

## DECEMBER 2019 QUARTERLY ACTIVITIES REPORT

31 January 2019

ASX : ARV

ATY : FRANKFURT

ARTTF : OTCQB

### GOLD FOCUSED

ARTEMIS RESOURCES LIMITED IS AN AUSTRALIAN MINERAL DEVELOPER ADVANCING ITS WEST PILBARA GOLD AND COPPER ASSETS TOWARDS PRODUCTION.

ARTEMIS HAS CONSOLIDATED A MAJOR LAND HOLDING IN THE WEST PILBARA AROUND THE 100% OWNED RADIO HILL PROCESSING PLANT AND INFRASTRUCTURE, STRATEGICALLY LOCATED 30 KM FROM THE CITY OF KARRATHA, THE POWERHOUSE OF THE PILBARA.

ARTEMIS ALSO HAS ~605 KM<sup>2</sup> IN THE PATERSONS RANGE WITH GOLD AND COPPER TARGETS 40KM FROM THE TELFER GOLD MINE AND SURROUNDING THE HAVIERON DISCOVERY BEING DRILLED BY NEWCREST.

### WANT TO KNOW MORE ABOUT ARTEMIS?

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### HIGHLIGHTS

#### Patersons Central, Au-Cu Project

- Artemis has identified seven high priority targets at its 100% owned Patersons Central Project, with drilling approved on the targets, subject to heritage surveys.
- Seismic study interprets good structural complexity in the basement within the Patersons Central Project around the Havieron discovery.
- Havieron mineralisation is open to the north, with Newcrest step out drilling continuing (announced on 30 January 2020).
- Kzinti, Bandi and Bolian targets are immediately to the north of Havieron.

#### Carlow Castle, Au-Cu-Co Project

- Gold (Au) resource significantly increased by 60%, Copper (Cu) resource increases 25% and Cobalt resource increased 15%.
- Inferred Mineral Resource estimate now 418koz Au, 48kt Cu and 7kt Co within 8Mt @ 0.51% Cu, 1.6 g/t Au and 0.08% Co.
- The Company's 100% owned Radio Hill Processing plant just ~35 km from Carlow Castle project, potentially provides an option to fast track infrastructure to process Carlow Castle material.
- Planned work program of resource drilling, and down hole Electromagnetic surveys, to test known mineralisation for signature, and test depth continuation of ore zones planned.

#### Munni Munni, PGE Project

- An internal review of Munni Munni is underway with the increase in Palladium price to greater than \$3,300 per ounce AUD.

### Corporate

- Successful \$5.9m placement at 3.2c per share.
- Appointment of UK based Director and capital raise of \$2m post quarter end.

#### Artemis's Non-Executive Chairman Sheikh Maktoum commented;

*"The December quarter removed secured debt from within the Company, advanced Carlow Castle with an independent review and upgraded resource, and allowed the geological team to advance work programs in the Patersons Range around the Havieron gold copper discovery being drilled by Newcrest. The recently announced placement allows us to further advance our exciting projects. I would like to thank existing shareholders for their ongoing support and welcome new shareholders who participated in the capital raise, as we execute on our strategy."*

**Artemis's CEO, Ed Mead, commented;**

*"The Company is in a stronger position to progress its key projects in the Telfer and Karratha areas. At Paterson Central reprocessing of seismic data has shown structural complexity in the basement around Havieron, which bodes well for further potential mineralisation.*

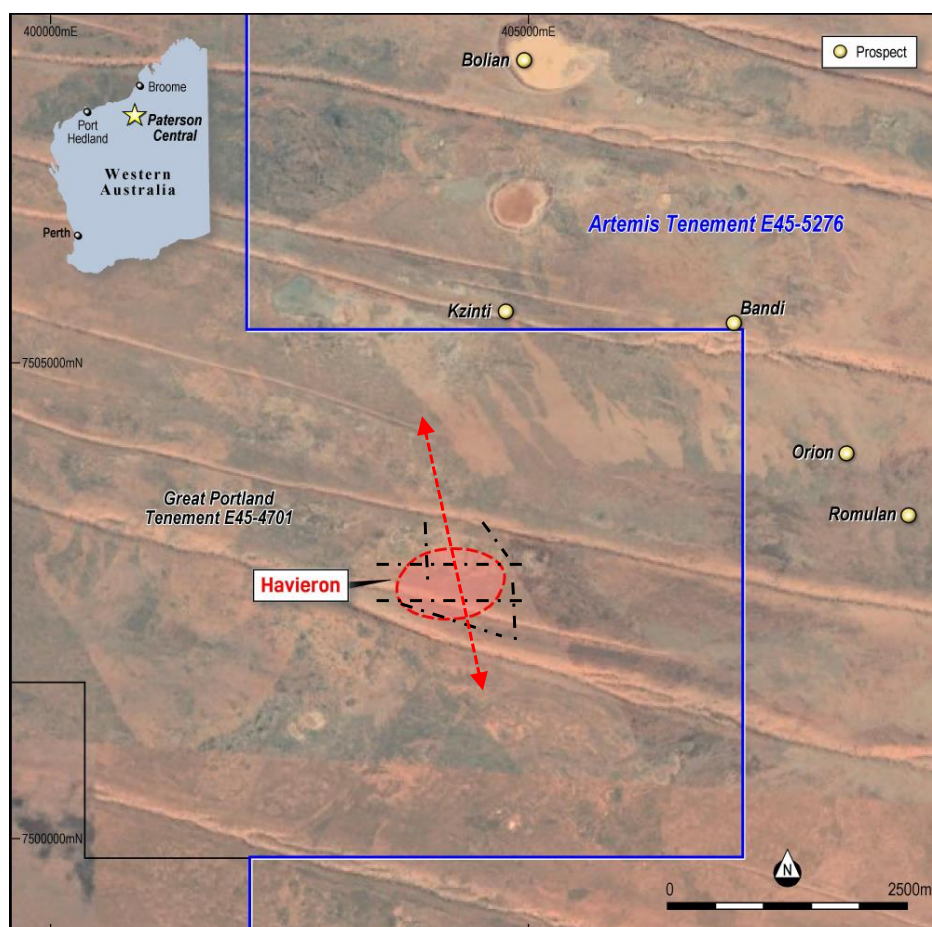
*The new Mineral Resource estimate at Carlow Castle by independent consultants CSA Global has significantly increased metal tonnes, giving the Artemis board confidence to advance Carlow Castle along the value curve. A small program of infill drilling will be undertaken with the objective of allowing conversion of a part of the Mineral Resource Estimate to higher classification (Indicated). A Down hole Electromagnetic survey program is designed to test the signature of the Carlow Castle Ore zone, and to then test depth extents, with the aim of cheaply increasing the potential scale of the project. We are in the fortunate position of owning a processing plant just ~35 km from the deposit and we look forward to accelerating the project and taking full advantage of this.*

