Andromeda

METALS

ASX Announcement

23 December 2019

Significant increase in Mineral Resource for the Poochera Kaolin Project

Summary

- **2019 infill drilling undertaken in April-May at Carey's Well has resulted in an increase in the Measured Resource category by approximately 80%(1) highlighting improved confidence in the resource quality.**
- **Overall "bright white" kaolinised granite Mineral Resource has increased by over 28% to 26.0 million tonnes.**
- **The in situ "bright white" kaolinised granite will yield 10.6 million tonnes of minus 45 micron quality kaolin product.**
- **The Carey's Well Mineral Resource still remains open to the north and north-east.**
- **These improvements in both the size and quality of the Mineral Resource will be incorporated in the Pre-Feasibility Study which is scheduled for completion early in the June quarter 2020.**

Discussion

Andromeda Metals Limited (ASX: ADN, Andromeda, the Company) is pleased to report an updated Mineral Resource estimate reported in accordance with the 2012 JORC Code for the Carey's Well kaolin deposit located on EL 5814 near Poochera on the west coast of South Australia's Eyre Peninsula.

The Carey's Well kaolin Mineral Resource is one of a number of kaolin (kaolinite and halloysite) prospects which are included under a Joint Venture agreement in place with Minotaur Exploration Limited (ASX: MEP). This updated Mineral Resource estimate replaces previous estimates by Minotaur in 2009 and 2012 reported under the 2004 JORC Code as well as estimates reported by Andromeda in 2018 and 2019 under the 2012 JORC Code & Guidelines *(refer ADN ASX announcements dated 22 August 2018 and 12 February 2019*).

A summary of the new Mineral Resource is given below in Table 1, and a summary report prepared by independent geological consultancy group H&S Consultants Pty Ltd is included as an Appendix to this release.

The new kaolinised granite resource estimates for the Carey's Well deposit are included below:

Andromeda Metals Limited
ABN: 75 061 503 375

Corporate details:

ASX Code: ADN

Cash: $4.93 million
(as at 30 November 2019)

Issued Capital:
1,444,910,087 ordinary shares
700,626,053 ADNOB options
20,000,000 unlisted options

Directors:

Rhod Grivas
Non-Executive Chairman

James Marsh
Managing Director

Nick Harding
Executive Director and Company Secretary

Andrew Shearer
Non-Executive Director

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Category	Mt	Brightness Reflectance at 457	-45µm Rec %
Measured	15.6	82.3	50.7
Indicated	4.9	81.7	49.8
Inferred	5.5	82.4	50.4
Total	**26.0**	**82.2**	**50.5**

(minor rounding errors)

Table 1 – New Mineral Resource

The amount of Measured Resource has increased by 80%[1] due to the 2019 infill drilling, whilst the -45µm recovered material for both Measured and Indicated Resources is reduced by 5%, with the biggest decrease in the recovery grades associated with the Inferred (peripheral) material. Andromeda instigated significant upgrades to the resource with improved processing of the ore to remove the +45 micron fraction. This included engagement with external laboratories and international kaolin expert consultants on improved processing techniques, along with expanded quality assurance and quality control checks, and independent sign-off on Exploration Results.

As noted earlier, a halloysite zone has been interpreted. The DSO resource estimates for this zone, including back-calculated kaolinite, halloysite and combined halloysite/kaolinite (from the -45micron fraction), are shown below.

Category	Mt	R457	-45µm Rec %	Kaolinite %	Halloysite %	Kaolin %
Measured	8.7	82.6	52.7	40.3	8.9	49.2
Indicated	1.5	81.9	52.6	42.0	7.0	49.0
Inferred	0.4	81.6	51.7	39.8	7.8	47.5
Total	**10.6**	**82.5**	**52.6**	**40.5**	**8.6**	**49.1**

(minor rounding errors)

Table 2 – Halloysite Zone Interpretation

The previous resource estimate for the halloysite content was 9.7Mt within the Carey's Well 'bright white' kaolinised granite Mineral Resource, and so this new estimate represents an increase of approximately 9%. The 12 February 2019 estimate was based on only the halloysite content in the -45 micron fraction for the halloysite zone, but in this case the back calculation method used adds back the +45 micron fraction of primarily quartz sand grains, which is approximately 47.4% of the total ore.

The high grade halloysite material from the recovered -45µm fraction within the halloysite zone comprises:

Category	Mt	R457	Halloysite %	Kaolinite %	Al_2O_3 %	Fe_2O_3 %	SiO_2 %	TiO_2 %
Measured	4.6	82.7	17.0	76.5	37.0	0.57	47.6	0.44
Indicated	0.8	82.0	13.4	79.7	36.8	0.52	48.0	0.50
Inferred	0.2	81.6	15.0	76.9	36.8	0.52	48.1	0.55
Total	**5.6**	**82.6**	**16.4**	**77.0**	**36.9**	**0.56**	**47.7**	**0.45**

(minor rounding errors)

Table 3 – High Grade Halloysite Zone

(1) The comparison to the previous Mineral Resource takes into account the updated average dry rock bulk density of 1.44 tonnes/m^3 as reported in the clarification statement made to ASX on 17 May 2019.

James Marsh
Managing Director

<u>Appendix (attached)</u> - Resource estimation report prepared by independent geological consultancy group H&S Consultants Pty Ltd

20th December 2019

James Marsh
Andromeda Metals Ltd
(by email)

Updated Resource Estimates for the Careys Well Kaolin Deposit, SA

H&S Consultants Pty Ltd ("H&SC") was commissioned by Andromeda Metals Limited ("ADN") to complete updated Mineral Resource estimates for the Carey's Well Kaolin Deposit, part of its Poochera Project in South Australia, 130kms south east of Ceduna. Development of the project is a joint venture between ADN and Minotaur Exploration ("MEP"). The target commodity is kaolin shipped initially as Direct Shipping Ore ("DSO"), and then up-grading to dry-processing at site to remove the sand after approximately 18 months. Simon Tear from H&SC completed a site visit in April 2019 during the recent ADN drilling. The estimates have been reported in accordance with the 2012 JORC Code and Guidelines.

Drilling has been the main method of sampling the deposit either with an aircore or a Calweld rig, generating 1m bulk samples. Sampling intervals have then been based on whiteness of the drilled material with the 1m bulk samples subjected to riffle splitting and sample compositing roughly representing 4-5m intervals. The 2008 and 2011 composited samples were processed on site at Streaky Bay with a blunging process by MEP personnel before being analysed for the -45µm recovered material and a variety of elements and minerals by XRF and XRD respectively on that fraction. The 2019 composited samples were processed using a wet sieving method to give a -45µm recovered fraction by Bureau Veritas, a commercial laboratory based in Adelaide, South Australia, and followed up with XRF analysis. XRD analysis for all samples has included kaolinite and halloysite determination and was completed by the CSIRO, Division of Land and Water, Urrbrae, South Australia.

The deposit comprises relatively flat-lying kaolin, between 8 and 24m below surface, generated from the extensive weathering of a granite. The current estimates cover an area of roughly 1.5km by 1.5km with a kaolin thickness ranging from 3m to 28m with the deposit open to the north, north east and south east. Overburden consists of a thin soil layer overlying calcrete which in turn overlies a mixed sequence of alluvial clays, sands and gravels. The top of the kaolin is generally silicified, referred to a as a silica cap, with the base of silicification marking the top of the kaolin resource whilst the change in weathering intensity, generally based on whiteness, marks the base of the kaolin resource.

ADN has supplied the drillhole database for the deposit, which H&SC has accepted in good faith as an accurate, reliable and complete representation of the available data. The responsibility for quality control for drilling now resides with H&SC (previously MEP). H&SC performed some validation of the data and noted no sample recovery data was available for the 2008 and 2011 drilling along with limited QAQC data and possible issues with the density data. These deficiencies have been addressed with the recent 2019 infill drilling which now includes drilling recoveries, a more comprehensive QAQC programme and a larger number of density data. The drillhole database for Careys Well is satisfactory for resource estimation purposes.

A review of the limited QAQC procedures and outcomes for the MEP 2011 drilling indicates no obvious issues with the sampling or analysis data. A much more comprehensive QAQC programme was undertaken with the 2019 ADN drilling and indicated some issues with the sampling and processing method but the impact of these issues has subsequently been reduced with some additional testwork. The main issue was an under-reporting of the -45µm material relative to the 2011 drilling due to the wet sieving method being a rather benign processing technique and is not as aggressive as the MEP blunging process. The modest reduction in average -45µm grade (approximately 7-8%) has had a knock-on effect in that it has increased the average reflectance and Al_2O_3 grades (more kaolin as a proportion of the finer material). Initial mine studies including pit design plus the observation that the disparity in -45µm grades lessens with increased kaolinite have indicated that the impact on the overall resource estimates is much less than 7-8%. The CSIRO halloysite analysis has shown a lack of precision, but no bias, that seems inherent with the analytical method. A study on the population distributions between the two drill datasets (2011 & 2019) indicated very similar patterns despite the small systematic shift associated with the two different processing techniques. It was concluded that the two datasets could be combined for resource modelling purposes with some additional testwork indicating that this would be a slightly conservative measure.

The new resource estimates for Careys Well are based on the MEP 2011 drilling (153 holes for 3,794.6m) on approximately 100m centres and the ADN 2019 infill and exploration drilling (95 holes for 2,736m) on 50m and 100m centres respectively. Additionally, 6 MEP Calweld large diameter drillholes completed in 2008 have been included along with geological input from 27 holes drilled in 2013 by Adelaide Brighton ("ABC") for 882m. All drillholes are vertical, intersecting the flat-lying mineralisation at right angles and nearly all holes except some of the Calweld holes and the occasional aircore hole intersected upper (hangingwall) and lower (footwall) contacts to the mineralisation.

H&SC completed an updated geological interpretation on a combination of 50m and 100m spaced E-W sections for the deposit area under investigation. This work utilised the drillhole logging, assayed sample intervals and geological sense, resulting in the creation of 3D surfaces for a base of soil, a base of calcrete, a base of overburden clay, a base of overburden sandstone, a top of kaolinised granite ("KG") which often corresponded to a base of silcrete, but not always, a base of analysed kaolin and a base of kaolin (not always the same as the base of analysed kaolin) with the surface strings snapped to drillholes. It is apparent that mineralisation forms both sharp and gradational contacts with the decomposed granite and the overlying alluvial sediments. In addition, a solid wireframe was designed for the gravels at the base of the overburden sandstone. An halloysite zone was interpreted as a surface based on detected halloysite from the CSIRO work at a nominal cut off of 5% with geological sense. The accuracy of the interpretation is to the nearest metre based on the sample interval limitations imposed by the aircore drilling method.

Nominal 5m composites were extracted from the drillhole database constrained by the "analysed" kaolin surfaces and divided into three categories, namely sample processing (including -45µm material), XRF element analysis and XRD mineral analysis. The number of composites is 382, 380 and 373 respectively reflecting slightly more selectivity in the number of samples chosen for analysis. Compositing of the drillhole sample data utilised a best fit method around a nominal 5m interval (a Surpac compositing option). This reduces the impact of basal residual composites and results in a range of composite lengths whilst maintaining a reasonable number of data points for modelling. Grade interpolation was completed for the -45µm fraction and R457 (reflectance - ISO-brightness) for all material, along with Al_2O_3, Fe_2O_3, SiO_2, TiO_2, and mineral species halloysite and kaolinite, all obtained on the -45µm material. Statistical analysis of the composite data indicated nominally normal distributions, reasonably well-structured data and very low coefficients of variation, all of which resulted in no top cuts being applied. Variography showed weak to reasonable continuity for all elements.

Ordinary Kriging was used for the grade interpolation using the H&SC in-house GS3 modelling software. The modelled data was loaded into a Surpac block model for resource reporting and additional mine studies. A single search domain was used for the element grade interpolation reflecting the overall consistency in strike and dip of the mineralisation. Block size was 25m by 25m by 5m (X, Y & Z) with 6.25m by 6.25m by 1.25m sub-blocking. A 3 pass search strategy was employed with an initial Measured Resource search (Pass 1) of 150m by 150m by 15m with a minimum number of 8 data and 4 octants. Pass 2 (Indicated) involved reducing the number of data to 4 with 2 octants whilst Pass 3 was expanded to a maximum search of 250m by 250m by 15m with a minimum of 4 data and 2 octants for Inferred. Modelling was unconstrained on the lateral peripheries of the drilling with the maximum extrapolation being approximately 200m beyond the last drillhole. The only hard boundaries were the 'analysed' kaolin mineral bounding surfaces.

Initial density had been determined by MEP on 8 samples that were selected to represent a range of kaolinised granite types. The samples were dried, weighed and then coated in epoxy resin and inserted in water such that the amount of displaced water could be measured. Bulk density was then calculated based on dry weight and volume of the sample. The measured bulk densities were reasonably constant ranging from 1.63 to 1.81t/m^3 with the average bulk density of dry kaolinised granite being determined at 1.7t/m^3 which was the default density for the 2018 resource estimation.

In October 2018 a bulk sample programme by ADN included designing and implementing an appropriate method to determine bulk rock density on the unconsolidated, porous kaolin-halloysite material. The method involved vacuum sealing fresh drill samples and completing weight in air weight/water measurements along with oven-drying the sample. A total of 220 samples were collected on which density determinations were completed. The same sample suite was used to determine moisture content. The average in-situ bulk rock density measured for the material sampled was 1.83 tonnes/m^3, whilst the average dry bulk rock density was 1.44 tonnes/m^3. The average moisture content of the bulk sample material was measured to be 21.6wt%. The average dry bulk rock density of 1.44 tonnes/m^3 is materially different from the density estimate of 1.7 tonnes/m^3 (based on 8 samples) used in the previous Mineral Resource estimates. The 1.44t/m^3 has been used as a default value for reporting tonnages for the most recent resource estimates.

Block model validation consisted of a visual comparison of block grades with drillhole assays and composite values, a review of the summary statistics for the block grades and composite values, cumulative frequency curves for each element and check model comparisons. No significant issues were noted with the visual comparison and the statistical analysis.

The impact of the noted under-reporting of the -45µm recovered material with the wet sieving method was checked by running two separate check models for the same overlapping area for each of the two datasets (i.e. the 2011 and 2019 drilling). The result indicated a 9% drop in the amount of -45µm material for the 2019 drilling in line with the composited sample differences. However, as the overlap area included areas of lower mining priority on the periphery of the deposit, was roughly only 30% of the total resource area and that combining the two datasets in a modelling sense is likely to more than halve the 8-9% difference in the -45µm recovered material for the overlap area, the total impact on the resource estimate is likely to be considerably less than 9%. Recent sample processing testwork by ADN using a process more closely aligned with the likely mine processing method has indicated that with additional data analysis, an upward linear correction could be applied to the 2019 data to better align it with the 2011 data.

A check model for a sub-area of the deposit, based on the ABC 2013 drilling was completed by H&SC in 2018 and used estimate kaolin grades compared to the -45µm material, and resulted in a <6% difference in the amount of contained kaolin compared with the H&SC model. Comparison of the 2018 H&SC model with the MEP 2012 resource estimate shows no major difference in the estimated amount of contained kaolin despite the increase in sophistication of the H&SC modelling method.

Reporting of the updated Mineral Resource estimates for the Careys Well deposit uses block centroids with an interpolated grade within the two "analysed" kaolin wireframes for an ISO-brightness (R457 nm) cut off of zero. A brightness filter has already been applied in the manual selection of the 1m samples for compositing.

ADN has informed H&SC that they intend to selectively mine the deposit in an open pit scenario and the resource estimates have been modelled and classified on this assumption. The resource estimates are classified as Measured, Indicated and Inferred with the classification of the Mineral Resources based primarily on the drillhole/sample spacing, the geological model, QA/QC outcomes, density data and drillhole recoveries. The new kaolinised granite resource estimates for the Careys Well deposit are included below.

