MCB RESOURCES LIMITED

ASX RELEASE.

16 April 2020

Alteration Mapping defines Mineralisation Vectors at Melilup

Highlights

- **Short Wavelength Infrared (SWIR) has defined strong phyllic alteration assemblages spatially associated with previously mapped intrusive phases and broad copper mineralisation at Melilup (see company ASX announcement dated 6th April 2020).**

- **Chlorite temperature proximators (FeOH 2250nm wavelength position) vector in towards diorite intrusives, a conspicuous NW-SE striking fault and silicic alteration mapped by Company geologists (see company ASX announcement dated 29th January 2020).**

- **Chlorite 2250 nm wavelength position adjacent and within Batu Hijau pit shell typically between 2243 and 2250nm (Melilup on periphery of shorter wavelength).**

- **Potassic white mica (phyllic alteration) associated with dioritic phases located within a NW-structural corridor (arc-parallel) and equally in a NE-SW direction (arc-normal) toward Fathom Target 1 indicates similar broad structural setting to Panguna Copper Mine (at the intersection of arc parallel and arc normal structures, see SEG paper by Agnew, 2018), ~100km to the south.**

- **Alunite float sample obtained on eastern limb of Eric's River indicates advanced argillic alteration characteristic of the upper portions of porphyry related systems, where high temperature low ph conditions dominate alteration fluids.**

- **Assay results for surface geochemical samples collected in Dec 2019 have been reported previously (see company ASX announcement dated 6th April 2020), and are consistent with the alteration profile suggested by the SWIR study.**

Introduction

MCB Resources Limited (MCB or the **Company)** (ASX: MCB) is pleased to announce that alteration mapping has defined strong lateral zonation (typical of Cu/Au porphyry deposits) transitioning from an outer propylitic zone to an inner phyllic zone associated with previously mapped diorite intrusives and broad copper mineralisation at Melilup.

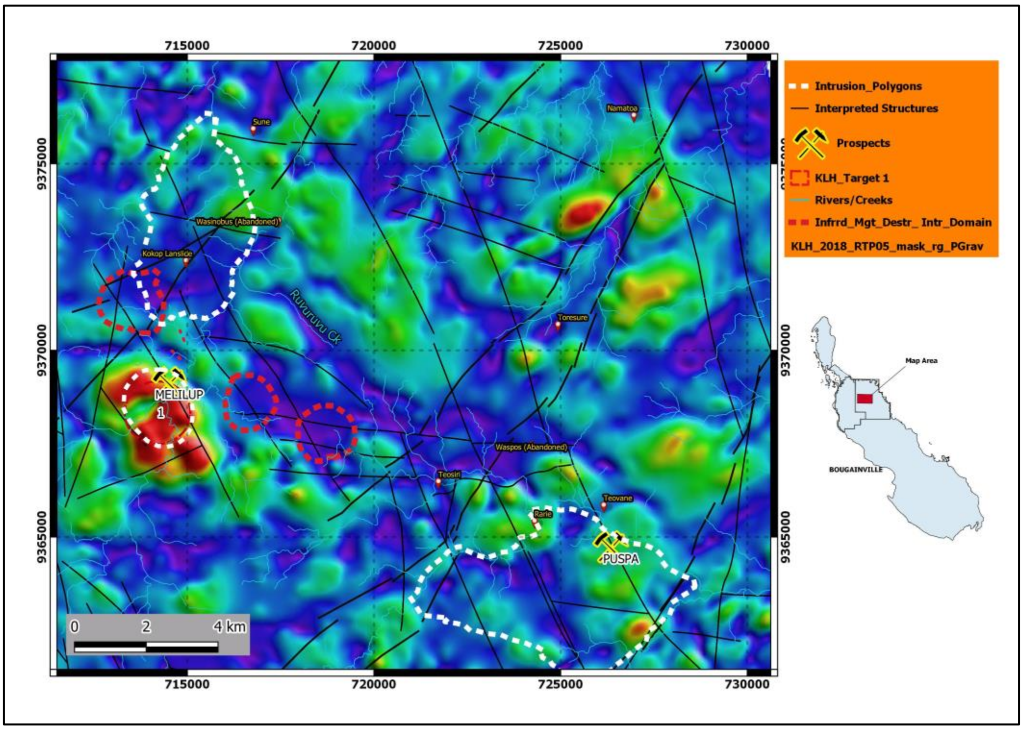

Figure 1: Location Map showing prominent NW, NE, EW structures overlain on RTP magnetics (see company ASX announcements dated 21st January, 11th March and 20th March 2019 for additional details of the helimag survey).

Figure 2: TerraSpec Halo

Dr Bill Andrews (Valhalla Geology) was engaged by MCB Resources to conduct a SWIR survey on rock specimens obtained at Melilup. The study permits the identification and characterisation of mineral species and allows for the reconstruction of thermal, geochemical and weathering environment to vector in towards mineralisation. Alteration mapping using infrared spectra permits the analysis of a wide variety of deposit types including epithermal and porphyry alteration systems. It maps alteration minerals in order to identify alteration zones (mineral occurrence/ proportions and mineral composition and crystallinity), and to define ore bodies. A copy of Dr. Andrews' report will be available on the Company's website shortly. The scalar raw data is contained in Appendix 2.

