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Australian & International Exploration & Evaluation of Mineral Properties

UPDATED INDEPENDENT GEOLOGIST'S REPORT ON THE

CAPE LAMBERT IRON ASSETS WITH SPECIAL REFERENCE TO THE VALUATION OF AN UNDERLYING ROYALTY ON THE CAPE LAMBERT SOUTH PROJECT (R47/18)

held by

PHARLAP HOLDINGS

Author: A. J. Maynard BAppSc(Geol), MAIG, MAusIMM. Company; Al Maynard & Associates Pty Ltd Date: 23rd November 2023

1: EXECUTIVE SUMMARY

This Independent Geologist's Report has been prepared by Allen J. Maynard, principal of Al Maynard & Associates ("AM&A") at the request of SunMirror AG. ("SunMirror") on the mineral assets contained within the Cape Lambert iron projects owned by MCC located approximately 20 km east of Karratha and 8 km west of Roebourne in Western Australia, Figure 1. This is an update of the previous report dated 27th April 2023.



Figure 1: Cape Lambert location.

Pharlap Holdings have a royalty covering future mine production from the MCC Australia Sanjin Mining Pty Ltd (ASX-"MCC") Retention Licence R47/18, their Cape Lambert South Magnetite Project.

SunMirror are interested in acquiring undeveloped magnetite BIF deposits with the aim of quickly developing these deposits to enable the export of high-grade magnetite/Fe concentrates.

The tenement referred to herein is R47/18 covering a BIF unit within the Cleaverville Formation.

Exploration Targets are 4.8Mt of magnetite BIF at 30-35% Fe to produce a range from 1.0 - 1.2 Mt of concentrate at >65% Fe and a further 750,000 to 850,000 t of CID at 50-55% Fe.

MCC carried out a Pre-Feasibility Study (PFS) on the project in 2008 compliant with the reporting standards, costs and revenues at the time.

The results of the PFS indicated that the BIF ore at Cape Lambert can be mined using conventional open cut mining methods at a rate of 50 million tonnes BIF ore per year over a 30-year mine life from which a magnetite concentrate produced that after magnetic beneficiation is a high value marketable product.

The Pharlap Holdings Pte Ltd royalty (Royalty Deed dated 2005) on the MCC Cape Lambert Magnetite project is \$0.50/ tonne of all minerals mined including magnetite BIF ore at a rate of up to 50 million tonnes/year. The valuation in this report uses the annual production figures in the PFS.

The discounted value of this Pharlap Holdings Royalty over a projected 30-year project life has been calculated using a variety of asset specific discount rates and production start-up dates (see Project Conclusions section). On the basis of assuming an initial production date in 11.2 years' time from 30th June 2023 and using a project specific PNAV of 0.5x and a WACC of 9.48%, the royalty is valued at AUD\$ 43.3 million as of 30th June 2023.

The valuation figure for the royalty (in the author's opinion) is conservative, in that it is based on figures from a 2008 Pre-Feasibility Study, and since that time, mining and mineral processing techniques have improved dramatically.

Yours faithfully,

almanned

<u>Allen J. Maynard</u> Al Maynard & Associates Pty Ltd

This Report has been prepared in general accordance with the requirements of the JORC Code (2012) for reporting Exploration Results and Mineral Resources (the 'JORC Code') (An acceptable Internationally Recognised Mineral Standards approved by ESMA) as adopted by the Australian Institute of Geoscientists ('AIG') and the Australasian Institute of Mining and Metallurgy ('AusIMM').

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Dear Mr Quelin,

INDEPENDENT GEOLOGICAL REPORT ON THE CAPE LAMBERT IRON PROJECT.

2: INTRODUCTION

This Independent Geologist Report ("Report") has been prepared by Al Maynard & Associates ("AM&A") at the request of SunMirror AG ("SunMirror"), on the mineral assets contained within the Cape Lambert iron project owned by MCC located approximately 20 km east of Karratha and 8 km west of Roebourne in Western Australia. SunMirror are interested in acquiring undeveloped magnetite BIF deposits with the aim of quickly developing these deposits to enable the export of high-grade magnetite/Fe concentrates.

Scope and Limitations

This Report has been prepared in general accordance with the requirements of the JORC Code (2012) for reporting Exploration Results and Mineral Resources (the 'JORC Code') (An acceptable Internationally Recognised Mineral Standards approved by ESMA) as adopted by the Australian Institute of Geoscientists ('AIG') and the Australasian Institute of Mining and Metallurgy ('AusIMM').

This Report is valid as of 30th June 2023 which is the date of the latest review of the data and technical information.

The information presented in this Report is based on technical reports provided by Cape Lambert Resources supplemented by our own inquiries and assumptions on risk. At the request of AM&A, copies of relevant technical reports and agreements were readily available and relevant references are listed at the end of this report.

No recent site visit was undertaken by the author since he has prior knowledge of the district from earlier work in the project area including site visits. The author has driven past the deposit several times during field trips in the Pilbara for other clients and is familiar with the geology of the project. The geology of the region is well studied and documented by many workers including the WA Geological Survey and previous workers on the project are considered to be very reliable.

During 2020 there were periods when travel restrictions in place due to Covid-19 that prevented site visits, especially at the time the original report was written. Phil Jones of AM&A was part of the team working on the project with MacKay and Schnellmann in 2005 and is very familiar with the deposit.

Statement of Competence and Independence

This Report has been prepared by Allen J. Maynard BAppSc(Geol), MAIG (No. 2062), a geologist with over 40 continuous years in the industry and 35 years in mineral asset

valuation. The writer holds the appropriate qualifications, experience and independence to qualify as an independent "Competent Person" under the definitions of the JORC Code and Valmin Code.

AM&A will be paid professional fees by SunMirror AG ("SunMirror") for the preparation of this report. The fees paid were not dependent in any way on the outcome of the technical assessment. AM&A is independent from SunMirror. No AM&A staff or specialists who contributed to this report have any interest or entitlement, direct or indirect, in the Company, the mining assets under review, or the outcome of this report.

3: TENURE, LOCATION AND ACCESS

The Cape Lambert South Magnetite Project located approximately 20 km east, 8 km west of Roebourne, Figure 2, consists of one Retention Licence. The tenement straddles the Roebourne (SF50-03) and Dampier (SF50-02) 1:250,000 geological map sheets.

Tenement No.	Holder	Granted Date	End Date	Area (km²)	Status
R47/18	MCC Australia Sanjin Mining Pty Ltd	22/03/2019	21/03/2025	83.68	Granted

Covernment of Western Australia Department of Mines, Industry Regulation and Safety			MINERAL WILLES ONLINE						
Home Tenement Register Online Transactions Enquiry * Admin * Help *									
Tenement Register									
Register for Tenement R 47/18			0						
Identifier: R 47/18 New Search Previous New	t		Application Tracking						
Status: Live		Rent Status							
Markout:		Rental for Year End 21/03/2025: \$92,048.00							
Term Granted: 3 Years (Renewed)		Expenditure Status							
Commence: 22/03/2019 Expiry: 21/03/2025		Expended Year End : NO EXPENDITURE REQUIRED							
Death:		Current rear commitments no EAPENDITURE REQUIRED							
Holders Description Relationships Survey General Shire	Grant Conditions Dealings Payments Expenditure Combined Reporting	Bond Map Native Title Warden's Court Documents							
Current Holder's Holder Changes Applicants On Receival									
Organisation MCC AUSTRALIA SANJIN MINING PTY LTD 100/1	00								
ACN 136 966 482 ABN 25 136 966 482									
Address C/- AUSTWIDE MINING TITLE MANAGEMENT PTY LTD, PO B	хс								
Email xxxxxxxx@austwidemining.com.au									
Telephone xxxxxx400 Designated Tenement Contact (Correspondence Details)									
Name AUSTWIDE MINING TITLE MANAGEMENT PTY LTD									
Address C/- AUSTWIDE MINING TITLE MANAGEMENT PTY LTD, PO B 1434, WANGARA, WA, 6947	24								
Email xxxxxxxxidemining.com.au Telephone xxxxxx400									
C									

The MCC Retention Licence is partly covered by an EL application (E47/4143) held by Cape Lambert Resources Ltd. Should R47/18 lapse, the area covered by the R and within the EL boundaries would revert to the owners of the granted EL.

The Retention licence covers sufficient area to accommodate all the required infrastructure, waste dumps and tailings storage once mining commences.

Retention Licence (WA)

A Retention Licence (R) is a holding title for a mineral resource that has been identified but is not able to be further explored or mined. A Retention Licence may be granted in respect of the whole or any part of land within the boundaries of a primary tenement. An application fee and rental are payable.

The term of the R is for a period not exceeding five years and renewable for a period not exceeding five years (Rs have been granted for 3 years). There is no maximum area.

Before mining can commence the Retention Licence must be converted to a Mining Lease or for further exploration an appropriate tenement type, typically an Exploration Licence.

Mining Lease (WA)

The following is a summary of what is required to apply for a Mining Lease:

- A Mining Lease has to be correctly marked out on the ground along with all the necessary papers and fees paid including application fee, rates and taxes.
- An application must be submitted to the Mines Department accompanied (within 14 days) by either a Mining Proposal with Mine Closure Plan; or a Mineralisation Report with supporting statement; or a Resource Report with supporting statement.
- After granting, the boundaries must be surveyed by a licenced surveyor.

It shall be a condition of every mining lease that all holes, pits, trenches and other disturbances to the surface of the land made whilst mining which in the opinion of an environmental officer are likely to endanger the safety of any person or animal will be filled in or otherwise made safe to the satisfaction of the environmental officer.

Additional rent for mining lease producing iron ore is payable. A lessee shall pay rent calculated at the rate of 25 cents per tonne of all forms of iron ore obtained from the mining lease after the expiry of the period of 15 years from the day on which iron ore is or was first obtained from that mining lease by the lessee.

Under the WA Mining Act 1978 an application for a mining lease must be accompanied by either a mining proposal (or a statement and mineralisation report).

A mining proposal must be submitted on EARS (Environmental Assessment and Regulatory System) online. The mining proposal will be assessed by an environmental officer of Department of Mines, Industry Regulation and Safety (DMIRS), who will make recommendations to the Mineral Titles Branch.

