



Altech Chemicals
Limited

ASX ANNOUNCEMENT AND MEDIA RELEASE

8 July 2016

ALTECH UPDATES KAOLIN RESOURCE FOR ITS MECKERING MINING LEASE

Highlights

- Kaolin Indicated Mineral Resources of 11Mt @ 82.7% ISO brightness (JORC 2012)
- Sufficient resources to provide >250 years feed-stock for the Company's proposed Malaysian high purity alumina plant
- Submission of mining proposal and mine closure plan imminent

Following the completion of grade control drilling in April 2016, Altech Chemicals Limited (Altech/the Company) (ASX: ATC) is pleased to announce an update to kaolin mineral resources for its 100%-owned mining lease (ML) M70/1334, at Meckering Western Australia.

The updated Mineral Resource is 11 million tonnes (Mt) of kaolin clay containing 45% minus 45 micron clay with a brightness of 82.7% (ISO standard), and is classified as Indicated. The mineral resource was estimated using an 80% brightness cut-off, and a 30% minus 45 micron cut-off and is in accordance with JORC 2012.

At Meckering, the Company is planning to mine approximately 120,000 tonnes of kaolin once every three years in short two-month mining campaigns. The resultant raw kaolin ore will be stockpiled, then containerised into standard shipping containers at the rate of around 40,000tpa (770t per week) and transported to Johor, Malaysia via the port of Fremantle, Western Australia for processing into high purity alumina (HPA) at the Company's proposed plant.

Altech's proposed Malaysian HPA plant is designed for annual production of 4,000tpa of HPA. At this production rate there are sufficient kaolin mineral resources at Meckering for in excess of 250 years of feed-stock supply.

Altech managing director Mr Iggy Tan said, *"The Company is delighted with the updated mineral resources statement for our recently granted ML.*

"Altech can now progress to the next stage in preparation for mine development, the submission of what will be a relatively straightforward mining proposal and mine closure plan.

"Upon approval of these items, the site at Meckering will be ready for the development of the campaign mining and container loading operation to supply feedstock for Altech's proposed Malaysian HPA plant.

"This marks another significant milestone in the advancement of the Company's HPA project", Mr Tan concluded.

UPDATED JORC RESOURCES OF KAOLIN AT MECKERING, MINING LEASE M70/1334

Mining Lease M70/1334

The Company's granted tenement M70/1334 covers 86Ha of freehold land situated adjacent to the town of Meckering, approximately 130km from Perth, Western Australia. The ML is held by the Company's wholly-owned subsidiary Altech Meckering Pty Ltd and hosts the Meckering kaolin deposit.

Meckering Resource Estimation

An Indicated Resource of 11MT, containing 45% minus 45 micron clay with a brightness of 82.7% (ISO standard). The resource was estimated using an 80% brightness cut-off, and a 30% minus 45 micron cut-off.

The minus 45 fraction has been demonstrated by extensive testwork, including pilot plant production, to be suitable for production of high quality kaolin for use as paper filler, or in paint or ceramic industries, with potential for production of some paper coating clay product.

The resource has been trimmed to 40m below surface and to 40m inside the mining lease boundaries, and commences below the laterite zone, generally 5 to 8m below surface. There are occasional minor lenses of low brightness clay within the resource outline, but the resource is otherwise a continuous sheet, 5 to 35 m thick, within the outline shown on the map.

Altech has conducted tests on a bulk sample which demonstrated suitability of this material for economic production of high purity alumina. Altech intend to use a minus 500 micron fraction as feed into this process, to lower the amount of silica in the feed. The minus 500 micron fraction is expected to be 60 to 70% of the mined material, and this fraction is expected to contain 18% to 23 % alumina.

Geology

The kaolinite is a residual weathering product of granite and granitic-gneiss of the Western Gneiss Terrane. Kaolin in this region is related to in-situ lateritic weathering of predominantly granitic rocks, with kaolin has developed in the pallid zone below a laterite and overlies weathered granite.

Minerals identified by XRD analysis of two cores from within the kaolin deposit include: quartz, kaolinite, smectite, micas (muscovite + biotite), chlorite, orthoclase, goethite and magnetite. Quartz is present throughout the full deposit profile in varying quantities.

Drill hole data and bulk sample data to date all confirm the type model for the deposit.

Sampling

Several periods of drilling have been conducted by different companies since the 1990s to present. These were CRA Exploration Pty Ltd (CRAE) in the 1990s, Minerals Corporation Ltd subsidiary and Swan River kaolin (SRK) from 2003 to 2010, and recently Altech Chemicals Limited in March 2016.

In total 49 vertical RC (reverse circulation air core) drill holes are located within Mining Lease M70/1334, including 19 from the 2016 campaign. All drilling has been conducted using standard wireline drilling techniques. Drill holes within the Mining Lease are spaced from 30 to 200m apart. Drill hole collar information is tabulated in Appendix 2 and recorded drill hole intersections are tabulated in Appendix 3.

From the RC drilling 1 m down hole interval samples were obtained and retained. If the sample was white, off white or pale cream the sample was retained in full for despatch to the laboratory.

Sample sizes are considered appropriate to the grain size of the material being sampled. No subsampling was conducted at drill site.