The TerraSpec Halo spectrometer measures the optical energy that is reflected by, absorbed into, or transmitted through a sample (ASD, 2008). Resulting scans are then compared to a "Spectral Library" of known responses derived from various alteration systems from around the world, allowing comparisons to be made on distance from source, fluid chemistry, and nature of mineralised system.

Spectrometer

A portable PanAnalytical TerraSpec Halo field spectrometer (Figure 2) was utilised to collect infrared spectra from wavelengths between 350-2550 with results processed through spectral geologist (TSG™) software. Scalars were generated for potassic white micas (muscovite, illites, paragonites) and chlorite minerals prior to spatial interpretation.

Infrared spectrometers produce diagnostic spectra that yield absorption features relative to particular molecular bonds at specific bands within the measured spectrum. An example of this is the characteristic chlorite spectra which yields diagnostic FeOH and MgOH adsorption features between 2234-2255 nm and 2320-2360 nm respectively (Herrman et al, 2001). Wavelengths of both features increase as the iron content in chlorite increases.

FeOH features measured at shorter wavelengths are indicative of Mg/Fe substitution and are interpreted as Mg rich. In the case of the Batu Hiju porphyry, chlorite chemistry within approximately 1 km from the mineralised centre are observed to be Mg rich and rapidly decrease in the Mg:Fe ratio from approximately 1.5 km (Neal et al, 2018).

Results

71 rock chip specimens obtained from Melilup were analysed using a TerraSpec Halo. Analysis identified strong phyllic assemblages spatially associated with intrusive phases (Figure 3). Illite assemblages detected mainly occurred within and proximal to inferred copper mineralisation. This work validates past field observations carried out at Melilup.

Potassic white mica (phyllic alteration) associated with dioritic phases and magnetite destructive alteration zones along a NW-structural corridor (arc-parallel) as well as in a NE-SW striking direction (arc-normal) toward Fathom Target 1 (Figures 1 and 3) suggests a similar structural setting to that of the Panguna Copper Mine (Agnew, 2018).

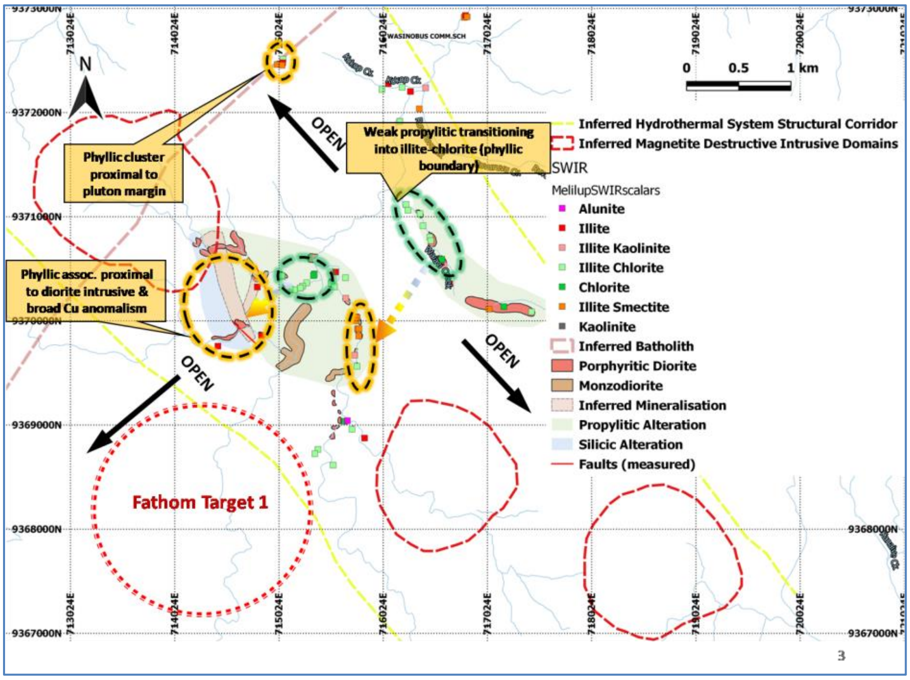

Figure 3: Zonation of phyllic and propylitic alteration toward intrusive centres.

At Melilup, strong chlorite heat signatures (2250nm wavelength) manifest where known intrusive outcrops are more abundant as well as on structural trends of measured NW-SE faults (Figure 4), demonstrating vectoring relationships toward recently mapped intrusive phases and associated mineralisation. For comparison, the chlorite 2250nm wavelength position proximal and within the Batu Hijau pit shell ranges between 2243 and 2250nm (Neal et al, 2018).

Elsewhere, an alunite float sample (KTR488) collected on the eastern limb of Eric's River indicates advanced argillic alteration, characteristic of the upper portion of porphyry/intrusion related mineralisation, and is possibly connected to a trend extending to the silicic alteration mapped by MCB Resources geologists (Figure 4).

