



**METALS** 

## **Andromeda Metals Limited**

ABN: 75 061 503 375

#### **Corporate Details**

ASX Code:

ADN (ordinary shares)
ADNOB (listed options)

Cash at 30 June 2020: \$2.999 million

#### Issued Capital:

1,549,988,790 ordinary shares 598,047,950 ADNOB options 96,500,000 unlisted options

#### **Directors**

#### **Rhod Grivas**

Non-executive Chairman

#### **James Marsh**

Managing Director

#### **Nick Harding**

Executive Director and Company Secretary

#### Joe Ranford

**Operations Director** 

#### **Andrew Shearer**

Non-executive Director

#### **Contact Details**

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# **Quarterly Report**

Period ending 30 June 2020

# Summary of Company activities for the June quarter:

Poochera Halloysite-Kaolin JV (right to earn up to 75% interest)

- Results of the Pre-Feasibility Study (PFS) were released during the quarter which reinforced the potential for the Poochera Halloysite-Kaolin Project to be a long-term supplier of high-quality halloysite-kaolin product able to meet a growing global demand from ceramic industry manufacturers.
- The PFS is based on an expanded Life of Mine (LOM) of 26 years and inclusion of onsite wet-processing, thereby delivering further significant improvement to the Project economics. Key metrics for the PFS are:
  - o Pre-tax NPV<sub>8%</sub> of A\$736M (after-tax NPV<sub>8%</sub> of A\$511M);
  - Pre-tax IRR of 175% (after-tax IRR of 135%);
  - o Project cashflow of A\$1.97B pre-tax and A\$1.39B after-tax;
  - All In Sustaining Cost (AISC) of A\$354/tonne of refined premium halloysitekaolin product with an anticipated selling price of A\$700/tonne;
  - Pre-production capital estimated at A\$13M with a maximum cash requirement of A\$28M prior to initial revenues being received;
  - o Payback period of 15 months from commencement of mining;
  - On-site wet-processing plant fully funded by revenues received from DSO production, constructed in the Year 2 of operations at a cost of A\$56M.
- Maiden Carey's Well Ore Reserve of 12.5Mt bright white kaolinized granite classified as Probable Reserves comprising 15% halloysite and 78% kaolinite in the minus 45 micron fraction determined.
- Drilling confirms bright white kaolin over a 2 km strike between two highgrade halloysite zones at Condooringie with final assays awaited.
- Project to be renamed Great White Kaolin Project from 1 August 2020.

## Mount Hope Halloysite-Kaolin Project (100% ADN owned)

- Drilling encountered large intersections of greater than 20 metres of white kaolin with the zone remaining open to the south.
- Significant areas of Ultra-High Bright White kaolin with exceptionally low iron contaminant provide a potential additional high value market opportunity in specialist coatings and polymers.

## **Eyre Peninsula Gold Joint Venture**

 Planning undertaken by JV partner Cobra Resources for an extensive RC drilling program across a number of targets to commence in the next quarter.

# Corporate

- Joe Ranford moved to the executive role of Operations Director to manage the Project through the final feasibility and mining approvals phases.
- Cash received during the quarter relating to the exercise of options totaled over \$773K. The current BPay facility expires at 5.00pm 31 July 2020.



James Marsh 30 July 2020 The Board and management of Andromeda Metals Limited (ASX: ADN, Andromeda, the Company) is pleased to provide a summary of the Company's activities for the quarter ended 30 June 2020.

# **Poochera Halloysite-Kaolin Project**

The Poochera Halloysite-Kaolin Project covers two main geographic areas of interest, both situated in the western province of South Australia (Figure 1). The current main area of focus for the Project is on the Eyre Peninsula which comprises four tenements and is located approximately 635 kms west by road from Adelaide and 130 kms south-east from Ceduna (Figure 2).

