

Andromeda Metals Limited ABN: 75 061 503 375

#### Corporate details:

ASX Code: ADN Cash (31 Dec 2020): \$7.94 million Issued Capital: 2,157,227,827 ordinary shares 89,820,000 unlisted options 19,750,000 performance rights

#### 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:

69 King William Road, Unley, South Australia 5061

PO Box 1210 Unley BC SA 5061 Tel: +61 8 8271 0600 Fax: +61 8 8271 0033

admin@andromet.com.au www.andromet.com.au



## METALS

# **ASX Announcement**

05 March 2021

# Drilling underway at Mount Hope Kaolin Project

### Summary

- An aircore drilling program commenced this week at Andromeda Metals 100 % owned Mount Hope Kaolin Project.
- The program's key objective is to infill drill the southern half of the Mount Hope Resource which is the thicker and higher quality portion of the deposit.
- Results from the drilling program will be incorporated in a new Mount Hope Mineral Resource Estimate, and dependent on results, upgrade the selected potion of the Resource from an inferred to an indicated classification.
- The program will also include drilling to test for extension of the mineralisation to the south.

## Discussion

#### **Aircore Drilling Program**

Andromeda Metals Limited (ASX Code: ADN, Andromeda, the Company) is pleased to report the commencement of drilling at the Company's 100% owned Mount Hope Kaolin Deposit located on EL 6286, approximately 80 kilometres northwest of Port Lincoln and 160 kilometres southeast of the Great White Kaolin Project on the west coast of South Australia's Eyre Peninsula (Figures 1 and 2).

The aircore drilling program will comprise of approximately 50 holes for up to 2,500 metres targeting the thick, kaolinised weathered gneiss (Sleaford Complex) of the Mount Hope Kaolin Deposit. Results from the drilling program will be used to update the Mount Hope Mineral Resource Estimate, and where supported (statistically), upgrade the Resource from an inferred to an indicated classification.

The 2020 Mount Hope Mineral Resource Estimate of 18.0Mt of kaolinised gneiss included two sub domains; an Ultra-Bright (R457 >84 in the minus 45 micron) high-purity (very low iron) kaolin sub domain and a halloysite-kaolin sub-domain, (refer Table 1). Much of the infill drilling will target the high purity kaolin sub domain, located in the central and southern portion of the Resource which is typically thicker and of higher quality (*refer ADN ASX announcement dated 11 August 2020 titled "New Mineral Resource for the Mount Hope Kaolin Project"*).





Figure 1 - ADN Halloysite-Kaolin interests

Figure 2 - Mount Hope tenement EL 6286

		PSD	Kaolinite	Halloysite
Domain	Mt	-45µm	%	%
Main	12.8	40.95	33.6	0.9
Halloysite	1.6	39.13	25.6	6.7
Ultra-Bright	3.7	44.37	38.0	0.7
Total	18.0	41.49	33.8	1.4

## Table 1 - Mount Hope Kaolin Mineral Resource

Note that all figures are rounded to reflect appropriate levels of confidence

The Mount Hope Mineral Resource yields 7.5Mt of High Bright kaolin product (R457 >80) when applying the minus 45 micron recovery factor. The Ultra-Bright sub domain contains 1.6Mt of minus 45 micron material with an ISO brightness (R457) of 84.1 and the halloysite sub domain contains 0.6Mt of minus 45 micron material comprised of 17.2% halloysite (refer Table 2).

Table 2 - Mount Hope Kaolin Mineral Resource -45µ
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Domain	Mt	R457	Kaolinite %	Halloysite %	Al <sub>2</sub> O <sub>3</sub> %	Fe₂O₃ %	TiO₂ %
Main	5.2	81.8	82.1	2.2	35.1	0.56	0.62
Halloysite	0.6	81.2	65.4	17.2	34.8	0.60	0.63
Ultra-Bright	1.6	84.1	85.7	1.5	36.0	0.32	0.63
Total	7.5	82.2	81.4	3.3	35.3	0.51	0.62

Note that all figures are rounded to reflect appropriate levels of confidence

# High-Purity Kaolin Testing for Coating and Polymer Applications

The Ultra-Bright domain is comprised of extremely high purity, bright white kaolin with low halloysite levels. This makes it ideally suited to high-value markets in specialist coatings and polymers, thus providing market diversification and de-risking opportunities while presenting new and potentially significant markets for the Company to pursue. A large representative sample (blended from 15 drillholes) of ultra-high purity kaolin from Mount Hope Deposit was sent to Europe for processing and testing to determine its suitability for these high-value markets where commercial kaolin products (Imerys Supreme) are currently sold for approximately A\$1,000/t<sup>(i)</sup> (see Appendix 1 detailing drillholes and assay results of the samples tested).

The ISO brightness and the particle size distributions of refined product at 70% and 90% < 2um from Mount Hope were shown to be exceptional, which confirmed excellent potential for the high value coatings and polymer markets (refer Table 3). In key attributes the refined Mount Hope kaolinite compares favourably to the top commercial grades globally, and even the 70% < 2um product is better in brightness (*refer ADN ASX announcement dated 12 November 2020 titled "Positive Results from Concrete and Coatings Application Testing"*).