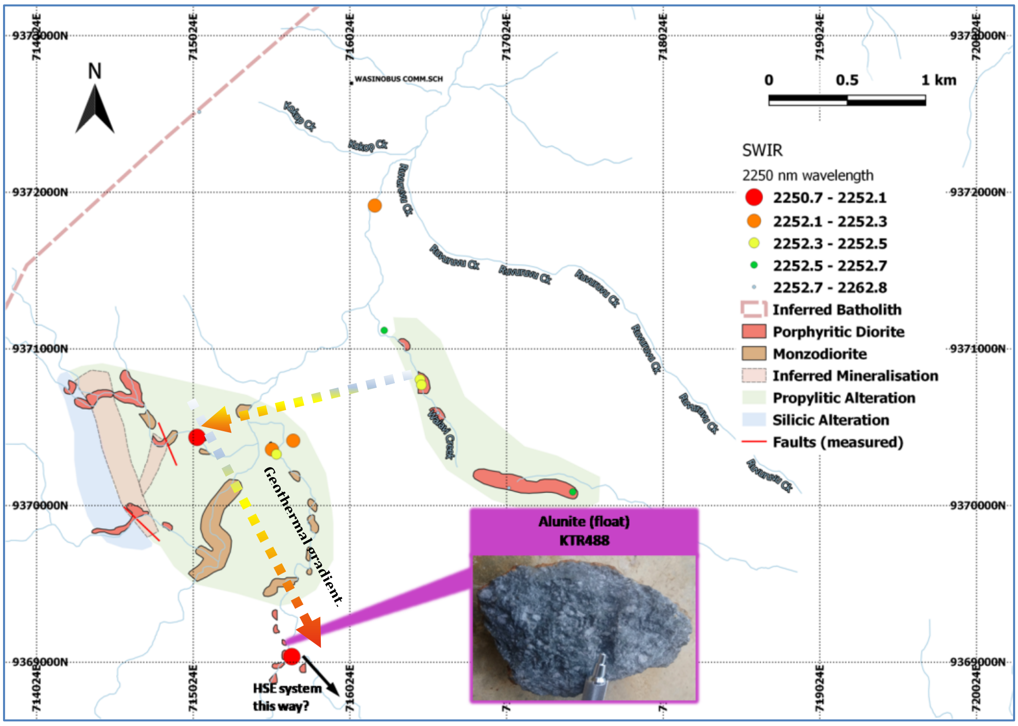

Figure 4: Melilup Chlorite 2250nm wavelength.

Future Work Program

Planning is underway for additional rockchip, mapping, geophysics and soil survey work at Melilup. Program to be implemented following the lifting of the suspension of licence imposed by DoMER as well as the current State of Emergency (SOE) enforced by the Autonomous Region of Bougainville (ARoB) in response to COVID-19. In addition, prior to work resuming, a cleansing ceremony to honour the death of Terry Kilya (in line with Melanesian culture) will be necessitated.

Authorised for issue by Michael Johnston, Executive Director

For further information, please contact:

Mr Michael Johnston – Executive Director
+61 (08) 6424 8524

About MCB Resources Limited

MCB Resources Limited is an ASX listed junior exploration company, solely focused on its two Exploration Licenses in North Bougainville. The tenements are considered highly prospective for porphyry copper and intrusion related copper gold mineralisation, and have not been the subject of any modern exploration since "The Crisis" in 1989.

About the Bougainville Exploration Licences

The Company, through Tore Joint Venture Limited, manages two exploration licences on the island of Bougainville, Autonomous Region of Bougainville, Papua New Guinea. Tore Joint Venture Limited is 75% owned by MCB Resources Limited, with the remaining 25% being held by Toremana Resources Limited, a registered landowner association. The two exploration licences, EL03 and EL04 were issued in November 2017 and cover a combined area of 1,704 km^2.

Tenement Schedule

Tenements held by MCB Resources Limited and subsidiary companies.

TENEMENT	LOCATION	NAME	INTEREST
EL03	Bougainville	Tore East	75%
EL04	Bougainville	Tore West	75%

Field work on the Company's two Bougainville tenements was suspended by the Department of Mineral and Energy Resources (**DoMER**) on 17th December 2019. The suspension remains in force.

Competent Person Statements

The information in this announcement that relates to Exploration Results is based on information reviewed by **Mr Michael Johnston** who is a fellow of the Australasian Institute of Mining and Metallurgy (FAusIMM) and an Executive Director of the Company. Mr Johnston has sufficient experience which is relevant to the style of mineralisation and type of deposits 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'. Mr Johnston consents to the inclusion of the information in the form and context in which it appears. Mr Johnston is a related party by virtue of being an executive director of MCB Resources.

Dr. Bill Andrews (Principle of Valhalla Geology) completed the alteration data collection and interpretation, and consents to the inclusion of the data in the form and context in which it appears in this press release.

References

Agnew, M.(2018). Return to Bougainville – Reassessing the Mineral Potential of a Long-Forgotten Island, SEG Newsletter No. 118 (April) pp 17-24.