*A significant increase in the Palladium price has led to a first stage internal review of project economics on the Munni Munni project, before making further decisions on the project."*

**Artemis Resources Limited** ("Artemis" or "the Company") (ASX:ARV, Frankfurt: ATY, US OTCQB: ARTTF) is pleased to provide an update on activities for the quarter ended 31 December 2019.

**PATERSON CENTRAL (Previously referred to as Armada), Au-Cu Project**

The Paterson Central project covers 605 km<sup>2</sup> and is located approximately 40km east of Newcrest Mining's multi-million-ounce Telfer Gold-Copper mine and is contiguous to the Havieron gold and copper discovery ("Havieron") by Greatland Gold Plc (Figure 1).



**Figure 1:** Artemis Resources' Paterson Central tenement E45/5276 (formerly called Armada) that surrounds the Havieron Discovery on 3 sides. 3 Targets (Kzinti, Bandi and Bolian) are immediately north. Ranking of targets will change as more exploration information comes to hand.

Based on recent magnetic and gravity survey results, Artemis has identified seven (7) high priority targets within the Patersons Central project (E45/5276). These targets will vary in priority as more exploration information comes to hand

Reprocessing of the Moodoo NC87-13, a 1987 Seismic line (ASX News Release 12 December 2019) which coincidentally covers the Company's wholly owned Paterson Central Tenement (45/5276), has shown complexity in the basement which The reprocessing of the 1987 Moodoo Seismic line focusing on the nearer surface portion of the Seismic data indicates structures of interest, in relation to the Havieron Project being drilled by Newcrest and around the location of the Orion and Romulan targets identified by Artemis.

Results from reprocessing are encouraging as they indicate folding within the basement that could be a site for trapping mineralised hydrothermal fluids.

Further work will assess the best path forward and further drill results from Havieron will provide more information to generate better target selection.

### **PATERSON CENTRAL PROSPECT OVERVIEW**

The gravity and airborne magnetic surveys identified up to 13 targets within a 22 km radius of the Havieron Project. Artemis has assessed these targets based on a combination of magnetic signature, density contrasts and structural character/complexity (Figures 2 and 3).

The Company conducted a detailed airborne magnetic survey (100m line spacing - MAGSPEC Dec 2018) and semi-regional helicopter supported gravity surveying (400x400m grid - ATLAS Feb 2019) over the western half of tenement: E45/5276. The primary aim of the recent interpretation of resultant processed/inversion products was to identify and further rank priority targets for either further focussed electrical geophysical surveys or potential direct drill testing.

Initial detailed aeromagnetic survey results and high-level interpretation defined a total of 10 targets. Six targets were rated as Priority 1: Kazon, Ferengi, Bolian, Kzinti, Maquis, Vidiian and four targets as Priority 2: Arcadian, Edosian, Ocampa, Edos. (Our previous reporting showed eight of these ten targets on a map).

Using subsequent interpretations, the Company identified eight targets (ASX Announcements: 17 January 2019; 14 March 2019) – this drew upon the previously mentioned ten targets but excluded Maquis and Edos for various reasons.

The semi-regional gravity survey and 3D inversion outcomes have defined limited density contrast targets in several locations, however very few were directly coincident with the eight aeromagnetic primary targets. Based on the 3D gravity inversion-isosurface results (Figure 3) along with the earlier defined aeromagnetic targets, the Company has re-ranked targets and identified three brand new targets: Bandi, Orion and Romulan.

Bandi, Orion and Romulan have been now added as priority targets and lie along a ~NW-SE trending gravity ridge situated ~4km NE of Havieron. Reinterpreting the previous eight targets from the magnetic surveys and considering the gravity results, the Company has now identified seven priority targets: **Kazon, Ferengi, Bolian, Ocampa, Bandi, Orion and Romlan** (which downgraded the perspective of Kzinti, Vidiian, Arcadian and Edosian).

The Company has lodged a Programme of Work (PoW) application to the Department of Mines, Industry Regulation and Safety (DMIRS) for approval to drill these seven priority targets, subject to conducting heritage surveys as per the *Aboriginal Heritage Act 1972*.

Despite some magnetic targets – namely Kzinti, Vidiian, Arcadian and Edosian - not being coincident with gravity results, it may be worth still investigating these targets based on magnetic potential alone.