A total of 1,546 samples were collated in the database; this included samples from historic drilling surrounding the mining lease. A total of 669 1m samples were collected from the 2016 drilling.

Due to the nature of the drilling method and considering the full sample intervals collected for analysis, recoveries were not recorded. Drill samples have been disturbed by the drilling process and hence may include some minor contamination and hence the quantitative analysis may inherit some minor error. The level of any sample bias or inherent sample error is considered to be minimal.

All RC drill chip and spoils from drill holes were geologically logged on a meter interval basis. The colour and brightness were especially noted. During the 2016 campaign a Munsell soil colour chart was used for comparison of spoil and chip colour and brightness logging.

Hand held GPS was used to locate drill hole positions. Drill hole positions were later surveyed.

Modelling

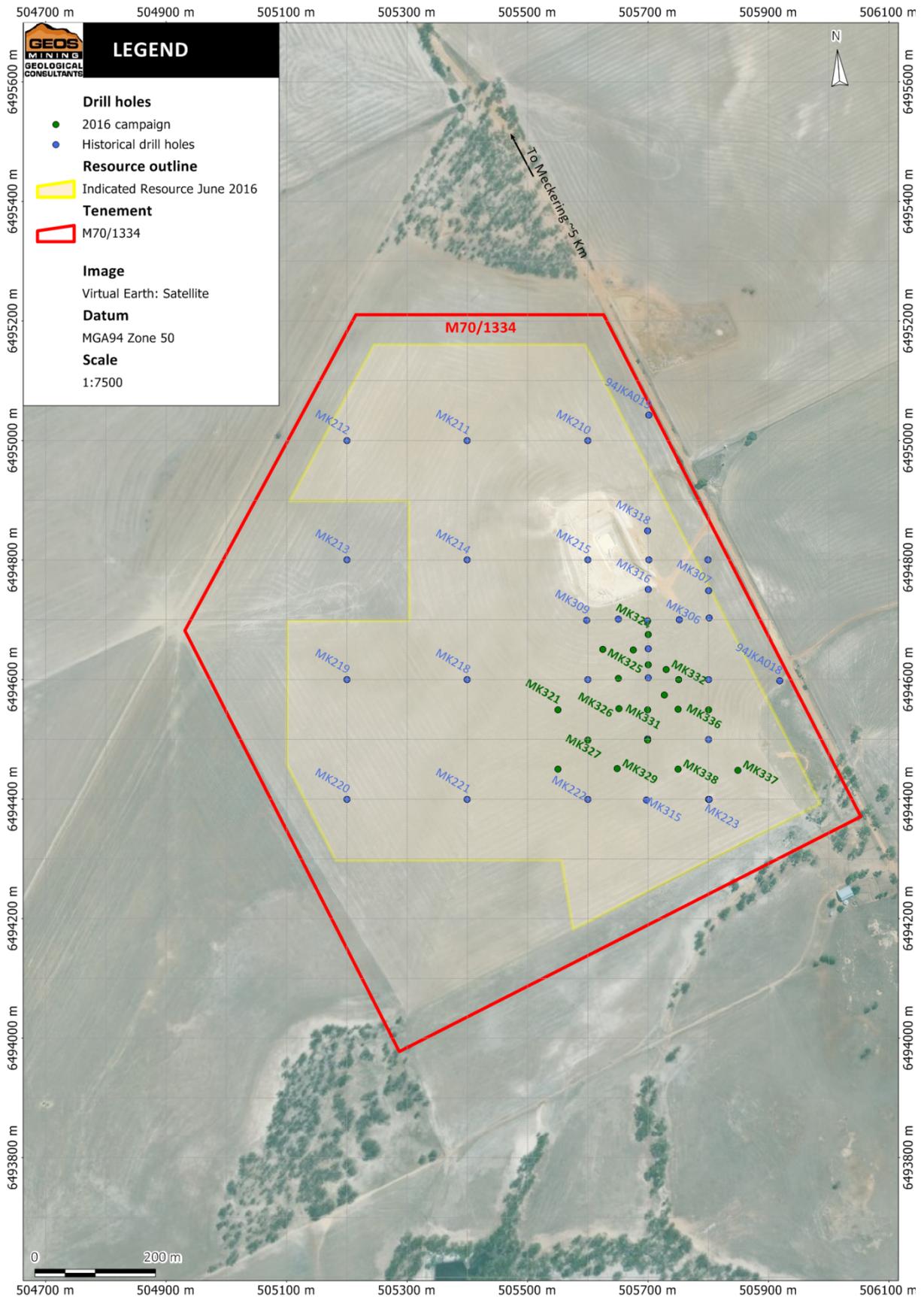
Random data checks were made to original SRK lab sheets and with available CRA data. 2016 data from Nagrom was transferred digitally into the database. Sample data audits and reviews were undertaken during data entry into a database and further on querying during later modelling.

A block model of dimensions of 50 by 50m by 5m was used in Micromine, with interpolation by ordinary kriging. Interpolation has been limited to the boundary of logged kaolin. Variography on brightness and yield confirms confidence in extrapolation distance.