ASD. (2008). TerraSpec User Manual, ASD Document 600541 Rev.g. https://www.mapping-solutions.co.uk/downloads/data/pdf/A1044.pdf

Blake, D.H., and Miezitis, Y. (1967). Geology of Bougainville and Buka Islands, New Guinea: Bureau of Mineral Resources, Geology and Geophysics, Department of National Development, Commonwealth of Australia Bulletin 93, 56 p.

Buckingham, A. (2019). Processing, enhancement and modelling of 2018 airborne data over the Tore JV, Bougainville, Papua New Guinea, power-point presentation by Fathom Geophysics for Kalia Limited, ver. 4. *Unpublished*, 61 slides.

Clark, G.H. (1990). Panguna copper gold deposit, in *Geology of the Mineral Deposits of Australia and Papua New Guinea* (Ed- F.E. Hughes)' pp' 1807-1816 (The Australasian Institute of Mining and Metallurgy: Melbourne).

Garwin, S. (2019). Preliminary Interpretation of Geology and Geochemical Results for the northern Bougainville Island Tenements of Kalia Limited: Implications for Copper and Gold Exploration, power-point presentation ver. 4. *Unpublished*, 39 slides.

Herrmann, W., Blake, M., Doyle, M., Huston, D., Kamprad, J., Merry, N., & Pontual, S. (2001). Short Wavelength Infrared (SWIR) Spectral Analysis ofHydrothermal Alteration Zones Associated with Base Metal Sulfide Deposits at Rosebery and Western Tharsis, Tasmania, and Highway-Reward, Queensland. *Economic Geology, 96*(5), 939-955. doi:10.2113/gsecongeo.96.5.939

Neal, L.C., Mason, P. J., & Chang, Z. (2018). Spectral characteristics of propylitic alteration minerals as a vectoring tool porphyry copper deposits. Journal of Geochemical Exploration, 184 (Part A), 179-198. Doi:https://doi.org/10.1016/j.gexplo.2017.10.019

Rogerson, R. J., Hilyard, D. B., Finlayson, E. J., Johnson, R. W., and McKee, C. O. (1989). The geology and mineral resources of Bougainville and Buka Islands, Papua New Guinea. *Geological Survey of Papua New Guinea, Memoir 16*, 228 pages.

Sillitoe, R. H. (2010). Porphyry Copper Systems*. *Economic Geology, 105*(1), 3-41. doi:10.2113/gsecongeo.105.1.3

MCB RESOURCES LIMITED

APPENDIX 1

ADDITIONAL INFORMATION

JORC CODE, 2012 EDITION – TABLE 1

The following sections are provided for compliance with requirements for the reporting of exploration results under the JORC Code, 2012 Edition.

Section 1 Sampling Techniques and Data

Reporting of Exploration Results
(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg 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 (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.*	• Sampling of stream sediment was wet sieved at size -80 mesh and relates to historic geochemical data from Rogerson et al. 1989 • Whole rock sampling from Rogerson et al. 1989 is denoted by O/C for in situ outcrop at FLT for float samples. • For stream sediment samples from Rogerson et al. 1989, Au and Pt were determined on each sample by either 20g or 50g fire assay (depending on sample size); Hg by cold vapour AAS; As and Te by hydride-generation AAS; Ag by AAS. Following KClO4,HCl digestion and subsequent 10% aliquot 336-MIBK/KI/ascorbic acid metal concentration; and Cu, Zn by AAS following two separate metal extractions, 1% HCl (partial) digestion and HCl/HNO3 (total) digestion. Detection limits for each element were nominally; Au (10ppb), Pt (100ppb), Hg (2ppb), As (2ppm), Te (100ppb), Ag (100ppb), Cu (1ppb) and Zn (1ppm). • Whole rock samples were analysed for; Ba, Sr, Pb, Zr, V, Cr, Ni by ICP at AMDEL, South Australia, Rb, Nb, Y by XRF at AMDEL, Sc, Cs, Sr, Hf, Th, La, Ce, Nd, Sm, Cu, Tb, Dy, Yb, Lu, V, Zn, Au by Instrumental Neutron Activation Analysis at CSIRO Lucas Heights NSW. • MCB Resources Limited is reporting modelling utilising the airborne magnetic and radiometric data, for the survey carried out over the Mt Tore project area [EL03 and EL04] between 30/08/2018 and 30/11/2018. • MCB Resources Limited collects rockchips from outcrop and float at suitable locations in the field these are submitted to Intertek Lae. A 50g fire assay is conducted for gold analysis and a four acid digest ICP-MS/AES is conducted for trace and major multi-element detection. Fire assay size can be variable, and dependent on sample size collected.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).*	• No drilling results reported