The summary for these seven targets (Table1) with gravity/magnetic anomalies is:

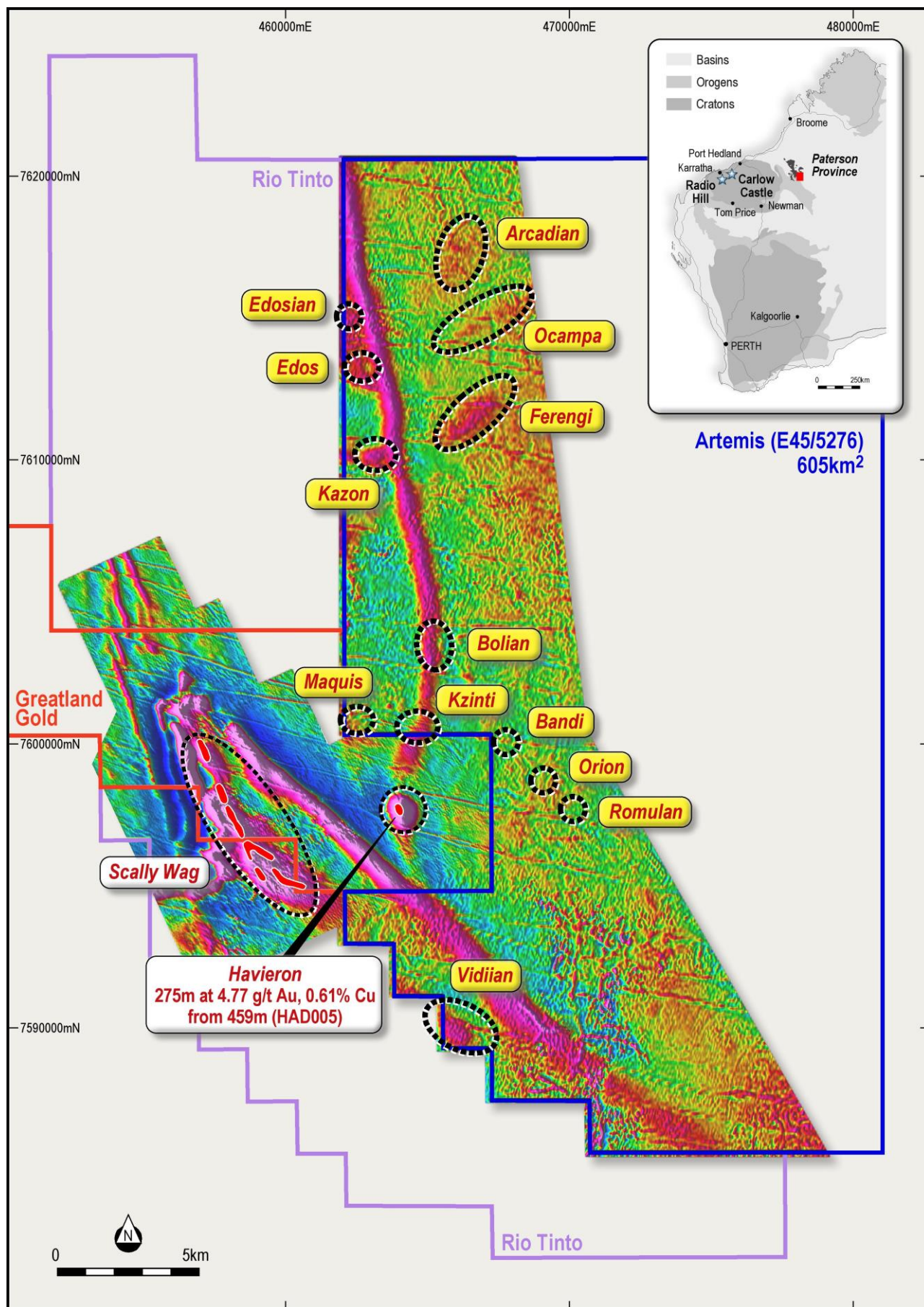
- OCAMPA, ORION and ROMULAN - coincident/near coincident gravity and magnetic bedrock targets, all of these also exhibit alignment along structural breaks/trends in either a ~NW-SE or ~NE-SW sense. Potential drill targets co-ordinates are provided below, it is however expected that these targets are at ~500m+ depth below cover. *(It should also be noted that the gravity contrast for Ocampa is very low and magnetic susceptibility is very low for all of these targets).*

- KAZON, FERENGI, BOLIAN and BANDI represent higher priority/ranked aeromagnetic targets believed worthy of follow-up/potential deep drill testing given their clearer magnetic signatures, alignment along structural breaks/trends and proximity to the Havieron mineralisation. Potential drill targets co-ordinates are provided below, it is however expected that these targets are at ~500m+ depth below cover. *(It should also be noted that the magnetic susceptibility for all these targets is very low, particularly so for the Ferengi and Bandi targets).*