DMIRS will refer a Mining Proposal to the EPA for the reasons outlined in the MOU between DMIRS and Environment Protection Authority (EPA). A Mining Proposal is of significant proposal under the Part IV of the Environment Protection Act or for the following criteria:

- Environmentally Sensitive Areas including:
 - Within 500m of World Heritage Property
 - \circ $\;$ Within 500m of a Bush Forever site $\;$
 - o Within 500m of a Threatened Ecological Community
 - Within 500m of defined wetlands (including Ramsar wetlands, ANCA wetlands, Conservation category wetlands)
- Area containing rare flora Area covered by an Environmental Protection Policy.
- Within 500m of a declared/proposed State Conservation Estate, including National Park, Nature Reserve, Conservation Park, or State Forest and Timber Reserves.
- Within a Public Drinking Water Source Area.
- Within 2 kilometres of a declared occupied town site (for Mining Proposals and petroleum Environment Plans only).
- Hydraulic fracturing exploration and development activities.
- Activities within the Strategic Assessment for the Perth Peel Region and potentially in conflict with the outcomes of the Strategic Assessment.
- Area previously or currently subject to formal assessment by the EPA.

Other Government Departments that may need consulting or approval are as follows:

- Department of Water and Environment Regulation (administers the works approvals and licences (or registration) required for the construction and operation of all prescribed premises,
- Department of Parks and Wildlife (administering the Wildlife Conservation Act 1950 and the Conservation and Land Management Act 1984)
- Department of Water (now part of the DWERs (administering the Rights in Water and Irrigation Act 1914, Metropolitan Water Supply Sewerage and Drainage Act 1909, Country Areas Water Supply Act 1947, Waterways Conservation Act 1976, Water Agencies (Powers) Act 1984 and Water Services Act 2012).
- The Commonwealth Government under Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (operates independent of the State)
- Department of State Development (administers State Agreements)

Baseline environmental data is required for a Mining Proposal, it usually requires study through at least one spring-time period. Refer to:

- EPA Technical Guidance Sampling of Short-Range Endemic Invertebrate Fauna (2016).
- EPA Technical Guidance Subterranean Fauna Survey (2016).
- EPA Technical Guidance Sampling methods for Subterranean Fauna Survey (2016).

The holder of a mining lease shall be required to expend in mining on or in connection with mining on the lease not less than AUD\$100 for each hectare or part thereof of the area of the lease with a minimum of AUD\$10,000 during each year of the term of the lease or in similar mining activity elsewhere in the district.

Reports for each Mining Lease shall be in the form of Form 5 and filed within 60 days after each anniversary date of the commencement of the term of the lease or within 60 days after the surrender, forfeiture, expiry or other cancellation of the lease.

Access and Infrastructure

Access to the tenements is via the North West Coastal Highway which passes through the tenement.

Access to the BIFs is via a well-defined station track which joins the highway 30 km east of Karratha and 1km west of the Rio rail line.

Due to the low relief and nature of the soils the station tracks within the tenements are suitable for traffic in dry periods only.

The towns Roebourne and major mining centre at Karratha and major port of Dampier are all within 30 km of the Cape Lambert Project.

Karratha was established in 1968 to accommodate the processing and exportation workforce of the Hamersley Iron mining company and, in the 1980s, the petroleum and liquefied natural gas operations of the North West Shelf Venture. At June 2018, Karratha had an urban population of 16,708.

Karratha's economic base includes the iron ore operations of the Rio Tinto Group, sea-salt mining, ammonia export operations, North West Shelf Natural Gas Project, Australia's largest natural resource development, the newest Natural Gas Project called Pluto LNG which is situated adjacent to the existing North West Shelf LNG facility and Ammonia/Technical Ammonium Nitrate production facility of Yara International.

Karratha has the largest shopping centre in the Pilbara, Karratha City, which has major food and grocery retailers and department store chains. There is also a smaller centre, Karratha Village, which has health services including a pharmacy and medical and dental practices. The Karratha Health Campus provides hospital services to the district.

Karratha Airport has two passenger airlines servicing the city with regular schedules: Qantas and Virgin Australia. The airport also serves as the hub of the Pilbara's light-aircraft and helicopter services, enabling contractors to access offshore destinations and other parts of the region.

Karratha has a major light and heavy industrial area that provides industrial services to the whole Pilbara region. The WA Mines Department (DMIRS) have an office at Karratha to monitor local mine safety and environmental matters.

Grid power, potable water and telecommunications can be sourced from Karratha.

Physiography and Climate

The West Pilbara region is generally flat over extensive flood plains following the main creek systems with scattered outcrops forming low hills and ridges, corresponding to outcrops of metamorphosed volcanic and sedimentary rocks ('greenstones'). These plains are dominated by spinifex and scattered shrubs with larger trees and other grasses concentrated along the banks of rivers and creeks.

Karratha has a hot dry climate with an annual maximum averaging 32.4°C and the annual minimum averaging 20.8°C. The annual precipitation averages 297 mm falling mainly during the occasional tropical storms between December and March.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Temperature Mean max temp (°C) Mean min temp (°C)	35.9 26.8	35.8 26.7	36.2 25.9	34.4 22.8	30 18.3	26.5 15.1	26.3 13.8	28.3 14.3	30.9 17	34.1 20.8	35 23.1	35.8 25.6	32.4 20.8
Rainfall Mean rainfall (mm) Mean number of days of rain >= 1 mm	47.7 3.3	75.4 4.2	47.3 3	17.3 1.3	27.7 2.2	36 2.1	14 1.3	4.1 0.6	1.3 0.3	0.4 0.1	1.4 0.2	13.6 1	296.7 19.6

 Table 1:
 Summary temperature and rainfall statistics for Karratha (1993-2019)

Source: Australian Bureau of Meteorology.



Figure 2: Cape Lambert Magnetite Project tenement location.

4: GEOLOGICAL SETTING

Regional Geology



Figure 3: Tectono-stratigraphic domains of the West Pilbara Granite–Greenstone Terrane. (after Hickman and Strong, 2003 Dampier – Barrow Island).

The Cape Lambert project is located within the West Pilbara Super Terrane which comprises the Roebourne, Whundoo and George Creek Groups as detailed below in Table 2.

Group	Formation	Lithology
Goorgo Crook Cp	Cleaverville Fm	BIF ~3.02 GA
George creek op	Low angled unconformity	
	Woodbrook Fm	Rhyolite, tuff, minor basalt and thin BIF
	Bradley Basalt	pillow, massive basalt with minor felsic tuff and chert
	Tozer Fm	Calc-alk volc, Minor chert and thin BIF
Wundoo Gp	Nallana Fm	Dominantly Basalt, ~3.13 Ga
	Scholl Shear Zone	
	Regal Fm	Basal peridotitic komatiite overlain by pillow basalt
	Regal Thrust	
Raphourno Cn	Nickol River Fm	BIF, clastics, felsic volcanic
Noebourne Gp	Ruth Well Fm	Basalt & extrusive peridotite. ~3.27Ga

Table 2: Pilbara stratigraphy.

The greenstone lithostratigraphy of Dampier comprises the 3,270–3,250 Ma Roebourne Group, the 3,125–3,115 Ma Whundoo Group, and the c. 3,020 Ma Cleaverville Formation (Hickman and Strong, 2003). This succession was folded, faulted, and intruded by granitoids during a sequence of magmatic and tectonic events between 3,270 and 2,920 Ma. The first major tectonic event was at about 3,160 Ma when the upper part of the Roebourne Group was thrust southwards across the lower part over an area of at least 1,750 km². Subsequent deformation included development of the Sholl Shear Zone, a major crustal dislocation with a long history of strike-slip and vertical movement, and regional upright folding at 2,950–2,930 Ma. A total of nine deformation events are recognized prior to earliest deposition of the Fortescue Group at c. 2,770 – 2,760 Ma.

The Cleaverville Formation, which hosts the Cape Lambert magnetite BIFs, comprises some 1500m of banded iron formation BIF, chert, and fine-grained clastic rocks lying unconformably on the Whundoo formation volcanics. The Whundoo Group of rocks unconformably overlies the Regal Formation composed of some 2000m of basal peridotites, pillow basalts and cherts.

The basal rocks of the Regal Formation are intruded by the Karratha Granodiorite. The basal contact to the Nickel River Formation of the Roebourne Group is tectonised along the Regal thrust. The Roebourne Group is composed of BIF, sediments, felsic volcanics overlying ultramafic and mafic extrusives.

The area is dominated by north-easterly trending structures formed by successive periods of northwest-southeast to north-south extension and compression. A total of 9 deformation events have been recognized within the area as detailed in Table 3.

Age (Ma)	Geological Event
3160-3090	D1: Thrusting, recumbent folding and granite intrusion. Deposition of the Whundo Group in a rifted zone. Sinistral movement along the Sholl Shear Zone.
3070-3020	D2: Culmination of sinistral strike-slip movement along the Sholl Shear Zone; transpressional folding and felsic magmatism.
3015-3010	D3: Strike-slip movement, felsic magmatism and transpressional folding of the Cleaverville Formation.
2975-2955	D4 & D5: Recognised in rocks of the Mallina Basin (south of license area). Involved local thrusting and east-west folding, and north-south folding respectively.
2950-2930	D6: Transpressional, northeasterly trending tight to open folding and commencement of dextral movement along Sholl Shear Zone and other easterly and northeasterly striking faults.
2940	D7: Characterised by northerly to northwesterly striking strike-slip faults
2920	D8: Culmination of dextral strike-slip movement along the Sholl Shear Zone and other easterly and northeasterly striking faults.
<2920	D9: Conjugate faulting produced by north-northwest-south-southeast compression.

Table 3: Regional Deformation Events.

(Modified after Hickman, 2002)

Local Geology

The south-eastern portion of the Cape Lambert South tenements is dominated by three discontinuously outcropping strike ridges of BIF and chert of the Cleaverville Formation located within the Roebourne Synform, see Figure 4.



Figure 4: Cape Lambert Project tenement – Local surface geology.

Mineralisation Styles

Magnetite BIF



Figure 5: BIF outcrop. (after SRK, 2008).