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.*	• No drilling results reported
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.*	• Samples have been logged by a geologist in the field.
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.*	• No drilling results reported
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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• For stream sediment samples from Rogerson et al. 1989, Au and Pt were determined on each sample by either 20g or 50g fire assay (depending on sample size); Hg by cold vapour AAS; As and Te by hydride-generation AAS; Ag by AAS. Following $KClO_4$,HCl digestion and subsequent 10% aliquot 336-MIBK/KI/ascorbic acid metal concentration; and Cu, Zn by AAS following two separate metal extractions, 1% HCl (partial) digestion and HCl/HNO_3 (total) digestion. Detection limits for each element were nominally; Au (10ppb), Pt (100ppb), Hg (2ppb), As (2ppm), Te (100ppb), Ag (100ppb), Cu (1ppb) and Zn (1ppm). • Whole rock samples were analysed for; Ba, Sr, Pb, Zr, V, Cr, Ni by ICP at AMDEL, South Australia, Rb, Nb, Y by XRF at AMDEL, Sc, Cs, Sr, Hf, Th, La, Ce, Nd, Sm, Cu, Tb, Dy, Yb, Lu, V, Zn, Au by Instrumental Neutron Activation Analysis at CSIRO Lucas Heights NSW. • Specific instrument information not available. • Lab-produced QAQC procedures and results are unknown. • Intertek Lae submit CRM standards, blanks, and check

MCB RESOURCES LIMITED

Criteria	JORC Code explanation	Commentary
		samples where required.
	• *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.*	Terraspec Halo Spectrometer The TerraSpec Halo infrared spectrometer (SWIR) has a full-range spectrometer measuring the visible and short wave infrared regions ranging between 350-2500nm. The instrument package includes calibration reference materials. Spectrometer analyses are particularly effective for identification of hydrated (or hydroxyl bearing) clays typical of advanced argillic through sericitic (phyllic) and propylitic hydrothermal alteration and therefore highly applicable for alteration zones and vectors towards mineralisation in porphyry systems. Minerals are identified based on their characteristic SWIR absorption spectra, and by comparison with standard minerals, from the TSG™ and USGS mineral spectral databases. Analysis were collected using the 'dark' setting 100/scans/acquisitions for a period of 10 seconds for each sample. Raw results were processed through the spectral geologist (TSG™) software. Scalars (numerical parametrics) were then generated for potassic white mica (muscovite, illite, paragonite) and chlorite. The unit was calibrated with manufacturer provided reference fused disks at each start-up and automatically using the internal white reference standard (fitted within the Halo instrument). A link to the manufacturers device can be found under: https://www.malvernpanalytical.com/en/products/product-range/asd-range/terraspec-range/terraspec-halo-mineral-identifier
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.*	• Unknown if historic samples were submitted to an umpire laboratory for check analysis. • No umpire laboratory checks on recent surface sample results. • MCB Resources Limited samples have not been submitted to an umpire laboratory to date, with the company relying on the laboratory QAQC to date.
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.*	• Samples from Rogerson et al. 1989 are recorded in mE and mN to the nearest hundred metres using WGS1984 datum. The method for plotting locations is unknown. • A Garmin hand-held GPS is used to define MCB Resources Limited sample locations. • Geophysics Datum: Geodetic Datum of Australia 94 (GDA94) • Projection: Map Grid of Australia (MGA) • Zone: Zone 56
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*	• No drilling results reported.

Criteria	JORC Code explanation	Commentary
	estimation procedure(s) and classifications applied. • *Whether sample compositing has been applied.*	
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.*	• Mineralisation reported at surface only.
Sample security	• *The measures taken to ensure sample security.*	• Sample security practices unknown for historic samples.. • All recent samples are within possession of company staff until deposited with an independent (international) courier and delivered to the laboratory (Intertek) in Lae.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No audits or reviews have taken place. • Senior geologists periodically review all laboratory data and collection processes.

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 Mt Tore Project consists of two exploration licences, EL03 and EL04. • The Mt Tore Project is a joint venture between MCB Resources Limited (75%) and Toremana Resources Limited, a registered landowner association (25%).
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• All data sourced by the company has been disclosed.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Tore region consists of volcanic rocks in an island arc tectonic setting. Intrusive bodies are recorded in numerous locations throughout the project area and is considered highly prospective for porphyry Cu-Au-Ag-Mo and Epithermal Au deposits.
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:* o *easting and northing of the drill hole collar* o *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* o *dip and azimuth of the hole* o *down hole length and interception depth* o *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*	• No drilling results reported

Criteria	JORC Code explanation	Commentary
	understanding of the report, the Competent Person should clearly explain why this is the case.	
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg 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.*	• No minimum or maximum cut-offs have been applied
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 (eg 'down hole length, true width not known').*	• N/A
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.*	• Maps and plans appear throughout this release.
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.*	• All sample assay data has been released, previously. • Results of the geophysical survey, interpretation and modelling has been released, previously.
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.*	• See previous press releases covering historic geochemical results, helimag survey and initial rock chip sampling.
Further work	• *The nature and scale of planned further work (eg 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.*	• See future work/plans within the release.