Grade	Mt Hope Mt Ho 70% <2um 90% <2		Eckalite YMT (Suvo)	Supreme (Imerys)	Speswhite (Imerys)
Country	Australia	Australia	Australia	UK	UK
Brightness (%)	89	90	88	88	86
Yellowness (%)	4.5	4.1	5.0	3.8	4.7
Oil Absorption (g/100g)	52	56	50	46	42
<2 um (%)	73	92	-	94	80
<1 um (%)	54	75	-	80	60
Surface Area (m2/g)	15	17	-	16	14

### Table 3 - Comparison vs Current Leading International Commercial Grades

Ceramic fired brightness testing (compressed discs fired to 1180°C) was carried out as potential interest for product blending with halloysitic material, and the ISO brightness (R457) values of the refined product were over 100 (off-scale) which reflects the minimal impurities present. Positively, all processed samples were close to the theoretical maximum for alumina for kaolin and with virtually no colouring oxides or alkalis, which also indicates good potential to produce High Purity Alumina (HPA).



Figure 3 – Fired discs from the Mount Hope composite sample labelled with ISO brightness

To further progress this market, material collected from the 2021 drilling will allow for larger quantities of refined kaolinite to be produced through the recently recommissioned pilot plant at Streaky Bay.

(i) Andromeda Metals Halloysite/Kaolin Marketing Report by Frank Hart, First test Minerals – June 19th 2020

#### **About Andromeda Metals**

Andromeda Metals is an emerging industrial minerals company based in Adelaide, South Australia with a vision of becoming the world's leading supplier of high grade halloysite-kaolin. The Company's primary focus is directed towards the final evaluation and development of the world class Great White Kaolin Project into production in early 2022, which is a joint venture between Andromeda Metals and Minotaur Exploration Limited (ASX: MEP) in which ADN has a 75% interest.

The Great White Kaolin Project covers two main geographic areas of interest, both situated in the westem province of South Australia (Figures 1) and is located approximately 635 kms west by road from Adelaide and 130 kms south-east from Ceduna. High quality halloysite-kaolin occurrences exist extensively across the Great White 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 commercially positive.

The development of the Great White Kaolin Deposit remains the focus for ADN, with Mount Hope offering excellent potential for future growth opportunities for the Company.

#### Contact:

lames Marsh
Managing Director
Email: james.marsh@andromet.com.au

Peter Taylor Investor Relations Ph: 0412 036 231 Email: peter@nwrcommunications.com.au

#### **Competent Person's 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.

The data in this announcement that relates to the Exploration Results for the Mountt Hope 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.

### APPENDIX 1 – MOUNT HOPE DEPOSIT COMPOSITED ASSAY DATA TESTED FOR HIGH PURITY KAOLIN

Summary intercepts by drillhole for Mount Hope composite sample submitted for high purity kaolin analysis\* (*refer ADN ASX announcement dated 11 August 2020 titled "New Mineral Resource for the Mount Hope Kaolin Project"*) are listed in Table 4 and collar locations shown on Figure 4.

Hole ID	Depth From	Depth To	Interval	-45µm	Reflectance	Fe2O3	Al2O3	TiO2	Kaolinite	Halloysite
	(m)	(m)	(m)	(%)	(ISO B)	(%)	(%)	(%)	(%)	(%)
MH20AC002	9	24	15	45.1	84.5	0.27	37.5	0.41	91	0
MH20AC003	10	19	9	36.9	84.0	0.29	35.3	0.54	86	0
MH20AC006	8	14	6	36.8	85.1	0.36	34.2	0.61	81	0
MH20AC017	10	23	13	46.7	84.6	0.20	36.3	0.69	91	0
MH20AC018	13	18	5	37.8	84.0	0.40	34.9	0.54	80	0
MH20AC020	8	26	18	50.5	84.6	0.19	36.7	0.75	90	0
MH20AC021	12	21	9	42.9	85.3	0.23	36.6	0.57	88	0
MH20AC023	11	18	7	48.9	83.2	0.24	35.8	0.66	89	0
MH20AC024	9	19	10	48.7	84.9	0.23	36.3	0.69	92	0
MH20AC026	11	19	8	50.3	86.3	0.19	36.6	0.65	91	0
MH20AC030	12	16	4	42.4	84.1	0.46	34.7	0.43	91	0
MH20AC031	13	27	14	45.7	82.6	0.28	36.6	0.50	86	0
MH20AC032	11	21	10	36.5	83.4	0.28	34.9	0.67	84	0
MH20AC038	13	27	14	46.3	84.6	0.21	36.4	0.74	88	0
MH20AC039	7	18	11	46.2	85.9	0.30	36.7	0.48	90	0

Table 4 – Summary of composite high purity Mt Hope kaolin sample



Figure 4 – Mount Hope drill collars with high purity kaolin coloured red, MGA Zone 53 GDA 94