Category	Mt	R457	-45µm Rec %
Measured	15.6	82.3	50.7
Indicated	4.9	81.7	49.8
Inferred	5.5	82.4	50.4
Total	**26.0**	**82.2**	**50.5**

(minor rounding errors)

The new global estimates show a 9% increase in tonnes with a 5% drop in the -45µm recovered fraction compared to the 2018 estimates. The increased tonnage is due to the discovery of more material in the north east of the deposit outweighing the impact of a 15% drop in the default density value. The drop in the -45µm recovered fraction is due to the lower recovery grades associated with the wet sieving processing method for the 2019 drilling. The amount of Measured Resource has increased by 80% due to the 2019 infill drilling whilst the changes in the -45µm recovered material for both Measured and Indicated Resources is only down 4%, with the biggest decrease in the recovery grades associated with the Inferred (peripheral) material.

ADN are anticipating one of the products from mining will be DSO material. Mineral Resources for DSO material are included below whereby the kaolin grades (combined kaolinite and halloysite grades) have been back-calculated from the CSIRO mineral analysis on the -45µm recovered material and assumes no kaolin with the coarser fraction. The slightly reduced tonnage is due to the classification being based on the amount and distribution of the XRD data which is slightly less than the sample processing data.

Category	Mt	R457	-45µm Rec %	Kaolin %
Measured	15.5	82.3	50.7	45.0
Indicated	4.8	81.7	49.8	43.4
Inferred	5.3	82.1	50.0	42.7
Total	**25.6**	**82.1**	**50.4**	**44.2**

(minor rounding errors)

As noted earlier an halloysite zone has been interpreted, the DSO resource estimates for this zone, including back-calculated kaolinite, halloysite and combined halloysite/kaolinite, are shown below.

Category	Mt	R457	-45µm Rec %	Kaolinite %	Halloysite %	Kaolin %
Measured	8.7	82.6	52.7	40.3	8.9	49.2
Indicated	1.5	81.9	52.6	42.0	7.0	49.0
Inferred	0.4	81.6	51.7	39.8	7.8	47.5
Total	**10.6**	**82.5**	**52.6**	**40.5**	**8.6**	**49.1**

(minor rounding errors)

The Mineral Resources for a high-quality kaolin product for potential High Purity Alumina (HPA) and coatings applications are listed below, whereby the -45µm recovered material proportion is used as a volume adjustment to the global resource using the XRD data-generated resource classification. The results are very similar to the previously announced 2018 estimates, the extra tonnes associated with discovery of kaolin material in the north east (2019 drilling) being offset by a much lower default density and the lower -45µm recovered material values from that 2019 drilling.

Category	Mt	R457	Kaolin %	Al_2O_3 %	Fe_2O_3 %	SiO_2 %	TiO_2 %
Measured	7.9	82.5	88.7	36.7	0.56	47.9	0.44
Indicated	2.4	81.9	87.3	36.3	0.52	48.5	0.50
Inferred	2.6	82.3	85.6	36.3	0.53	48.5	0.51
Total	**12.9**	**82.3**	**87.8**	**36.6**	**0.54**	**48.2**	**0.46**

(minor rounding errors)

A further product option from the recovered -45µm fraction is high grade halloysite material from within the halloysite zone with the estimates detailed below.

Category	Mt	R457	Halloysite %	Kaolinite %	Al_2O_3 %	Fe_2O_3 %	SiO_2 %	TiO_2 %
Measured	4.6	82.7	17.0	76.5	37.0	0.57	47.6	0.44
Indicated	0.8	82.0	13.4	79.7	36.8	0.52	48.0	0.50
Inferred	0.2	81.6	15.0	76.9	36.8	0.52	48.1	0.55
Total	**5.6**	**82.6**	**16.4**	**77.0**	**36.9**	**0.56**	**47.7**	**0.45**

(minor rounding errors)

Future work should look to assess if conversion factors in relation to combining the 2011 and 2019 drilling results can be derived for the -45µm fraction and hence the other analytical results. If this is achievable then remodelling of the resource estimates can be undertaken, perhaps to include some of the other recommendations. Other work should look to involve the collection of additional samples for density measurement, spread over a larger area. It would also be advisable to undertake some pitting to ascertain the 3D nature of the kaolin and elucidate any structural information e.g. jointing, fractures, quartz content that may be relevant to any possible product variation. If additional resources are required then further drilling to the north and the north east of the current Mineral Resource estimates is recommended.

A series of figures and tables appear in Appendix 1.

A brief QAQC report is included in Appendix 2.

Simon Tear
Director and Consulting Geologist
H&S Consultants Pty Ltd

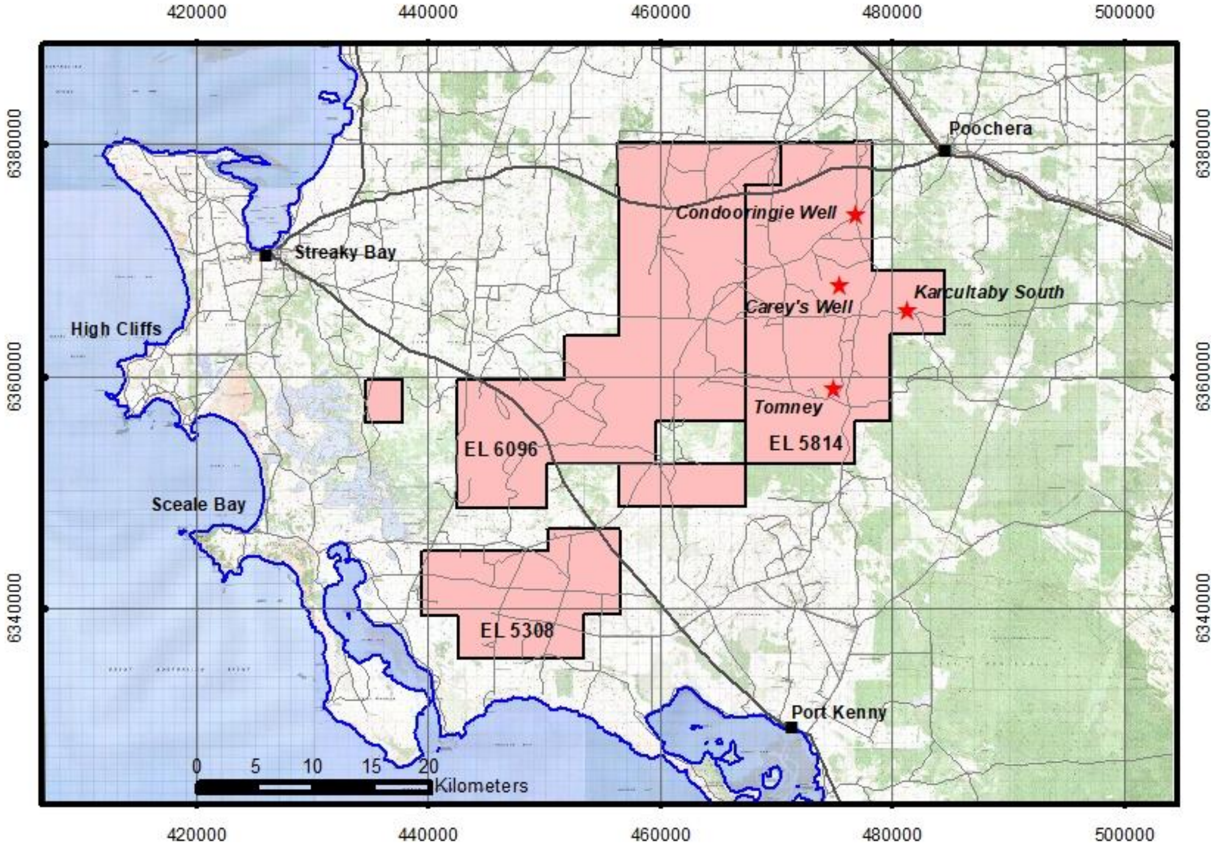
The data in this report that relates to Exploration Results and Mineral Resource Estimates for the Poochera Kaolin Project is based on information evaluated by Mr Simon Tear who is a Member of The Australasian Institute of Mining and Metallurgy (MAusIMM) and who has sufficient experience relevant to 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 Tear is a Director of H&S Consultants Pty Ltd and he consents to the inclusion in the report of the Mineral Resource in the form and context in which they appear.

Some of the data in this report that relates to Product Specification for the Poochera Kaolin Project which is based on information evaluated by Mr Graham Lee who is a Fellow of The Australasian Institute of Mining and Metallurgy (FAusIMM) and who 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 Lee is an Associate of H&S Consultants Pty Ltd and he consents to the inclusion in the report of the Mineral Resource in the form and context in which they appear.

Appendix 1

The map below shows the location of the Poochera Kaolin Project, in South Australia.

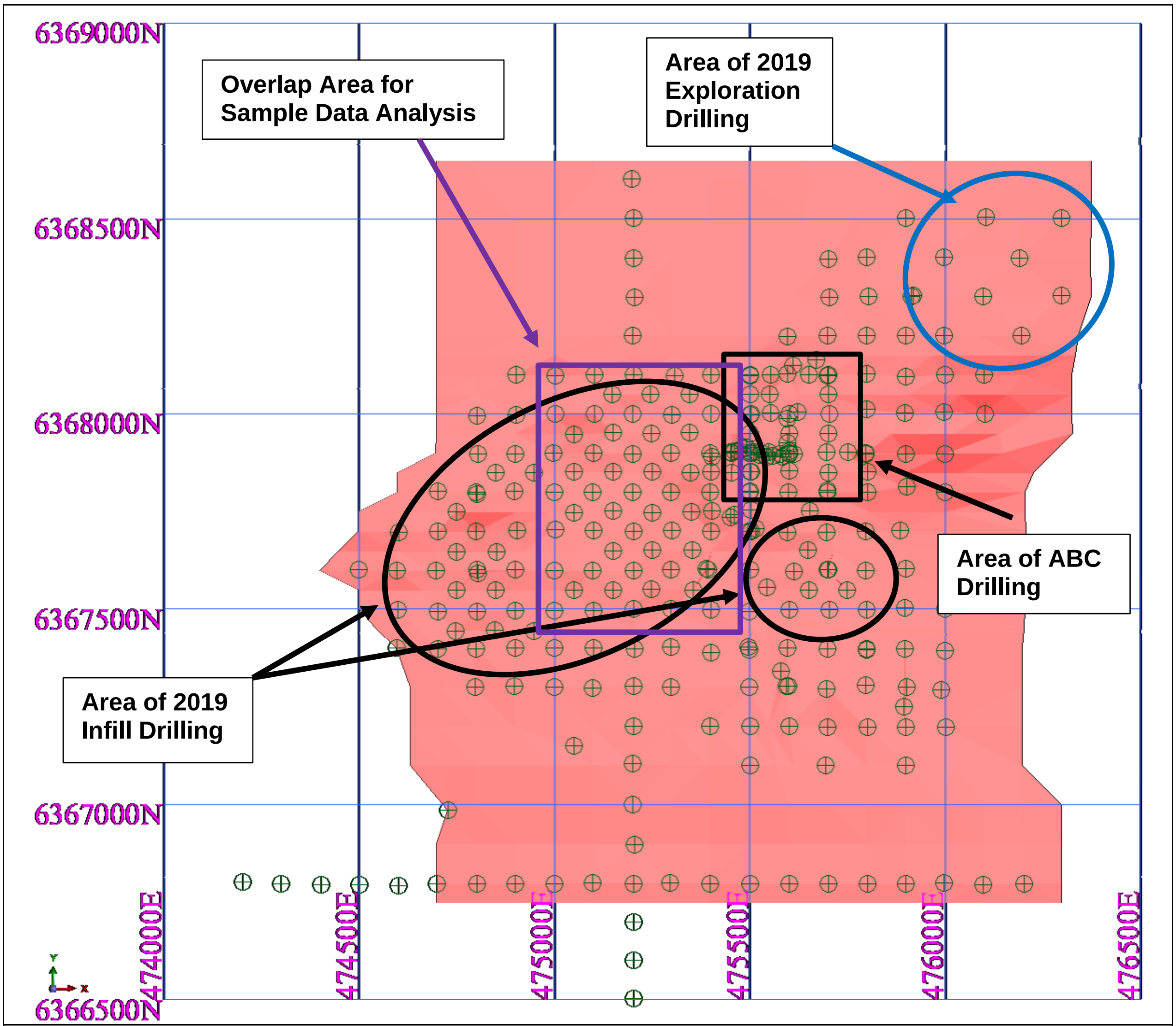
Poochera Kaolin Project Location Map



(source: MEP)

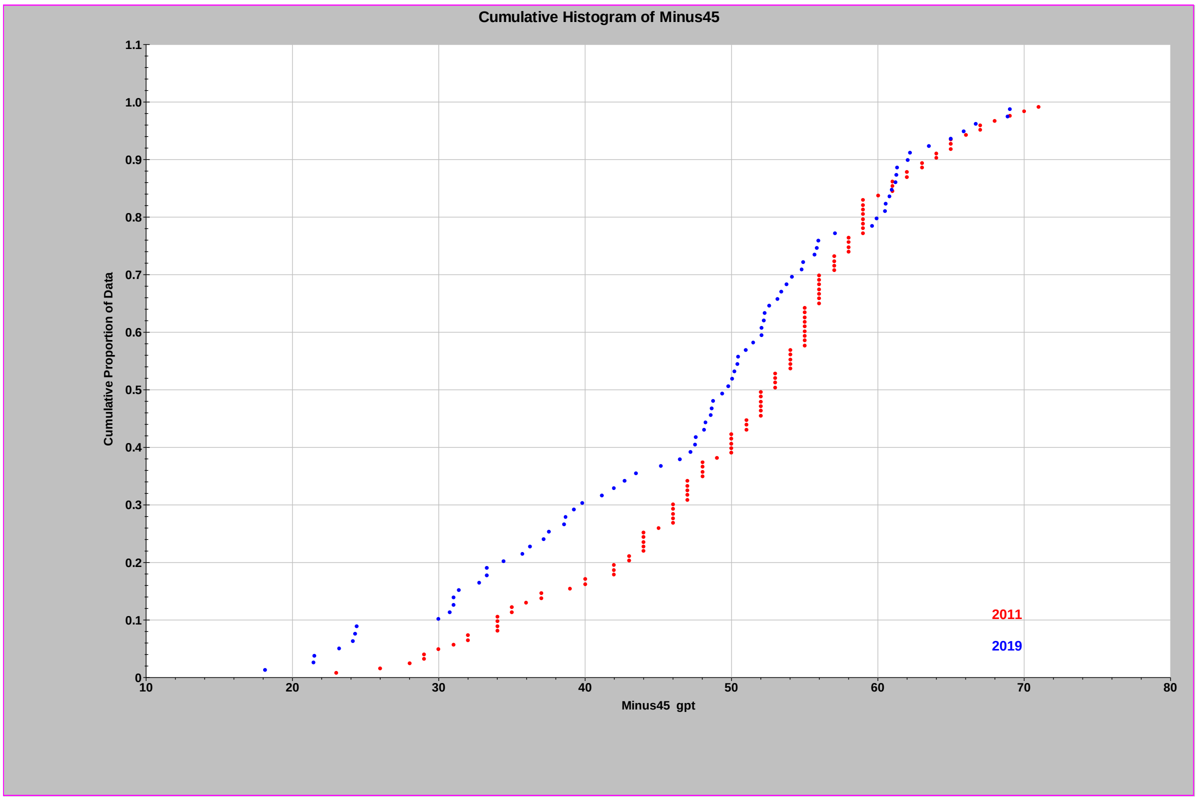
A plan view of the drilling and the geological interpretation for the Careys Well kaolin body is included below. Definition of the kaolin material is based on the "KG" logged geology code in combination with composited samples with assays. The limitation of the 1m sample interval from the aircore drilling and the gradational boundaries associated with the granite weathering meant that no other geological domains within the kaolin were used as either hard or soft boundaries.