APPENDIX 2

Melilup Raw Scalar Data

(Index: FSFR.30023Int=10sec HaloDefaultProject

Sample	East	North	RL	TYPE	Min1 sTSAS	Wt1 sTSAS	Min2 sTSAS	Wt2 sTSAS	2200wvl	2200A	2200D	2200wdth	1900wvl	1900A	1900D	SWIR IC….
ETFL00002	716802	9372915		FL	Muscovite	0.428	Chlorite-FeMg	0.323	2203.69	1.143	0.814	39.947	1907.54	1.132	0.655	1.243
ETFL00003	716802	9372915		FL	Muscovite	0.467	Montmorillonite	0.322	2204.92	1.227	0.891	37.986	1908.09	1.111	0.734	1.213
ETFL00005	716863	9373093		FL	Kaolinite-PX	0.753	Zoisite	0.247	NULL	0.741	0.961	15.583	1909.66	1.091	0.916	1.049
ETRK00036	716848	9373046		RK	MuscoviticIllite	0.51	Montmorillonite	0.286	2205.78	1.15	0.822	38.594	1910.33	1.211	0.747	1.1
ETRK00037	716813	9372932		RK	Muscovite	1	NULL	NULL	2202.26	1.077	0.888	41.362	1914.11	1.307	0.726	1.224
ETRK00038	716829	9372919		RK	Montmorillonite	0.694	ParagoniticIllite	0.306	2204.33	1.1	0.797	45.822	1909.31	1.225	0.577	1.382
KTR448	716285	9372202	493	FL	Muscovite	0.82	Gypsum	0.18	2198.89	0.975	0.834	41.381	1905.89	NULL	NULL	NULL
KTR449	716285	9372202	493	FL	MuscoviticIllite	1	NULL	NULL	2199.67	1.026	0.74	42.95	1910.47	1.231	0.703	1.052
KTR450	716206	9372242	514	FL	MuscoviticIllite	0.745	Chlorite-FeMg	0.255	2207.36	1.231	0.939	39.436	1910.63	1.143	0.897	1.047
KTR451	716243	9371118	592	FL	Chlorite-FeMg	0.78	MuscoviticIllite	0.22	2199.31	NULL	NULL	NULL	1914.09	1.316	0.839	0
KTR452	716262	9371062	617	FL	Muscovite	0.813	Ankerite	0.187	2207	1.175	0.874	34.047	1913.43	1.212	0.834	1.049
KTR453	716377	9371028	585	RK	Siderite	0.459	Montmorillonite	0.335	NULL	1.333	0.988	3.497	NULL	0.286	0.948	1.042
KTR454	716405	9370913	608	FL	MuscoviticIllite	0.469	Chlorite-FeMg	0.283	2206.33	1.195	0.86	29.406	1912.53	1.217	0.855	1.005
KTR455	716472	9370804	649	RK	Chlorite-FeMg	0.538	Epidote	0.29	2205.58	NULL	NULL	NULL	1914.73	1.342	0.786	0
KTR456	716481	9370770	633	RK	Chlorite-Mg	0.359	Epidote	0.321	2204.69	1.344	0.962	23.828	1914.5	1.307	0.816	1.178
KTR457	716586	9370591	656	RK	Chlorite-FeMg	0.648	Epidote	0.352	NULL	NULL	NULL	NULL	NULL	1.917	0.923	0
KTR458	716606	9370530	685	FL	MuscoviticIllite	0.757	Kaolinite-PX	0.243	2206.5	1.15	0.921	33.158	1911.14	1.152	0.906	1.017
KTR459	716663	9370356	718	RK	PhengiticIllite	0.76	Calcite	0.24	2212.28	0.0714	0.905	34.274	1907.66	0.985	0.889	1.018
KTR460	717039	9370112	734	RK	MuscoviticIllite	0.411	Montmorillonite	0.302	2206.4	1.306	0.881	36.08	1911.06	1.227	0.707	1.247
KTR461	717182	9370136	966	RK	Siderite	0.434	Chlorite-FeMg	0.336	NULL	NULL	NULL	NULL	NULL	1	0.952	0
KTR462	717447	9370087	996	RK	Chlorite-FeMg	0.533	MuscoviticIllite	0.268	2206.1	NULL	NULL	NULL	1910.04	1.25	0.866	0
KTR463	716431	9372237	474	RK	MuscoviticIllite	0.478	Kaolinite-PX	0.264	2205.81	1.15	0.812	33.004	1909.82	1.155	0.803	1.011
KTR464	716073	9372277	532	FL	Muscovite	1	NULL	NULL	2201.65	1.05	0.822	42.138	1912.71	1.169	0.862	0.955
KTR465	716012	9372221	541	RK	MuscoviticIllite	0.648	Chlorite-Mg	0.352	2203.21	1.162	0.881	40.966	1911.22	1.227	0.742	1.188
KTR466	715034	9372467	859	RK	Muscovite	1	NULL	NULL	2202.7	1.075	0.732	44.315	1911.16	1.183	0.777	0.942
KTR467	715008	9372461	852	RK	Paragonite	0.761	Montmorillonite	0.239	2196.27	0.9	0.667	41.85	1905.88	1.7	NULL	NULL