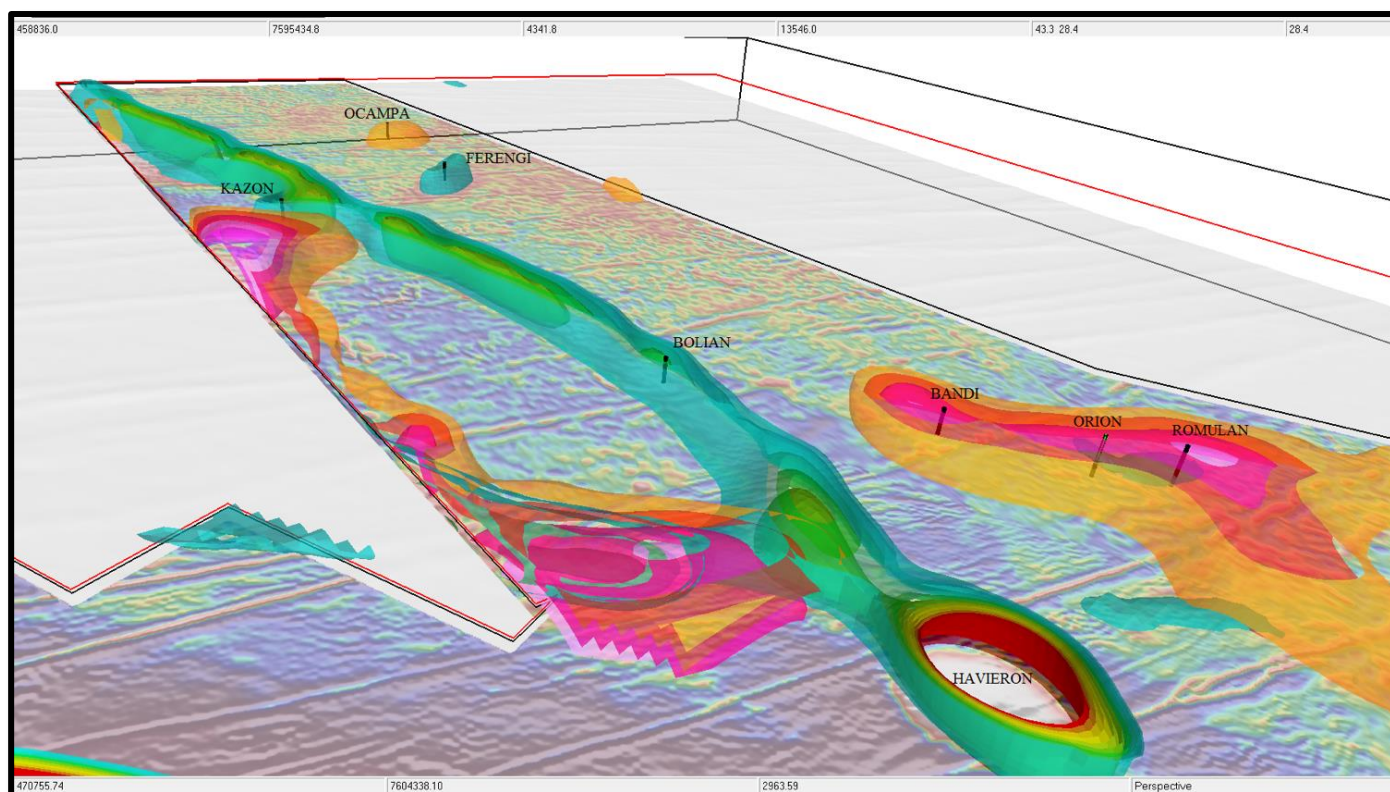
**Table 1:** Summary of drill targets at Patersons Central, as identified by aeromagnetic and gravity surveys. The targets will change in priority as more information comes to hand.

Identified from aeromagnetic survey (10)	Primary aeromagnetic targets (8)	Identified from gravity survey (3)	Top seven targets using magnetics and gravity (7)
KAZON	KAZON		KAZON
FERENGI	FERENGI		FERENGI
BOLIAN	BOLIAN		BOLIAN
KZINTI	KZINTI		
MAQUIS			
VIDIIAN	VIDIIAN		
ARCADIAN	ARCADIAN		
EDOSIAN	EDOSIAN		
OCAMPA	OCAMPA		OCAMPA
EDOS			
		BANDI	BANDI
		ORION	ORION
		ROMULAN	ROMULAN





**Figure 2:** Artemis aeromagnetic and gravity surveys over the western half of the tenement, showing up to 13 targets, with data merged with the Greatland Gold Plc magnetic data – hence we are able to show anomalies off our tenement.



**Figure 3:** Patersons Central Project, Paterson Ranges - 3D Inversion Results for Aeromagnetic/Gravity - Primary Target/Potential Deep Drill Holes Highlighted. Warm colours gravity inversion shells and green/cooler colours magnetic inversion shells (with exception of Havieron which is an intense magnetic high). This shows the top seven targets.

Drill targets (in order of north to south, as seen in Figure 3):

- OCAMPA: 466750E, 7614600N vertical hole ~800m depth
- FERENGI: 466575E, 7611475N vertical hole ~800m depth
- KAZON: 463150E, 7610100N vertical hole ~800m depth
- BOLIAN: 465100 E, 7602875N vertical hole ~800m depth
- BANDI: 467150E, 7600375N vertical hole ~800m depth
- ORION: 468325E, 7599025N vertical hole ~1000m depth
- ROMULAN: 469000E, 7598400N vertical hole ~1000m depth

Newcrest is currently targeting depths of mineralisation significantly below the depths of the Artemis design drill holes.

## LOOKING FORWARD

The primary ranked geophysical targets generated to date provide a pathway forward that may include:

- Orientation high powered EM/MT ground surveying/soundings - limited transects over primary target zones to characterise the conductivity properties of the thick cover sequence and also the thickness/depth to basement.
- Drilling an initial deep drill hole on deemed primary target and completing downhole geophysical logging to define the conductivity/physical properties of the thick cover sequence and also the thickness/depth to basement.
- A geochemical program over identified targets.