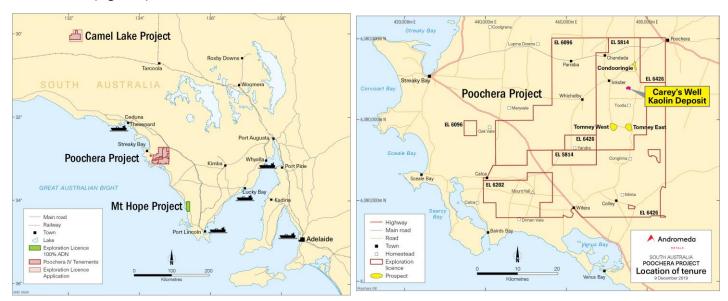


Figure 1: Project Location Plan

Figure 2 : Poochera Joint Venture tenements

High quality halloysite-kaolin occurrences exist extensively across the Poochera Project area making this a region of global significance for the mineral and capable of supporting a considerable long-life mining operation, should final feasibility studies determine the project to be positively commercial.

#### Release of Pre-Feasibility Study

The Pre-Feasibility Study (PFS) for a proposed kaolinised granite open-cut mine and onsite wet-processing facility at the Carey's Well deposit was released to the market during the quarter (refer ADN ASX announcement dated 1 June 2020 titled "Pre-Feasibility Study Further Improves Poochera Halloysite-Kaolin Project Economics"). The PFS builds on the highly positive Updated Scoping Study (USS) released in April 2020 (refer ADN ASX announcement dated 6 April 2020 titled "Wet-Processing Delivers Improved Economics for the Poochera Halloysite-Kaolin Project") and reinforced the potential for the Poochera Halloysite-Kaolin Project to be a long-term supplier of high-quality halloysite-kaolin product able to meet a growing global demand from ceramics industry manufacturers and hence generate significant cash flows for Andromeda and its joint venture partner Minotaur Exploration Limited (ASX: MEP, Minotaur).

The PFS is based upon an initial phase of mining kaolinised granite as Direct Shipping Ore (DSO) and toll wet-refining overseas to generate early cash flows that will be used to fund construction of an onsite wet-processing facility and associated infrastructure during the second year of operation. Production is then scheduled to convert to onsite wet-processing to remove the majority of the contained quartz sand in the mined kaolinised granite and produce concentrated kaolinitic product that is shipped in bulk as filter cake for final toll wet-refining overseas in order to produce a premium bright-white halloysite-kaolin product.

Both dry-processing and wet-processing at site were evaluated during the study with wet-processing proving to produce the significantly better project economics. The prime advantages of onsite processing by a wet rather than a dry method are that it delivers greater recoveries of kaolin clay, and hence the generation of considerably higher revenues, while also providing lower site processing costs due to the operating features of wet processing and efficiencies of the plant design being considered. The inclusion of a hot drying stage under wet-processing has been made in order to comfortably meet maximum shipping moisture contents, with the benefit of recovering condensed

water that will subsequently reduce the external water demand and also lower tonnage based transport and shipping costs on account of the reduced moisture content of the filter cake which outweighs the additional capital and operating costs of the drying plant. Both the initial bulk DSO material and wet-processed bulk filter cake product will be shipped through existing, or under development, port facilities.

A summary of the key physical and financial statistics associated with both the PFS and the previous Updated Scoping Study is shown in Table 1.

Table 1 – Key Poochera Project Statistics

Mine Plan – Production Target	Updated SS	PFS	Change	
From Measured Resources	4.2 Mt	11.2 Mt	+167%	
From Indicated Resources	3.4 Mt	1.3 Mt	-61%	
From Inferred Resources	0.0 Mt	0.2 Mt	Minimal	
Total Production Target	7.6 Mt	12.7 Mt	+67%	
Capital Costs				
Initial Capital Costs	\$13M	\$13M	No Change	
Working Capital	\$16M	\$15M	-6%	
Maximum Cash Requirement	\$29M	\$28M	-3%	
Processing Plant Costs	\$35M	\$56M	+60%	
Sustaining Capital Costs	\$11M	\$15M	+36%	
Production Summary				
Mine life (years)	15	26	+70%	
Processing rate of kaolinized granite (ktpa)	500	500	No Change	
Stripping Ratio (Waste:Ore)	2.3	2.1	-9%	
Annual Refined Kaolin Produced (ktpa)	227	233	+3%	
Yield of Refined Kaolin (LOM average)	45%	46%	+1%	
Project Economics				
Refined Premium Kaolin Price (AUD)	\$700/t	\$700/t	No Change	
Revenue	\$2,379M	\$4,136M	+74%	
AISC equivalent (LOM average)	\$374/t	\$354/t	-5%	
EBITDA (LOM)	\$1,109M	\$2,058M	+86%	
Pre-Tax Cashflow	\$1,049M	\$1,974M	+88%	
Pre-Tax NPV (8% discount rate)	\$544M	\$736M	+35%	
Pre-Tax IRR	175%	175%	No Change	
After-Tax Cashflow	N/A	\$1,389M	New	
After-Tax NPV (8% discount rate)	N/A	\$511M	New	
After-Tax IRR	N/A	135%	New	
Payback from start of site works	15 months	15 months	No Change	