Sample	East	North	RL	TYPE	Min1 sTSAS	Wt1 sTSAS	Min2 sTSAS	Wt2 sTSAS	2200wvl	2200A	2200D	2200wdth	1900wvl	1900A	1900D	SWIR IC….
KTR468	715062	9372513	998	RK	Muscovite	0.8	Gypsum	0.2	2205.05	1.125	0.831	43.99	1905.89	1.909	NULL	NULL
KTR469	715062	9372513	998	RK	Muscovite	0.629	Jarosite	0.371	2200.1	1.081	0.929	40.609	NULL	0.727	0.791	1.176
KTR470	715062	9372513	998	RK	Aspectral	1	NULL	NULL	NULL	0.667	0.947	1.295	1913.23	1.333	0.891	1.063
KTR471	715059	9372478	983	RK	Paragonite	1	NULL	NULL	2190.05	0.811	0.867	39.478	1913.35	1.556	0.846	1.024
KTR472	715053	9372455	984	RK	Paragonite	0.648	Montmorillonite	0.352	2197.19	0.925	0.69	43.836	1911.28	1.159	0.833	0.828
KTR473	716370	9372035	523	FL	Muscovite	0.442	Montmorillonite	0.328	2203.87	1.1	0.807	31.659	1908.59	1.123	0.697	1.157
KTR474	715567	9370469	538	FL	Muscovite	1	NULL	NULL	2206.5	1.15	0.757	40.702	1912.09	1.211	0.814	0.93
KTR475	715526	9370358	568	RK	Chlorite-FeMg	0.514	Ankerite	0.244	NULL	NULL	NULL	NULL	NULL	1.25	0.947	0
KTR476	715555	9370327	611	FL	Siderite	0.431	Muscovite	0.353	2205.84	1.412	0.976	30.236	1919.37	1.836	0.913	1.068
KTR477	715665	9370217	624	RK	Muscovite	0.658	Kaolinite-PX	0.342	2206.7	1.175	0.782	32.588	1913.29	1.239	0.814	0.961
KTR478	715662	9370414	616	RK	Chlorite-FeMg	0.525	Phengite	0.321	2207.58	1.127	0.909	23.537	1915.04	1.275	0.88	1.032
KTR479	715765	9370037	644	RK	Muscovite	0.74	Siderite	0.26	2206.75	1.15	0.89	38.236	1911.56	1.5	0.872	1.02
KTR480	715773	9370031	630	RK	MuscoviticIllite	0.676	Montmorillonite	0.324	2203.97	1.1	0.779	41.712	1908.53	1.086	0.742	1.05
KTR481	715762	9370001	623	RK	MuscoviticIllite	0.593	Montmorillonite	0.407	2207.15	1.175	0.746	41.108	1907.91	1.123	0.67	1.113
KTR482	715777	9369923	634	RK	MuscoviticIllite	0.497	Montmorillonite	0.345	2207.95	1.2	0.845	38.911	1910.69	1.227	0.751	1.126
KTR483	715792	9369924	695	RK	MuscoviticIllite	0.523	Montmorillonite	0.31	2209.54	1.225	0.865	35.882	1910.29	1.155	0.804	1.077
KTR484	715789	9369854	695	RK	MuscoviticIllite	0.664	Montmorillonite	0.336	2207.37	1.175	0.784	39.273	1909.22	1.127	0.73	1.075
KTR485	715750	9369670	686	RK	MuscoviticIllite	0.484	Kaolinite-PX	0.332	2206.31	1.15	0.664	33.123	1912.98	1.289	0.575	1.155
KTR486	715772	9369563	724	RK	MuscoviticIllite	0.607	Chlorite-FeMg	0.393	2207.71	1.247	0.868	36.331	1912.46	1.194	0.893	0.972
KTR487	715653	9369035	824	RK	Hornblende	0.423	Epidote	0.325	NULL	NULL	NULL	NULL	NULL	0.5	NULL	NULL
KTR488	715680	9369041	822	FL	Kaolinite-WX	0.52	Alunite-Na	0.48	2169.14	0.133	0.87	2.594	NULL	1	NULL	NULL
KTR489	715724	9368959	833	FL	Aspectral	1	NULL	NULL	NULL	1.667	0.983	2.302	NULL	1.908	NULL	NULL
KTR490	715845	9368874	842	RK	Muscovite	1	NULL	NULL	2199.99	1	0.699	37.169	1913.82	1.246	0.917	0.762
KTR491	715398	9368766	740	RK	MuscoviticIllite	0.667	Montmorillonite	0.333	2208.65	1.2	0.819	37.259	1910.03	1.155	0.754	1.085
KTR492	715368	9368724	809	RK	MuscoviticIllite	0.668	Chlorite-FeMg	0.332	2206.95	1.237	0.812	37.487	1910.47	1.183	0.861	0.943
KTR493	715543	9368614	916	FL	Muscovite	0.661	Siderite	0.339	2204.4	1.143	0.881	38.608	NULL	1.863	NULL	NULL
KTR494	716183	9371916	480	FL	Chlorite-FeMg	0.651	Muscovite	0.192	2206.98	1.231	0.928	22.543	1917.41	1.371	0.895	1.037
KTR495	716183	9371915	481	FL	Chlorite-FeMg	0.457	Muscovite	0.317	2208.13	1.216	0.958	20.641	NULL	1.507	NULL	NULL
KTR496	715363	9370450	501	FL	Aspectral	1	NULL	NULL	NULL	2	0.995	2	NULL	1.957	0.87	1.144
KTR497	715362	9370441	515	FL	Muscovite	0.597	Siderite	0.403	2205.59	1.13	0.912	37.205	NULL	1.92	NULL	NULL
KTR498	715355	9370435	516	FL	Siderite	0.784	Zoisite	0.216	NULL	1.6	0.991	1.527	NULL	1.6	0.945	1.049