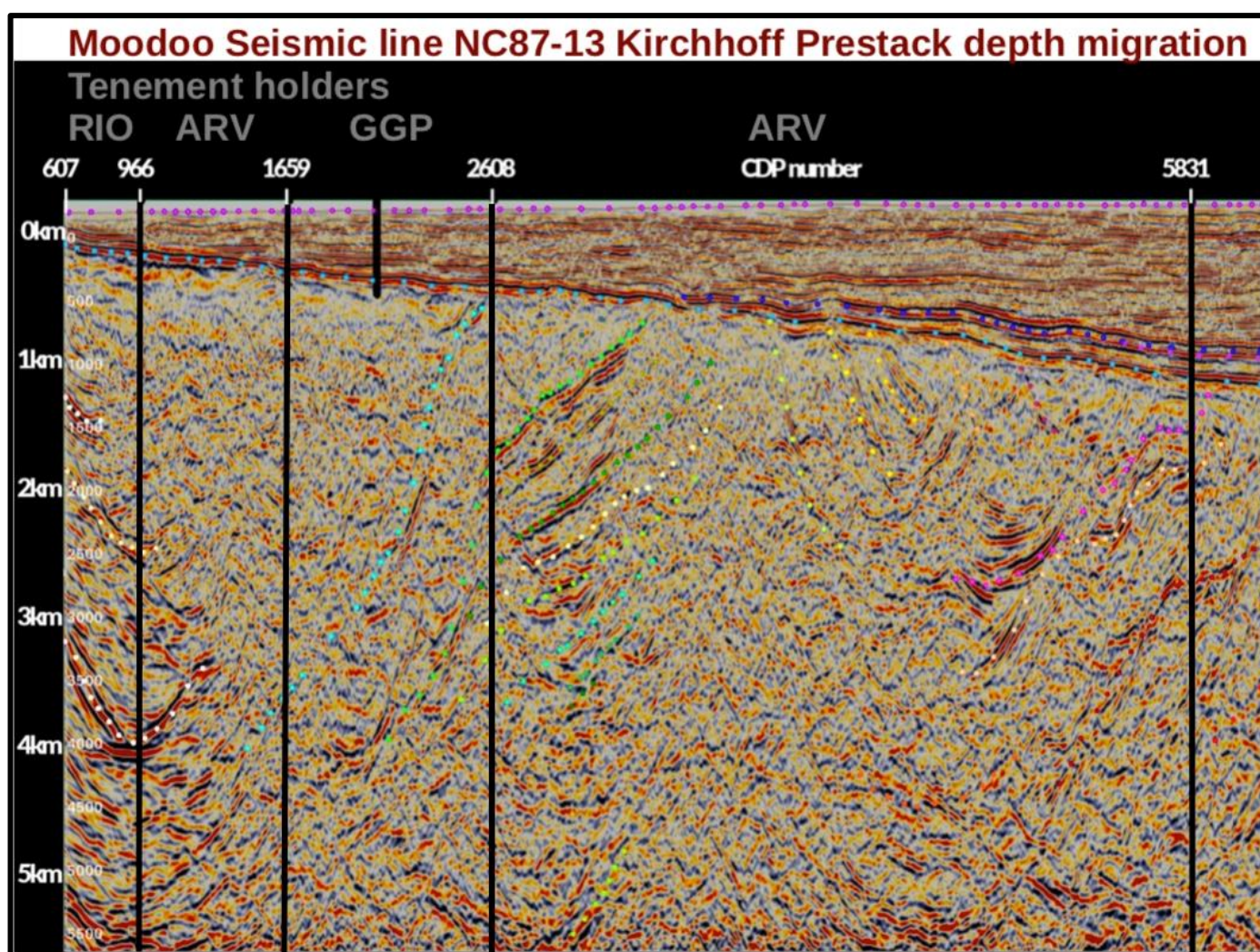


## MOODOO SEISMIC LIINE

This seismic line was surveyed in 1987, processed and initially interpreted to determine the hydrocarbon prospectively of the Mesozoic sediments overlying the Proterozoic Paterson Province geology. Since then there have been significant advances and improvements made in processing techniques which appreciably enhance and improve resolution of stratigraphy and more importantly structures. Interpretation of thickness of cover which can be integrated with the gravity data to improve modelling of targets. This seismic line passes approximately 2.5km southeast of Greatland Gold's Havieron Prospect, which coincidentally is over the Company's Patersons Central tenement, which provides an advantage to Artemis over nearby companies.

The NC87-13 line transects the Rio Tinto tenement, then Artemis tenement, then over Greatland Gold, then back over Artemis' Patersons Central tenement. The processed results are shown in Figure 4, which shows depth of cover and structural complexity within the basement. The NC87-13 line transects Rio Tinto (CDP: 607-966), Artemis (966-1659), Greatland Gold (1659-2608) and Artemis (2608-5831).

Results from reprocessing (Figure 4) are encouraging as they indicate folding within the basement that could be a site for trapping mineralised hydrothermal fluids.



**Figure 4:** Reprocessed Moodoo Seismic line NC87-13 across Artemis' 100% owned Patersons Central Project. The Seismic data indicates folding within the basement and clearly defines the depth of Permian sediments.