Ore moisture ranged between 2% and 17% with average moisture of around 13% for 2016 drilling. Moisture was recorded for the majority of samples however due to sample handling/transport issues the moisture results are considered potentially in error for the historic holes, but 2016 moisture results are considered to represent in situ moisture. Resource tonnage has been estimated on a dry basis.

Dry bulk density was calculated using downhole geophysics results from 5 holes of the 2016 campaign to get in situ wet density, and lab measured moistures from 2016 drilling. Average of short spaced density and long spaced density used. The average calculated dry density of 1.57 g/cm³ is close to the dry density of 1.6 g/cm³ assumed in previous resource estimates.

The resource model is consistent with previous estimates.



-Ends-

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About Altech Chemicals (ASX: ATC)

Altech Chemicals Limited (Altech/the Company) is aiming to become one of the **world's leading suppliers of 99.99% (4N) high purity alumina (HPA)** (Al_2O_3).

HPA is a high-value, high margin and highly demanded product as it is the critical ingredient required for the production of artificial sapphire. Artificial sapphire is used in the manufacture of substrates for LED lights, semiconductor wafers used in the electronics industry, and scratch-resistant artificial sapphire glass used for wristwatch faces, optical windows and smartphone components. There is no substitute for HPA in the manufacture of artificial sapphire.



Global HPA demand is approximately 19,040tpa (2014) and demand is growing at an annual rate of 28%, primarily driven by the growth in worldwide adoption of LEDs. As an energy efficient, longer lasting and lower operating cost form of lighting, LED lighting is replacing the traditional incandescent bulbs. HPA demand is expected to at least double over the coming decade.

Current HPA producers use an expensive and highly processed feedstock material such as aluminium metal to produce HPA. Altech has completed a Bankable Feasibility Study (BFS) for the construction and operation of a 4,000tpa HPA plant at Tanjung Langsat, Malaysia. The plant will produce HPA directly from kaolin clay, which will be sourced from the Company's 100%-owned kaolin deposit at Meckering, Western Australia. Altech's production process will employ conventional "off-the-shelf" plant and equipment to extract HPA using a hydrochloric (HCl) acid-based process. Production costs are anticipated to be considerably lower than established HPA producers.

The Company is currently in the process of securing project financing with German KfW IPEX-Bank.

Competent Persons Statement – Meckering Kaolin Deposit

The information in this release that relates to sampling techniques and data, exploration results, geological interpretation and resource has been reviewed by Lyle Sawyer M.App.Sc. and Sue Border B.Sc. Sue Border and Lyle Sawyer are not employees of the company, but are employed by Geos Mining as geological consultants. Sue Border is a Fellow of the Australian Institute of Mining and Metallurgy as well as the Australian Institute of Geoscientists. Lyle Sawyer is a member of the Australian Institute of Geoscientists. Both have sufficient experience with the style of mineralisation and type of deposit under consideration, and to the activities undertaken, to qualify as competent persons as defined in the 2012 edition of the "Australian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves" (The JORC Code). Sue Border and Lyle Sawyer consent to the inclusion in this report of the contained technical information in the form and context as it appears.

Cautionary Statement:

Readers should use caution when reviewing the data presented and ensure that the Modifying Factors described in the 2012 edition of the JORC Code are considered before making an investment decision. Exploration has defined a Mineral Resource as defined in the 2012 edition of the JORC Code, but work aiming to define a Reserve is not yet complete.

Forward-looking Statements

This announcement contains forward-looking statements which are identified by words such as 'anticipates', 'forecasts', 'may', 'will', 'could', 'believes', 'estimates', 'targets', 'expects', 'plan' or 'intends' and other similar words that involve risks and uncertainties. Indications of, and guidelines or outlook on, future earnings, distributions or financial position or performance and targets, estimates and assumptions in respect of production, prices, operating costs, results, capital expenditures, reserves and resources are also forward looking statements. These statements are based on an assessment of present economic and operating conditions, and on a number of assumptions and estimates regarding future events and actions that, while considered reasonable as at the date of this announcement and are expected to take place, are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies. Such forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties, assumptions and other important factors, many of which are beyond the control of our Company, the Directors and management. We cannot and do not give any assurance that the results, performance or achievements expressed or implied by the forward-looking statements contained in this announcement will actually occur and readers are cautioned not to place undue reliance on these forward-looking statements. These forward looking statements are subject to various risk factors that could cause actual events or results to differ materially from the events or results estimated, expressed or anticipated in these statements.

JORC Code, 2012 Edition – Table 1

1 Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Reverse circulation air core (RC) drilling was used to obtain 1 m down hole interval samples If the sample was white, off white or pale cream it was retained in full <ul style="list-style-type: none"> The sample was bagged in plastic bags, assigned a unique sample number and grouped into batches for despatch. A total of 1546 samples were collated in the database; this includes samples surrounding the Mining Lease. A total of 669 1m samples were collected from the 2016 drilling.
Drilling techniques	<ul style="list-style-type: none"> 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.). 	<ul style="list-style-type: none"> Several periods of drilling <ul style="list-style-type: none"> CRA Exploration Pty Ltd (CRAE) – 1990s, Minerals Corporation Ltd subsidiary, Swan River kaolin (SRK) - 2003 to 2010, Altech 2016 49 vertical RC drill holes within M70/1334 Standard wireline drilling techniques used.
Drill sample recovery	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Drill recoveries not recorded Drill samples have been disturbed by the drilling process <ul style="list-style-type: none"> drill hole samples may include some minor contamination Quantitative analysis may inherit some minor error Full sample intervals collected for analysis Any sample bias / inherent sample error is expected to be minimal
Logging	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Logging was conducted on RC drill chip and spoils All drill holes were geologically logged on a meter interval basis <ul style="list-style-type: none"> The colour and brightness especially noted 2016 campaign used Munsell chart comparison for logging colour and brightness

