochemistry that strikes to the north, the trend of the calcrete anomalies represent north-northeasterly trending shear-zones, within which auriferous structures dip as arrays or single units to the north.

The geological interpretation (shown below) by Drown (2003) indicated a flat dip of mineralised zones generally following lithological contacts with the interpretation validated by the Lady Alice Mines (2019) investigations.



The gold mineralisation within basement rocks has been shown to correlate well with gold-in-calcrete anomalism from surface sampling. An extensive study of the regolith profiles and extents was carried out by CSIRO CRC LEME (Sheard, 2007). This study showed that shallow transported cover (<5-10m) over basement rocks may be related to lithogeochemical anomalism of Au, Cu, Ag, or As. The regolith profile and landform relationships developed as part of the study by CSIRO identified several regolith profiles in the study area. The regolith and landscape evolution study assist in the understanding of landscape position and local landforms are both crucial when selecting appropriate geochemical sample media and for interpreting their trace element assay values.

Reserves and resources

Summary

The total Wudinna Project Mineral Resource, including the Baggy Green, White Tank and Barns gold deposits, totals 4.43 million tonnes at 1.5g/t gold for 211,000 ounces using a 0.5g/t gold cut-off grade, comprised of 0.41 million tonnes at 1.40g/t gold for 18,000 ounces of Indicated Resource and 4.02 million tonnes at 1.5g/t gold for 193,000 ounces of Inferred Resources. This includes:

- The Barns Mineral Resource Estimate totals 2.21 million tonnes at 1.5g/t gold for 104,000 ounces at a 0.5g/t gold cut-off grade. The Resource includes 0.41 million tonnes at 1.4 g/t for 18,000 ounces classified as Indicated and 1.71 million tonnes at 1.5g/t classified as Inferred.
- The Baggy Green Mineral Resource Estimate totals 2.03 million tonnes at 1.4g/t gold for 94,400 ounces at a 0.5g/t gold cut-off grade. The Resource is classified as Inferred.
- The White Tank Mineral Resource Estimate totals 0.28 million tonnes at 1.4g/t gold for 13,000 ounces at a 0.5g/t gold cut-off grade. The Resource is classified as Inferred.

Barns, Baggy Green and White Tank fall within 6km of each other and are shallow and potentially open-pitable. Each of the deposits remain open and step-out drilling can potentially add further resources, while other prospects in the Wudinna Project also show potential to contribute ounces. Recent metallurgical testwork confirms gold recoveries exceeding 97% are achievable at Barns using a conventional flowsheet, with testing of Baggy Green mineralisation is foreseen.

Resource Estimation

Optiro Pty Ltd ("**Optiro**") has prepared updated Mineral Resource estimates for the Barns, White Tank and Baggy Green deposits. Mineral Resources were estimated by Mining Plus Pty Ltd ("**Mining Plus**"), for Andromeda (the owner of the project), in 2016 for the Barns deposit and in 2017 for the White Tank and Baggy Green deposits.

In 2018, LAM, a joint venture party, requested Optiro to investigate an alternative orientation to the interpreted mineralisation at Barns, White Tank and Baggy Green aligned with the strong regional northwest/southeast orientation observed in:

- calcrete gold geochemical data;
- regional gravity and magnetic data; and
- structural interpretation of drill core data.

Variography indicated that the maximum continuity for the mineralisation at Barns is orientated along 305°, which is consistent with the regional orientation observed by LAM. LAM requested Optiro to remodel the mineralisation at Barns, White Tank and Baggy Green using this as the dominant orientation for the mineralisation and to develop alternative conceptual resource models.

A nominal cut-off grade of 0.3 g/t gold was used for interpretation of the mineralisation at Barns, White Tank and Baggy Green. Optiro provided preliminary resource estimates for Barns, Baggy Green and White Tank which were based on the interpretation of a series of stacked lodes with an overall strike consistent with the regional northwest orientation and a shallow dip to the southwest. Since then, Optiro obtained the weathering surfaces and density data used by Mining Plus and has updated the preliminary resource models with these data. In addition, two horizons of supergene mineralisation have been interpreted within the saprolite material at Barns that replaced three of the previously interpreted dipping lodes.