The target mineralisation, as a potential source of high-grade Fe concentrates, is magnetite BIF. Magnetite BIF, as suggested by its name, is composed of alternating bands of generally millimetre to centimetre scale bands of magnetite and chert. These units, because of their relative hardness and resistance to weathering, generally form linear ridges proud of the surrounding countryside.



Figure 6: BIF ridges. (after SRK, 2008).

Chemical weathering near the surface usually oxidises the magnetite (Fe_3O_4) to hematite (Fe_2O_3) then with further weathering to limonite/goethite ($FeO(OH) \cdot nH_2O$). This oxidation both lowers the Fe grade and the resultant minerals are non-magnetic.

BIF composed of Fe minerals other than magnetite such as hematite, limonite and grunerite are almost always of no commercial value since it is very expensive to metallurgically recover these Fe minerals from the rock. Magnetite is generally easily and relatively cheaply recovered from the rock by grinding and magnetic separation.

Magnetite BIF is usually easily distinguished regionally, even if buried by more recent sediments, by aeromagnetics, Figure 7.



Figure 7: Aeromagnetics over Cape Lambert tenement. (red = highly magnetic).

5: EXPLORATION

Drilling

A total of 377 resource drill holes (83,957m) were completed between 1994 and 2008. The majority of holes were used the reverse circulation (RC) drilling method. A total of 31 holes were core drilled, with RC pre-collars.

The drilling summary is shown in Table 4.

Stage	Holes	Metres	Spacing
1994-1995 Robe Drilling	186	22,505	200m - 120m
2006-2007 Cape Lambert	166	52,849	Variable
2008 MCCAH	25	8,608	Variable
Total	377	83,960	

Table 4: Cape Lambert Iron Ore Project — Drilling Summary

Source: Golder 2009

Drilling samples were combined into either 2m or 4m composite samples and analysed for a range of elements using XRF. In addition, samples determined to be within the resource envelope were also analysed using the Davis Tube Recovery (DTR) method. This is a laboratory scale method for determining the grade and recovery volume of magnetic separation products. This was expected to provide an indication of beneficiation performance throughout the resource. The DTR grades and recovery were both estimated by Golder in the 2009 Mineral Resource estimate. Cape Lambert Iron Ore Pty Ltd (CLIO) and MCC Australia Sanjin Mining Pty Ltd (MCCAH) used the ALS laboratory in Perth for head and DTR analyses.

Exploration methods and data quality assurance is summarised in Table 5.

Exploration Methods	Details of activities	Comments		
Drilling	346 RC and 31 precollared core holes	Total 83,960m drilling		
Sampling	Samples were taken at 2m or 4m in RC drilling and from 1m to 12m in core drilling.	Approx. 23,600 samples were prepared for geochemical analysis.		
Geochemical analysis	Elemental analyses were conducted for Fe, Fe++, Al ₂ O ₃ , MgO, TiO ₂ , SiO ₂ , S, P, CaO, K ₂ O, Na ₂ O, LOI	XRF technique by ALS Laboratories in Perth, WA.		
Beneficiation analysis (DTR)	Concentrate grades and LTR were prepared Fe, Fe ⁺⁺ , Al ₂ O ₃ , MgO, TiO ₂ , SiO ₂ , S, P, CaO, K ₂ O, Na ₂ O, LOI	Samples with Fe>10% were routinely analysed using DTR		
Duplicates and assay checks	Duplicates of every tenth sample were verified by other Laboratories.	All work originally carried out included extensive QAQC and indicated no problems with precision or accuracy.		
Specific Gravity analysis	In mineralized zones, 132 density determinations carried out on drill core.	Average specific gravity (Ore Density) was determined as 3.35 t/m^3		

Table 5:	Exploration	Methods and	data quality	assurance.
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Figure 8: Geological Section on Local Grid 12,400E.



Figure 9: Geological Section on Local Grid 13,200E.

Sampling

Robe Drilling Campaign

Sampling in the Robe drilling campaigns consisted of composites to 2 metre intervals. Samples taken during the 1994 campaign were passed through a cyclone, while those in the 1995 campaign were passed through a cyclone and a riffle splitter. Wet samples were passed through a wet splitter and then drained.

Diamond core was sampled on 2 metre intervals, with half core being sent for analysis. Samples for DTR test work were composited over large intervals that varied in length from 10 meters up to 50 meters.

CLIO Drilling Campaign

Samples taken for the CLIO drilling campaign were passed through a cyclone and a riffle splitter. Wet samples were collected in calico bags and placed in rigid buckets, which were progressively drained. The remaining material was then spear sampled. Samples were taken every metre and then composited to 4 m intervals.

All samples were tested for magnetic susceptibility response; those with a weak response were sent for XRF analysis only, while those with a strong response were sent for full Davis Tube Recovery (DTR) analysis.

No diamond drilling was undertaken by CLIO during the 2006 campaign. A 10,000 m diamond drilling campaign commenced late June 2007 to provide metallurgical, physical and geotechnical data, as well as enhancing the stratigraphic, structural and mineralogical understanding of the resource. The core used in the resource modelling was split along the long core axis by diamond saw and half the core in 4 m intervals despatched for chemical analysis.

MCCAH Drilling Campaign

MCCAH followed the sampling procedures used by CLIO.

QAQC

Golders undertook a QAQC review of the 2006 to 2007 drill program. The QAQC data reviewed included field and laboratory duplicates, laboratory repeats, standards, and duplicates and repeats sent to an umpire laboratory. Selected plots are provided as Figure 10 to 12.



Cape Lambert Iron Ore Deposit Field Duplicates QC_Fe_pct vs Fe_pct

Figure 10: Field duplicate Fe% QAQC (Golder 2008).



Figure 11: Laboratory check Fe% QAQC (Golder 2008).





Figure 12: Field duplicate Fe% concentrates QAQC (Golder 2008).

QAQC comments by Golders are summarised below:

- The field duplicates generally show a reasonably good correlation except for two possible sample swaps, sample MA315 092-096 and sample MA411 132-136.
- The sample laboratory repeats generally show better precision than the field duplicates; except again a few possible sample swaps.
- The laboratory pulp repeats show excellent precision for all samples except one.
- The sample repeats sent to the umpire laboratory show a very good correlation, however a couple of sample swaps also appear to have occurred.
- The pulp repeats sent to the umpire laboratory show excellent precision.
- The standards generally show very good accuracy with variations from the expected values mostly less than 2%.

In summary, Golders found that the QAQC results are generally very good in terms of overall accuracy and precision. The main problem appears to be occasional sample swaps.

6: MINERAL RESOURCE AND ORE RESERVE ESTIMATES

This report, including the resource estimates, complies with the 2012 edition of the *Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves* (the 'JORC Code (2012)'). Key definitions of this code are as follows:

A 'Mineral Resource' is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade (or quality), and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade (or quality), continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling. Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories.

An '**Inferred Mineral Resource**' is that part of a Mineral Resource for which quantity and grade (or quality) are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade (or quality) continuity. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drillholes. An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to an Ore Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

An '**Indicated Mineral Resource**' is that part of a Mineral Resource for which quantity, grade (or quality), densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drillholes, and is sufficient to assume geological and grade (or quality) continuity between points of observation where data and samples are gathered. An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Ore Reserve.

A '**Measured Mineral Resource**' is that part of a Mineral Resource for which quantity, grade (or quality), densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit. Geological evidence is derived from detailed and reliable exploration, sampling and testing gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drillholes, and is sufficient to confirm geological and grade (or quality) continuity between points of observation where data and samples are gathered. A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proved Ore Reserve or under certain circumstances to a Probable Ore Reserve.

An '**Ore Reserve**' is the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at Pre-Feasibility or Feasibility level as appropriate that include application of Modifying Factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified. The reference point at which Reserves are defined is usually the point where the ore is delivered to the processing plant.

'**Modifying Factors**' are considerations used to convert Mineral Resources to Ore Reserves. These include, but are not restricted to, mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and governmental factors.

A '**Probable Ore Reserve**' is the economically mineable part of an Indicated, and in some circumstances, a Measured Mineral Resource. The confidence in the Modifying Factors applying to a Probable Ore Reserve is lower than that applying to a Proved Ore Reserve.

A '**Proved Ore Reserve**' is the economically mineable part of a Measured Mineral Resource. A Proved Ore Reserve implies a high degree of confidence in the Modifying Factors.



Figure 13: General relationship between Exploration Results, Mineral Resources and Ore Reserves.

The latest resource estimate was prepared in March 2009 by the international consulting group Golder Associates (Golder) of Perth under the then current JORC Code (2004). The methodology applied to the resource estimate by Golder is generally appropriate and correct for this style of mineralisation. The original drilling and other exploration data has been reviewed by AM&A and compared with the sample collection, subsampling, assaying, sampling and assaying quality control, bulk density, data collection and verification, resource modelling and resource classification applied by Golder has been reviewed by AM&A against the recommendations of the current JORC Code (2012) and the Golders resource estimate and resource classifications appear reasonable and would conform the with current JORC Code (2012).

There has not been any further drilling or other exploration work carried out since this resource estimate report that would affect the Golder resource estimate, resource classifications and conclusions.

Due to the early-stage nature of the project, Ore Reserves cannot be quoted. The results of preliminary mining studies indicate that the BIF ore can be mined from which a magnetite concentrate produced that after magnetic beneficiation is a high value marketable product. All mining studies to date have included Inferred Mineral Resources which will be excluded from any future stated Ore Reserves until they have been upgraded to Indicated by further in-fill drilling.

Drill hole data and resource interpretations were provided to Golder by MCCAH. Golder validated the drill hole database and analysed the QAQC results. Golder determined that the QAQC results were very good, although a number of sample swaps were noted.

The resource interpretations were checked and adjusted by Golder then used to prepare wireframes within which the mineralised zones were defined. Vulcan software was used for geological modelling. Golder then composited the samples within the wireframes to even 4 m intervals then carried out exploratory data analysis and spatial data analysis to identify characteristics and grade trends within the mineralised zones. Golder used its own proprietary statistical software for spatial analysis of the data (variography) which showed relatively low nugget variance and long ranges of continuity for Fe as would be expected with BIF style mineralisation.