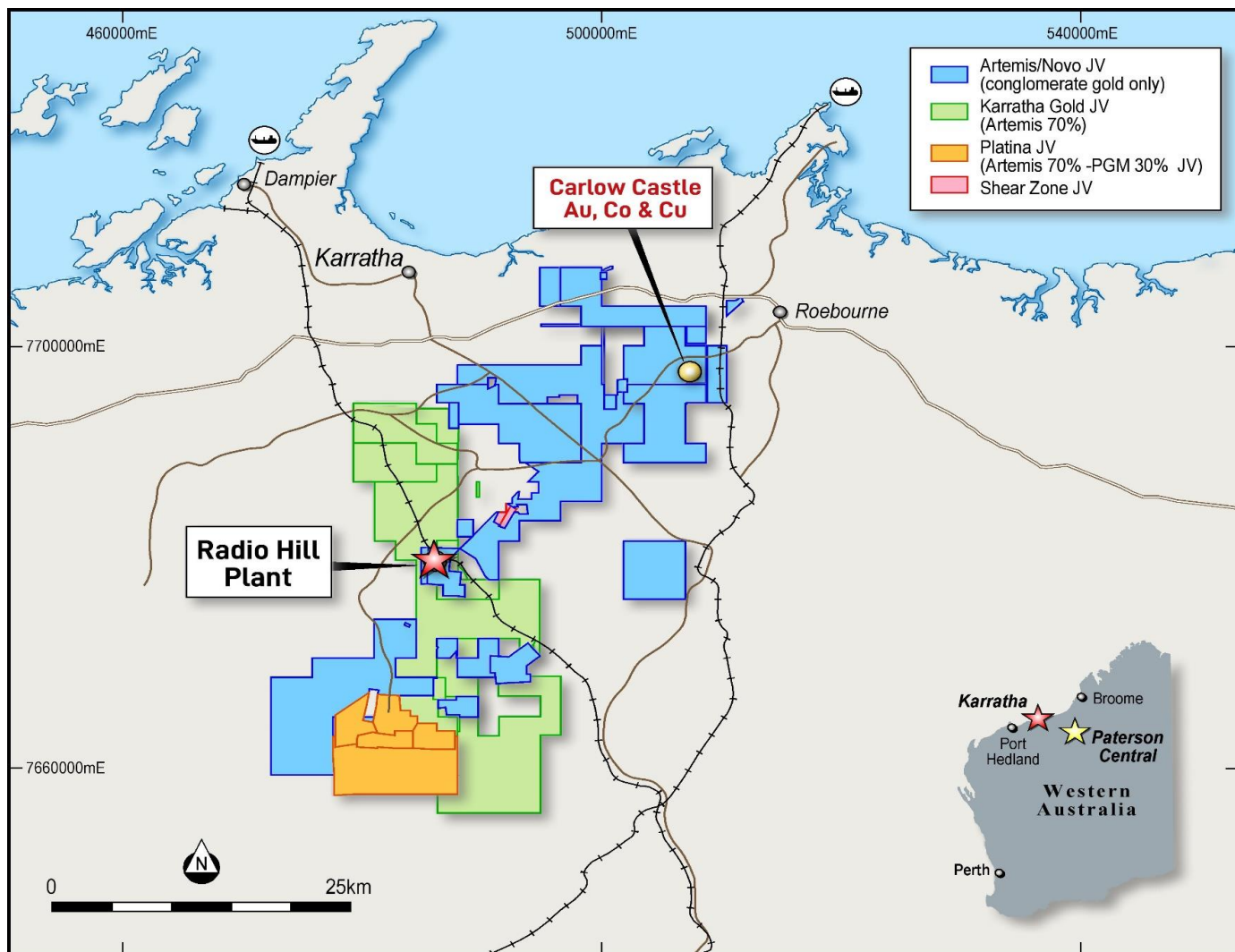
## CARLOW CASTLE RESOURCE

A **significant increase** in the Mineral Resource Estimate (MRE) in grade and metal tonnes in accordance with JORC Code (2012) at the Company's 100% owned Carlow Castle Project (E47/1797), was released to the ASX on the 20 November 2019. A summary of the Carlow Castle MRE is tabulated in Table 2.

**Table 2: Carlow Castle Inferred Resource<sup>1</sup>, reported at 0.3% Cu cut-off (numbers have been rounded to nearest 100 kt).**

Type	Inferred				Total			
	Tonnes	Cu	Au	Co	Tonnes	Cu	Au	Co
	kt	%	ppm	%	kt	kt	koz	kt
Fresh	5,100	0.6	2.1	0.10	5,100	32	353	5
Oxide	2,800	0.6	0.7	0.05	2,800	17	65	2
<b>Total</b>	<b>8,000</b>	<b>0.6</b>	<b>1.6</b>	<b>0.08</b>	<b>8,000</b>	<b>48</b>	<b>418</b>	<b>7</b>

<sup>1</sup>The Company notes that it has materially updated its Mineral Resource during the December Quarter, since the last estimate provided to the market on 6 March 2019. The upgrade is based on newly acquired structural mapping of trenches and structural logging of diamond core.



**Figure 5: Carlow Castle Project Location Map.** Blue shaded tenements are within the Conglomerate JV with Novo resources Corp, but Artemis retains 100% of all other styles of mineralisation and commodities