Note – all figures are on a 100% project basis and rounded to reflect appropriate levels of confidence

The PFS has been developed using the December 2019 Mineral Resource estimate (*refer ADN ASX announcement dated 23 December 2019 titled "Significant Increase in Mineralised Resource for the Poochera Kaolin Project"*) of 26.0Mt of Measured, Indicated and Inferred kaolinised granite.

A mining rate of 500ktpa of raw material for the 12.7Mt Production Target over a 26 year mine life has been assumed for the PFS, producing on average 233ktpa of refined premium halloysite-kaolin product with a 15% average LOM halloysite content.

The Project is anticipated to create approximately 30-40 jobs once the onsite wet-processing plant is operating with most employees to be sourced from the local region and reside within driving distance of the site.

Marketing activity for the PFS has focussed on confirmation of product market pricing and current demand, along with production of large amounts of commercially representative products to be used to secure customer offtake agreements. Market pricing for Andromeda's premium grade halloysite-kaolin has been indicated by end users and commercial contacts in China, Japan and Europe. Production of commercial quantities have now been completed and are to be distributed to existing and new potential customers for final approval trials. Interest has been high with numerous requests for material being received from potential customers in several countries. Testing has also been expanded to new applications to reduce dependence on the ceramic industry and investigate potentially higher value business in Australia and overseas. First Test Minerals in the UK prepared an up to date report on the status of the halloysite-kaolin and high-purity halloysite production and sales markets to support product prices used in the PFS.

At an assumed selling price of A\$700/tonne (using USD exchange rate of 0.70) for the halloysite-kaolin blend, total LOM revenues of A\$4,136M are estimated to be generated by the Project. Total AISC averages A\$354/tonne over the Life of Mine (LOM) and so presents a significant cash margin to be generated by the Project. The LOM capital is a total of A\$84M which includes initial start-up capital expenditure of A\$13M and the cost of construction of a wet-processing plant of A\$56M in year 2 plus sustaining capital of a further A\$15M. An initial working capital requirement of A\$15M is required to fund start-up activities prior to revenues being received.

Total cumulative cash flow generated over the LOM is A\$1,974M (Pre-Tax). At an assumed discount rate of 8%, the Project has an NPV of A\$736M (Pre-Tax), an IRR of 175% and payback of initial capital and operating expenditures within 15 months from commencement of operations.

Additional other kaolin market areas, including supplying the High Purity Alumina (HPA) sector and halloysite nanotechnology research, have not been considered as part of the PFS and represent potential future opportunities to be evaluated.

The anticipated timeline for the Project development is to conduct environmental impact assessments over the balance of the 2020 calendar year and prepare a mining lease application targeted to be lodged in early 2021. Subject to satisfactory progress negotiating agreements with key stakeholders, obtaining of all necessary regulatory approvals and completion of a Definitive Feasibility Study (DFS), commencement of site activities is now targeted for early 2022 with first product sales possible in mid 2022.

Known impacts of the COVID-19 pandemic have been factored into the timeframe targets but further impacts are still unknown and may affect global and local business access and therefore potentially influence these targets.

# Carey's Well Ore Reserve

A maiden Ore Reserve Estimate for the Carey's Well deposit of 12.5Mt of bright white kaolinised granite containing 52% of material in the minus 45 micron fraction was announced subsequent to the end of the quarter (*refer ADN ASX announcement dated 10 July 2020 titled "Maiden Ore Reserve for Carey's Well Deposit"*). The Ore Reserve Estimate, which comprises 15% halloysite and 78% kaolinite in the minus 45 micron fraction, consists entirely of Probable Reserves in accordance with the 2012 JORC Code guidelines and has been derived from the Measured and Indicated Mineral Resources contained within the December 2019 Mineral Resource Estimate announced on 23 December 2019, and is shown in Table 2 below.