Geological Interpretation of Kaolinised Granite Plan View

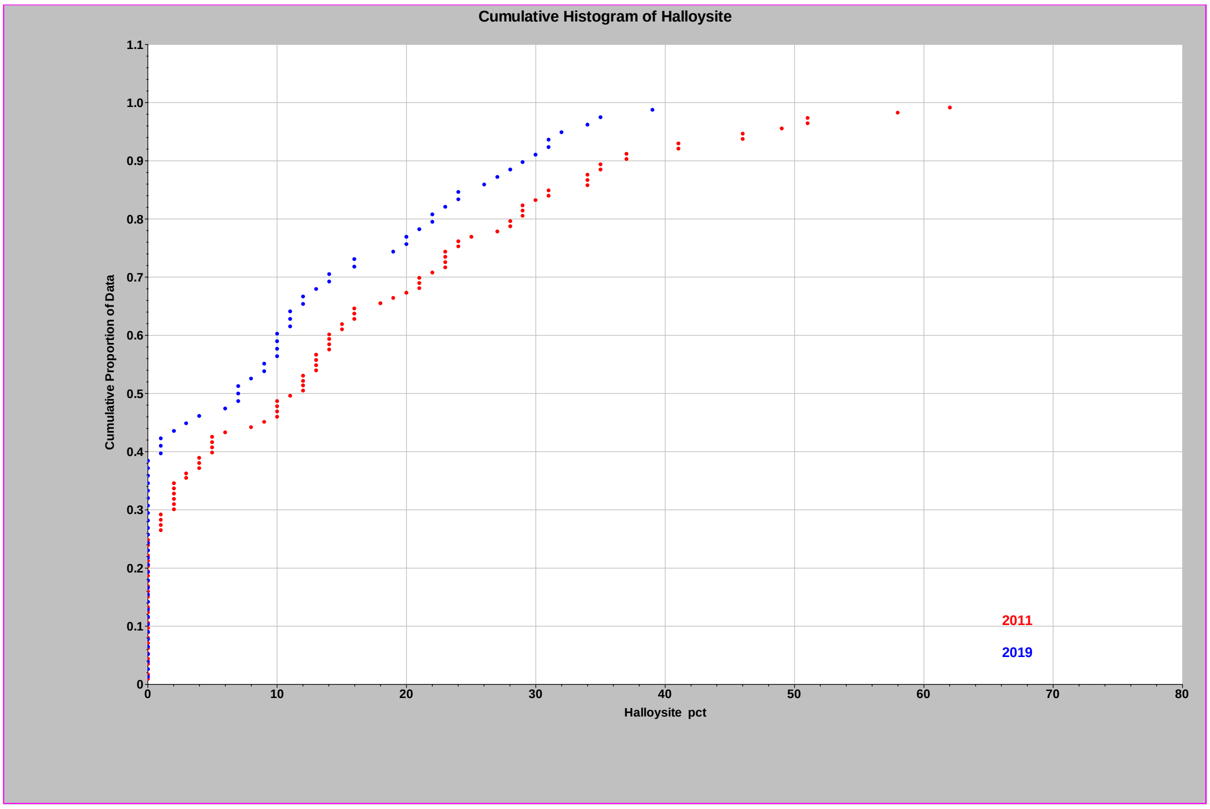


(red surface = top of kaolinised granite; green circles = drillhole collars)
(Close spaced drill line = 2018 bulk sample holes (inc density)

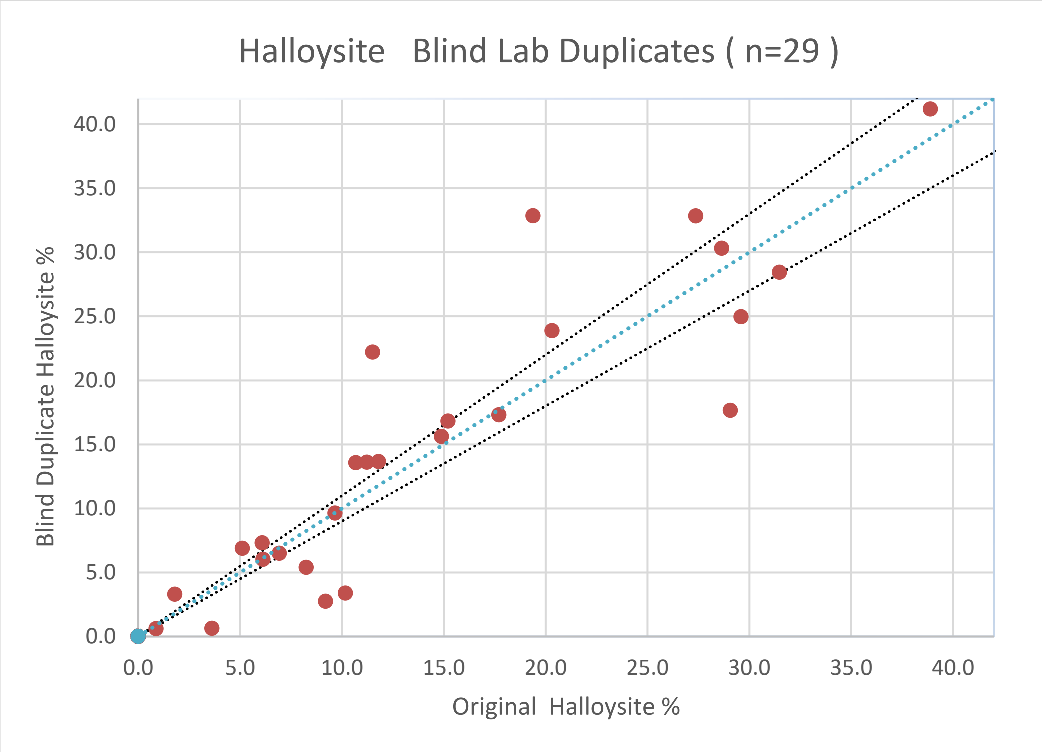
Sample data analysis for the 2019 drilling indicated that the -45µm recovered material was lower than the 2011 data for the same overlapping area in the central west of the deposit (see cumulative frequency plot below). The difference in the means for the two datasets was between 7-8% although the patterns for cumulative frequency plots of the data were very similar, possibly indicating sampling of the same material, the offset being due to the different sample preparation method. The lower -45um fraction results have had a knock-on effect with slightly higher reflectance values for the 2019 drilling (due to a greater percentage of kaolin in the sample) along with higher Al_2O_3 values (especially for lower -45um grades) and lower Fe_2O_3 values. The reason for this has been explained to H&SC by ADN, as being due to the 2011 blunging sample prep process being more aggressive than the wet sieving method and hence producing more finer grained material.



Cumulative frequency plots for the CSIRO halloysite analysis show different populations with similar patterns for the two drilling campaigns (see the cumulative frequency plots below). The difference has been attributed by ADN to the differences in the sample prep method, as QAQC results indicate no obvious internal bias with any of the analysis.



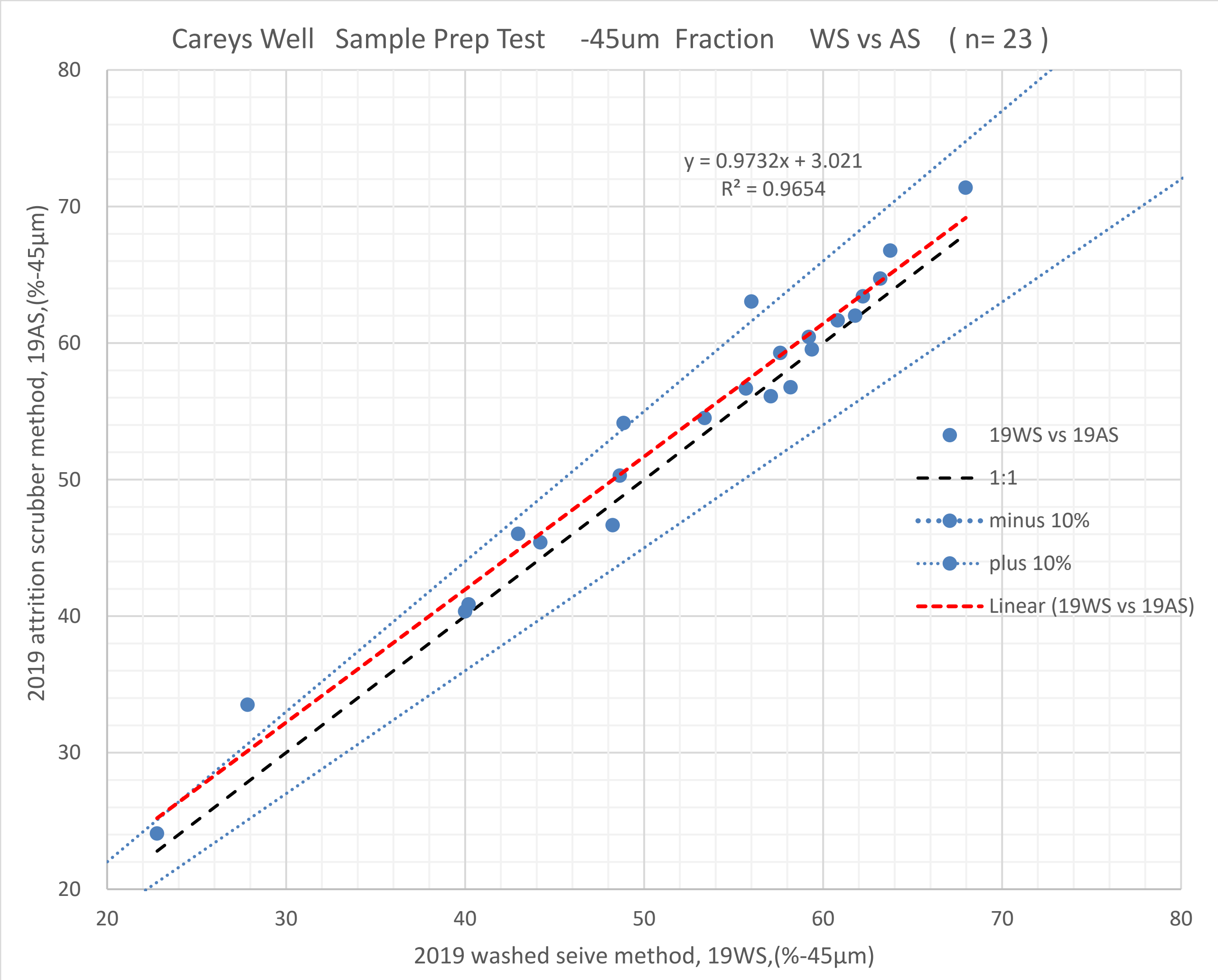
As part of the 2019 QAQC programme CSIRO analysis of 29 blind samples from 2011 indicated no obvious bias but only modest precision (see figure below). The lack precision may be a fundamental feature of the analytical method and/or the halloysite occurrence over time. The blind duplicates come from different 50g splits, separated over time. CSIRO internal lab duplicates of the same single split show higher precision.



(blue dashed line = 1:1 ratio; black dashed lines = +/- 10% variance)

A check on the sample prep process involved the submission by ADN of 23 samples, covering a range of -45µm fraction grades, to a UK test facility. The UK testwork used an attrition scrubber ("AS") blunging and sieving method, similar to that likely to be used for full scale production. The results in comparison with the wet sieved ("WS") results indicate a slight positive bias, roughly 3.5%, for the AS results but it is not considered significant. This means that the combination of the 2011 and 2019 drilling analytical results is likely to result in some averaging out of values with respect to modelling.

The conclusion on the combining of the 2011 and 2019 drilling analysis from the UK testwork is that the 2011 data might be slightly higher than what might be produced in full scale production. The 2019 data might be slightly lower than full scale production but when it comes to modelling the two will tend to average each other out. Further testwork and analysis is recommended although it is anticipated the likely error with respect to the resource estimates will be in the 3.5 to 4% error range which is acceptable for Measured Resource.

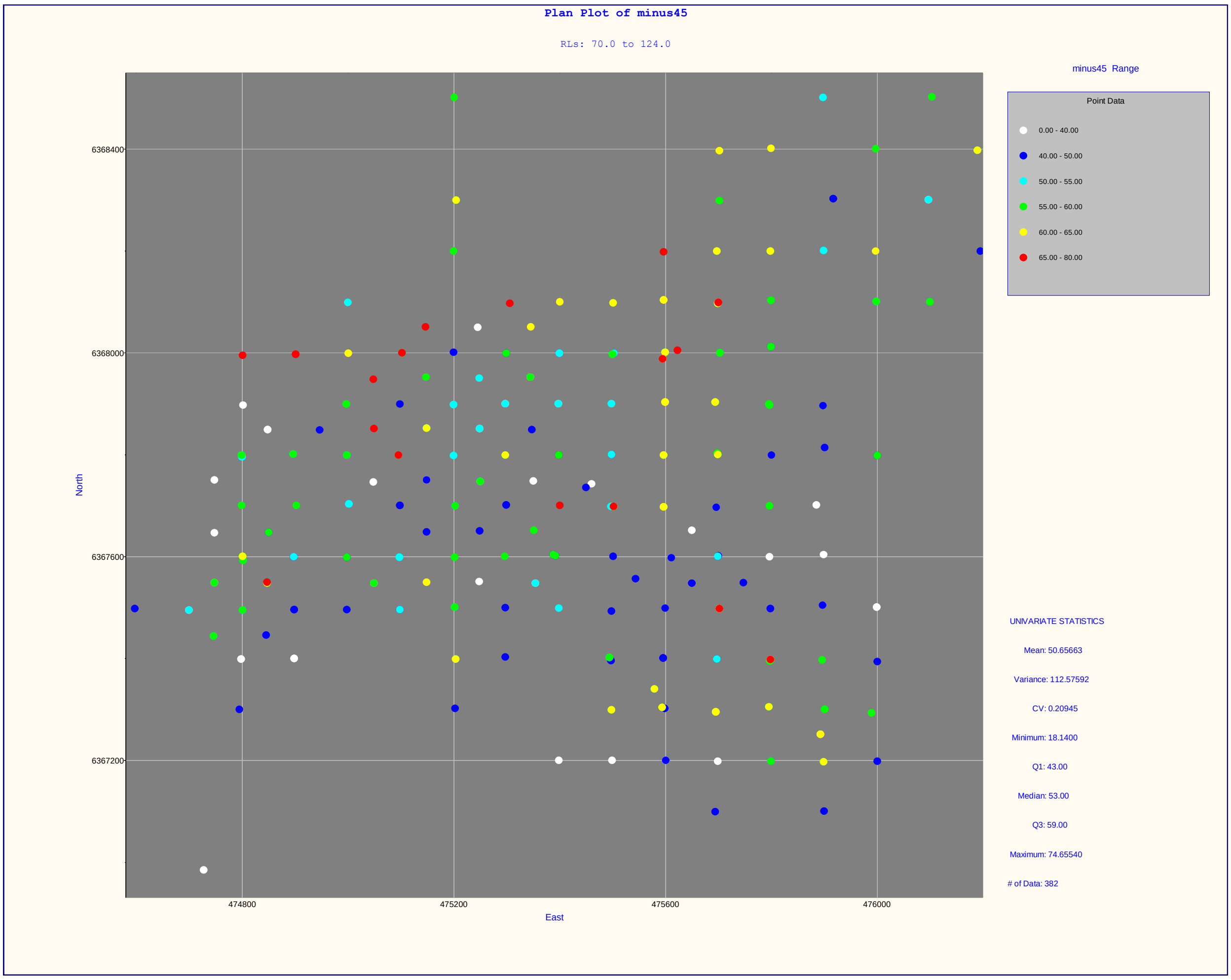


5m composites for resource modelling were generated from the drillhole database using the upper and lower 'analysed' kaolin surfaces. Summary statistics for the 5m composited data showed well-structured data and the relatively low coefficients of variation suggesting that the data is not skewed and that no top cutting of the data is required.

An example of the Careys Well composite distribution for the -45µm material is included below. Of interest is the higher recoveries observed at the northern edge of the deposit indicating a greater concentration of kaolin and that the deposit is relatively open in that area.