Golder separated the deposit in to three main domains (north, central, south) for variography and analysis. The domains were based solely on Fe grade using a 20% Fe threshold to define resource outlines. The characteristics of each domain were found to be similar with orientation and geometry being the main differences.

The different orientations were incorporated into the grade estimation utilising Ordinary Kriging. AM&A has reviewed this estimate and compared it against the underlying drill data and considers the estimate to be a good representation of the mineralisation and grade within the Southern and Northern Zones. Interpolation directions for the Central Zone are not optimal and will have caused incorrect grade assignment on a local basis however the overall global estimate is unlikely to be materially affected.

Density determinations were carried out on drill core. A total of 132 values were available from the mineralised zones. An average value of $3.35t/m^3$ was derived from the data. AM&A considers this reasonable at scoping level however the data is inadequate for a BFS level evaluation. The total estimated Mineral Resource reported in the 2009 estimate by Golder was 1.91Bt at 30.7% Fe (20% Fe cut-off).

The resource classifications by Golder were based principally on data density, data quality and geological confidence criteria. Considering that the drill spacing was on approximately 200 m spaced sections with drill holes at 100 m centres on each section, the resources were classified as Indicated with the geological complex zones and areas with wider spaced holes as Inferred.

The classification approach for the resource was both quantitative and qualitative. Initially, the kriging slope of regression for Fe was assessed, with areas with a Fe-slope >0.5 considered for classification as Indicated Resources. Small less continuous mineralised zones, areas of broadly spaced drilling and geologically complex zones, were then assessed and considered for classification as Inferred Resources.



Figure 14: Golders resource classifications. (green = Indicated, blue = Inferred).

AM&A has reported the Resource in compliance with the recommendations in the Australasian Code for Reporting of Mineral Resources and Ore Reserves (2012) by the Joint Ore Reserves Committee (JORC). The Golder estimate verified by AM&A of Mineral Resources at the Cape Lambert Iron Ore project at June 2009 is summarised in Table 6.

. Resource classifications defined by Golder have been retained. Due to the good distribution of drilling and very regular Fe grade distribution, AM&A considers the reported classifications to be appropriate.

Table 6: Cape Lambert Iron Ore Project — Golder Associates Estimated Mineral Resources, as at March 2009.

				Head G	rade Est	imate (2	0% Fe (Cut off (Grade)			
JORC Classification	Tonnes Mt	Fe %	Fe++ %	<u>SiO2</u> %	$\frac{\mathrm{Al}_2\mathrm{O}_3}{\%}$	$\frac{P_2O_5}{\%}$	<u>LOI</u> %	CaO %	$\frac{K_2O}{\%}$	MgO %	<u> </u>	<u>TiO2</u> %
Measured												
Indicated	1,434	30.7	16.0	40.4	2.32	0.03	7.22	2.66	0.19	2.61	0.14	0.17
Inferred	481	30.5	16.0	41.1	2.81	0.03	5.44	3.09	0.28	2.67	0.19	0.20
Total	1,915	<u>30.7</u>	<u>16.0</u>	40.6	2.44	0.03	<u>6.78</u>	<u>2.77</u>	0.21	2.63	0.15	0.17

Source: Golder 2009 Resource Report.

Mineral Resources shown above include reserves.

			Co	ncentra	te Grade	Estima	te (20%)	Fe Cut-o	off Grad	e)		
JORC Classification	DTR Rec%	Fe %	Fe++ %	<u>SiO2</u> %	$\frac{\mathrm{Al}_2\mathrm{O}_3}{\%}$	$\frac{P_2O_5}{\%}$	<u>LOI</u> %	<u>CaO</u> %	$\frac{K_2O}{\%}$	MgO %	<u> </u>	<u>TiO2</u> %
Measured												
Indicated	31.7	61.7	22.0	10.2	0.62	0.01	77	0.72	0.05	1.00	0.11	0.08
Inferred	32.2	62.0	22.7	10.4	0.63	0.01	-1.3	0.67	0.05	0.89	0.26	0.09
Total	<u>31.8</u>	<u>61.8</u>	<u>22.1</u>	<u>10.3</u>	0.62	<u>0.01</u>	-0.9	<u>0.71</u>	0.05	<u>0.97</u>	0.15	0.08

It is usual that Inferred Resources are upgraded to at least the Indicated category before mining commences by infilling the existing holes to form a closer spaced grid. AM&A estimate that approximately 55 holes are required to upgrade the Inferred resources to Indicated for approximately 3,000 m taking approximately 20 days at a cost of approximately AUD\$450,000.

For drilling, the consent of the WA Mines Department in Perth needs to be obtained. The respective application would be made by the owner of the tenement MCC who would also manage the timing, drilling and costs.

MCCAH Pre-Feasibility Study

MCCAH carried out a Pre-Feasibility Study (PFS) on the project in 2008 compliant with the reporting standards, costs and revenues at the time that demonstrated that the BIF ore can be mined and a magnetite concentrate produced that after beneficiation is a high value marketable product. A concentrate price of AUD\$100/tonne was assumed and costs appropriate at 2008. The current magnetite concentrate price is at record highs in the order of AUD\$200.

This PFS considered all the relevant factors that could affect the viability of the project including mining, processing, metallurgical, infrastructure, environmental, community impact, geotechnical, hydrological and geotechnical engineering issues as well as economic, marketing, legal and government factors resulting in a positive outcome.

The 2008 PFS was based on a conventional open cut mine (Figure 15) with the mined BIF undergoing simple magnetic beneficiation to produce a high-grade magnetite concentrate for sale (Figure 16).



Figure 15: 2008 PFS open pit design.



Figure 16: 2008 PFS processing flow sheet.

The 2008 PFS assumed that at full production, 15 Mt of iron ore concentrate grading 65% Fe is planned to be produced. In the PFS the concentrate grade after magnetic beneficiation was assumed to remain constant throughout the life of the project, however the DTR results used to estimate concentrate recovery and grade in the resource model shows a total deposit average CFe grade of 61.8%.

The C_Fe% grade varies from around 60% in the southern portion of the deposit to around 68% in the northern portion. The mass recovery of 31.8% demonstrated by the DTR results supports the project life of mine assumption recovery of 31.25%.

The Pharlap Holdings Pte Ltd royalty on the MCC Cape Lambert Magnetite project is AUD\$0.50/ tonne of all minerals including magnetite BIF ore at a rate of up to 50 million tonnes/year.

Mining at a rate of 50 million tonnes BIF ore per year over a 30-year mine life requires a total resource of 1.5 billion tonnes which is less than the total Golders resource estimate of 1.915 billion tonnes. Actual mining rates will be determined by current market prices for the magnetite concentrate produced from the BIF ore, mining and other production costs and availability of markets. If mining at a rate of 50 million tonnes BIF ore per year is achieved the royalty will raise AUD\$25 million for that year, however in this report the author has used the annual production figures reported in the PFS.

Mining and processing BIF very similar to the BIF at Cape Lambert in the Western Australia, including in the Pilbara region, is very common with the most notable operation currently in production being the Sino Iron Project operated by Citic Pacific Mining with an eventual annual production target of more than 27 million tonnes of magnetite concentrate.

AM&A note that SunMirror / Pharlap is only a passive holder of a royalty and has no influence on any future exploration program or mining operation by MCC and so are unable to provide a definitive time plan with dates for any future activities and measures for the project.

7: IRON ORE MARKET ANALYSIS

The iron ore price surged in 2021 to reach its highest level since 2011 above USD 200 / tonne. Prices were driven by high demand in China and fears of disrupted supply in Brazil and elsewhere. The iron ore price then progressively decreased throughout 2022 as China maintained COVID restrictions and global interest rates rose to reach a low of USD 80 / tonne in the second half of 2022. A rebound has occurred since then with the full reopening of China reaching USD 120 / tonne in Q1 2023 (Figure 17). Prices going forward are expected to ease with the continued impact of higher interest rates and a global economy slowdown. From an estimated average price of around US\$100 per tonne (FOB) in 2023, the benchmark iron ore price is projected to average around US\$63 per tonne (in real terms) by 2028.



Figure 17: Iron ore price and China steel production, monthly

From a medium-term outlook perspective, China — accounting for around 57% of global iron ore demand in 2022 — faces a number of key structural drivers that are expected to contribute to this lower demand growth. The foremost of these is China's stated aim to reach peak steel output by 2030. As well as contributing to the country's net zero emissions ambition, China's efforts to reduce aggregate steel output are expected to support a longer-term shift in its economy away from investment-led (and toward consumption-led) growth.

China also faces a falling total (and working age) population, with the country announcing its first decline in population in over six decades in 2022. This is expected to prompt a more modest rate of growth for the Chinese economy in coming years compared with prior decades. Together with the slowdown in the real estate sector, this is expected to see China's iron ore demand decline by around 1% annually over the outlook period to 2028.

However, growing steel demand and production capacity in regions such as emerging Asia and the Middle East are projected to see strong growth in ex-China iron ore consumption over the outlook period. This includes more than 100 million tonnes of integrated (Blast Furnace-Basic Oxygen Furnace) steelmaking expected to come online in the next few years in Asia alone. This is expected to see ex-China demand for iron ore rise by around 3.2% per annum over the outlook.

On the supply side, the world's two largest producers — Australia and Brazil — are expected to continue to collectively grow export volumes by 3.2% per annum over the outlook period. This follows a ramp up of greenfield projects for major Australian miners, and major expansions planned by Brazilian producers Vale, CSN and others. New supply from emerging producers in Africa will also contribute to annual growth of around 3% in global trade of iron ore).

8: RISKS

A key risk, common to all exploration companies, is that the expected mineralisation may not be present or that it may be too small to warrant commercial exploitation.

The interpretations and conclusions reached in this Report are based on current scientific understanding and the best evidence available to the author at the time of writing. It is the nature of all scientific conclusions that they are founded on an assessment of probabilities and, however high these probabilities might be, they make no claim for absolute certainty.