The Ore Reserve supports a 26 year mine life at a mining rate of 500,000 tpa which is the basis under which the PFS was prepared.

Table 2 - Carey's Well Ore Reserve Estimate

Catagory	Tonnes	Grade	Mineral % of -45µ	Halloysite + Kaolinite		
Category	Mt	% -45μm	Halloysite	Kaolinite	% of -45µm fraction	
Proven	0.0	0	0	0	0	
Probable	12.5	52	15	78	93	
Total	12.5	52	15	78	93	

Note that all figures are on a 100% Project basis and rounded to reflect appropriate levels of confidence.

As part of the DFS the Company intends to update aspects to land access, aboriginal cultural heritage, and environmental status to improve these Modifying Factors in anticipation of converting the Measured Resources to Proven Reserves.

## **Condooringie Drilling**

A 2,000 metre aircore drilling program was undertaken in May 2020 at the Condooringie Prospect, which is approximately 5 kms northeast of Carey's Well, to follow up on a high-grade halloysite zone located 1 km north of drilling undertaken at Condooringie in December 2019, which significantly extended the kaolin zone to the south (*refer ADN ASX announcement dated 16 March 2020 titled "High Grade Halloysite Zone Identified at Condooringie"*). A key objective of the May 2020 drilling program was to infill between the two high-grade halloysite zones identified to potentially define a bright white halloysite-kaolin prospect over 2 kms of strike should the two zones be shown to be linked.

Final assay results are currently awaited but observations from the drilling undertaken showed continuity of greater than 12 metres in thickness of visually bright white kaolin across the 2 km area between the two zones at Condooringie in addition to a number of holes of greater than 20 metre thickness of visually bright white kaolin to the northwest and south and which remains open in both directions.

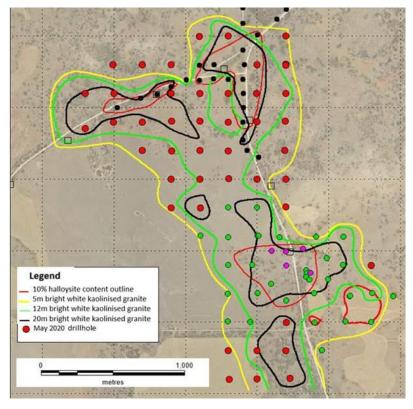


Figure 3: Condooringie Bright White Kaolinised Granite outlines

Once assay results are received, the Company will determine a JORC Mineral Resource for Condooringie for release later in the year.

#### **New Project Name**

The joint venture partners have agreed to rename the Project and Deposits going forward as some confusion exists with the Poochera Project Joint Venture extending beyond the Poochera location in South Australia; for example Camel Lake which is over 300 kms to the northwest of Poochera. A theme based upon sharks and rays found in Australian waters is considered appropriate given the propensity for sharks contained within the waters surrounding the Eyre Peninsula, of which it is well-known for.

Therefore effective from 1 August, the Poochera Halloysite-Kaolin Joint Venture between Andromeda and Minotaur will be renamed the Great White Kaolin Joint Venture and the Poochera Project will be known as the Great White Kaolin Project.

Deposit and Prospect names will also be renamed as follows:

Previous Name	New Name	
Carey's Well Deposit	Great White Deposit	
Condooringie Prospect	Hammerhead Prospect	
Tomney East Prospect	Tiger Prospect	
Tomney West Prospect	Bronze Whaler Prospect	
Karcultaby South Prospect	Manta Prospect	

At this stage the name for the Camel Lake Prospect will remain unchanged. It remains part of the Great White Kaolin Joint Venture between Andromeda and Minotaur.

## **Camel Lake Halloysite Project**

An introductory meeting with the Maralinga Tjarutja Council, who are the traditional landowners on which the Camel Lake tenement is located, continues to be deferred due to COVID-19 concerns which has forced the closure of the Maralinga Lands. The Company has engaged the services of an experienced native title consultant who has worked with the traditional owners in the past to facilitate a possible meeting outside of the Maralinga Lands to meet and discuss access in order to undertake exploration activities once it is considered safe to do so.