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.*

- If the sample of the RC drill spoils was white, off white or pale cream it was retained in full for forwarding to the laboratory
- Sample sizes are considered appropriate to the grain size of the material being sampled
- No subsampling was conducted at drill site.

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.*

- 2016 samples tested at Nagrom, Perth, for minus 500 micron yield, and XRF chemistry, plus additional testing is being conducted..
- Pre 2016 - yield (minus 45 %, a measure of ultimate kaolin product yield), conductivity, brightness and particle sizing have been tested at the laboratories of CRA, Skardon River Kaolin Pty Ltd and Swan River Kaolin.
- The quoted brightness is the raw brightness of the minus 45 micron fraction without any brightness enhancement.
- Limited chemical and other analyses at external laboratories were conducted on the historic drilling.
- SRK's internal laboratory quality control and procedures, including instrument calibrations are considered appropriate for the style and type of deposit.
- The main techniques used were blunging, wet screening, conductivity measurements on fresh clay slurry (using a standard conductivity meter), fine particle sizing using a sedigraph, and brightness measurements using a Technidyne.
- Drilling by Swan was not tested for XRD and XRF.
- A few of the CRAE drill samples were tested by XRD and XRF
 - Results not located.
- Honours thesis (Freer, 2004), found to be best historic source of chemistry and mineralogy – sample profiles from two holes MK221 and MK256 tested by XRF and XRD.
- Brightness measurements were made on a dried pressed pellet (15 kg pressure) of fine kaolin; brightness measurements were conducted according to procedures which are in line with kaolin industry ISO standards.
- Check analyses were mainly analyses of product samples analysed by potential customers.
 - Significant other historic testwork, including process testing, brightness enhancement, moisture content, jaw crushing tests etc on drill samples, together with pilot plant tests on bulk samples. This confirmed good kaolin product quality suitable for paper filler and other markets, potential plant design, etc.

- Altech has also carried out tests on a bulk sample which confirms the process and suitability of a minus 500 screened product to economically produce high purity alumina.

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.

- A comparison of bulk sample A (dug by excavator) with the same depths in the adjacent drill hole gave:

Particle Size	Bulk sample A	Hole 223, 3-6m
-45 micron	51.7%	52.5%
-5 micron	13.8%	15.6%
-1 micron	8.9%	7.4%
Brightness	87.3%	87.1%

- Hence no reason to presume any significant error in the data.
- Level of variation is typical of the kaolin version of the nugget effect.
- SRK measured brightness initially on -5 micron kaolin, later at -45 micron kaolin.
- CRAE brightness measurements are thought to have been done on the -10 micron fraction.
- The brightness of a powder increases as the grain size decreases, hence measured brightness from the CRAE and early SRK programmes were corrected to the expected brightness if measured on the -45 micron fraction
 - Brightness correction for data measured at -5 micron is -1.9%; same correction used for 94JKA series holes (CRAE drilling)
 - Considered conservative
 - Uncertainty in whether CRAE holes were measured at -10 micron or -45 micron; assumed -10 micron as the worst case
 - However if the CRAE measurements were on -45 micron fraction, correcting these values has underestimated the brightness of these samples.
- Conductivity readings were undertaken on bulk samples
 - however waters used in two bulk sample tests processing had different conductivities and hence may have resulted in induced errors in the combined results
- Moisture was recorded for the majority of samples
 - Due to sample handling/transport issues the moisture results are considered potentially in error for the historic holes, but 2016 moisture results considered to represent in situ moisture

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.

- Hand held GPS used to locate drill hole positions
- Hole positions later surveyed

<p><i>Data spacing and distribution</i></p>	<ul style="list-style-type: none"> • <i>Data spacing for reporting of Exploration Results.</i> • <i>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.</i> • <i>Whether sample compositing has been applied.</i> 	<ul style="list-style-type: none"> • Drill holes are from 30 to 200m apart. • The drill spacing is considered sufficient for this style and type of kaolin deposit. • The drilling is considered sufficient for this level of mineral resource estimation procedure and classifications applied. • No field compositing of samples was undertaken • For the 2016 drilling selected intervals, logged with similar colour and brightness, of up to 4m were composited in the laboratory under instruction from the competent persons • Bulk sampling (48 tonnes) was conducted from a test pit, and two smaller bulk samples (a few tonnes) were taken from other locations.
<p><i>Orientation of data in relation to geological structure</i></p>	<ul style="list-style-type: none"> • <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i> • <i>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.</i> 	<ul style="list-style-type: none"> • The deposit is considered to be largely unaffected by any intersecting structures.
<p><i>Sample security</i></p>	<ul style="list-style-type: none"> • <i>The measures taken to ensure sample security.</i> 	<ul style="list-style-type: none"> • March 2016 drilling campaign samples were collected and delivered to laboratory by site geologist and accompanying staff. • No reason to suspect any problems with sample security in previous drilling; salting is not an issue with kaolin.
<p><i>Audits or reviews</i></p>	<ul style="list-style-type: none"> • <i>The results of any audits or reviews of sampling techniques and data.</i> 	<ul style="list-style-type: none"> • No known formal audits or reviews of sampling. • Sample data checks were undertaken during data entry into a database and further on querying during later modelling.