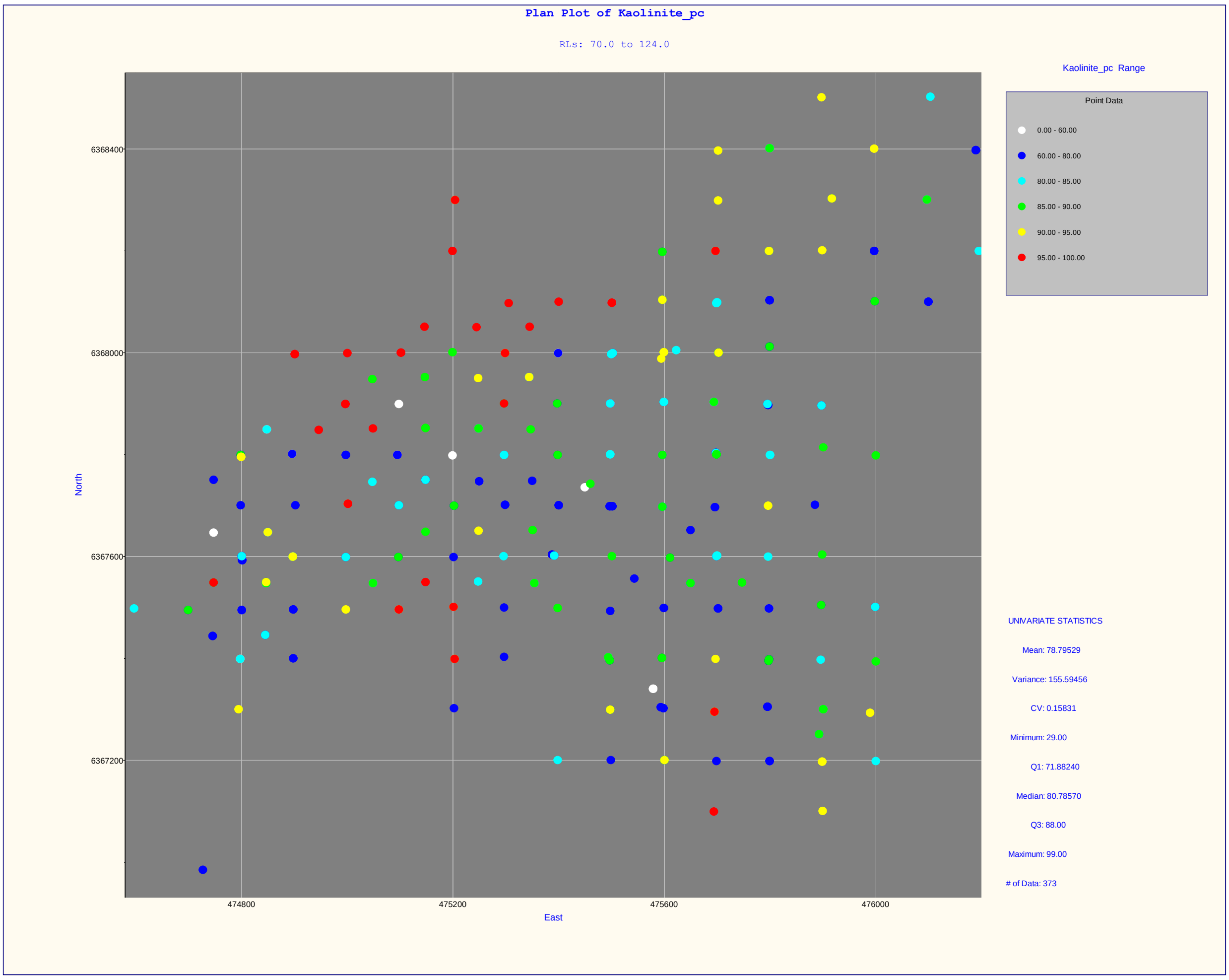
An additional pair of images are included below for the kaolinite and halloysite assays for the -45µm recovered material.

Composite Data Distribution -45µm Material Plan



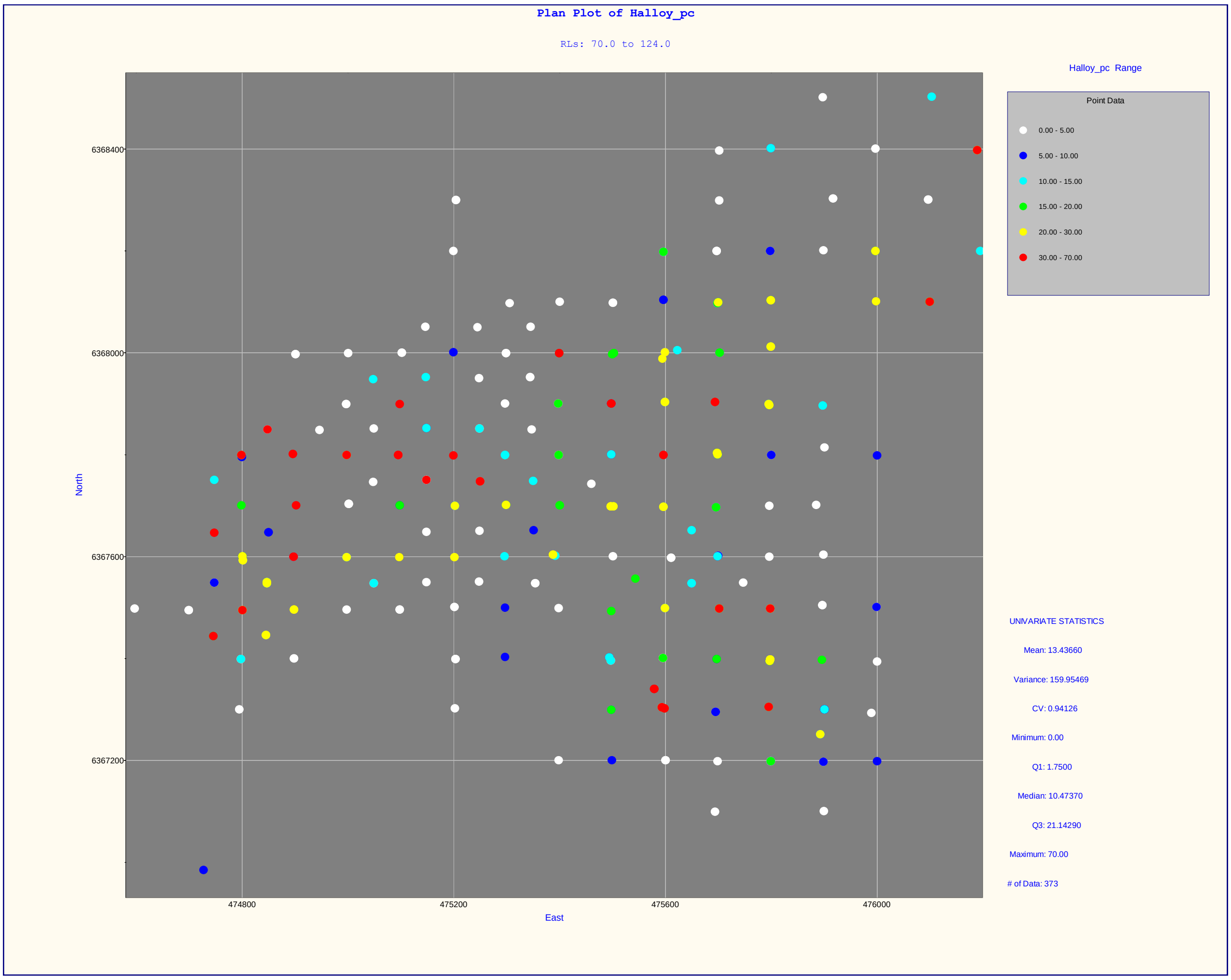
The kaolinite image shows a zone of high grade on the northern margin of the drilling and relatively lower grade in the central area. This central area corresponds to increase levels of halloysite which means not necessarily any drop in overall kaolin levels.

Composite Data Distribution -Kaolinite Plan



The halloysite composite data shows a more restricted zonation to the higher grade material, generally antithetic to the kaolinite content (as might be expected).

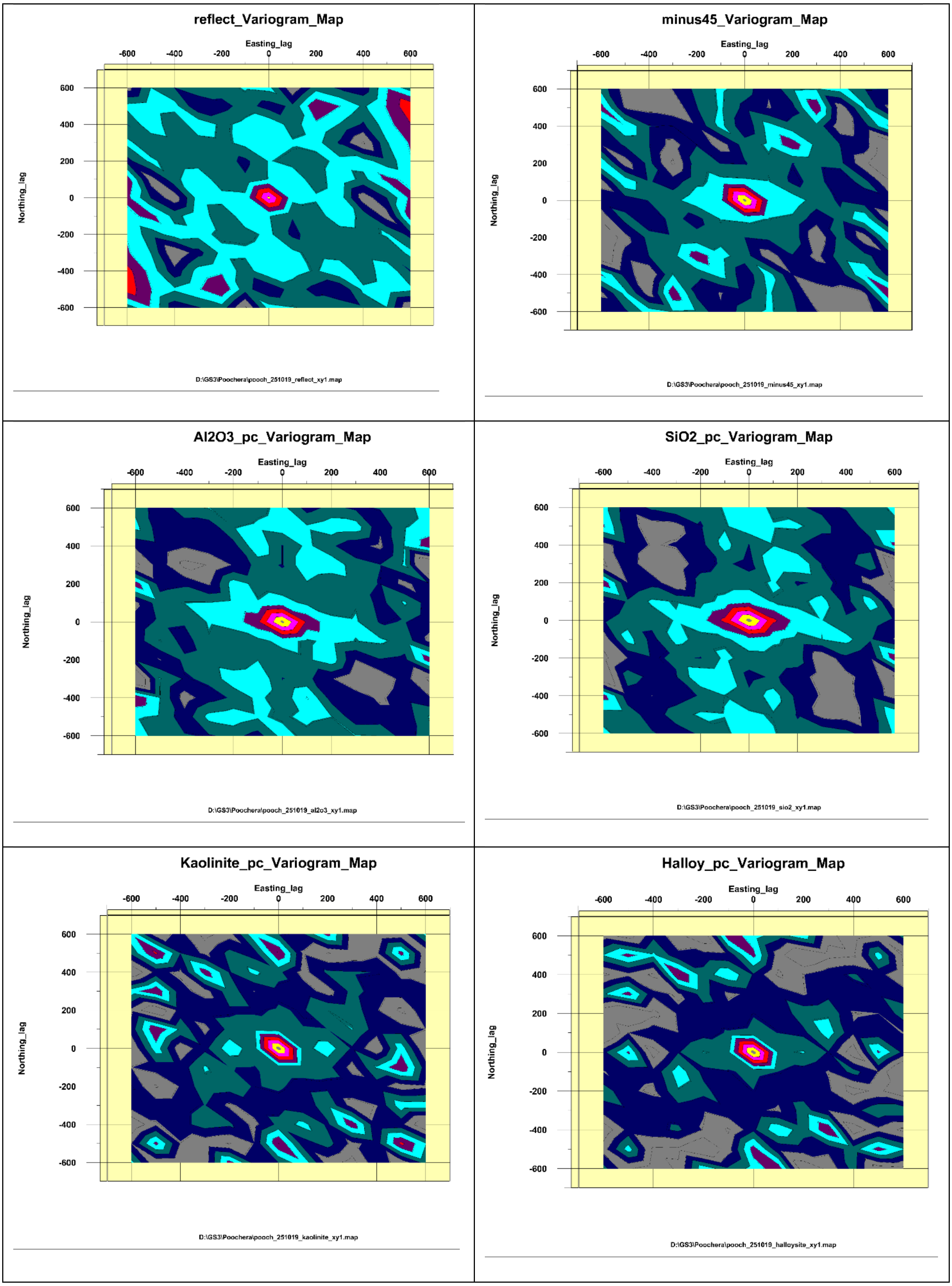
Composite Data Distribution -Halloysite Plan



The drillhole sample compositing has generated a limitation on the ability to analyse any subtleties in the chemical/mineralogical variation of the kaolin. As a result, variography is considered only modest mainly due to a lack of data that makes it difficult to delineate structure in the data and hence inform on grade continuity.

The XY variogram maps for the R457 reflectance, the -45µm recovered material, Al_2O_3, SiO_2, kaolinite and halloysite are included below. There appears to be only a moderate level of discrete grade continuity for most elements. This is as much to do with the large compositing size limiting the amount of data for analysis, possible undulations in the kaolin base and its thickness, the assay differences for the 20111 and 2019 drilling and possible complications with the overlying gravel and sand sediments. There are moderate indications of an E-W grade continuity direction although this may be a function of the more predominant ENE-WSW drillhole axis. Other causes may be the impact of an E-W fault that has allowed for more intense/penetrative weathering of the granite. It may also be due to a fundamental granite foliation or some other primary mineralogical variation in granite composition.

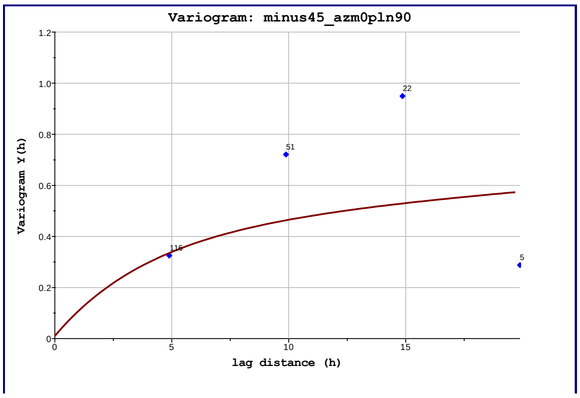
Example of Variogram Maps for Composites



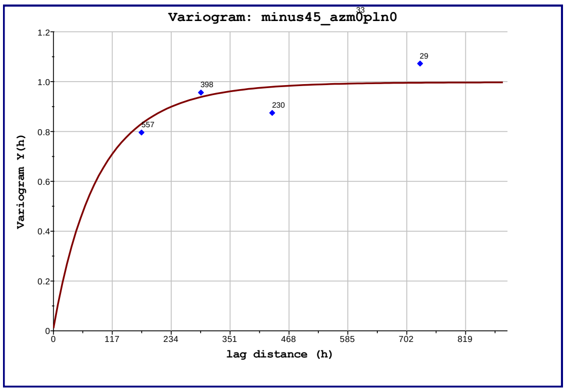
Examples of variograms and the variogram model for the -45µm recovered material are included below. The impact of the 5m compositing and lack of structure is evident in the downhole variogram. The variogram model is a flat ellipse slightly rotated north of east.

Example of Variograms for the -45µm Recovered Material

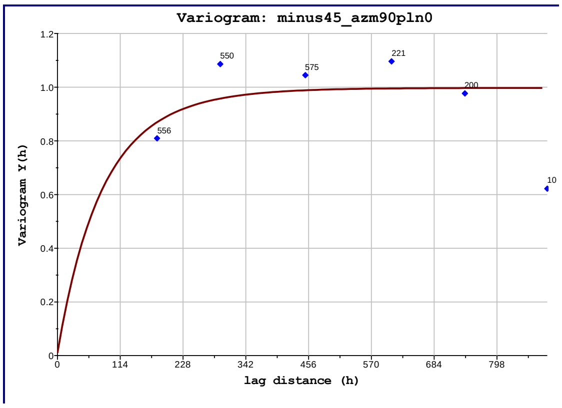
Downhole



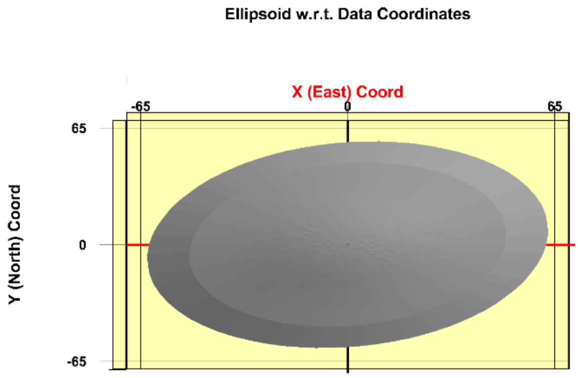
E-W Direction 1



N-S Direction 2



Variogram Model (plan view)



Details of the search parameters for the resource modelling are included in the table below.