The ability of any person to achieve forward-looking production and economic targets is dependent on numerous factors that are beyond AM&A's control and that AM&A cannot anticipate. These factors include, but are not limited to, site-specific mining and geological conditions, management and personnel capabilities, availability of funding to properly operate and capitalise the operation, variations in cost elements and market conditions, developing and operating the mine in an efficient manner, unforeseen changes in legislation and new industry developments. Any of these factors may substantially alter the performance of any mining operation.

The data included in this report and the basis of the interpretations herein have been derived from a compilation of data included in annual technical reports sourced from various company reports, public documents and Western Australian Mineral Exploration reports (WAMEX reports) compiled by way of historical tenement database searches.

In most cases the historical exploration reports do not include or discuss the use of quality assurance and quality control (QAQC) procedures as part of the sampling programs, this data frequently not reported. Therefore, it is difficult to determine the validity of much of the historical samples. AM&A have relied on the 2009 Golder report and MMC Independent Technical Review Report to confirm the reliability of the drilling, sampling, assaying and resource modelling.

A Mineral Resource estimate is reported for the project that is in accordance with the 2012 JORC Code. This Mineral Resource estimate was originally modelled and reported by Golder in March 2009, prior to the implementation of the current JORC Code (2012). AM&A have reviewed the Golder Mineral Resource report and have concluded that the resource estimate as reported and classifications assigned by Golder conforms with the current JORC Code (2012). Estimates of Mineral Resources may change when new information becomes available or new modifying factors arise. Interpretations and assumptions on the geology and controls on the mineralisation on which Resource or Reserve estimates based on may be found to be inaccurate after further mapping, drilling, sampling or through future production. Any adjustment could affect the development and mining plans, which could materially and adversely affect the potential revenue from the Project and the valuation of the Project. If the Resources are over-estimated in either quantity or quality of ore, the profitability of the project will be adversely affected. If however the quantity or quality is underestimated the profitability of the project will be enhanced. Mineral value fluctuations, dilution, grade and mining losses all could potentially change the value of the Resource estimate.

The exploration potential of the project may change when new information becomes available or new modifying factors arise. Interpretations and assumptions on the geology and controls on the mineralisation on which the exploration potential has been based on may be found to be inaccurate after further mapping, drilling and sampling or through future production. Any adjustment could affect the potential for future development and mining plans, which could materially and adversely affect the potential revenue from the Project and the valuation of the Project. If the potential is over-estimated in either quantity or quality of ore, the profitability of the project will be adversely affected. If however the quantity or quality is underestimated the profitability of the project will be enhanced. Mineral value fluctuations, dilution, grade and mining losses all could potentially change the value of the stated exploration potential.

Mineral exploration, by its very nature has significant risks, especially for early-stage projects and additional challenges occur in areas of historical mining. Based on the industry wide exploration success rates it is likely that, that no significant economic mineralisation will be located within the projects. Even in the event significant mineralisation does exist within the projects, factors both in and out of the control of Artemis may prevent the location of such mineralisation.

This may include, but is not limited to, factors such as community consultation and agreements, metallurgical, mining and environmental considerations, availability and suitability of processing facilities or capital to build appropriate facilities, regulatory guidelines and restrictions, ability to develop infrastructure appropriately, and mine closure processes. In additional variations in commodity prices, saleability of commodities and other factors outside the control of the Company may have either negative or positive impacts on the projects that may be defined.

Within the projects there are registered heritage sites which may impact potential exploration activities.

The interpretations and conclusions reached in this Report are based on current scientific understanding and the best evidence available to the authors at the time of writing. It is the nature of all scientific conclusions that they are founded on an assessment of probabilities and, however high these probabilities might be, they make no claim for absolute certainty.

9: PROJECT CONCLUSIONS

The tenement package under consideration for this report comprises a granted Retention Licence R47/18.

The tenement covers BIF units within the Cleaverville Formation. The Retention Licence reportedly contains the 1.9 billion tonnes @ 30.7% Fe Cape Lambert Magnetite deposit currently owned by China Metallurgical Group Corporation ("MCC"). This Mineral Resource estimate was originally modelled and reported by Golder in March 2009, prior to the implementation of the current JORC Code (2012).

AM&A have reviewed the Golder Mineral Resource report and have concluded that the resource estimate as reported and classifications assigned by Golder conforms with the current JORC Code (2012). There has not been any further drilling or other exploration work carried out since this resource estimate report that would affect the Golder resource estimate, resource classifications and conclusions.

Ore Reserves cannot be quoted for the project without the project owners MCC carrying out another PFS using current revenue and cost values, especially since the magnetite concentrate market price has doubled since the 2008 PFS.

The results of earlier preliminary mining studies in 2008 however indicate that the BIF ore can be mined using conventional open cut mining methods at a rate of 50 million tonnes BIF ore per year over a 30-year mine life from which a magnetite concentrate produced that after magnetic beneficiation is a high value marketable product.

This resource has a royalty held by Pharlap Holdings Pte Ltd worth \$0.50/ tonne of all minerals mined including magnetite BIF ore at a rate of up to 50 million tonnes/year, but in this valuation report the conservative PFS annual production figures are used.

In order to arrive at a fair value for the Pharlap Holdings Royalty, the author applied a standard DCF valuation methodology as follows:

1. Production assumption and royalty values are as per Section 6 of this report. We assume the project produces at capacity because once the capital expenditures have been incurred, the project owner will always have the incentive to produce at maximum capacity given the marginal cost of production is expected to be below the iron ore prices. Any ramp up assumptions would have only a marginal impact on the NPV and therefore are considered an irrelevant level of detail in terms of order of magnitude compared to the other assumptions (particularly the discount rate and the start-up date)

2. Royalty cash flows are discounted assuming a standard weighted average cost of capital ("WACC") for the mining industry in Australia (build-up of WACC is provided below, source: Damodaran). We use a WACC ranging from 8% to 11% with a central case of 9.48%, reflecting the cost of capital in the mining sector as of 30th June 2023.

3. An asset specific PNAV of 0.5x is then applied on the NPV considering that the WACC already reflects the average riskiness of mining industry cash flows. PNAV for royalty NPVs ranges from 1.25x-1.75x for producing royalties and 0.5-1.0x for non-producing royalties, depending on how close a mine is to production (Source: Cantor Fitzgerald). We have selected the lower end of the range for the purpose of this valuation. Cases where we have seen PNAV multiples lower than 0.5x were either for early-stage exploration assets or in reference to NAVs calculated at artificially low standardised discount rates of 5% or 8% (eg. Lower than the WACC).

4. A range of initial start-up production dates were modelled starting at 5 years to 20 years with a central case at 11.2 years from the date of valuation (30th June 2023). 11.2 years is the start date corresponding to the average value derived from a production range start date of 5-20 years and a WACC range of 8-11%. Further considerations behind the rationale on the start date are provided in Section 10 of this report.

Various assumptions are made:-

- 1. Production assumption and royalty values are as per in this Section 6 of this report.
- 2. A range of initial start-up production dates were modelled starting at 5 years to 20 years with a central case at 11.2 years from the date of valuation (30th June 2023).
- 3. A PNAV ratio of 0.5x, which is consistent with an iron ore royalty on a pre-development mining project in a safe jurisdiction such as Western Australia.
- 4. WACC (Weighted Average Cost of Capital) ranging from 6% to 11% with a central case of 9.48%, reflecting the current cost of capital in the mining sector.
- 5. Further assumptions behind the rationale on the start date are provided in Section 12 at the end of this report.

		Royalty /t		Discount rate
		\$0.50		9.48%
Year	Tonnes pa	Rovalty Ś	Discounted	Cumulative
	Golder		Royalty	Royalty
1	16,000,000	\$8,000,000	\$2,896,854	\$2,896,854
2	48,000,000	\$24,000,000	\$7,938,037	\$10,834,891
3	48,000,000	\$24,000,000	\$7,250,673	\$18,085,564
4	48,000,000	\$24,000,000	\$6,622,829	\$24,708,392
5	48,000,000	\$24,000,000	\$6,049,350	\$30,757,743
6	48,000,000	\$24,000,000	\$5,525,530	\$36,283,273
7	48,000,000	\$24,000,000	\$5,047,068	\$41,330,341
8	48,000,000	\$24,000,000	\$4,610,037	\$45,940,377
9	48,000,000	\$24,000,000	\$4,210,848	\$50,151,225
10	48,000,000	\$24,000,000	\$3,846,226	\$53,997,451
11	48,000,000	\$24,000,000	\$3,513,177	\$57,510,628
12	48,000,000	\$24,000,000	\$3,208,967	\$60,719,595
13	48,000,000	\$24,000,000	\$2,931,099	\$63,650,693
14	48,000,000	\$24,000,000	\$2,677,291	\$66,327,985
15	48,000,000	\$24,000,000	\$2,445,462	\$68,773,446
16	48,000,000	\$24,000,000	\$2,233,706	\$71,007,153
17	48,000,000	\$24,000,000	\$2,040,287	\$73,047,440
18	48,000,000	\$24,000,000	\$1,863,616	\$74,911,056
19	48,000,000	\$24,000,000	\$1,702,244	\$76,613,299
20	48,000,000	\$24,000,000	\$1,554,844	\$78,168,144
21	48,000,000	\$24,000,000	\$1,420,209	\$79,588,352
22	48,000,000	\$24,000,000	\$1,297,231	\$80,885,583
23	48,000,000	\$24,000,000	\$1,184,902	\$82,070,485
24	48,000,000	\$24,000,000	\$1,082,300	\$83,152,786
25	48,000,000	\$24,000,000	\$988,583	\$84,141,368
26	46,000.000	\$23,000.000	\$865,356	\$85,006,724
27	46,000.000	\$23,000.000	\$790.424	\$85,797,148
28	37.000.000	\$18,500,000	\$580,723	\$86,377,871
20	16.000.000	\$8,000.000	\$229,378	\$86,607,249
25	20,000,000	<i><i><i>qc</i>,<i>scc</i>,<i>ccc</i></i></i>	Rounded ASM	\$43.3
			nounded Agitti	φ - 5.5

Table 7: Cape Lambert Iron Ore Project DCF Calculations (Royalty)