2 Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Altech Meckering Pty Ltd holds granted (19/05/2016) Mining Lease M70/1334 covering the kaolin deposit – hosting the Meckering Kaolin Deposit. Grant is for 21 years. Licence covering 86 Ha. Adjacent to the small town of Meckering, WA. Situated 30 km east of the major service town of Northam, WA Mining lease well positioned with respect to infrastructure such as Western Power's SWIS transmission line and the Goldfields water pipeline within CUNDERDIN SHIRE. Native title has been extinguished, the area is freehold land No historical sites, wilderness or national park, conservation zone or environmental issue other than dryland salinity and drought are indicated.
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> CRA Exploration Pty Ltd (CRAE) – 1990's, Minerals Corporation Ltd subsidiary, Swan River kaolin (SRK) - 2003 to 2010; previously explored and evaluated the Meckering area for kaolinite and kaolin products.
<i>Geology</i>	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. 	<ul style="list-style-type: none"> The kaolinite is a residual weathering product of granite and granitic-gneiss of the Western Gneiss Terrane. Kaolin forms part of an unusually thick and well developed weathering profile. Kaolin is found under overburden of laterite and mottled clays, with overburden thickness ranging from 5 to over 8m. High grade kaolin ranges from 5 to 35m thick. Minerals identified by XRD analysis of two cores include: quartz, kaolinite, smectite, micas (muscovite + biotite), chlorite, orthoclase, goethite and magnetite. Quartz is present throughout the profile.
<i>Drill hole Information</i>	<ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar 	<ul style="list-style-type: none"> 49 vertical reverse circulation drill holes within the ML, data also available for additional drilling outside the lease. Holes are from 30 to 200m apart. Drill hole collar information is tabulated in Appendix 2 Recorded drill hole intersections are tabulated in Appendix 3

	<ul style="list-style-type: none"> ○ dip and azimuth of the hole ○ down hole length and interception depth ○ hole length. <ul style="list-style-type: none"> • 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. 	
Data aggregation methods	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Not relevant as no exploration results being reported.
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> • These relationships are particularly important in the reporting of Exploration Results. • If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. • If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known'). 	<ul style="list-style-type: none"> • Mineralisation is sub horizontal weathering profile, tested by vertical drilling.
Diagrams	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Drillhole location map attached
Balanced reporting	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • No results being reported.
Other substantive exploration data	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • Substantial bulk sampling and testwork as noted above.

and rock characteristics; potential deleterious or contaminating substances.

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.
- Additional test results awaited on 2016 drilling.
- Resources and reserves to be revised once these results are available.

3 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
<i>Database integrity</i>	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Random data checks made with original SRK lab sheets and with available CRA data. • Nagrom data transferred digitally into database • Sample data audits and reviews were undertaken during data entry into a database and further on querying during later modelling
<i>Site visits</i>	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Competent person Sue Border has visited site on many occasions and supervised SRK drilling. Llyle Sawyer supervised the 2016 drilling and contributed to data compilation and resource modelling
<i>Geological interpretation</i>	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Kaolin in this region is related to lateritic weathering of predominantly granitic source rocks, with kaolin developed in the pallid zone below a laterite and usually overlying weathered granites. Areas which from geomorphology, geology, presence of laterite and topography are prospective for high quality kaolin resources are widespread within the project area. • Drill hole data and bulk sample data to date all confirm the type model for the deposit. • Around the defined Meckering deposit are areas prospective for extensions and repetitions of the kaolin resource.
<i>Dimensions</i>	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • The Mineral Resource extends to the boundaries of the Mining Lease; see map for area, but trimmed to 40m from the boundary to allow for anticipated mining constraints. • The resource has been trimmed to 40m below surface, and generally commences 5 to 8m below surface. • Occasional minor lenses of low brightness clay within the resource outline, otherwise resource is a continuous sheet, 5 to 35 m thick.