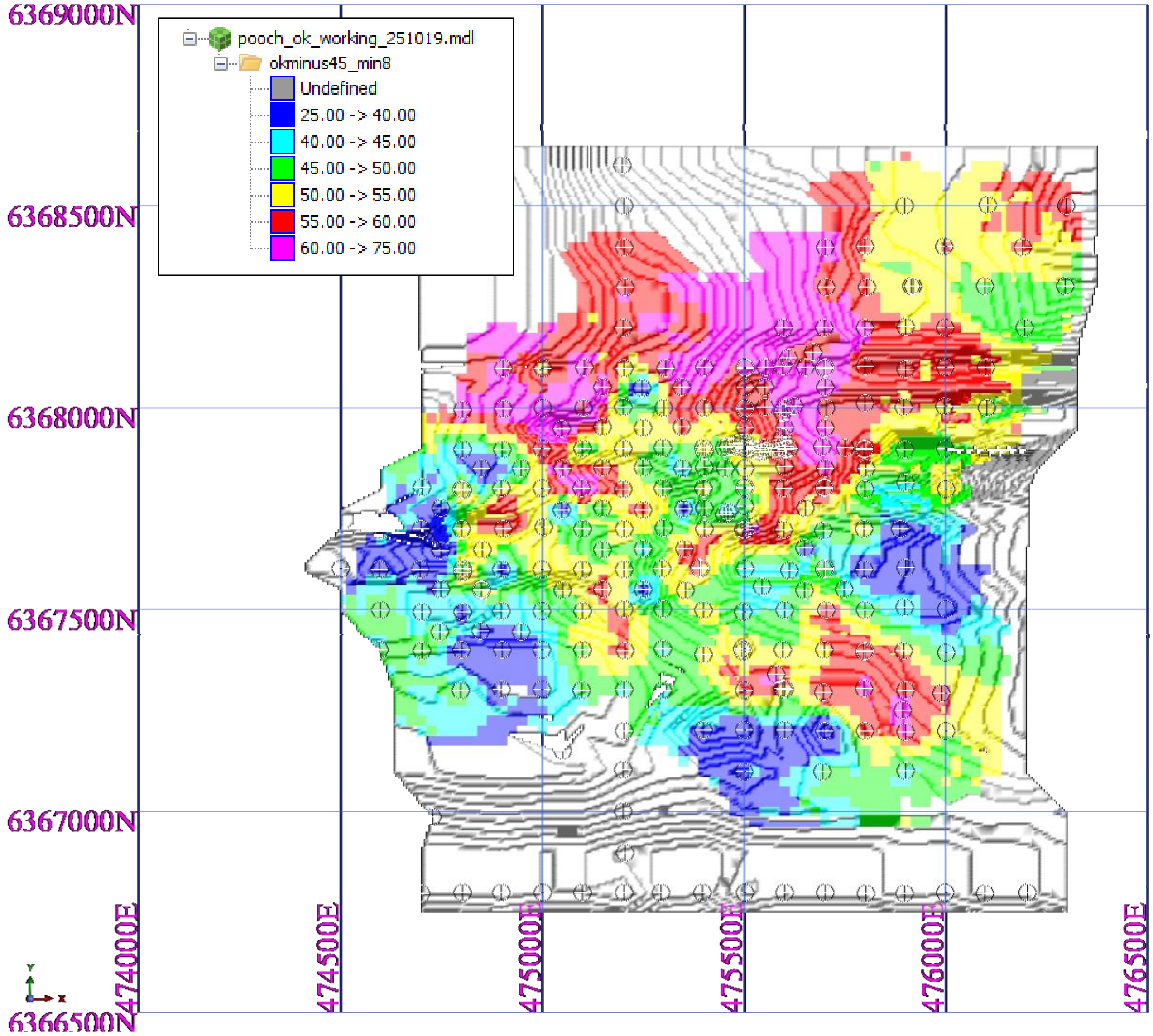
Search Parameters for Grade Interpolation

	Pass 1	Pass 2	Pass 3	Rotations
X	150	150	250	0
Y	150	150	250	0
Z	7.5	7.5	15	0
Min Data	8	4	4	
Max Data	32	32	32	
Min Octants	4	2	2	

(trigonometrical convention for rotations)

Estimation results for all three pass categories for the Careys Well Deposit are reported for block centroids (sub-blocked) between the upper and lower kaolin wireframe surfaces at a zero R457 reflectance cut off grade. An example of the block grade distribution for the -45µm recovered material is shown in the figure below (only the top block is shown)

Careys Well -45µm Material Block Grade Distribution

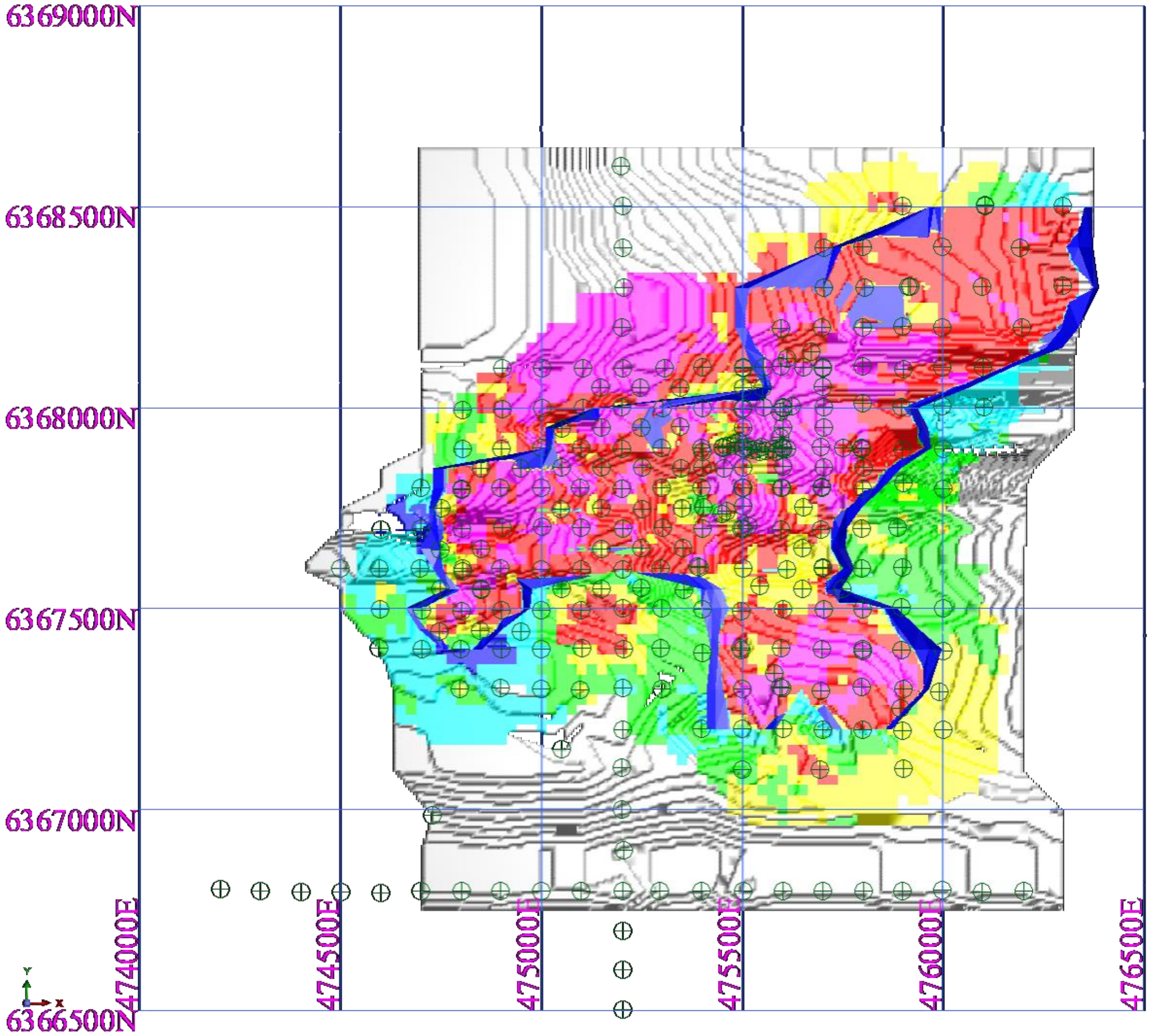


(green circles = drillhole collars)

An example of the kaolin block grade distribution (combined kaolinite and halloysite) for all 3 pass categories for the -45µm recovered material is shown in the figure below. The blue outline represents the halloysite zone. The high grade area north of the halloysite zone is of interest in terms of further exploration as it is high grade kaolinite with no halloysite but is supported by limited drilling.

The creation of kaolin values is achieved by using the kaolinite value for all blocks and adding the halloysite grades from within the halloysite zone only.

Careys Well -Kaolin Block Grade Distribution

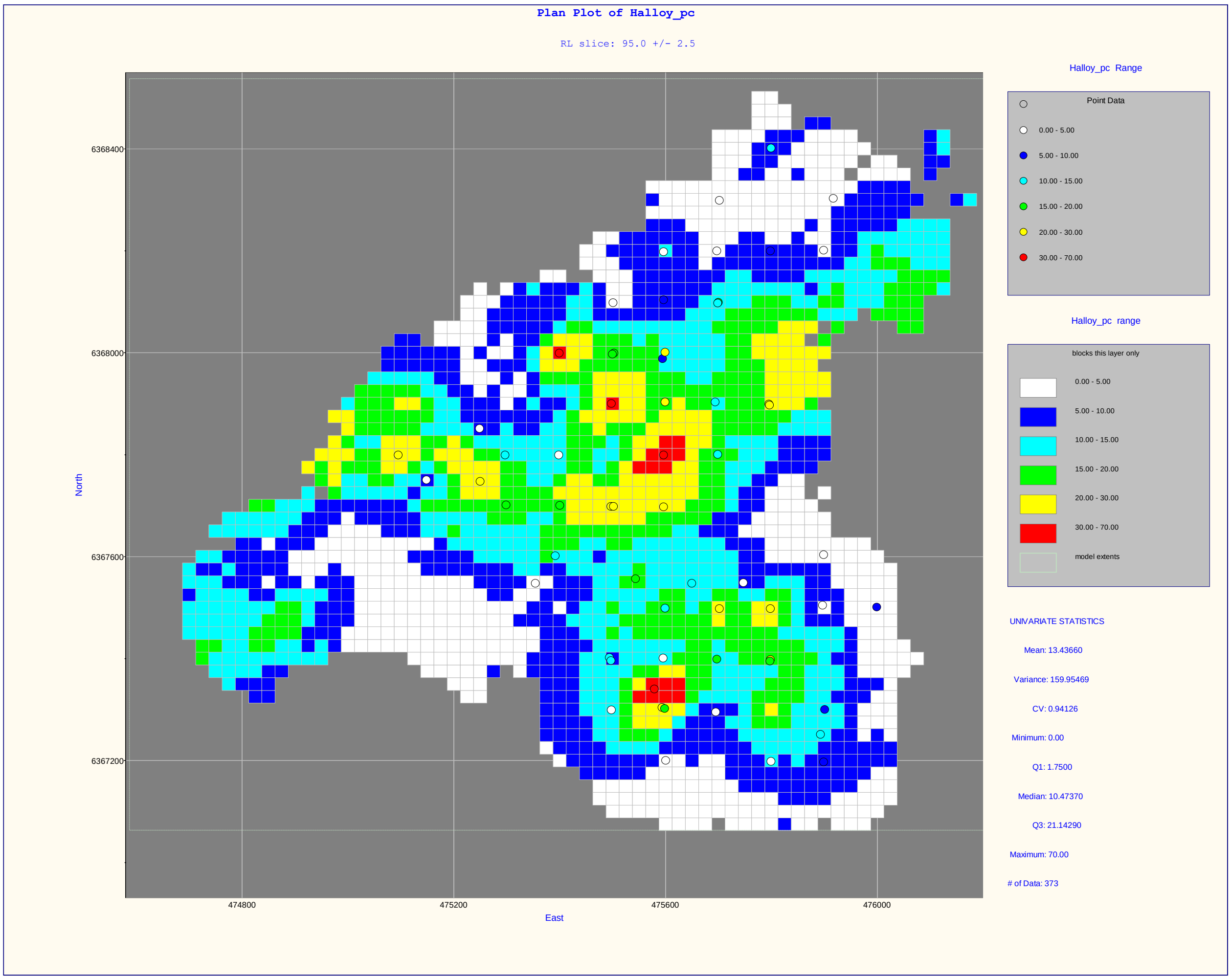


(green circles = drillhole collars)

Validation of the H&SC block model has involved a visual comparison of block grades with drillhole assay values. No issues were noted. An example of the halloysite composite value versus block grades for the 95mRL is included below.

Other methods of validation have included comparison of summary statistics for composite values and block grades, no issues noted, and cumulative frequency plots for composite values and block grades with no significant issues noted.

Careys Well Composite Value vs Block Grade for Halloysite 95m RL



Classification of the resource estimates is derived from the search passes and is detailed below.

Resource Classification

Classification	Pass Category
Measured	Pass 1
Indicated	Pass 2
Inferred	Pass 3

Other considerations in the classification include the following:

Positive

- Aircore drilling is recent on a systematic 50 by 50m or 100m by 100m grid
- Reasonably spaced drilling adequate for Measured and Indicated Resources
- Composite data does not appear to be skewed such that Ordinary Kriging is an appropriate modelling method
- A good geological understanding of the deposit and the controls to mineralisation.

- QAQC for the recent and historic drilling has indicated no obvious issues with the sample preparation or analysis.
- Recent aircore drilling has shown no issues with drilling recoveries and confirms the 2011 drilling observations.
- More detailed density data (200+ samples) has allowed for a revised default density to be used for the resource estimation (previously density was based on 8 samples)
- Robust resources by comparison with other previous or check models.
- Preliminary testwork on alumina content and the ability to produce HPA previously carried out with Bureau Veritas, UniSA and the University of Newcastle showed that the product would be suitable for HPA generation with the added bonus that it gives a significantly higher alumina mass yield than comparable Australian kaolin deposits.
- BHM Consultants were commissioned to undertake the necessary concept metallurgical investigation and future process design aspects for upgrading typical hydrous processed kaolin from [Poochera] to a saleable HPA product via industry standard hydrometallurgical processing routes. The BHM testwork indicates that an HPA product with 99.99% purity is readily available from [Poochera] kaolin/halloysite feedstock using an industry standard HCL two-stage dissolution-precipitation process, with the initial testwork achieving 99.9855% alumina.