# **Mount Hope Kaolin Project**

During the previous quarter, the Company undertook an aircore drilling program comprising 40 holes for 1,383 metres at the 100% owned Mount Hope Halloysite-Kaolin Project. The Mount Hope tenement had previously reported a kaolin resource of 12.26Mt in 1973, however as this is not reported in accordance with the JORC 2012 Code, investors are cautioned that the Company has not yet completed the work necessary to verify the historical resource estimate. The objective of the new drill program was to obtain fresh material to undertake testwork in order to determine suitability for various applications, and to verify the central portion of the historic kaolin resource in order to estimate a revised Mineral Resource compliant with the JORC 2012 Code.

Significant intersections of greater than 20 metres thickness of bright white kaolin were intercepted within the southern zone of the drill target area which remains open to the south (refer ADN ASX announcement dated 20 April 2020 titled "Significant Kaolin Intersected at Mount Hope Halloysite-Kaolin Project").

Assay results received from this drilling program were released to the market subsequent to the end of the June quarter (refer ADN ASX announcement dated 15 July 2020 titled "New Major Market Opportunity for Andromeda with Mount Hope Project") which delivered significantly High Bright White kaolin intersections (above 80 ISO Brightness) across the historic kaolin resource. Some areas of the Mount Hope deposit returned high levels of halloysite (>20%)

that is similar to the existing resource at Carey's Well. However, a substantial portion of the deposit shows exceptionally low iron contaminant within the Bright White kaolin rarely found elsewhere in the world, with halloysite levels ideally suited to some high-value markets in specialist coatings and polymers. This opens up a new and potentially significant market opportunity for Andromeda to explore in addition to the high-value ceramic market and thereby provides the Company with excellent market diversification and de-risking in addition to potentially adding further significant value to the business as a whole.

The Company is now finalising a new 2012 JORC compliant Mineral Resource for Mount Hope which is anticipated to be released in the near future.

# **Drummond Epithermal Gold Joint Venture**

Field exploration activities during the quarter continued to be suspended on the Drummond Gold Project by Joint Venture partner Evolution Mining Limited (ASX: EVN, Evolution) due to COVID-19 restrictions. Final assay results for the 200m x 100m southern extension of the Limey Trend were received in addition to assays of rock samples collected during earlier mapping of this area.

With COVID-19 restrictions now partially relaxed by the Queensland Government, Evolution is planning to recommence field activities in the September quarter with an approximate 2,400 metre RC drilling program to be undertaken at Roo Tail, which is located at the southern end of the South West Limey Prospect.

## **Moonta Copper ISR Joint Venture**

Moonta ISR Joint Venture partner Environmental Metals Recovery (EMR) continued to make steady progress during the June quarter with further positive testwork carried out by the CSIRO indicating that the main copper species contained within the Wombat material are readily leachable using various reagents as lixiviants in recovering copper and gold under both acid and alkaline conditions. Results from hylogger spectral analysis conducted on two historic diamond drillholes at Wombat are currently pending.

## **Eyre Peninsula Gold Joint Venture**

Results from two geochemical sampling programs undertaken by Joint Venture partner Cobra Resources PLC (LSE: COBR, Cobra) at Wudinna during the previous quarter has identified a unique and distinctive chemical footprint for gold mineralization at Barns, Baggy Green and White Tank which Cobra believes will improve drill targeting of gold mineralisation across the Eyre Peninsula Gold Project. A third geochemistry program commenced in the June quarter with approximately 3,000 samples collected from historic RC drilling undertaken at the Baggy Green, Baggy Green North, Clarke and Laker prospects, and a further 1,100 soil samples from the Larwood prospect, which have been submitted for multi-element geochemical analysis. Results from this analysis work will provide final targeting for an extensive RC drilling program across a number of prospects by Cobra which is scheduled to commence during the September quarter.

Following a request received from Cobra to extend the Stage 1 earn-in timeframe due predominantly to COVID-19 travel restrictions, the Company has agreed to grant a two month extension to 31 December 2020 for Cobra to meet its \$2.1 million expenditure commitment under the joint venture agreement. It was considered that a small extension to the deadline would allow Cobra time to maximize the value from the planned staged drilling program.

## **Pilbara Gold Project**

The application process for the additional tenement (Rooneys) made during the September 2019 quarter to add to the Pilbara tenement portfolio is continuing. Andromeda is currently considering how best to move the project forward given the focus of the Company is directed towards development of the Poochera Halloysite-Kaolin Project.