WACC Build Up 30th June 2023		Source:
USD Risk free rate	3.82%	10-year Treasury Yield, US Department of Treasury
AUD USD LT inflation differential	0.50%	Federal Reserve, Reserve Bank of Australia
AUD Risk free rate	4.34%	Calculated
Equity Risk Premium	5.00%	Damodaran, https://pages.stern.nyu.edu/~adamodar/pc/datasets/ctrypremJuly23.xlsx
Metals & Mining Beta	1.15	Damodaran, https://pages.stern.nyu.edu/~adamodar/pc/datasets/waccRest.xls
Cost of equity	10.14%	Calculated
Metals & Mining Standardized Gearing	14%	Damodaran, https://pages.stern.nyu.edu/~adamodar/pc/datasets/waccRest.xls
Metals & Mining Standardized Debt Spread	3.13%	Damodaran, https://pages.stern.nyu.edu/~adamodar/pc/datasets/waccRest.xls
Metals & Mining Standardized Cost of Debt	7.48%	Calculated
Marginal Tax Rate	27%	Damodaran, https://pages.stern.nyu.edu/~adamodar/pc/datasets/waccRest.xls
After Tax Cost of Debt	5.46%	Damodaran, https://pages.stern.nyu.edu/~adamodar/pc/datasets/waccRest.xls
WACC	9.48%	Calculated

CAPE LAMBERT ROYALTY RISKED VALUATION

Production start year	11.2		
Asset specific PNAV	0.5		
Discount rate range	9.5%	11.5%	

		Production ye	ear							
		5	7.5	10	12.5	15	17.5	20	22.5	25
WACC	6%	121.44	104.98	90.75	78.44	67.81	58.62	50.67	43.80	37.87
	7%	105.39	88.99	75.14	63.45	53.58	45.24	38.20	32.26	27.24
	8%	92.02	75.91	62.62	51.66	42.62	35.16	29.01	23.93	19.74
	9%	80.78	65.13	52.50	42.33	34.12	27.51	22.18	17.88	14.41
	9.48%	76.04	60.63	48.34	38.55	30.74	24.51	19.54	15.58	12.43
	10.00%	71.30	56.18	44.27	34.88	27.49	21.66	17.07	13.45	10.60
	11.00%	63.23	48.71	37.53	28.91	22.27	17.16	13.22	10.18	7.84

CAPE LAMBERT ROYALTY VALUE (in AUD millions)

In summary, the discounted value of this Pharlap Holdings Royalty over a projected 30-year project life is currently valued at A\$43.3 million (equivalent to the start date of production being 11.2 years from valuation reference date 30th June 2023), which is also the average value of all sensitivity scenarios for WACCs ranging from 8-11% and a start-up date ranging from 5-20 years.

Yours faithfully,

amagned

Allen J. Maynard. BAppSc(Geol), MAIG. MAusIMM.

10: RATIONALE FOR ANTICIPATED START DATE

The background and history behind anticipated latest start date assumption to the valuation model is based on public domain data which at the time of writing is very current.

- 1. There are 3 Australian-owned main ports on the NW coast of Western Australia exporting iron ore concentrate from the nearby operating mines. They are:
 - a. **Port of Dampier** owned and operated by Rio Tinto through its Hamersley Iron and Pilbara Iron subsidiaries.
 - b. Port Hedland operated by BHP Billiton, and
 - c. **Port Walcott** (also known as Cape Lambert) operated by Rio Tinto, through their subsidiary Pilbara Iron.

		PO - POR	RT HEDLAND	PO	PT WALCOTT
FUR	IN ORPATION	PORT DETAILS	7	FU	KI WALCOII
PORT DETAILS		FORTDETALS	Port Hedland is a large volume, bulk mineral export port located	- DODT	TINEODMATION
	One of the major port facilities servicing West Australia's		on Australia's north west coast in the resource rich Pilbara	- FUR	THIORMATION
BRIEF PORT DESCRIPTION:	Pilbara region, the port of Dampier hosts five berths at Parker Point and one berth at East Intercourse Island for the export of iron one. Iron ore facilities are owned and operated by Rio Tinto through its Hamersley Iron and Pilbara Iron subsidiaries.	BRIEF PORT DESCRIPTION:	region. Iron Ore is overwhelmingly the main cargo handled at the port, with shipper BHP Billiton providing four bulk berths for Iron Ore exports, accommodating large bulk ships.	PORT DETAILS BRIEF PORT DESCRIPTION:	Port Walcott hosts one of Australia's longest, deepest and highest wharves, which is used to ship iron one. Rio Tinto is the local shipper and the port facilities are operated by their
TERMINAL	Parker Point	TERMINAL:	Finucane Island Terminals		subsidiary Pibara iron.
NUMBER OF REPTUS	E E	NUMBER OF BERTHS:	2	TERMINAL:	Port Walcott - Berth 1 & 2
NUMBER OF BERTHE.				NUMBER OF BERTHS:	2
PORT INFORMATION	1	PORT INFORMATION		PORT INFORMATION	
POSITION:	LAT 20* 39' S. LONG 116 * 43' F	POSITION:	Lat 20119' S, Long 118'34' E.	POSITION	LAT 20° 39' S. Loneitude 116 ° 43' F
LOCATION	West Coast of Australia - 1400km NE of Perth	LOCATION:	West Coast of Australia, 1700km north of Perth	LOCATION:	West Coast of Australia - 1400km NE of Perth
SHIPPER(S)	Rio Tinto (Hamerslev Iron, Pilbara Iron)	SHIPPER(S):	BHPB	SHIPPER(S):	Rio Tinto (Hamersley Iron, Pilbara Iron)
TIDE RANGE	3.2M - 5.3M	TIDE RANGE:	1.4m - 3.4m	TIDE RANGE:	1.4M - 3.4M
The fortoe.	0.200 - 0.000				
MAX SHIP DIMENSIONS	1	MAX. SHIP DIMENSIONS		MAX. SHIP DIMENSIONS	
LOA:	269 M / 455 M / 330M	LOA:	325M - 340M	LOA:	N/a
ORAFT:	14.4 M / 15.4 M / 15.1 M	DRAFT:	19.5M	DRAFT:	15.6 M
AIR DRAFT (at Datum)	23 M / 26 3 M / 26 2 M	AIR DRAFT (at Datum):	N/A	AIR DRAFT (at Datum):	20 M
REPTH LENGTH-	267 M / 455 M / 320 M	MAX BEAM:	55M / 56M	BERTH LENGTH:	400 M +
DEPTH ALONSIDE:	17 2 M / 18 8 M / 18 1 M	BERTH LENGTH:	403M / 430M	DEPTH ALONSIDE:	19.1 M / 19.4 M
DEP IN ALONDIDE.	17 SE HE / 10 SE HE / 16 E HE	DEPTH ALONSIDE:	19M		-
LOADING FACILITIES	1			LOADING FACILITIES:	
NUMBER OF SHIPLOADERS	Tue	LOADING FACILITIES:		NUMBER OF SHIPLOADERS:	: Two (Slewing Conveyor Type)
LOAD RATE	9 500 TPH / 7 500 TPH	NUMBER OF SHIPLOADERS:	2	LOAD RATE:	8000 IPH
TRAVEL	180M / 300M	LOAD RATE:	6,000 TPH (Average)	OUTPEACH	512 M / 245 M
OUTREACH	23.8 M / 33M	TRAVEL:	278M	ourreach.	30,0 m r 21,3 m
oo menon.	20.0 m / 00m	OUTREACH:	27.5M		a section of the local division of the local
	Catalogue				
_	W Wilhelmsen		W Wilhelmsen		W Wilhelmse

All operators closely protect their iron respective ore railway networks and are unlikely to share access with any competitors, including CITIC / MCC.

2. A fourth port, **Cape Preston**, is located about 100km southwest of Karratha, and is <u>owned and operated by CITIC</u> who mine and export iron ore concentrate from their jointly owned Sino Iron Mine. The mine is 20% owned by MCC. CITIC Group Corporation Ltd., formerly the China International Trust Investment Corporation (CITIC), is a state-owned investment company of the People's Republic of China. As of 2019, it is China's biggest state-run conglomerate with one of the largest pools of foreign assets in the world. MCC is also a Chinese state-owned enterprise headquartered in Beijing, engaged in EPC (Engineering, Procurement, and Construction), natural resources exploitation, papermaking, equipment manufacturing, and real estate development.

The above should be borne in mind in terms of current Australian – Chinese political relationships in Australia.

The Sino Iron Mine is the <u>only iron ore operation owned and operated by CITIC /</u><u>MCC in Western Australia</u>. It is the largest magnetite mining and processing operation in Australia, located in Western Australia's resource-rich Pilbara region.

 The Sino Iron mine pit is over 2.5sq km in area and was expected to triple in size over the life of the project (approximately 30 years, starting from the beginning of production in 2013) (Source: <u>https://www.mining-</u> <u>technology.com/projects/sino-iron-project-cape-preston/?cf-view)</u>

CITIC purchased the mining rights to mine 2 billion tonnes of ore (after acquiring Sino Iron and Korean Steel) from Mineralogy (owned by Australian businessman Clive Palmer) for \$US415 million in 2006 and initiated construction in the same year (https://www.abc.net.au/news/2023-03-23/clive-palmer-rakes-in-700-million-dollars-from-pilbara/102130478). The relationship between CITIC and Mineralogy has been fractious, with various court battles and is very much in the Press at the time of this report.