<p><i>Estimation and modelling techniques</i></p>	<ul style="list-style-type: none"> • <i>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.</i> • <i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i> • <i>The assumptions made regarding recovery of by-products.</i> • <i>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</i> • <i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i> • <i>Any assumptions behind modelling of selective mining units.</i> • <i>Any assumptions about correlation between variables.</i> • <i>Description of how the geological interpretation was used to control the resource estimates.</i> • <i>Discussion of basis for using or not using grade cutting or capping.</i> • <i>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</i> 	<ul style="list-style-type: none"> • Interpolation limited by boundary of logged kaolin of the 49 drillholes within M70/1334. • Variography on brightness and yield confirms confidence in extrapolation distance • Micromine used with 50 by 50m by 5m block model, interpolation by ordinary kriging. • Brightness correction for the data measured at minus 5 is -1.9 %; correction used for JKA holes (CRA drilling) was also – 1.9 %. This is conservative; uncertainty in whether these holes were measured at minus 10 micron or minus 45, assumed minus 10 as the worst case. • Can include: 1m of intervening marginal grade; <ul style="list-style-type: none"> ○ up to 3m of missing samples if geology log implies continuity with surrounding samples • Resource model consistent with previous estimates.
<p><i>Moisture</i></p>	<ul style="list-style-type: none"> • <i>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</i> 	<ul style="list-style-type: none"> • Ore moisture ranged between 2% and 17% with average moisture of around 13% for 2016 drilling. Samples were bagged immediately after drilling and these moisture values represent natural in-ground moisture levels. • Resource tonnage estimated on a dry basis.
<p><i>Cut-off parameters</i></p>	<ul style="list-style-type: none"> • <i>The basis of the adopted cut-off grade(s) or quality parameters applied.</i> 	<ul style="list-style-type: none"> • minimum cut-off of 80% brightness for -45 micron clay <ul style="list-style-type: none"> ○ Minimum brightness of 80% required industry standard for filler grade B ○ Minimum minus 45 content of 30% excluded some less weathered samples at base of resource <ul style="list-style-type: none"> • Resource trimmed to 40m below surface.
<p><i>Mining factors or assumptions</i></p>	<ul style="list-style-type: none"> • <i>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.</i> 	<ul style="list-style-type: none"> • No mining or processing factors have been applied to the resources • Series of small open cuts are planned.

<p><i>Metallurgical factors or assumptions</i></p>	<ul style="list-style-type: none"> <i>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.</i> 	<ul style="list-style-type: none"> Particle size distributions of the kaolin are typical of “primary style” kaolin produced from weathered granites. This resource is suitable for use both as filler clay for the paper industry, and as high quality ceramic clay. Laboratory and pilot plant testwork shows simple sizing can produce a sized product with low abrasion and defined brightness from this resource. Tests also indicate that the resource may be suitable for delamination and other processing techniques to produce a range of other products, including paper coating grades. Kaolin taken from a major test-pit in Mining Lease by SRK was batch processed and produced kaolin to a range of specifications, with a focus on High Brightness Filler (HBF) grade. SRK undertook considerable market analysis, with HBF samples ranging from 1kg to 400kg in size being sent globally to potential customers in the paper, ceramics and industrial fillers markets for assessment. Parameters of the final product will vary depending on customer requirements and processing undertaken. For example, finer sized fractions have higher brightness Potential product yield will decrease unless both a coarser and a finer product can be sold.
<p><i>Environmental factors or assumptions</i></p>	<ul style="list-style-type: none"> <i>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.</i> 	<ul style="list-style-type: none"> Water recycling is planned and has been tested on pilot plant
<p><i>Bulk density</i></p>	<ul style="list-style-type: none"> <i>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.</i> <i>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.</i> <i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i> 	<ul style="list-style-type: none"> Dry bulk density calculated using downhole geophysics on 5 holes to get in situ wet density, and lab measured moistures from 2016 drilling. Average of short spaced density and long spaced density used. Average calculated dry density is close to the figure assumed in previous resource estimates (1.6 assumed previously, 1.57 estimated via geophysics).
<p><i>Classification</i></p>	<ul style="list-style-type: none"> <i>The basis for the classification of the Mineral Resources into varying confidence categories.</i> <i>Whether appropriate account has been taken of all relevant factors (ie relative</i> 	<ul style="list-style-type: none"> Variography used to confirm overall continuity. Test pit confirmed drilling results and geological interpretation. Consistency between the different drill programs and test pits adds to confidence. The data has been validated to a high level and is considered to be reliable for

	<p><i>confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</i></p> <ul style="list-style-type: none"> • <i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i> 	<p>modelling</p> <ul style="list-style-type: none"> • The result and classification are appropriate to this style of deposit.
Audits or reviews	<ul style="list-style-type: none"> • <i>The results of any audits or reviews of Mineral Resource estimates.</i> 	<ul style="list-style-type: none"> • No formal audits conducted.
Discussion of relative accuracy/confidence	<ul style="list-style-type: none"> • <i>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.</i> • <i>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.</i> • <i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i> 	<ul style="list-style-type: none"> • A high level of confidence is given to the global resource tonnage and grade for brightness and minus 45 micron within the deposit within ML70/1334. • Local variations have been observed within the depth of overburden and variability of kaolinitic weathering, this may impact on reconciliation of the modelled resource to the final mined resource. • Minus 500 micron yield and alumina content estimates are only reliable within the area of the 2016 drilling. Additional analyses are awaited to confirm correlations with older drilling and improve confidence in these factors across the remainder of the resource.