## **Finance and Corporate**

Andromeda's cash position at the 30 June 2020 stood at \$2.999 million.

During the quarter the Company was advised that it had been successful in securing funding of \$50,100 under the South Australian Government's Accelerated Discovery Initiative to be used towards investigation of testing methods for the quantification of halloysite in samples.

A total of 64,458,611 ordinary shares were issued during the quarter resulting from the exercise of 61,958,611 ADNOB listed options and 2,500,000 unlisted options by optionholders, providing the Company with cash receipts of \$773,503 at the exercise price of \$0.012 per option. The Company has introduced a temporary BPay facility for a six week period to facilitate an easier process for optionholders to exercise their options if they choose to do so. Optionholders are reminded however that the BPay facility ends at 5.00pm (ACST) on Friday 31 July 2020. The ADNOB options will continue to be able to be exercised at any time up until the expiry date of 30 November 2020 using the usual method of sending a cheque to the Company's share registrar Computershare Limited along with a completed Exercise of Options form.

As of the date of this report, Andromeda Metals currently has on issue 1,549,988,790 ordinary shares, 598,047,950 ADNOB listed options and 96,500,000 unlisted options.

## **Company Appointment**

On 8 April 2020 Mr Joe Ranford, a mining engineer with significant experience gained in senior management roles he has previously held with both domestic and international mining companies, joined the Board as a Non-executive Director. From 1 June, Mr Ranford moved into an executive role as Operations Director responsible for managing the Project through the completion of the Definitive Feasibility Study and the preparation and submission of a mining lease application. The Company considers his considerable knowledge of the South Australian mining approval process and managing key stakeholder engagements invaluable in assisting moving the Poochera Halloysite-Kaolin Project through the feasibility and approval phases and into production.

## **Competent Persons Statements**

Information in this announcement has been assessed and compiled by Mr James Marsh, a Member of The Australasian Institute of Mining and Metallurgy (MAusIMM). Mr Marsh an employee of the Andromeda Metals Limited has sufficient experience, which is relevant to metal recovery from the style of mineralisation and type of deposits under consideration and to the activity being undertaking to qualify as a Competent Persons under the 2012 Edition of the 'Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves'. This includes over 30 years of experience in kaolin processing and applications.

Information in this announcement that relates to the Exploration Results for the Poochera Halloysite-Kaolin Project and Mt Hope Halloysite-Kaolin Project is based on information evaluated by Mr Eric Whittaker who is a Member of the Australasian Institute of Mining and Metallurgy (MAusIMM). Mr Whittaker is the Chief Geologist of Andromeda Metals Limited and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the "JORC Code"). Mr Whittaker consents to inclusion in this document of the information in the form and context in which it appears.

The information in this report that relates to Ore Reserves is based on and fairly represents information and supporting documentation compiled by Paul Griffin, BMinTech, GradDip(Tech)Man, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy (AusIMM Member No. 100234). Paul Griffin is an Employee and Director of MinEcoTech Pty Ltd and is retained as a consultant and study manager by Andromeda Metals Limited. Paul Griffin holds options in Andromeda Metals Limited. Paul Griffin has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Paul Griffin consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