<u>Map (above) showing the various Ports used by the iron ore miners to export their</u> <u>concentrate – note the location of the Cape Lambert Retention Licence (red text) R47/18</u> <u>in relation to the main Ports and the Sino Iron Project 100km to the southwest. The</u> <u>nearest Port is Port Walcott (owned and operated by Rio Tinto)</u>

- 4. The relationship between CITIC and Mineralogy on the Sino Iron Mine has been very toxic and is very much in the news this year (2023) see attached various Press Articles at the end of this assumption that clearly show just a fraction of articles in the Australian Press demonstrating a long and acrimonious public relationship between the two parties over the years.
- 5. CITIC Sino Iron development timeline is provided in Appendix. <u>https://citicpacificmining.com/our-operation/major-milestones</u>

Note that it took CITIC the best part of 6 years to construct their mine and produce their first concentrate, however this was due to the scale of the infrastructure development required and missing many deadlines and going massively over budget (see: https://www.mining.com/4-years-late-and-6bnover-budget-sino-iron-reach-production-10942/). In the case of MCC's Retention Licence, we know from their 2009 Annual Report that as of 2009, "the Company completed further geotechnical drilling work of the project, commenced environmental impact assessment during the feasibility study stage and testing of ore samples for experimental purposes, completed the filing of application documents in respect of tender for relevant feasibility studies and the leasing of mining sites, conducted investigations, discussions and negotiations in connection with historical remains, original inhabitants, reform of railway lines by Rio Tinto, joint construction of harbour ports". Furthermore in 2009 they report that "It is currently expected that the mining permit will be granted in 2011, relevant construction work will be commenced in 2012 and production will be commenced in 2014." Clearly, MCC did not intend to develop rail and port infrastructure if they were expecting construction work at Cape Lambert North to take only 2 years until production. It is therefore not unreasonable to suggest an early start date of 5 years, based on a decision to begin development being made by MCC in 3 years, with a production date two years later.

6. It is therefore possible that MCC, the owners of the Cape Lambert iron ore project (Retention Licence R 47/18) did not proceed with the development of the project in 2012 as they were unable to reach a deal with Rio Tinto to use their railway to transport the concentrate to Port Walcott (also known as Cape Lambert) and to use their port for export. Instead they focused their attention at the time on the Sino Iron Project (now an operating mine), which was under construction with port infrastructure at Cape Preston fully under the control of CITIC/MCC.

Conclusions and opinion based on public domain information above:-

 Rio Tinto is likely to be reluctant to share their railway network to Port Walcott in the event that MCC does decide to develop the iron ore project on Retention Licence R47/18. They are by no means duty bound to share their rail network to Port Walcott but could potentially enter into some sort of commercial deal. Likely they would not want to do a deal as any MCC iron ore rail cargo might upset their own existing rail schedules. Any MCC shipments would carry an additional external risk to their systems which would be out of their control, however based on MCC's 2009 Annual Report the use of Rio Tinto's railway does remain a possibility.

- 2. CITIC / MCC only have the Sino Iron Ore project in Western Australia and have a toxic relationship with the underlying mineral rights stakeholder, Mineralogy, with numerous court battles since operations first began.
- 3. The Sino Iron project will likely run out of ore in 2043/4 (Start date 2013/4 with a reported mine life of 30 years).
- 4. CITIC will be looking for other iron ore resources to replace the Sino Iron project production. (above)
- 5. CITIC own their own Port at Cape Preston and will want to ensure continuity of concentrate coming through it as they have spent over \$2 billion on infrastructure.
- 6. MCC's Retention Licence provides the opportunity to develop a nearby iron ore resource without a difficult partner / stakeholder.
- 7. MCC is likely to be considering contingency planning for R 47/18 and will need to begin working on updating their Feasibility Study and infrastructure planning / development.
- Based on the Sino Iron Project timelines (above) it is not unreasonable to assume that CITIC / MCC would resume work on R 47/18 with a view to scheduling production to overlap the last few years of production from the Sino Iron Project, eg at the latest by 2043/44.
- 9. An alternative scenario might be that Rio Tinto could potentially buy R 47/18 from MCC to add to their own resource in the Pilbara. This would make sense as their rail network from Mesa A and Mesa J runs past the Retention Licence as per below:-



Photo (above) of one of the Rio Tinto iron ore trains running past the Retention Licence (**source:** Geonomik Pty Ltd October 2021 on behalf of SunMirror AG)

If this is the case, Pharlap's Royalty would still be in force generating revenue for the SunMirror Group, unless Rio Tinto made an offer to purchase the royalty.

10. Another potential outcome is that a third party might purchase the licence from MCC and do a deal with Rio Tinto on access to their railway and Port facilities. It should be noted that in the event that MCC did decide to walk away from their licence (unlikely as they've been paying their licence fees since their onsite activities stopped) then the ground would revert back to the original owners of the licence who retain an active licence 'over the ground' in the event that the licence lapses or MCC drop it. It is to be noted that the former owner of the Cape Lambert Iron Ore Project (sold to MCC in 2008) has applied for a new licence (E47/4143). Should R47/18 lapse, the area covered by the Retention Licence which falls within the EL boundaries would revert to the original owners of the granted EL. The Royalty will carry to the new license, in line with the caveat that was registered against R47/18 in 2018 as the R47/18 area is fully contained in the original tenement covered by the Royalty (E47/1462).



Extract (above) from Tenement Register Search on R47/18 license dated 23rd July 2020.

11. Finally, it is appropriate to look at the Table below (*Australia's Ore Reserves and Mineral Resources of selected commodities at operating mines as of December 2021*) – notably the Iron Ore Reserve Life in column 8 (12 years) which fits in with the mid-point start date in this Report's valuation model (eg circa 10.5 years from the value reference date of 30th June 2023).

Source: <u>https://www.ga.gov.au/digital-publication/aimr2022/australias-</u> estimated-ore-reserves#australias-estimated-ore-reserves-section

Commodity	Unit	No. of Operating Mines ¹	Ore Reserves ²	Measured and Indicated Mineral Resources ³	Inferred Mineral Resources ⁴	Mine Production ⁵	Reserve Life (years)	Resource Life 1 (years)	Resource Life 2 (years)
Antimony	kt Sb	1	19.5	39.6	6.9	3.4 ⁶	6	12	14
Bauxite	Mt	8	1,554	2,956	2,475	103.3	15	29	53
Black Coal	Mt	91	11,023	32,563 ⁷	18,708	554 ⁸	20	59	93
Cobalt	kt Co	5	146	247	22	5.3 ⁹	28	47	51
Copper	Mt Cu	33	18.55	81.36	26.50	0.82	23	99	131
Gold	t Au	162	3,402	7,744	2,755	307	11	25	34
Iron Ore	Mt	44	11,205	30,643	42,653	922	12	33	79
Lead	Mt Pb	16	8.30	27.18	8.56	0.49	17	56	74
Lithium	kt Li	4	2,559	3,373	1,360	55 ¹⁰	47	61	86
Manganese Ore	Mt	4	108	209	75	4.9 ¹¹	22	43	58
Mineral Sands ¹²									
Ilmenite	Mt	11	11.2	40.6	7.3	0.6	20	74	87
Rutile	Mt	8	1.0	3.5	0.6	0.2	7	23	27
Zircon	Mt	10	3.2	10.2	1.6	0.5	6	20	23
Nickel	Mt Ni	13	3.8	7.7	2.3	0.15	25	52	67
Rare Earths ¹³	Mt oxide	2	1.65	2.10	1.35	0.02314	82	105	173
Silver ¹⁵	kt Ag	27	21.10	70.25	21.96	1.33	16	53	69
Tin	kt Sn	1	219	368	39	8.8 ¹⁶	25	42	46
Uranium	kt U	2	237	995	346	3.798 ¹⁷	62	262	353
Zinc	Mt Zn	18	17.24	57.02	22.06	1.32	13	43	87

Abbreviations

t = tonne; kt = kilotonne (1,000 t); Mt = million tonne (1,000,000 t).

Where an element symbol follows the unit it refers to contained metal content.

Notes

Reserve Life = Ore Reserves ÷ Production.

Resource Life 1 = Measured and Indicated Resources ÷ Production.

Resource Life 2 = Measured, Indicated and Inferred Resources + Production.

Previous editions of this table have included diamond. However, with the closure of the Argyle mine, Australia no longer has any operating diamond mines.

Whilst some of the Resources can be converted into Reserves for mining, there is no guarantee that they will be converted as it depends on numerous variables, including grade and other factors.

Sino Iron Project Major Milestones

2006

- March Initial mining rights acquired
- May CITIC Pacific Mining formed
- June Foreign Investment Review Board approval

2007

- January Signed EPC contract for the main processing area
- August Acquired Mardie Station
- November First deliveries of mining fleet to site

2008

• August - Construction team mobilised

2009

- Port construction begins
- Causeway constructed

2010

- March First ball mill lifted onto foundation
- May First AG mill lifted onto foundation

2011

- January Launch of CITIC Pacific's first 115,000 tonne vessel
- May First gas turbine commissioned
- September Barges and transhipper arrive at the port

2012

- February Power station supplies electricity
- September Desalination plant produces water

2013

• July – Line 1 continuous production of concentrate

- September Line 2 load commissioning begins
- December First shipment of magnetite concentrate

2014

• July – Construction begins on lines 3-6, first million tonne milestone

2015

- March First CITIC purpose-built mini-cape vessel transports concentrate to China
- October Line 3 load commissioning begins
- November Line 4 load commissioning begins

2016

Installation completion and commissioning of lines 5 and 6

2017

- Mining Control Room implemented and MineStar Fleet Management system implemented
- July Cape Preston (Sino Iron) Aerodrome Official Opening

2018

- July 100,000 tonnes in 24-hour period for the first time
- October 50 millionth tonne of concentrate

2019

- April New reclaimed record of 97,000 tonnes in 24 hours. Completed the construction of crew boat Ardea in Fremantle.
- May Shipped 60 millionth tonne
- October Ninety employees celebrate 10 years or longer at Sino Iron

2020

- July Introduce of company-based apprenticeship scheme to grow workforce capability
- September Launch of Sino Iron's site-wide container recycling program, reducing plastic landfill and supporting local community groups

2021

• April - Shipped 100 millionth tonne of magnetite concentrate since start of production

• **December** - Third consecutive year of 20 million tonnes shipped - consolidates Sino Iron's status as world's biggest seaborn supplier of concentrate to China.

2022

- September Successful five-year water survey drydocking of transhipper Magdragon 2
- November 81 employees achieve their 10 year anniversary with Sino Iron
- December Record 21 million tonnes shipped for the calendar year

Sample of Press Articles in the media:-

Clive Palmer company loses Cape Preston port court battle in WA PerthNow

August 14, 2015 7:03AM

https://www.perthnow.com.au/business/clive-palmer-company-loses-cape-preston-port-court-battle-in-wa-ng-6989e70a5f332190398307d948880111

Palmer eyes windfall after court win over Chinese conglomerate

Brad Thompson Reporter Mar 8, 2023 – 4.33pm https://www.afr.com/companies/mining/palmer-eyes-major-windfall-after-court-winover-chinese-conglomerate-20230308p5cqge#:~:text=Mr%20Palmer%2C%20already%20estimated%20to,between%20CITIC %20and%20Clive%20Palmer.