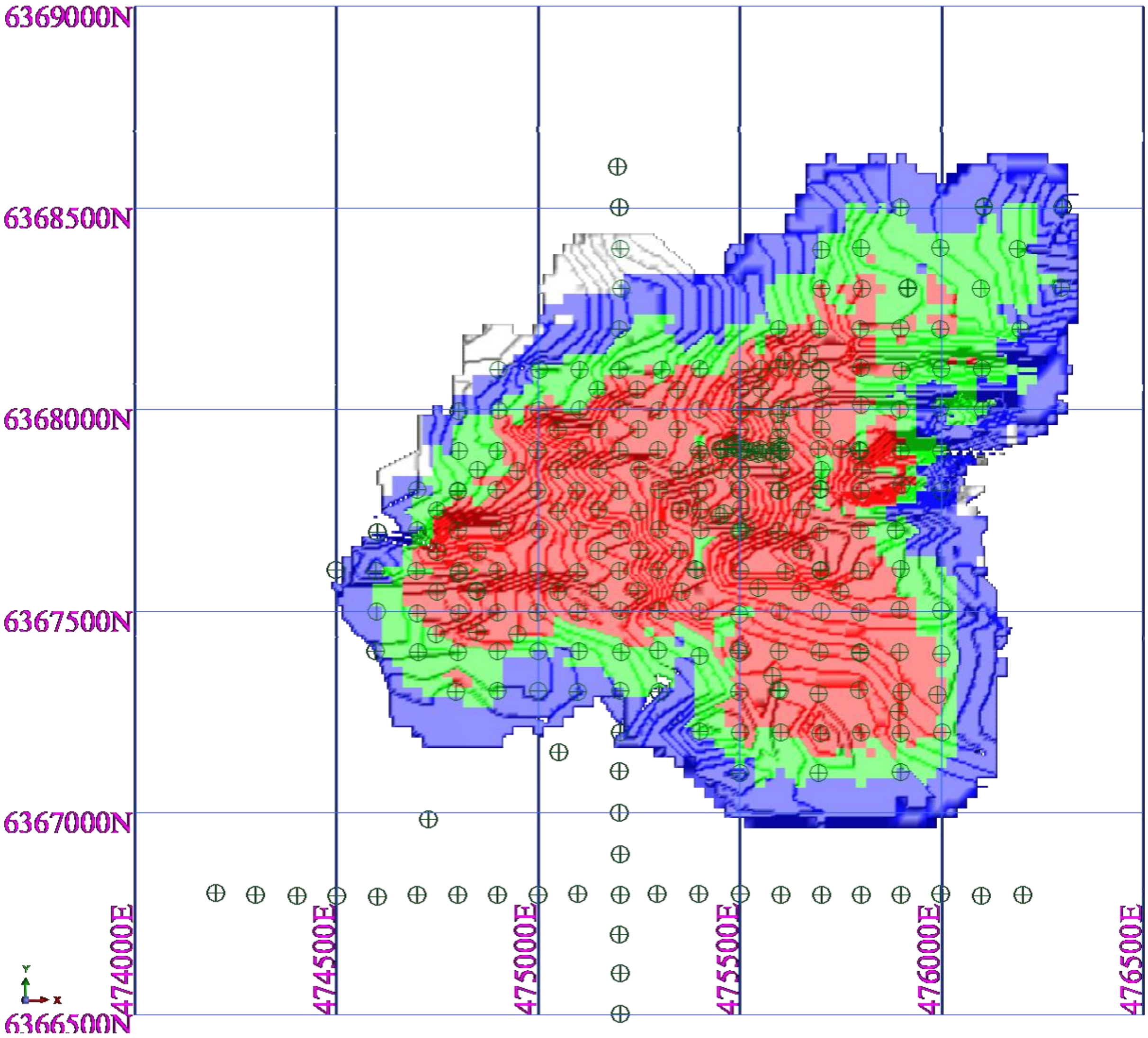
Negative

- The difference in the two datasets for the -45µm recovered material, and its impact for all subsequent analytical results, for the 2011 and 2019 drilling. It appears that the same material was sampled, as demonstrated by the patterns of the cumulative frequency curves, but the different sample preparation processing has produced a 7-8% difference in the means of the datasets. The level of impact on the overall resource estimates is difficult to tell (noting that there are changes in default density and additional discovered material) but it is likely to be much less than 7-8%.
- Poor precision associated with the CSIRO halloysite analysis.
- Other minor QAQC issues (see Appendix 2)
- Possible uncertainties to the base of mineralisation with the chance of an undulating surface to the kaolin. Thought to be less of risk with the 50m infill drilling.
- Possible lack of density data over the whole deposit; the detailed work was carried out over a very small area.

An example of the classification of the Careys Well resource estimates for the kaolinite material is included below. The small grey area on the north west margin represent blocks that have a -45µm grade but no kaolinite grade.

H&SC

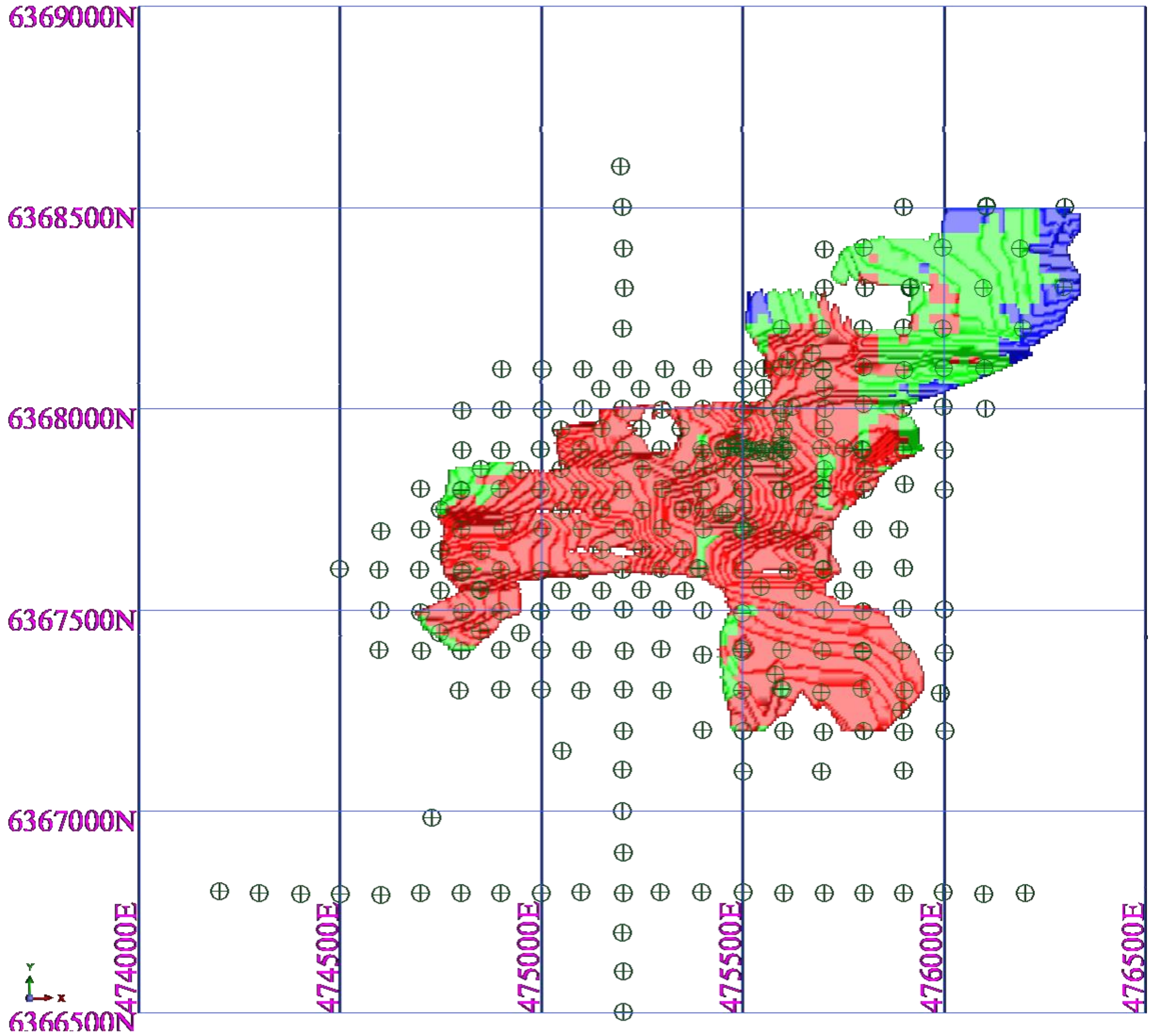
Careys Well Resource Category for Blocks for Kaolinite



(red = Measured; green = Indicated; blue = Inferred; green circles = drillholes)

The figure below shows the classification of the resource estimates for the halloysite zone.

Careys Well Resource Category for Blocks in the Halloysite Zone



(red = Measured; green = Indicated; blue = Inferred; green circles = drillholes)

Exploration potential for the Careys Well kaolin deposit exists mainly to the north and north east of the deposit where it is open. Kaolin has been logged in the southernmost line of drillholes but there are no sampling and analytical results to confirm the quality of the kaolin material.

Appendix 2

QAQC Report for Careys Well Kaolin Deposit, South Australia

2019 Drilling Programme

The 2019 QA/QC programme is of an acceptable level and conforms to, sometimes exceeding, common industry practice. The results confirm that there are no issues with the 2019 sample prep or analysis.

- The field duplicates show good precision for most elements with no significant biases. Thus, there are no issues with the sub-sampling of the drilled material. For halloysite there is poor precision (with no bias) that is attributed to the difficulties with the halloysite analytical technique.

- Laboratory duplicates and blind checks (for accuracy) for XRF and XRD analysis generally show good precision with no bias, except for halloysite which shows typical poor precision but with no bias. There are no issues with brightness which shows good precision with no bias.

- Re-sampling checks of the 2011 drilling indicate good precision but with a positive bias for the original sampling particularly the -45µm recovered material, reflectance, Al_2O_3, Fe_2O_3 and kaolinite. This is attributed to the different sample prep methods and is a concern that requires further work to measure the risk. The checks also confirm a significant positive bias for the 2019 TiO_2 data albeit at low levels, that has no explanation at this stage. The lack of precision for halloysite is also confirmed.

- Re-testing of 2011 samples via XRF confirmed the accuracy of the original analysis including the TiO_2 data.

- Hole twinning of 12 pairs of aircore 2011/2019 drillholes generally showed a weakening of the precision potentially due to the difficulty of getting exactly matching mineral intercepts with the 1m aircore sampling. The results indicate slightly longer average mineral intercepts for the 2011 drilling which is accompanied by a greater percentage of -45µm recovered material (average 4% greater). It is uncertain if the two factors are related. Otherwise modest precision with a minor positive bias for the 2011 drilling is associated with the reflectance, Al_2O_3 and SiO_2 XRF results but poor precision occurs for the Fe_2O_3 and TiO_2 XRF results and the kaolinite and halloysite XRD analysis. Offsetting the poor precision for the XRD analysis is a lack of significant bias but for the two XRF outcomes there are significant biases ie for TiO_2 it is positive for 2019 drilling and for Fe_2O_3 it is positive for 2011 drilling. The reasons for this are uncertain but the poor precision maybe due to low values associated with the analysis ie close to detection limits. However, the main issue is the bias associated with the -45µm recovered material which is attributed to the different sample prep techniques.

None of the above issues are considered critical but the cumulative effect of various minor issues, may have a slight negative impact on the resource classification.

2011 Drilling programme

The 2011 QA/QC programme is of a moderately acceptable level and conforms to common industry practice. The results show that there is a minor issue with the 2011 sample prep but no issues with the analysis. It should be noted that the 2011 sample preparation is different to the 2019 process with a resultant difference in the -45μm recovered fraction. This difference has had a knock-on effect to the results from the subsequent element and possible mineral analysis. H&SC consider the that both sample prep methods are 'correct' and are perhaps end members of the likely processing method to be used at plant scale.

The field duplicates show good precision for most elements with no significant biases. Thus, there are no issues with the sub-sampling of the drilled material.

Laboratory duplicates for XRF and XRD analysis generally show good precision with no bias, except for halloysite which shows typical poor precision but with no bias. There are no issues with brightness which shows good precision with no bias.

There was no hole twinning that allowed for direct comparison of analytical results. The 2013 drilling included five pairs of twin holes form which it was only possible to confirm the kaolin interval and a rough measure of the amount of kaolin present. However, the overall weighted average difference of kaolin between the 2011 and 2013 intervals is just under 7%.

JORC Code, 2012 Edition – Table 1   Careys Well Kaolin Deposit

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 (e.g. 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 (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.	• Sampling consists of Aircore or power auger drilling to produce chip samples representing 1m of drilled material. Samples are composited to between 1 and 5m via riffle splitting to perceived common reflectance intervals. Samples either initially processed at a local facility or sent for processing and analysis to a commercial laboratory. Processing includes blunging and wet sieving for the -45µm fraction, analysis of the fine fraction includes measuring reflectance (third party lab) and XRF analysis for element composition and XRD analysis for mineral species abundance including kaolinite and halloysite testing was completed at CSIRO • Aircore drilling of vertical holes to industry standard completed by Andromeda Metals ("ADN") generating 1m chip samples. A total of 109 holes for 3,265m completed in 2019. Drilling penetrated beyond the kaolin to the partially decomposed parent granite. Maximum drilling depth is 54m. • Aircore drilling of vertical holes to industry standard completed by Minotaur ("MEP") generating 1m chip samples. A total of 153 holes for 3,795m completed in 2011. Drilling generally penetrated beyond the kaolinite to the partially decomposed parent granite. Maximum drilling depth is 48m. • Samples composited based on visually assessed reflectance levels. Composite intervals range from 1-5m. • 2011 Sample preparation and initial testing was carried out at Minotaur's pilot kaolin processing facility at Streaky Bay, South Australia. 2019 sample compositing was carried out at Minotaur's pilot kaolin processing facility at Streaky Bay, South Australia. Samples then transferred to a commercial laboratory, Bureau Veritas, in Adelaide for further processing. • Sample processing generated results for -45µm material with follow up assaying consisting of industry standard XRF analysis, XRD mineral species analysis, ICP analysis and reflectance measurement suite. Additional analysis for halloysite was undertaken as a separate phase. • Kaolinite is a white, weathered clay product easily distinguished in drilling.

Criteria	JORC Code explanation	Commentary
		The mineralisation forms a flat lying blanket atop a partially decomposed granite. Cover material comprises alluvial clays and sands and calcrete. The kaolinite is capped by a silicified zone generally logged as 1m thick. • The anticipated product for the 2011 drilling was a high quality high reflectance material for use in paper coating. Andromeda ("ADN") are looking at several different options including supply of raw material feed and semi-processed product for ceramics applications. • 6 Calweld holes for 142m were drilled in 2008 by MEP in order to supply bulk samples. These holes are included in the new resource estimates. • Additional drilling of 27 reverse circulation (RC) holes for 882m by Adelaide Brighton ("ABC") was completed in 2013. Drilling comprised a sub-area of the MEP-defined kaolinite body with the anticipated product being suitable as a cement filler. Sampling and analysis was different to the MEP work and has not been used to numerically help define the Mineral Resources. • In 2018 a total of 21 holes were drilled for bulk sample collection using a power auger. The material was not processed or assayed for use in the resource estimates but a detailed study of density of the kaolin material was completed and was used in the resource estimates.
Drilling techniques	• Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. 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).	• 2019 ADN: Drilling completed by Mcleod Drilling using an MD1 Almet drill rig. The majority of the drilled metres were completed with 77mm diameter aircore drilling technique. 4 drillholes were drilled with an 87mm diameter bit in order to convert them into monitor wells (piezometers). • 2011 MEP: Drilling completed by contractor Johannsen Drilling using an Edson 2000 drill rig. Some drillholes were pre-collared using a rotary air blast (RAB) open hole hammer technique to penetrate hard bands of shallow calcrete and, where present, a silcrete horizon at the top of the kaolinised granite. The majority of the drilled metres were completed with 75mm diameter aircore drilling technique. • 2013 ABC : Reverse circulation (RC) drilling completed by Coughlan Drilling contractors; diameter and drill bit unspecified however ABC drilling data have not been used to numerically help define the Mineral Resources.2008 MEP: Drilling completed by contractor Kim Thiele using a Calweld rig to drill 810mm diameter holes enabling collection of approximately 1 tonne of kaolinised material per downhole metre drilled.

Criteria	JORC Code explanation	Commentary
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 loss/gain of fine/coarse material.	• 2019 aircore ADN: All metre bags that were sampled had their weights recorded before compositing and splitting for assay purposes. With few exceptions samples recovered were dry with good recoveries. The depth of penetration of the drill bit was noted and the downhole interval recorded for each aircore sample. Semi-quantitative estimates of sample recoveries were made • 2011 aircore MEP: No recovery data were available. Damp intervals were recorded in logging. The depth of penetration of the drill bit was noted and the downhole interval recorded for each aircore sample. • 2013 RC ABC: No recovery data were available. Damp intervals were recorded in logging. The depth of penetration of the drill bit was noted and the downhole interval recorded for each RC sample. • 2008 Calweld MEP: No recovery data were available. Damp intervals were recorded in logging. The depth of penetration of the drill bit was noted and the downhole interval recorded for each bulka bag filled with Calweld sample. Geological logging was undertaken by the onsite geologist during each drilling programme. Determination of optimal samples and, conversely, intervals of poor recovery were based on visual observation of kaolinised material collected from each metre drilled. • Sample recovery is expected to have minimal negative impact on samples collected. • There was no obvious evidence of bias in the samples between recovery and kaolin content.
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.	• 2019 aircore ADN: All drill samples were logged by an experienced geologist on-site at the time of drilling. Observations on lithology, colour, degree of weathering, moisture, mineralisation and alteration for sampled material were recorded. • 2011 aircore MEP: All drill samples were logged by an experienced geologist on-site at the time of drilling. Observations on lithology, colour, degree of weathering, mineralisation and alteration for sampled material were recorded. • 2013 RC ABC: All drill samples were logged by an experienced geologist on-site at the time of drilling. Observations on lithology, colour, and mineralisation for sampled material were recorded.