## **SCHEDULE OF TENEMENTS AS AT 30 JUNE 2020**

Project	Tenement	Tenement Name	Area km²	Registered Holder or Applicant	Nature of Company's Interest %		
South Australia							
Wudinna Gold Joint Venture	EL 6317	Pinkawillinie	156	Peninsula Resources Ltd <sup>1</sup>	100%		
	EL 6131	Corrobinnie	1303	Peninsula Resources Ltd	100%		
	EL 6489	Wudinna Hill	42	Peninsula Resources Ltd	100%		
	EL 5953	Minnipa	184	Peninsula Resources Ltd	100%		
	EL 6001	Waddikee Rocks	147	Peninsula Resources Ltd	100%		
	EL 6262	Acraman	96	Peninsula Resources Ltd	100%		
Moonta Copper Gold Project <sup>9</sup>	EL 5984	Moonta-Wallaroo	713	Peninsula Resources Ltd	100%		
	EL 5984	Moonta Porphyry JV	106	Peninsula Resources Ltd	90% - option to acquire 100% from Minotaur Exploration Ltd		
Poochera Kaolin- Halloysite Project	ELA 2020/96	Tootla	372	Great Southern Kaolin Pty Ltd <sup>2</sup>	ADN 51% GSK 49%		
	EL 6096	Whichelby	447	Minotaur Operations Pty Ltd <sup>3</sup>	ADN 51% MOP 49%		
	EL 6202	Mt Hall	147	Minotaur Operations Pty Ltd	ADN 51% MOP 49%		
	EL 6426	Mt Cooper	684	Minotaur Operations Pty Ltd	ADN 51% MOP 49%		
Camel Lake Halloysite-Kaolin Project	EL 6128	Camel Lake	455	Minotaur Operations Pty Ltd	ADN 51% MOP 49%		
	ELA 2019/73	Dromedary	481	Minotaur Operations Pty Ltd	ADN 51% MOP 49%		
Mt Hope Halloysite- Kaolin Project	EL 6286	Mt Hope	227	Andromeda Industrial Minerals Pty Ltd <sup>4</sup>	100%		
Queensland							
Drummond Gold Project <sup>6</sup>	EPM 18090	Glenroy	196	Adelaide Exploration Pty Ltd <sup>5</sup>	ADN 100% EVN earning 80% over 48 months		
	EPM 25660	Gunthorpe	74	Adelaide Exploration Pty Ltd	ADN 100% EVN earning 80% over 48 months		
	EPM 26154	Sandalwood Creek	109	Adelaide Exploration Pty Ltd	ADN 100% EVN earning 80% over 48 months		
	EPM 26155	Mount Wyatt	144	Adelaide Exploration Pty Ltd	ADN 100% EVN earning 80% over 48 months		
	EPM 27501	Packhorse Creek	16	Adelaide Exploration Pty Ltd	ADN 100% EVN earning 80% over 48 months		
Western Australia							
Pilbara Gold Project	E 46/1196	East Rooneys	54	Frontier Exploration Pty Ltd <sup>7</sup>	100%		
	E 46/1336 (Application)	Rooneys	95	Frontier Exploration Pty Ltd	100%		
	E 08/2954	Wyloo	124	Mylo Gold Pty Ltd <sup>8</sup>	100%		
	E 08/2955	Cheela Plains	123	Mylo Gold Pty Ltd	100%		

 $<sup>1\,</sup>Peninsula\,Resources\,Ltd\,(incorporated\,18\,May\,2007)\,is\,a\,wholly\,owned\,subsidiary\,of\,Andromeda\,Metals\,Ltd.$ 

 $<sup>2\</sup> Great\ Southern\ Kaolin\ Pty\ Ltd\ ("GSK")\ is\ a\ wholly\ owned\ subsidiary\ of\ Minotaur\ Exploration\ Ltd.$ 

 $<sup>{\</sup>it 3~Minotaur~Operations~Pty~Ltd~("MOP")}~is~a~wholly~owned~subsidiary~of~Minotaur~Exploration~Ltd.$ 

 $<sup>4\</sup> Andromeda\ Industrial\ Minerals\ Pty\ Ltd\ (incorporated\ 9\ August\ 2018)\ is\ a\ wholly\ owned\ subsidiary\ of\ Andromeda\ Metals\ Ltd.$ 

 $<sup>5\</sup> Adelaide\ Exploration\ Pty\ Ltd\ (incorporated\ 13\ July\ 2001)\ is\ a\ wholly\ owned\ subsidiary\ of\ Andromeda\ Metals\ Ltd.$ 

A Adelaide Exploration Pty Ltd (incorporated 15 July 2001) is a winoily Owned subsidiary of Andromeda Metals Ltd has formed a Joint Venture with Evolution Mining Ltd ("EVN") over the Drummond Epithermal Gold Project.

7 Frontier Exploration Pty Ltd (acquired 21 December 2017) is a wholly owned subsidiary of Andromeda Metals Ltd.

8 Mylo Gold Pty Ltd (acquired 21 December 2017) is a wholly owned subsidiary of Andromeda Metals Ltd.

9 Andromeda Metals Ltd has partnered with Environmental Metals Recovery Pty Ltd ("EMR") to form the Moonta ISR Joint Venture.