## CARLOW CASTLE GOLD AND COPPER PROJECT RESOURCE SUMMARY

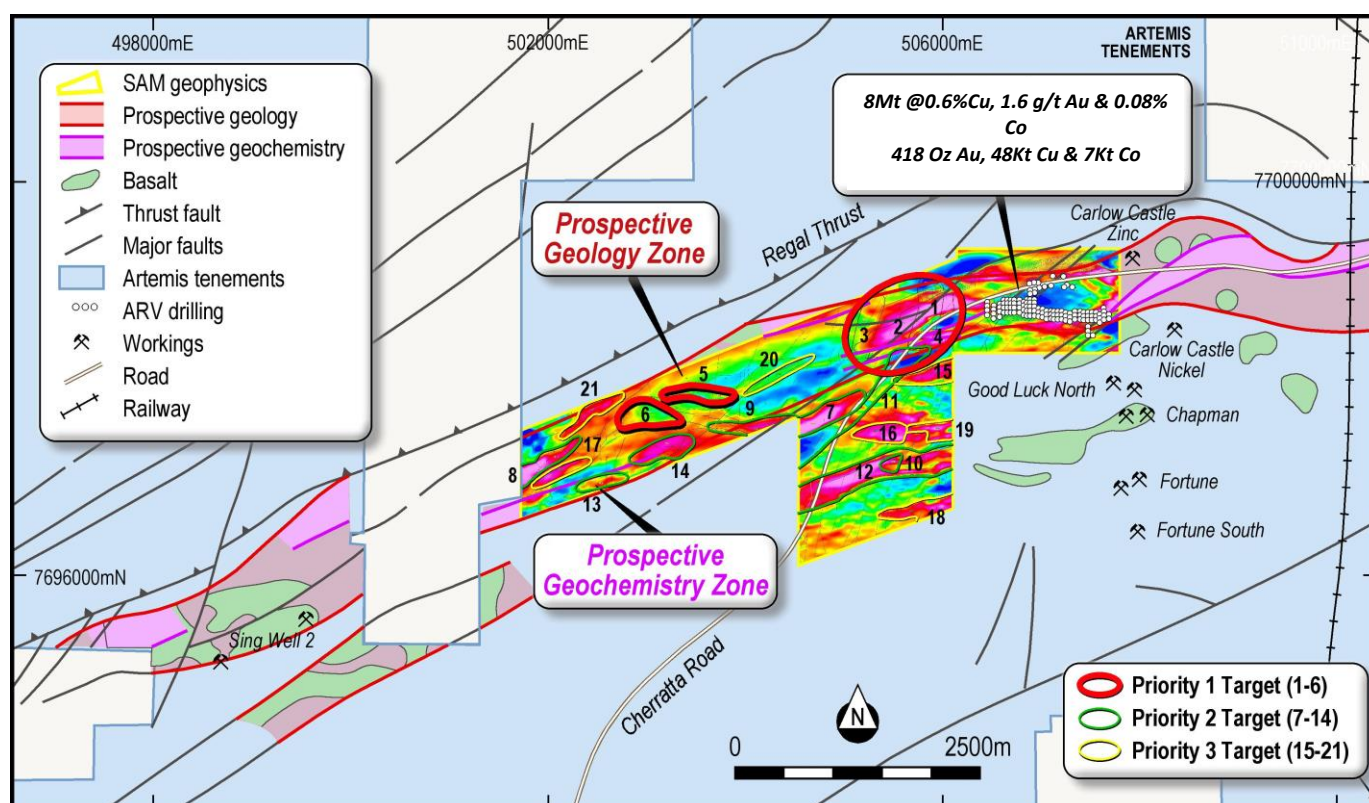
The Carlow Castle gold and copper project is located in the West Pilbara region of Western Australia, ~45 km by road east of the city of Karratha (**Figure 5**). Access is via the Northwest Coastal Highway and then by the unsealed Cheratta public road, which passes through the Project area. Carlow Castle is on the granted exploration license E47/1797 and is ~35 km from Artemis' 100% owned Radio Hill Processing Plant.

The current Carlow Castle Mineral Resource covers a strike length of 1.2 km, and was successfully identified using SAM exploration in early 2018. In conjunction with geochemical anomalies, SAM targeting drove the Carlow Castle drilling program in 2018 that increased the resource by 71% in February 2019, and subsequent SAM survey which has identified 21 new targets to the west of the current resource (Figure 6).

Recent Structural mapping and evaluation of historical diamond core and trenching through the top of the resource area, led to a significant increase in the confidence levels of the project, and culminated in the new Mineral Resource estimate (MRE) that has increased metal content by 60% for gold, 25% for copper and 15% for cobalt. The structural mapping programs and MRE have been carried out by independent Mining Industry Consultants, CSA Global.

A work program has been designed to increase the confidence in the Mineral Resources, which includes an infill diamond drilling campaign for structural and geotechnical logging, and assaying of a select number of stored assay pulps for acid soluble copper.

The drill program will also allow Down hole Electromagnetic surveys to be completed to test known mineralisation for signature, and to test depth continuation of ore zones. This will assist in generating an Exploration Target to grow the Carlow Castle resource.



**Figure 6:** Carlow Castle Geology, SAM survey results with 21 anomalies, drilling and resource area to date, which indicates mineralisation is open to the west and east.

## MUNNI MUNNI, PGE Project

An internal review of Munni Munni is underway looking at project economics based on the increase in Palladium price to greater than \$3,300 per ounce AUD. Artemis is looking to generate value from this asset.

## **CORPORATE**

### **Capital Raise, Debt Repayment and Appointment of UK based Director.**

International and Australian institutions and sophisticated investors participated in a capital raise of \$5.9 million (before costs) in October 2019. On closing, the funds from this capital raise were used to retire the Riverfort Global Capital Limited Convertible Note ("Riverfort Note").

Subsequent to the Quarter end, the Company announced it had received firm commitments for a \$2 million capital raise at 2.5 cents per share to provide working capital for Artemis' key projects in the Telfer and Karratha areas of Western Australia.

### **Director Appointment**

Post quarter end the Company announced the appointment of Mr Alastair Clayton as an Executive Director of the Company. Mr Clayton has considerable experience with both ASX and AIM listed companies. In his role at Primorus Investments AIM:PRIM. Mr Clayton has been a vocal supporter of the Patersons Range area and understands the significant potential the Company holds as our project surrounds Haverion. Mr Clayton was previously a Director of Extract Resources and Universal Coal.

Mr Clayton will be on a remuneration package of Pounds 168,000 per annum and will be entitled to an option package, subject to shareholder approval at the next shareholder meeting of 30,000,000 options exercisable at price 5 cents with expiry date 31 July 2022, and 30,000,000 options at price 7 cents with expiry date 31 January 2023. The grant and vesting of the options will be subject to hurdles which will be outlined in the notice of meeting.

## **DIVESTMENT AND MONETISATION OF OTHER ASSETS**

Artemis management team and advisers have also been working on a number of strategies with a view to extracting the maximum value from the Company's valuable non-core assets which it has acquired over the last several years.

Artemis has received a number of incomplete proposals in relation to certain non-core assets and it will be pursuing these proposals vigorously to deliver value to all shareholders.

Projects which are currently under review by the company include:

- Mt Clement Gold (near Northern Star's Paulsens gold mine)
- Whundo Copper mine (near Radio hill processing facility)
- Ruth Well – Nickel and copper project
- Munni Munni – Australia's largest platinum/palladium (PGE) deposit

Further details regarding the above projects will be announced to the market once definitive agreements have been finalised.

Report authorised by the Board.