Appendix 2

DRILL HOLE LOCATION TABLE

Drill Hole	Easting (m)	Northing (m)	Elevation (m)	Inclination (°)	Azimuth (°)	Total Depth (m)
94JKA018	505918	6494598	293	-90	0	60
94JKA019	505701	6495042	288	-90	0	37
MK210	505600	6495000	284	-90	0	22
MK211	505400	6495000	281	-90	0	15
MK212	505200	6495000	278	-90	0	19
MK214	505400	6494800	279	-90	0	21
MK215	505600	6494800	283	-90	0	39
MK216	505800	6494600	290	-90	0	45
MK217	505600	6494600	284	-90	0	45
MK218	505400	6494600	280	-90	0	27
MK219	505200	6494600	275	-90	0	14
MK220	505200	6494400	275	-90	0	40
MK221	505400	6494400	278	-90	0	25
MK222	505600	6494400	285	-90	0	45
MK223	505800	6494400	286	-90	0	45
MK305	505800	6494500	286.86	-90	0	37
MK306	505752	6494700	285.69	-90	0	37
MK307	505800	6494749	285.69	-90	0	36
MK308	505801	6494703	285.6	-90	0	36
MK309	505598	6494699	287.78	-90	0	36
MK310	505651	6494701	285.55	-90	0	54
MK311	505699	6494698	288.32	-90	0	36
MK312	505700	6494652	284.38	-90	0	36
MK313	505700	6494603	285.43	-90	0	36
MK314	505699	6494501	286.86	-90	0	36
MK315	505697	6494399	288.7	-90	0	66
MK316	505700	6494751	285.71	-90	0	36
MK317	505701	6494800	286.29	-90	0	37
MK318	505699	6494849	287.59	-90	0	36
MK319	505799	6494800	289.53	-90	0	36
MK320	505624.56	6494652	284.09	-90	0	40
MK321	505551.13	6494546.5	281.93	-90	0	40
MK322	505550.28	6494447.5	282.33	-90	0	40
MK323	505598.34	6494496.5	283.72	-90	0	40
MK324	505648.16	6494600.5	284.85	-90	0	40
MK325	505673.5	6494653.5	284.96	-90	0	40
MK326	505699.28	6494675	285.33	-90	0	40
MK327	505699.72	6494623	285.97	-90	0	40
MK328	505647.19	6494549	285.13	-90	0	40
MK329	505648.34	6494449	286.13	-90	0	43
MK330	505697.84	6494495.5	287.24	-90	0	40
MK331	505697.31	6494549.5	286.71	-90	0	40
MK332	505728.16	6494613.5	286.83	-90	0	40
MK333	505750.94	6494598	287.72	-90	0	40
MK334	505726.63	6494574.5	287.39	-90	0	40
MK335	505748.81	6494550	288.13	-90	0	40
MK336	505797.84	6494549	289.76	-90	0	40
MK337	505847.72	6494446	288.47	-90	0	40
MK338	505750.78	6494447	288.5	-90	0	40

Appendix 3

DRILL HOLE RECORDED INTERSECTION TABLE

Drill Hole	Depth From	Depth To	Intersected Unit	Intersect (m)
94JKA018	0	2	LT	2
94JKA018	2	6	MC	4
94JKA018	6	7	KL	1
94JKA018	7	32	LT	25
94JKA018	32	44	KL	12
94JKA018	44	60	TS	16
94JKA019	0	2	LT	2
94JKA019	2	7	MC	5
94JKA019	7	25	KL	18
94JKA019	25	28	TS	3
94JKA019	28	36	KL	8
94JKA019	36	37	GR	1
MK210	0	1	SO	1
MK210	1	2	LT	1
MK210	2	5	CY	3
MK210	5	6	GR/SC?	1
MK210	6	21	KL	15
MK210	21	22	CY	1
MK211	0	1	LT	1
MK211	1	2	GR	1
MK211	2	3	SC	1
MK211	3	4	GR	1
MK211	4	14	KL	10
MK211	14	15	GR	1
MK212	0	1	LT	1
MK212	1	2	SS	1
MK212	2	3	GR/SC?	1
MK212	3	15	KL	12
MK212	15	18	CY	3
MK214	0	2	LT	2
MK214	2	6	MC	4
MK214	6	19	KL	13
MK214	19	20	MC	1
MK214	20	21	GR	1
MK215	0	1	SO	1
MK215	1	3	LT	2
MK215	3	4	CY	1
MK215	4	6	GRKL	2
MK215	6	8	MC	2
MK215	8	36	KL	28
MK215	36	38	MC	2
MK215	38	39	GR	1
MK216	0	2	LT	2
MK216	2	3	MC	1
MK216	3	4	LT	1
MK216	4	5	CY	1
MK216	5	43	KL	38
MK216	43	45	CY	2
MK217	0	1	SO	1
MK217	1	2	CY	1
MK217	2	5	LT	3
MK217	5	7	MC	2
MK217	7	43	KL	36
MK217	43	44	MC	1
MK217	44	45	GR	1
MK218	0	1	LT	1
MK218	1	2	CY	1
MK218	2	4	GR?	2
MK218	4	6	MC	2
MK218	6	13	KL	7
MK218	13	18	CY	5
MK219	0	1	SO	1
MK219	1	7	CY	6