Criteria	JORC Code explanation	Commentary
		• 2008 Calweld MEP: All drill samples were logged by an experienced geologist on-site at the time of drilling. Observations on lithology, colour, degree of weathering, mineralisation and alteration for sampled material were recorded. • All relevant intersections were logged. • All logging for 2008,2011 2013, and 2019 drilling has been converted to quantitative codes in the ADN database. • Data from the 2013 drilling has not been used to numerically help define the Mineral Resources.
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.	• 2019 aircore ADN: Sample compositing consisted of contiguous 1m drill samples up to 5m in total length, based on drill logs and visual estimation of whiteness of material, ie reflectance. Sample composites were prepared with the aim of including kaolinised granite of similar quality within each composite, although in some cases narrow bands of discoloured kaolinised granite were included in the composite to determine if poorer quality could be carried within the interval. Each metre bag drill sample was weighed before splitting. • Sample splitting took place in the Streaky Bay shed in sterile conditions. The samples were run through a 87.5:12.5% 3 tier splitter to compile composite samples of between 2 and 4kg in weight. • The majority of samples were competent, with only 4 or 5 samples requiring air drying before compositing • A total of 244 samples were collected, plus 28 duplicates from 93 sampled drillholes. • 2019 aircore ADN samples were processed by NATA accredited laboratory - Bureau Veritas. Composited Samples were wet screened by soaking and agitating the sample to disaggregate the kaolinite and passed over a Kason 2 screen vibrating deck. Coarser particles were collected, re-agitated and passed through again until a visual estimation that all the kaolin had been removed (ie the water was clear). The finer seperating screen was 45um. The plus and minus 45um material was oven dried at 35C and weighed. The minus 45um material was then split into several portions by a rotary splitter.

Criteria	JORC Code explanation	Commentary
		• 2011 aircore MEP: sample compositing consisted of only contiguous 1m drill samples up to 5m in total length, based on drill logs and visual estimation of whiteness of material i.e. reflectance. Sample composites were prepared with the aim of including kaolinised granite of similar quality within each composite, although in some cases narrow bands of discoloured kaolinised granite were included in the composite to determine if poorer quality could be carried within the interval. Composite samples ideally weighed between 10 and 15 kg with equal amounts of kaolinised granite being taken from each 1m drillhole sample. In a few cases, because of a lack of sample, the composite samples weighed less than 10kg. When sample processing commenced it was soon found that a minimum sample weight of about 8kg was required for satisfactory blunging and processing. Consequently, a very few composite samples could not be processed. A total of 270 composite samples were prepared from 93 drillholes within the drilled resource definition area. Depending upon sufficient sample being available, about every tenth sample was duplicated, and was processed as a separate sample. 23 duplicate samples were prepared. • 2011 aircore MEP samples were processed by blunging at high solids content in a high shear blunger with sodium polyacrylate dispersant to ensure kaolin was fully dispersed and then screened and decanted to remove quartz and mica, to produce a -45µm kaolin sample. Particle sizing was confirmed (>99% -45µm) on site using a Sedigraph 5100 particle size analyser. Based on the measured solids content of the blunged kaolinised granite slurry, the -45µm kaolin percentage was determined by difference, after the +45µm percentage was determined by wet screening and weighing. The dried -45µm samples were submitted to CSIRO, Division of Land and Water, Urbrae for quantitative elemental and mineralogical (including kaolinite/halloysite ratio estimation) by XRF and XRD respectively. At CSIRO, a 2 gram subsample was micronised, slurried, spray dried and a spherical agglomerated sample prepared for XRD. Quantitative analysis of the XRD data was performed by CSIRO using SIROQUANT and halloysite/kaolinite proportions determined using profile fitting by TOPAS, calibrated by SEM point counting of a suite of 20 standards from the same locality (Janik and Keeling, 1996). An initial halloysite estimation by CSIRO on 161 samples in 2012 was undertaken with no constraint on crystallite

Criteria	JORC Code explanation	Commentary
		size of the halloysite phase. These, and additional samples in 2018, were all re-processed by constraining the halloysite crystallite size to 25nm. • 2013 RC ABC: All 1 metre samples from the 2013 RC drillholes were analysed in ABC's laboratory. Major elements (XRF) data were provided to MEP but not sub-sampling and sample preparation methodologies. Data from the 2013 drilling have not been used to numerically help define the Mineral Resources. • 2008 Calweld MEP : Selected bulk samples from the 2008 Carey's Well drilling were sub-sampled and processed at Minotaur's Streaky Bay kaolin processing facility to produce a range of hydrous kaolin products, including ParlaWhite90 (PW90). Full product characterisation was undertaken, including analysis of particle size distribution, ISO brightness, colour, +45µ grit content, oil absorption, surface area, major and minor elements and mineralogy. 100% of mineralised intervals of the Calweld drilling were sub-sampled from bulka bags at the Minotaur kaolin processing facility in Streaky Bay in 2012. Sub-samples were mixed with water then processed by blunging at high solids content in a high shear blunger with sodium polyacrylate dispersant to ensure kaolin was fully dispersed and then screened and decanted to remove quartz and mica to produce a -45µm kaolin sample, subsequently submitted for analyses similar to the 2011 aircore drillhole samples. • All MEP 2011 and 2008 sampling methods and sample sizes are deemed appropriate.
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 (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	• 2019 aircore ADN minus 45 subset samples were tested by ○ Bureau Veritas for XRF analysis of the 11 major elements. Approximately 0.7g of sample is dried in an oven at 105 °C and then weighed with the addition of 7g of 57:43 lithium borate flux. program. This mixture is then heated to 1050°C in a Pt/Au crucible for approximately 20mins. The sample is then poured into a 37mm Pt/Au mould and once cooled the glass disks were then analysed on a Panalytical Axios Advanced XRF instrument using an in-house calibration program. QC of XRF consists of each job being profiled with a blank at the start; a repeat per job page (50 disks) and 4 CRM's (Certified reference material) per job page.

Criteria	JORC Code explanation	Commentary
		○ CSIRO, Division of Land and Water, Urbrae for determination of mineralology by X Ray Diffraction analysis including kaolinite and halloysite. ○ ISO Brightness B and colours L*a*b* was tested in house in an enclosed laboratory room at Bureau Veritas using ADN's Technidyne Colourtouch CT-PC Spectrophotometer in accordance with Tappi standard T534 om-15. The measured parameters of ISO B, L*, a* and b* are internationally accepted spectral criteria for determinations of brightness, whiteness, redness and yellowness, respectively. Approximately 1 in 10 tests were duplicated for QAQC purposes. • Anonymous laboratory duplicates (Streaky Bay split samples) and field duplicates were submitted for assessment to Bureau Veritas for XRF analysis and to CSIRO for XRD analysis. • Both the field duplicates and the laboratory duplicates showed minimal variation. • The main issue was an under-reporting of the -45µm material for the 2019 drilling relative to the 2011 drilling due to the wet sieving method being a rather benign processing technique and is not as aggressive as the MEP blunging process. The modest reduction in average -45µm grade (approximately 7-8%) has had a knock-on effect in that it has increased the average reflectance and Al_2O_3 grades (more kaolin as a proportion of the finer material). Initial mine studies including pit design plus the observation that the disparity in -45µm grades lessens with increased kaolin content have indicated that the impact on the overall resource estimates is much less than 7-8%. • 2011 aircore MEP: ISO Brightness (R_{457}) and La*b* colour of the dried -45µm kaolin powder were determined according to TAPPI standard T 534 om-03 using a Technibrite 1B spectrophotometer at Minotaur's Streaky Bay kaolin processing facility. The measured parameters of R457 brightness, L, a* and b* are internationally accepted spectral criteria for determinations of brightness, whiteness, redness and yellowness, respectively. Subsamples of -45µm kaolin were forwarded to: ○ ALS Minerals laboratories in Adelaide for determination of 60 elements using method ME-MS61r (four acid digestion, ICP-MS),

Criteria	JORC Code explanation	Commentary
		○ CSIRO, Division of Land and Water, Urbrae for XRF analysis of 11 major elements plus Cl ○ CSIRO, Division of Land and Water, Urbrae for the determination of mineralogy by XRD. The CSIRO data confirm that the -45µm fraction is <u>dominantly</u> kaolin (kaolinite with halloysite in varying abundance) with <u>traces</u> of quartz, mica and microcline feldspar. The CSIRO Urbrae researchers are globally pre-eminent in the field of halloysite research. • 2013 RC ABC All 1 metre samples from the 2013 RC drillholes were analysed in ABC's laboratory for major elements (XRF), however sub-sampling and sample preparation methodologies were not disclosed. Data from the 2013 drilling have not been used to numerically help define the Mineral Resources. • 2008 Calweld MEPISO Brightness (R_{457}) and La*b* colour of the dried -45µm kaolin powder were determined according to TAPPI standard T 534 om-03 using a Technibrite 1B spectrophotometer at Minotaur's Streaky Bay kaolin processing facility. The measured parameters of R457 brightness, L, a* and b* are internationally accepted spectral criteria for determinations of brightness, whiteness, redness and yellowness, respectively. Subsamples of -45µm kaolin were forwarded to: ○ ALS Minerals laboratories in Adelaide for determination of 60 elements using method ME-MS61r (four acid digestion, ICP-MS), ○ CSIRO, Division of Land and Water, Urbrae for XRF analysis of 11 major elements plus Cl and determination of mineralogy by XRD. • The CSIRO data confirm that the -45µm fraction is <u>dominantly</u> kaolin (kaolinite with halloysite in varying abundance) with <u>traces</u> of quartz, mica and microcline feldspar. • No standards or blanks were used for the element assaying • All assay methods were appropriate at the time of undertaking. • No secondary lab checks were completed. • A study on the population distributions between the two drill datasets (2011 & 2019) indicated very similar patterns despite the small systematic shift associated with the two different processing techniques. It was concluded that the two datasets could be combined for resource modelling purposes

Criteria	JORC Code explanation	Commentary
		with some additional testwork indicating that this would be a slightly conservative measure. • The CSIRO halloysite analysis has shown a lack of precision, but no bias, that seems inherent with the analytical method. • Analytical techniques used by BHM Process Consultants for HPA testing are considered appropriate and included test work through Nagrom Mineral Laboratories and independent verification through Labwest Minerals Analysis. BHM Process Consultants have a strong expertise in analysis of industrial minerals.
Verification of sampling and assaying	• The verification of significant intersections by either independent or alternative company personnel. • 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.	• 2019 aircore ADN: Simon Tear, a consulting geologist from H&S Consultants, completed a one day site visit whilst drilling was in progress; this included discussion on the initial sample processing. • 12 twin holes were drilled each within 5m of 2011 collar locations to verify the drill sampling methods and results obtained in this program. The outcomes generally showed a weakening of the precision potentially due to the difficulty of getting exactly matching mineral intercepts with the 1m aircore sampling. The results indicate slightly longer average mineral intercepts for the 2011 drilling which is accompanied by a greater percentage of -45µm recovered material (average 4% greater). It is uncertain if the two factors are related. Otherwise modest precision with a minor positive bias for the 2011 drilling is associated with the reflectance, Al_2O_3 and SiO_2 XRF results but poor precision occurs for the Fe_2O_3 and TiO_2 XRF results and the kaolinite and halloysite XRD analysis. Offsetting the poor precision for the XRD analysis is a lack of significant bias but for the two XRF outcomes there are significant biases ie for TiO_2 it is positive for 2019 drilling and for Fe_2O_3 it is positive for 2011 drilling. The reasons for this are uncertain but the poor precision maybe due to low values associated with the analysis ie close to detection limits. However, the main issue is the bias associated with the -45µm recovered material which is attributed to the different sample prep techniques. • Sample and assay data from MEP 2008 Calweld and 2011 aircore drilling have been compiled and reviewed by the senior geologists involved in the logging and sampling of the drill core, cross-checking assays with the geological logs and representative samples. No independent intercept

Criteria	JORC Code explanation	Commentary
		verification has been undertaken. No twin holes were completed by MEP for the 2011 drilling. Repeat samples submitted to CSIRO for quantitative elemental and mineralogical analysis produced acceptable outcomes. • 5 pairs of twinned holes exist for the MEP 2011 drilling and the ABC 2013 drilling. The results indicate some variations in the logged intervals. However, the overall weighted average difference of between the amount of -45µm material and the kaolinite content between the 2011 and 2013 intervals is just under 7%. • All 2008 and 2011 drilling and testing data have been validated within the MEP GBIS samples database. • Any below detection values were substituted with half lower detection limit values for resource estimation purposes
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.	• 2019 aircore ADN : All drill collar locations had survey pick up done by GNSS (Global Navigation Satellite System). Collar surveys were completed by licensed surveyor Steven Townsend of P.A.Dansie & Associates using a Leica 1200 RTK (Real Time Kinematic) System with horizontal accuracy of +/- 20mm and vertical accuracy of +/- 20mm. • Survey pickup of 2011 aircore drilling collar locations by differential GPS accurately located and levelled all collars. Collar surveys completed by contractor Peter Crettenden using a Trimble R8 RTK (Real Time Kinematic) System with horizontal accuracy of +/- 20mm and vertical accuracy of +/- 30mm, cross-checked against differential GPS survey data collected by licensed surveyors Hennig & Co in March 2011. On comparison with the 2019 collar survey pick-ups this data was found to have been altered and was out by a consistent value of 0.482m when checked against the base stations. To standardise and correct the 2011 collar locations the RL values were adjusted by -0.482m. • 2013 ABC RC drilling collar locations located by handheld GPS (accuracy unspecified) at the time of drilling. Data from the 2013 drilling have not been used to numerically help define the Mineral Resources. • 2008 Calweld drilling collar locations located by handheld GPS (horizontal accuracy unspecified) at the time of drilling. Collars levelled vertically in 2011 utilising survey data collected by contractor Peter Crettenden using a

Criteria	JORC Code explanation	Commentary
		Trimble R8 RTK (Real Time Kinematic) System with vertical accuracy of +/- 30mm. • No downhole surveys have been completed – all holes are vertical and generally <30m deep • Grid projection is MGA94 Zone 53 • A topographic surface has been created based on an accurate contour plan of the Poochera kaolin deposit area produced in March 2011 by licensed surveyors Hennig & Co. utilising differential GPS (+/-0.2m accuracy). The surface has been used to drape the2013 and 2018 drill collar locations to give more accurate elevation values rather than the handheld elevations supplied
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.	• 2019 aircore ADN : Extensional drillhole spacing is 100m by 100m with downhole sampling at 1m intervals with sample compositing of only contiguous 1m samples up to 5m based on drill logs and visual estimation of whiteness of material i.e. reflectance. Drillholes within the known orebody were placed at the centre point within the 100m grid, effectively on a 70m spaced diagonal grid. • Sample splitting took place in the Streaky Bay shed in sterile conditions. The samples were run through a 87.5:12.5% 3 tier splitter to give equal weights for compiling composite samples of between 2 and 4kg in weight. • 2011 MEP: Drillhole spacing is 100m by 100m with downhole sampling at 1m intervals with sample compositing of only contiguous 1m samples up to 5m based on drill logs and visual estimation of whiteness of material i.e. reflectance. • 2013 ABC: Drillhole spacing is 100m by 100m, locally at 50m, with downhole sampling at 1m intervals. Area covered is approximately 400m by 400m in the NE quadrant of the Poochera deposit. Data from the 2013 drilling have not been used to numerically help define the Mineral Resources. • 2008 MEP: Variable drillhole spacing for bulk sampling at 1m downhole intervals. Area covered is approximately 1km x 1km within the Poochera deposit. • The drillhole spacing for the MEP work has established a high level of geological continuity for the kaolinite. The spacing is also suitable for establishing a reasonable level of grade continuity for the kaolinite and any