## ARTEMIS TENEMENT SCHEDULE FOR DECEMBER QUARTER

### ALL TENEMENTS ARE IN WESTERN AUSTRALIA

Project	Tenement	Status	Company	Project	Tenement	Status	Company
Purdy's Reward	E47/1745 <sup>1</sup>	Live	KML No 2 Pty Ltd Karratha Gold Pty Ltd	Sing Well	P47/1622	Live	KML No 2 Pty Ltd
	L47/782	Pending	KML No 2 Pty Ltd		P47/1112	Live	KML No 2 Pty Ltd
Carlow Castle	E47/1797	Live	KML No 2 Pty Ltd	Nichol River	P47/1126	Live	KML No 2 Pty Ltd
Ruth Well	P47/1929	Pending	KML No 2 Pty Ltd		P47/1925	Pending	KML No 2 Pty Ltd
	E47/3719	Pending	KML No 2 Pty Ltd		E47/2716	Live	KML No 2 Pty Ltd
	E47/3487 <sup>2</sup>	Live	Sorrento Resources Pty Ltd		M47/1527	Live	KML No 2 Pty Ltd
	E47/3341 <sup>2</sup>	Live	Hard Rock Resources Pty Ltd		E47/3373	Live	KML No 2 Pty Ltd
47 Patch	E47/3361 <sup>2</sup>	Live	Hard Rock Resources Pty Ltd		M47/87	Live	D & K Corps Investments
	E47/3443 <sup>2</sup>	Live	Elysian Resources Pty Ltd		M47/127	Live	D & K Corps Investments
Elysian / Hard Rock	E47/3564 <sup>2</sup>	Live	Elysian Resources Pty Ltd		M47/401	Live	D & K Corps Investments
	E47/3340 <sup>2</sup>	Live	Hard Rock Resources Pty Ltd		M47/421	Live	D & K Corps Investments
	E47/3390 <sup>2</sup>	Live	Hard Rock Resources Pty Ltd		M47/435	Live	D & K Corps Investments
	P47/1832 <sup>2</sup>	Live	Hard Rock Resources Pty Ltd		M47/577	Live	D & K Corps Investments
	P47/1881 <sup>2</sup>	Live	Hard Rock Resources Pty Ltd		L47/565	Pending	D & K Corps Investments
	E47/3534 <sup>2</sup>	Live	Jindalee Resources Pty Ltd		L47/687	Live	D & K Corps Investments
	E47/3535 <sup>2</sup>	Pending	Jindalee Resources Pty Ltd		L47/689	Live	D & K Corps Investments
	P47/1833 <sup>2</sup>	Pending	Jindalee Resources Pty Ltd	Balmoral	E47/3707	Live	KML No 2 Pty Ltd
Whundo	L47/820	Pending	KML No 2 Pty Ltd		E47/3708	Live	KML No 2 Pty Ltd
	L47/163	Live	Fox Radio Hill Pty Ltd		E47/3709	Live	KML No 2 Pty Ltd
	M47/7	Live	Fox Radio Hill Pty Ltd	Pyramid	E47/3720	Live	KML No 2 Pty Ltd
	M47/9	Live	Fox Radio Hill Pty Ltd		E47/3721	Live	KML No 2 Pty Ltd
Radio Hill	M47/161	Live	Fox Radio Hill Pty Ltd		E47/3722	Live	KML No 2 Pty Ltd
	M47/337	Live	Fox Radio Hill Pty Ltd	Roebourne	E47/3723	Live	KML No 2 Pty Ltd
	L47/93	Live	Fox Radio Hill Pty Ltd		E47/4069	Pending	KML No 2 Pty Ltd
Mt Oscar	E47/1217	Live	Fox Radio Hill Pty Ltd	Greater Munni Munni	E47/3545	Pending	KML No 2 Pty Ltd
Weerianna	M47/223 <sup>3</sup>	Live	Western Metals Pty Ltd		E47/3546	Live	KML No 2 Pty Ltd
Silica Hills	M47/177 <sup>4</sup>	Live	Western Metals Pty Ltd		E47/3547	Live	KML No 2 Pty Ltd
	M47/288 <sup>4</sup>	Live	Western Metals Pty Ltd		E47/3612	Live	KML No 2 Pty Ltd
	M47/93 <sup>5</sup>	Live	Shear Zone Mining Pty Ltd		E47/3160	Live	KML No 2 Pty Ltd
	M47/232 <sup>5</sup>	Live	Shear Zone Mining Pty Ltd	Munni Munni	E47/3322 <sup>6</sup>	Live	Karratha Metals Pty Ltd
	L47/781	Pending	KML No 2 Pty Ltd		M47/123 <sup>6</sup>	Live	Platina Resources Ltd
	E47/1746	Live	KML No 2 Pty Ltd		M47/124 <sup>6</sup>	Live	Platina Resources Ltd
Telfer	E45/5276	Live	Armada Mining Pty Ltd		M47/125 <sup>6</sup>	Live	Platina Resources Ltd
					M47/126 <sup>6</sup>	Live	Platina Resources Ltd
				Mt Clement	M08/191 <sup>7</sup>	Live	Artemis Resources Ltd
					M08/192 <sup>7</sup>	Live	Artemis Resources Ltd
					M08/193 <sup>7</sup>	Live	Artemis Resources Ltd

- <sup>1</sup> – 50% Artemis – Joint Venture with Novo Resources  
<sup>2</sup> – 70% Artemis – Karratha Gold Joint Venture  
<sup>3</sup> – 80% Artemis  
<sup>4</sup> – 70% Artemis  
<sup>5</sup> – 34% Artemis  
<sup>6</sup> – 70% Artemis – Joint Venture with Platina Resources  
<sup>7</sup> – 80% Artemis - Joint Venture with Northern Metals Pty Resources