Interpreted mineralisation at Barns extends over and area of 400 mN by 250 mE and is up to 200 m deep. Two lodes of flat-lying supergene mineralisation and 12 lodes of shallow dipping, fresh mineralisation have been interpreted. At White Tank, the interpreted mineralisation extends for 250 mN by 150 mE and is up to 120 m deep. One lode of flat-lying mineralisation and two shallow dipping lodes of mineralisation within fresh material have been interpreted. The Baggy Green resource has two areas of mineralisation: within the south the interpreted mineralisation extends over an area of 200 mN by 400 mE and in the north it extends over an area of 150 mN by 300 mE. One lode of flat-lying supergene mineralisation and 13 shallow dipping lodes of mineralisation have been interpreted within the fresh material to a depth of 200 m.

The resource models for the Barns and White Tank deposits were constructed using a parent block size of 10 mE by 10 mN on 4 m benches; the parent blocks were allowed to sub-cell down to 2 mE by 2 mN by 0.5 mRL to more accurately represent the geometry and volumes of the weathering horizons and mineralisation domains. For Baggy Green a parent block size of 20 mE by 20 mN by 5 m was used and the parent blocks were allowed to sub-cell down to 4 mE by 4 mE by 1 m RL. Gold block grades were estimated using ordinary kriging techniques, with search ellipses oriented within the plane of the mineralisation. Hard boundary conditions were applied for grade estimation into each of the mineralised domains (i.e. grade estimation for each domain used only the data that is contained within that domain).

A total of 255 bulk density determinations have been undertaken at Barns on either historical or recent diamond drillholes and 185 bulk density determinations have been undertaken at Baggy Green on recent diamond drillholes. Average values were calculated from the complete dataset by Mining Plus using a combination of weathering and mineralisation. Density values assigned to the mineralised domains in the resource models range from 2.29 t/m3 to 2.73 t/m3.

The mineralisation at Barns, White Tank and Baggy Green has been classified as Indicated and Inferred in accordance with the JORC Code. The Mineral Resources have been classified on the basis of confidence in geological and grade continuity and taking into account data quality (including sampling methods), data density and confidence in the block grade estimation, using the modelled grade continuity and conditional bias measures (slope of the regression) as criteria.

Indicated Mineral Resources have been defined at Barns within the supergene mineralisation in areas where drill spacing is generally 20 mE by 50 m or less. An Indicated classification was applied to four of the fresh lodes where the drill spacing is generally 20 mE by 50 m or less and the resources are above 40 mRL. Inferred Mineral Resources have been defined in areas where an extension of mineralisation is supported by the drilling. The total Mineral Resources at White Tank and Baggy Green have been classified as Inferred.

The likelihood of eventual economic extraction was considered in terms of possible open pit mining and results from metallurgical testwork. Metallurgical testwork from material at Barns and Baggy

Green indicated gold recoveries ranging from 94.3% to 99.3% and averaging 97.7% across all samples from a combination of conventional gravity and cyanide leaching.

The Mineral Resource estimate, as at March 2019, for the Barns, White Tank and Baggy Green deposits is reported in the table below. This has been classified and reported in accordance with the guidelines of the JORC Code. The Mineral Resources have been reported above a 0.5 g/t gold cut-off grade to reflect current commodity prices and extraction by open pit mining.

Deposit	Classificatio n	Tonnes (x1,000)	Grade (g/ t Au)	Gold ounces
Barns	Indicated	410	1.4	18,000
	Inferred	1,710	1.5	86,000
	Total	2,210	1.5	104,000
White Tank	Inferred	280	1.4	13,000
Baggy Green	Inferred	2,030	1.4	94,000
Total		4,430	1.5	211,000

Note: inconsistencies in totals due to rounding

For the Wudinna Gold Project, comparison of the 2017 and 2019 resource estimates indicates the tonnage has increased by 15% and the grade decreased by 8% for an overall increase in the contained gold by 5%.