CITIC's \$16bn iron ore mine could slow production after legal loss to Clive Palmer

https://www.theaustralian.com.au/business/mining-energy/citics-16bn-iron-ore-minecould-slow-production-after-legal-loss-to-clive-palmer/newsstory/aa3803f165d8a567c25ab173100c7f30 Monday, October 23, 2023

11: JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	 Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information. 	 A total of 377 resource drill holes (83,957m) were completed between 1994 and 2008. The majority of holes were used the reverse circulation (RC) drilling method. A total of 31 holes were core drilled, with RC pre-collars. All samples determined to be within the resource envelope were also analysed using the Davis Tube Recovery (DTR) method. Drilling samples were combined into either 2m or 4m composite samples and analysed for a range of elements using XRF. QAQC samples were included with sample batches.
Drilling techniques	 Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc). 	 377 face sampling RC of which 31 had Diamond tails were drilled.
Drill sample recovery	 Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential 	 Sample recoveries from the drilling were reported by Golder as being satisfactory. Considering the geology/lithologies drilled and degree of supervision sample recoveries should be very good.

Criteria	JORC Code explanation	Commentary
	loss/gain of fine/coarse material.	
Logging	 Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged. 	 Geological logging and sampling was carried out by Cape Lambert Iron Ore Ltd and MMC geologists. This logging was both qualitative and quantitative. All the drilled samples were logged. No logging sheets were available for reporting.
Sub- sampling techniques and sample preparation	 If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. Whether sample sizes are appropriate to the grain size of the material being sampled. 	 The RC samples were split with a riffle splitter at the drill rig and the diamond core was split by diamond saw providing unbiased and representative samples.
Quality of assay data and laboratory tests	 The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established. 	 The laboratories reported by Golder in their 2009 report were reputable and the analytical methods used appropriate for the mineralisation. Golder reported that an appropriate number of QAQC samples were included in the sample batches and no problems were encountered however no QAQC data was available for verification by AM&A.
Verification of sampling	The verification of significant intersections by either independent or alternative company personnel.	No independent verification of the original drill sampling and assays

Criteria	JORC Code explanation	Commentary
and assaying	 The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	was possible.
Location of data points	 Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control. 	The drill holes were drilled using GDA94 datum.The drill holes were located by a licenced survey team.
Data spacing and distribution	 Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied. 	 The drill hole spacing was adequate to establish geological and grade continuity and to make an Mineral Resource estimate at the categories reported. The grades were composited over 4 m.
Orientation of data in relation to geological structure	 Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material. 	 The drill holes were oriented to intersect the BIF units approximately perpendicular to their strike. The inclined drill holes intersected the BIF units at less than 90 degrees therefore all intersection widths are longer than the true widths.
Sample security	The measures taken to ensure sample security.	There is no available record of the sample security measures taken.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	 Due to the lack access to historic drill samples no audits of the sampling is possible.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	 Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area. 	 Retention Licence R47/18 is in good standing. It is currently held by MCC Australia Sanjin Mining Pty Ltd and due to expire 21/3/2025.
Exploration done by other parties	 Acknowledgment and appraisal of exploration by other parties. 	 The author acknowledges the work of the previous explorers, in particular Cape Lambert Iron Ore Pty Ltd and MMC.
Geology	Deposit type, geological setting and style of mineralisation.	 The main iron ore mineralisation reported is found as magnetite bearing BIF beds of the Cleaverville Formation located within the Roebourne Synform.
Drill hole Information	 A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case. 	 The drill hole locations and summaries of the grades are within the Mineral Resource section of the report. All the holes were inclined 60 degrees and were designed to intersect the BIF units orthogonally.

Criteria	JORC Code explanation	Commentary
Data aggregation methods	 In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	 All the Davis Tube Results were of composited samples determined by the iron grade >120% Fe of the samples. No metal equivalents were reported.
Relationship between mineralisation widths and intercept lengths	 These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known'). 	 All drill intercepts are less than 90 degrees to the units being tested so all intersection widths are longer than the true widths.
Diagrams	 Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. 	 All appropriate maps and cross sections are included in the text of the report.
Balanced reporting	 Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results. 	 The author believes that the report of the exploration results properly represents and not misleading of the mineralisation.
Other substantive exploration data	 Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances. 	 All the substantive exploration available to the author has been reported.
Further work	 The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). 	Further in-fill drilling at appropriate spacing is required to possibly

Criteria	JORC Code explanation	Commentary
	 Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	convert the Exploration Target to a Mineral Resource.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	 Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. Data validation procedures used. 	 The data was verified by Golder for their 2009 Mineral Resource modelling.
Site visits	 Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken indicate why this is the case. 	• The author has driven past the deposit several times during field trips in the Pilbara for other clients and is familiar with the geology of the project.
Geological interpretation	 Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. Nature of the data used and of any assumptions made. The effect, if any, of alternative interpretations on Mineral Resource estimation. The use of geology in guiding and controlling Mineral Resource estimation. The factors affecting continuity both of grade and geology. 	 The geology of the Cape Lambert BIF deposit is relatively simple and the geological interpretation used by Golder in their wireframing for their resource modelling is appropriate. The grade continuity is very high with minor variations along strike. Some minor problems with grade continuity in detail are possible in the central portion of the resource but these problems are unlikely to affect the global resource estimate.
Dimensions	• The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	• The resource occurs in three main BIF units ranging up to 150 m thick over a strike length greater than 10 km.

Criteria	JORC Code explanation	Commentary
Estimation and modelling techniques	 The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used. The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. The assumptions made regarding recovery of by-products. Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation). In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. Any assumptions about correlation between variables. Description of how the geological interpretation was used to control the resource estimates. Discussion of basis for using or not using grade cutting or capping. The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available 	 The resource was modelled by Golder in 2009 utilising Ordinary Kriging and this method is deemed appropriate by AM&A for the style of mineralisation being modelled. Golder separated the deposit in to three main domains (north, central, south) for variography and analysis. The domains were based solely on Fe grade using a 20% Fe threshold to define resource outlines. The different orientations were incorporated into the grade estimation utilising Ordinary Kriging. No check estimates are available but considering the additional drilling the Golder estimate shows a logical extension of the earlier estimates by other parties. The resource includes Davis Tube Recovery results that reflect the expected metallurgical recovery of magnetite from the BIF ore. All the potential deleterious elements have been considered including Al₂O₃, SiO₂, P, S Selective mining units were not modelled. All elements modelled separately and no correlations were considered. The BIF units were wireframed before modelling. No grade caps were used since the grade range did not include outliers. The modelling was checked internally by Golder.
Moisture	• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	All grades are on a dry basis.
Cut-off parameters	 The basis of the adopted cut-off grade(s) or quality parameters applied. 	• The resources are quoted using a 20% Fe lower cut-off.
Mining factors or assumptions	• Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding	 It has been assumed that the resource will be mined using conventional open cut methods. The BIF units hosting the magnetite ore are tens of metres thick and not likely to be heavily diluted during mining.

Criteria	JORC Code explanation	Commentary
	mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	
Metallurgical factors or assumptions	• The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	 The magnetite will be recovered from the BIF using magnetic separation methods. The Davis Tube Recovery results simulate the expected recoveries.
Environmenta I factors or assumptions	 Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made. 	 No environmental problems are expected that will significantly affect the proposed mining.
Bulk density	 Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples. The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit. Discuss assumptions for bulk density estimates used in the evaluation process of the different materials. 	 Density determinations were carried out on drill core. A total of 132 values were available from the mineralised zones. An average value of 3.35t/m3 was derived from the data.

Criteria	JORC Code explanation	Commentary
Classification	 The basis for the classification of the Mineral Resources into varying confidence categories. Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data). Whether the result appropriately reflects the Competent Person's view of the deposit. 	 The majority of the resource is categorised as Indicated and the remainder Inferred. AM&A consider that Golder took appropriate account of all the relevant factors when assigning the resource categories and appropriately reflects the Author's view of the deposit.
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	• There have not been any audits of the Mineral Resource estimate but M-MC independently reviewed the resource as part of the PFS.
Discussion of relative accuracy/ confidence	 Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available. 	 AM&A considers that the 2009 global resource estimate report by Golder meets all the criteria for reporting Mineral Resources required by the JOC Code (2012) and that the confidence of the estimates is properly reflected by the resource categories assigned.

12: REFERENCES

- AusIMM, (2004): "Australasian Code for Reporting of Mineral Resources and Ore Reserves (JORC Code), prepared by the Joint Ore Reserves Committee (JORC) of the AusIMM, the Australian Institute of Geoscientists (AIG) and the Minerals Council of Australia (MCA), effective December 2004.
- Anon, Undated 2012?, The Cape Lambert Magnetite Project Brief, Unpubl. for MCC Overseas Ltd.
- Anon, 2008, The Cape Lambert Iron Ore Project Summary, Unpubl. for MCC Mining (Western Australia) Pty Ltd.
- Anon, March 2021, Iron Ore/Resources and Energy Quarterly March 2021, www.industry.gov.au/OCE.
- Golder, 2007: Resource Model Update, Cape Lambert Iron Ore Deposit, Western Australia. Golder Associates report to MCCAH dated February 2008.
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- Golder, 2009: Resource Model Update, Cape Lambert Iron Ore Deposit, Western Australia. Golder Associates report to MCCAH dated March 2009.
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- MetPlant, 2007: Cape Lambert Iron Ore Ltd. Scoping Study for the Cape Lambert Project, Volume 1-Report. MetPlant Engineering Services, dated April 2007
- NETC, 2008: Cape Lambert Magnetite Iron Ore Project Pre-feasibility Study Report. Northern Engineering & Technology Corporation, MCC report dated September 2008.
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В

CHE	MICAL	SYM	BOL	_S
Гa	Iron			

ABBREVIATIONS billion

ге	Iron
Mn	Manganese

Ρ Phosphorus

- Si Silica
- cubic metre m³ million Μ tonne t

tpa tonnes per annum