Criteria	JORC Code explanation	Commentary
		impurities. • The sample compositing for the 2011 work has imposed a limitation on any detailed assessment of variability of kaolinite material for the deposit.
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.	• Vertical drilling generally achieved a very high angle of intercept with the flat-lying, stratabound mineralisation. • Drilling orientations are considered appropriate with no obvious bias.
Sample security	• The measures taken to ensure sample security.	• 2019 aircore ADN: Drill samples were collected by Andromeda personnel and delivered to the Streaky Bay shed usually (but not always) on the same day as the drilling took place. The shed was locked when no personnel were around. The composite samples were then sent to Bureau Veritas in Adelaide by McEvoy Transport, a local transport company. • After Bureau Veritas had completed the wet sieving process the minus45µm samples were collected by ADN staff and delivered to CSIRO for XRD analysis. • 2011 aircore MEP: The drill samples were collected by Minotaur personnel then delivered to the kaolin processing facility either by Minotaur personnel, or competent exploration contractor. • Transport of samples from the Streaky Bay kaolin processing facility to Adelaide and other locations for further testwork has been undertaken by competent exploration contractors. Remnant samples are stored securely at Minotaur Exploration premises in Streaky Bay or Adelaide.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	• No external audits or reviews of the sampling techniques or data have been completed

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.	• The Poochera Kaolin-Halloysite Project (Exploration Licences 5814, 6096 and 6202, which is a subsequent licence to EL5308) includes the Poochera (Carey's Well) deposit, which is located on EL5814. • The Poochera Project is held by subsidiaries of Minotaur Exploration Limited and is joint ventured to Andromeda under terms detailed in the ADN ASX release dated 26 April 2018. • There are no known non-government royalties due beyond the Minotaur JV agreement terms. • The underlying land title is freehold that extinguishes Native Title. • There are no known historical sites within the Carey's Well/Poochera area which preclude exploration or mineral development. • All tenements are secure and compliant with Government of South Australia Department for Energy and Mining requirements at the date of this report.
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	• MEP has conducted exploration in the Carey's Well/Poochera area since the tenement was granted in 2005. • The general area that is the subject of this report has been explored for kaolinitic products in the past by Transoil NL, SA Paper Clays ECC (Pacific) & Commercial Minerals Ltd. ADN has reviewed past exploration conducted by MEP.
Geology	• Deposit type, geological setting and style of mineralisation.	• Kaolin deposits, such as Poochera/Carey's Well, developed in situ by lateritic weathering of the feldspar-rich Hiltaba Granite. • The resultant kaolin deposit at Carey's Well is a sub-horizontal zone of kaolinised granite resting with a fairly sharp contact on unweathered granite. The kaolinised zone is overlain by loosely consolidated Tertiary and Quaternary sediments. • High quality kaolin-halloysite deposits occur extensively across the Poochera Project area • Halloysite is a rare derivative of kaolin where the mineral occurs as nanotubes. Halloysite has a wide variety of industrial uses beyond simple kaolin and commands a significant premium above the average kaolin price.

Criteria	JORC Code explanation	Commentary
		The Poochera kaolin deposits contain variable admixtures of kaolin and halloysite that appear amenable to selective mining to produce specific low, medium and high halloysite blends for the ceramic markets, new nanotechnology applications and as a strengthening additive in the cement and petroleum fracking industries.
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.	• Exploration results have been reported in the public domain with an ASX release for the initial resource estimate publicised on 8 February 2012. • Exploration results not being reported.
Data aggregation methods	• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. 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.	• Exploration results not being 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 (e.g. 'down hole	• Exploration results not being reported. • Drill hole angle relative to mineralisation has been almost perpendicular. Generally, the stratabound intercepts are close to true width.

Criteria	JORC Code explanation	Commentary
	length, true width not known’).	
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.	• Exploration results not being reported.
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.	• Exploration results not being reported.
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.	• Metallurgical testwork conducted by BHM Process consultants utilising industry standard two-stage acid dissolution and precipitation product with chemical analysis through Nagrom Mineral Laboratories and Labwest Mineral Analysis.
Further work	• The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). • Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	• Further HPA metallurgical testwork and additional halloysite analyses will be conducted as part of future Scoping and Feasibility studies.

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.	• All relevant data were entered into an Access database where various validation checks were performed including duplicate entries, sample overlap, unusual assay values and missing data. • Data linked to Surpac for wireframing, block model creation and resource reporting. • Visual reviews of data were conducted to confirm consistency in logging and drillhole trajectories. • Assessment of the data confirms that it is suitable for resource estimation.
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.	• A site visit by Simon Tear, director of H&SC was completed in April 2019. • Multiple site visits were completed by Tony Belperio, Executive Director of MEP. Mt Belperio was Competent Person for the 2011 Exploration Results • Three site visits have been completed in the previous year by Rhod Grivas Chairman of ADN. James Marsh, Managing Director of ADN has historically visited the area several times, but has also had three site visits in the previous year.
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 geological understanding is quite straightforward with the drilling density allowing for a high level of confidence. • Consistent logging has allowed for the definition of a series of 3D geological surfaces. These surfaces comprise a base of soil, a base of silcrete, a top of kaolinite mineralisation (generally coincides with the base of silicified kaolinite), a base of kaolinite (generally coincides with the top of partially decomposed granite) and a base of drilling surface. • The surfaces indicate the flat-lying nature to the mineralisation although there are significant variations in thickness of the kaolinite. • In most cases the top and base of the kaolinite mineralisation is defined by where the material has been assayed. • The 2013 ABC drilling has been used to help define the geological surfaces where appropriate information exists.

Criteria	JORC Code explanation	Commentary
		• Wireframe extrapolation is generally 200m beyond the last drillhole; termination of wireframes is due a combination of geology and a lack of drilling. • On receipt of halloysite analyses from CSIRO the interpretation was advanced with the definition of a halloysite zone using a nominal 5% halloysite (for -45µm size fraction) • The existing interpretation honours all the available data; an alternative interpretation is unlikely to have a significant impact on the resource estimates.
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.	• Mineralisation can be modelled for 1.5km of strike length, and down dip for 1.5km (very shallow dip of 2° to the east). The mineralised zone appears to have thicknesses ranging from 3 to 28m. • The depth below surface to the top of the mineralisation ranges between 8 and 24metres.
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 (e.g. 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 behind modelling of selective mining units. • Any assumptions about correlation between variables. • Description of how the geological interpretation was used to control the resource estimates.	• Mineral wireframes and geological surfaces are based on interpretations completed on a N-S line of E-W sections with strings snapped to drill holes. Section spacing is 50m in the central area expanding to 100m towards the margins of the drilling • Surpac mining software was used for the interpretation and block model reporting. The H&SC in-house GS3 software was used for block grade interpolation. • The kaolin wireframes were used to control the composite selection and the loading of subsequently modelled data into the block model. • Geostatistics were performed for the -45um recovered material, Al_2O_3, Fe_2O_3, SiO_2, TiO_2, R457 (reflectance). Halloysite and kaolinite percentage was also analysed • Correlation between the main economic elements was weak indicating possible mineral zonation, which is not an uncommon feature with the type of mineralisation. • Drillhole spacing is 50 or 100m with sample compositing of the 1m bulk samples up to 5m (predominantly 4 to 5m).

Criteria	JORC Code explanation	Commentary
	• 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.	• Parent block sizes were 25m in the X (east) direction, 25m in the Y (north) direction and 5m in the Z (RL) direction with sub-blocking to 6.25m by 6.25m by 1.25m. • The Ordinary Kriging estimation method was used. • 382 composites were used with compositing of the drillhole sample data utilising a best fit method around a nominal 5m interval (a Surpac compositing option). 373 composites had kaolinite/halloysite analyses. • No top cutting was applied; the coefficients of variation for the relevant composite datasets suggest that the data is not sufficiently skewed or unstructured to warrant top cutting. • 3 estimation search passes were used with an increasing search radius and decreasing number of data points. • Search size: Pass 1 150 by 150 by 7.5m (Measured), Pass 2 150 by 150 by 7.5m (Indicated) to Pass 3 250 by 250 by 15m (Inferred) with 8 minimum data (Measured) decreasing to 4 (Indicated and Inferred). • The first pass used an octant-based search where at least 4 octants had to be estimated; the Pass 2 and Pass 3 used a 2 octant based search. • Variography was modest mainly due to the limited amount of sample data, in combination with localised thinness of the mineral zone. • One search ellipse was used, orientated to follow the strike, dip and plunge trend of the mineral unit ie a flat search. • Model validation has consisted of visual comparison of block grades and composite values and indicated a good match. Comparison of summary statistics for block grades and composite values has indicated a very small risk of overestimation of grade for certain elements for certain lodes usually in the Inferred category. This is due to the deposit being open with zones of higher grade material on the margin. • There are relatively limited changes from the H&SC 2018 global resource estimates and this provides a good level of confidence in the resource estimates and their classification considering the substantial amount of drilling completed in 2019. • Check models for an area of overlap between the 2011 and 2019 drilling indicated a 9% difference in reported estimates, due to the outcomes associated with the different sample prep methods. Combining the two

Criteria	JORC Code explanation	Commentary
		datasets is likely to see that difference halve. However, noting that the disparity in -45µm recovered material grades reduces with increasing kaolin content and that the overlap area included areas of lower mining priority on the periphery of the deposit, was roughly only 30% of the total resource area and that combining the two datasets in a modelling sense is likely to more than halve the 8-9% difference in the -45µm recovered material for the overlap area, the total impact on the resource estimates of the differing -45µm grades is likely to be considerably less than 9%. Recent sample processing testwork by ADN using a process more closely aligned with the likely mine processing method has indicated that with additional data analysis, an upward linear correction could be applied to the 2019 data to better align it with the 2011 data. • The 2013 ABC drilling data was modelled as a check model as it only covers part of the deposit. This model used different data sources, namely kaolinite and silica percentages, rather than -45µm and R457 reflectance values. The check model for this sub-area reported only a 5% difference in the interpreted kaolinite content with the MEP model.
Moisture	• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	• Tonnages are estimated on a dry weight basis. • In October 2018 a bulk sample programme by ADN included designing and implementing an appropriate method to determine bulk rock density on the unconsolidated, porous kaolin-halloysite material. The method involved vacuum sealing fresh drill samples and completing weight in air weight/water measurements along with oven-drying the sample. This method was also used to determine moisture content which was reported as an average 21.6%
Cut-off parameters	• The basis of the adopted cut-off grade(s) or quality parameters applied.	• DSO resource estimates have been reported at a zero R457 reflectance within the upper and lower kaolinite surfaces. A brightness filter had been applied when manually selecting the intervals for sample compositing. • A second constraint uses the defined halloysite zone surface which is at a nominal 5% halloysite cut off • The -45µm values were used as a volume adjustment factor for reporting the HPA resources.

Criteria	JORC Code explanation	Commentary
		• There is a very limited amount of unassayed kaolinite material outside the new resource estimates • The cut-off grade at which the resource is quoted reflects the intended bulk-mining approach.
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 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.	• H&SC's understanding based on information supplied by ADN is for a conventional open pit mining scenario. • The proposed mining method will be a truck-shovel operation • Minimum mining dimensions are the sub-block size of 12.5m by 12.5m by 1.25m. • The current assumptions for the mining dilution and recovery for the open pit mine are 0% dilution and 90% recovery. The initial plan for mining start up will be to sell the product as direct shipping ore. • It is anticipated that most of the pit excavation will be mined sequentially with previous voids backfilled by overburden and sand reject material from the processing plant. • Material intended for processing will be delivered to a run of mine stockpile. • It is likely that processing plant feed will be blended from a variety of in pit sources and stockpiles to maximise the delivery of product meeting market specification requirements. • The mining and processing plan in the scoping study was to sell a refined premium product into the ceramics industry
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.	• Laboratory and pilot scale testwork have shown that a premium product for the ceramics industry can be refined from the Poochera kaolinized granite. • The scoping study envisaged site-based dry processing with toll wet refining, and pilot scale testwork for site-based wet processing is now also well advanced. • A kaolin product yield of 37% of the kaolinized granite was used in the recent scoping study. • Previous work showed that high purity alumina (HPA) can also be produced from the Poochera kaolinized granite. BHM Process Consultants were commissioned to undertake the necessary concept metallurgical investigation and future process design aspects for upgrading typical hydrous processed kaolin from Poochera/Carey's Well to a saleable HPA

Criteria	JORC Code explanation	Commentary
		product via industry standard hydrometallurgical processing routes. The BHM testwork indicates that an HPA product with 99.99% purity is readily available from Poochera/Carey's Well kaolin/halloysite feedstock using an industry standard HCL two-stage dissolution-precipitation process, with the initial testwork achieving 99.9855% alumina. Key impurities in the first testwork include Silicon (66.84ppm), Sodium (30.16ppm) and Iron (28.28ppm), each of which can be expected to be further reduced by processing improvements moving forward.
Environmental 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.	• Flora and fauna assessments done to date have indicated that there are no significant constraints to extraction of the resource. • A wide variety of baseline environmental studies and reports is currently underway with no significant constraints identified. • Appropriate consultants are being engaged to complete all the environmental studies required for a mining licence. • The Poochera/Carey's Well deposit area is currently utilised for grazing and cereal cropping. There are also areas of unused ground • There will be no tailings. A storage area for the overburden will be required initially. If it is decided to dry semi-processing on site at a later stage there will be approx. 50% of sand rejects that may be stockpiled or used for backfilling. • No large river systems pass through the area.
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.	• In October 2018 a bulk sample programme included designing and implementing an appropriate method to determine bulk rock density on the unconsolidated, porous kaolin-halloysite material. • The method involved vacuum sealing fresh samples and completing weight in air weight/water measurements along with oven-drying the sample. • A total of 220 samples were collected on which density determinations were completed. • The same sample suite was used to determine moisture content. • The average in-situ bulk rock density measured for the material sampled was 1.83 t/m^3, whilst the average dry bulk rock density was 1.44 t/m^3. • The average moisture content of the bulk sample material was measured to be 21.6wt%. • The average dry bulk rock density of 1.44 tonnes/m^3 is materially different

Criteria	JORC Code explanation	Commentary
		from the density estimate of 1.7 t/m^3 (based on 8 samples) used in previous Mineral Resource estimates. • This 1.44 t/m^3 value has been used as a default density value for subsequent resource estimation. • The default density value is considered reasonable, (possibly slightly conservative); it is generated from a large number of samples but from a relatively small area (the bulk sample).
Classification	• The basis for the classification of the Mineral Resources into varying confidence categories. • Whether appropriate account has been taken of all relevant factors (i.e. 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.	• Mineral Resources have been classified on the estimation search pass category for the kaolinite/halloysite composite data subject to assessment of other impacting factors such as drillhole spacing (variography), sampling procedures, QAQC outcomes, density measurements, geological model and previous resource estimates. • The classification appropriately reflects the Competent Person's view of the deposit.
Audits or reviews	• The results of any audits or reviews of Mineral Resource estimates.	• No reviews or audits have been completed.
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.	• The Mineral Resources have been classified using a qualitative assessment of a number of factors including the geological understanding in conjunction with the simplicity of mineralisation, the drillhole spacing, drill sample recoveries), sampling procedure, QA/QC data and density data. • The Mineral Resource estimates are considered to be accurate globally, but there is some uncertainty in the local estimates due to the sample compositing (and density data) giving a lack of detailed definition of any subtle variations in the deposit. • The disparity between the -45µm recovered material grades for the 2011 and 2019 drilling is noted. Various checks including twin holes, check models on the data and planned pit designs have indicated that the combining of the two datasets for modelling purposes is reasonable and any impact the differences will have on the resource estimates is considered very small. • No mining of the deposit has taken place so no production data is available for comparison.