Drill Hole	Depth From	Depth To	Intersected Unit	Intersect (m)
MK219	7	9	KL	2
MK219	9	13	GR	4
MK220	0	1	SO	1
MK220	1	6	MC	5
MK220	6	7	KL	1
MK220	7	8	MC	1
MK220	8	12	KL	4
MK220	12	13	MC	1
MK220	13	19	KL	6
MK220	19	23	MC	4
MK220	23	24	KL	1
MK220	24	25	MC	1
MK220	25	26	KL	1
MK220	26	29	MC	3
MK220	29	30	CY	1
MK221	0	1	SO	1
MK221	1	4	LT	3
MK221	4	8	SC?	4
MK221	8	11	KL	3
MK221	11	12	MC	1
MK221	12	15	KL	3
MK221	15	17	MC	2
MK221	17	24	KL	7
MK221	24	25		1
MK222	0	2	SO	2
MK222	2	3	LT	1
MK222	3	8	CY	5
MK222	8	27	KL	19
MK222	27	30	MC	3
MK222	30	43	KL	13
MK222	43	45	MC	2
MK223	0	2	LT	2
MK223	2	3	SC	1
MK223	3	43	KL	40
MK223	43	45	MC	2
MK305	0	6	LT	6
MK305	6	7	MC	1
MK305	7	35	KL	28
MK305	35	36	GR	1
MK306	0	5	LT	5
MK306	5	10	SC	5
MK306	14	36	KL	22
MK307	0	6	LT	6
MK307	6	36	KL	30
MK308	0	6	LT	6
MK308	6	9	SC	3
MK308	9	36	KL	27
MK309	0	8	LT	8
MK309	8	14	SC	6
MK309	14	36	KL	22
MK310	0	7	LT	2
MK310	7	9	SC	2
MK310	9	41	KL	36
MK310	41	53	KL/GR	12
MK310	53	54	GR	1
MK311	0	6	SO	16
MK311	6	8	MC	2
MK311	8	36	KL	28
MK312	0	7	LT	7
MK312	7	9	SC	2
MK312	16	21	KL	5
MK312	21	36	KL/GR	15
MK313	0	5	LT	5
MK313	5	6	SC	1
MK313	6	11	MC	1
MK313	11	36	KL	27

Drill Hole	Depth From	Depth To	Intersected Unit	Intersect (m)
MK314	0	5	LT	5
MK314	5	36	KL	31
MK315	0	2	SO	2
MK315	2	3	MC	1
MK315	3	41	KL	37
MK315	41	60	KL/GR	19
MK315	60	65	SC	5
MK315	65	66	GR	1
MK316	0	4	LT	4
MK316	4	9	SC	5
MK316	9	36	KL	27
MK317	0	4	LT	4
MK317	4	8	SC	4
MK317	8	27	KL	19
MK317	27	36	KL/GR	9
MK318	0	3	LT	3
MK318	3	8	SC	5
MK318	8	24	KL	16
MK318	24	25	KL/GR	1
MK318	25	36	KL	11
MK319	0	3	LT	3
MK319	3	9	SC	6
MK319	9	36	KL	27
MK320	0	5	LT	5
MK320	5	9	KL/GR	4
MK320	9	38	KL	29
MK320	38	40	KL/GR	2
MK321	0	3	SO	3
MK321	3	7	SC	4
MK321	7	39	KL	32
MK321	39	40	KL/GR	1
MK322	0	4	SO	4
MK322	4	8	LT	4
MK322	8	14	KL/GR	6
MK322	14	16	SC	2
MK322	16	38	KL	22
MK322	38	40	KL/GR	2
MK323	0	3	SO	3
MK323	3	8	LT	5
MK323	8	37	KL	29
MK323	37	40	KL/GR	3
MK324	0	6	LT	6
MK324	6	39	KL	33
MK324	39	40	KL/GR	1
MK325	0	0.5	SO	0.5
MK325	0.5	4	LT	3.5
MK325	4	9	SC	5
MK325	9	11	KL/GR	2
MK325	11	34	KL	23
MK325	34	40	KL/GR	6
MK326	0	0.5	SO	0.5
MK326	0.5	4	LT	3.5
MK326	4	7	KL/GR	3
MK326	7	39	KL	32
MK326	39	40	KL/GR	1
MK327	0	1	LT	1
MK327	1	5	SC	4
MK327	5	7	KL/GR	2
MK327	7	40	KL	33
MK328	0	1	SO	1
MK328	1	6	LT	5
MK328	6	40	KL	34
MK329	0	2	SO	2
MK329	2	6	LT	4
MK329	6	43	KL	37
MK330	0	4	LT	4

Drill Hole	Depth From	Depth To	Intersected Unit	Intersect (m)
MK330	4	6	SC	2
MK330	6	40	KL	34
MK331	0	4	LT	4
MK331	4	6	SC	2
MK331	6	40	KL	34
MK332	0	4	LT	4
MK332	4	5	SC	1
MK332	5	40	KL	35
MK333	0	4	LT	4
MK333	4	9	KL/GR	5
MK333	9	40	KL	31
MK334	0	4	LT	4
MK334	4	7	SC	3
MK334	7	40	KL	33
MK335	0	3	LT	3
MK335	3	7	SC	4
MK335	7	40	KL	33
MK336	0	3	LT	3
MK336	3	7	SC	4
MK336	7	40	KL	33
MK337	0	2	LT	2
MK337	2	40	KL	38
MK338	0	1	SO	1
MK338	1	3	KL/GR	2
MK338	3	40	KL	37