For Barns the global estimates are similar, with the 2019 estimate reporting a slightly higher tonnage and lower grade, for a decrease of 4% in gold ounces. Within the 2019 model a slightly higher proportion of the resource has been classified as Indicated. While the alternative orientation has not significantly changed the global resource estimate at Barns, it does present alternative strategies for future exploration and potential resource extension.

At both White Tank and Baggy Green, the 2017 resource estimates plot on the grade-tonnage curves as estimated in 2019, but at higher cut-off grades of almost 1 g/t gold. This is in-line with the lower cut-off grade that was used for the mineralisation interpretations in 2019. For both deposits this has resulted in additional tonnage at a lower grade, with an overall increase in contained gold ounces.

Potential Future Development

Gold mineralisation was originally detected from geochemical sampling which targeted calcrete layers in shallow transported cover. Further work by LAM in 2018 established that a zone of calcrete depletion aligned with the regional zone of deformation, in a north westerly orientation. LAM surmised that the raw gold in soil/calcrete values identify the valley-fill alluvial gold dispersion, whereas calcium-normalised gold in soil/calcrete values better reflect the presence of underlying gold mineralisation.

Further analysis demonstrated that testing of raw gold in soil/calcrete anomalies was suboptimal and that calcium normalised gold, which accounts for the degree of concentration in calcrete better reflects the presence of underlying gold mineralisation.

Secondly, the presence of anomalous arsenic geochemistry in in soil/calcrete samples is a common path finder used in hydrothermal gold exploration. The existing mineralisation showed a strong correlation with arsenic anomalism, and when coincident with calcium-adjusted-gold, proved to a better indicator of the existing mineralisation at Barns and Baggy Green. The presence of silver, which does not concentrate in calcrete to the same degree, was a tertiary indicator.

By applying this new understanding of the geochemical relationships to the larger tenement holding, 14 target areas were identified. Each of these areas has anomalous and coincident calcium adjusted gold and arsenic anomalism in soli/calcrete samples.

Infill geochem sampling at the 6 priority targets (ANC#1, ANC#3, ANC#6 ANC#7 ANC#8 and BU1 shown in the figure below) are planned to be completed as a priority by the Company in order to target a reverse circulation drilling programme which will test for bedrock gold mineralisation. The aim of this drilling programme is to replicate similar mineralisation as that discovered at Barns, Baggy Green and White Tank.



The Wudinna Agreement

On 31 October 2017, Andromeda announced that it had entered into a binding agreement with LAM, pursuant to which LAM can earn an up-to 75% interest in the Wudinna Gold Project (the "Wudinna Agreement").

Under the terms of the Wudinna Agreement, LAM will fund up to A\$5,000,000 through a staged earnin over a (maximum) six year period in order to earn up to 75% equity in a joint venture vehicle over the Wudinna Project (the "**Wudinna JV Co**") as follows:

- Stage One: LAM will sole fund A\$2,100,000 within three years of the execution date of the Wudinna Agreement.
- Stage Two: At the completion of Stage One, either (i) the Wudinna JV Co can be formed, in which LAM will be entitled to hold 50% of the share capital; or (ii) LAM can spend a further A\$1,650,000 within two years after the completion of Stage One to earn a 65% equity interest in the Wudinna Project.
- Stage Three: At the completion of Stage Two, either (i) the Wudinna JV Co can be formed, in which LAM will be entitled to hold 65% of the share capital; or (ii) LAM can spend a further A\$1,250,000 within one year of the completion of Stage Two to earn 75% of the equity in the Wudinna Project. The Wudinna JV Co would be formed, in which LAM would hold 75% of the share capital.

Once the Wudinna JV Co is formed, LAM and Andromeda will contribute to further expenditure in accordance with their respective equity positions. LAM will act as operator of the Wudinna Project.