Sample	East	North	RL	TYPE	Min1 sTSAS	Wt1 sTSAS	Min2 sTSAS	Wt2 sTSAS	2200wvl	2200A	2200D	2200wdth	1900wvl	1900A	1900D	SWIR IC….
KTR499	715290	9370365	541	FL	MuscoviticIllite	0.674	Chlorite-Fe	0.326	2207.68	0.667	0.937	38.153	1911.25	1.171	0.906	1.034
KTR500	715250	9370333	561		NULL	NULL	NULL	NULL	NULL	1.714	0.988	1.843	1919.05	0.571	0.898	1.101
KTR501a	715230	9370316	562	FL	Montmorillonite	0.617	Ankerite	0.383	NULL	1.102	0.971	34.597	1910.41	1.171	0.783	1.24
KTR501b	715230	9370316	562	FL	MuscoviticIllite	0.747	Epidote	0.253	2205.83	1.227	0.943	34.607	1911.54	1.222	0.795	1.186
KTR502	715172	9370297	619	FL	NULL	NULL	NULL	NULL	NULL	0.286	0.991	2.692	NULL	1.963	NULL	NULL
KTR503	715131	9370306	635		Aspectral	1	NULL	NULL	NULL	0.667	0.994	3.238	NULL	0.267	NULL	NULL
KTR504	715055	9370425		RK	Muscovite	0.596	Siderite	0.244	2204.86	1.184	0.898	37.159	1916.86	1.352	0.817	1.099
KTR505	715048	9370435	599	FL	Chlorite-FeMg	0.439	Muscovite	0.355	2202.92	1.955	0.951	33.622	NULL	1.526	NULL	NULL
KTR515	714816	9370325	792	RK	Muscovite	0.812	Ankerite	0.188	2206.19	1.15	0.912	38.138	1913.28	1.217	0.891	1.024
KTR578	714856	9369859	588	RK	MuscoviticIllite	0.787	Chlorite-Mg	0.213	2206.82	1.205	0.803	37.829	1911.49	1.159	0.853	0.941
KTR590	714438	9369757	716	RK	Muscovite	0.829	Ankerite	0.171	2208.08	1.2	0.85	35.516	1913.73	1.257	0.9	0.945
MATEP_KOTA					Ankerite	0.627	Phlogopite	0.373	NULL	NULL	NULL	NULL	NULL	0.833	NULL	NULL
MHS1					Chlorite-FeMg	0.651	Ankerite	0.19	2202.9	NULL	NULL	NULL	1917.08	1.952	0.922	0
MHS2					Siderite	0.541	Chlorite-FeMg	0.459	NULL	2	0.985	1.304	NULL	1	0.943	1.045

….Sample	East	North	RL	TYPE	2250wvl	2250D	2340wvl	2340D	CSM H2O
ETFL00002	716802	9372915		FL	2253.38	NULL	2346.52	0.904	0
ETFL00003	716802	9372915		FL	NULL	NULL	NULL	0.941	0
ETFL00005	716863	9373093		FL	NULL	NULL	NULL	0.991	0
ETRK00036	716848	9373046		RK	NULL	NULL	2347.26	0.925	0
ETRK00037	716813	9372932		RK	NULL	NULL	2345.73	0.962	0
ETRK00038	716829	9372919		RK	NULL	NULL	2346.54	0.933	0
KTR448	716285	9372202	493	FL	NULL	NULL	2344.01	0.963	NULL
KTR449	716285	9372202	493	FL	2249.77	NULL	2343.23	0.892	0
KTR450	716206	9372242	514	FL	NULL	NULL	NULL	0.962	0
KTR451	716243	9371118	592	FL	2252.54	0.919	2342.32	0.903	1.096
KTR452	716262	9371062	617	FL	NULL	NULL	2347.49	0.939	0
KTR453	716377	9371028	585	RK	NULL	0.983	NULL	0.965	1.037
KTR454	716405	9370913	608	FL	2253.38	NULL	2345.83	0.922	0
KTR455	716472	9370804	649	RK	2252.47	0.848	2338.8	0.694	1.079
KTR456	716481	9370770	633	RK	2252.34	0.94	2338.97	0.843	1.151

MCB RESOURCES LIMITED

....Sample	East	North	RL	TYPE	2250wvl	2250D	2340wvl	2340D	CSM H2O
KTR457	716586	9370591	656	RK	2252.81	0.903	2339.08	0.817	0.978
KTR458	716606	9370530	685	FL	NULL	NULL	NULL	0.963	0
KTR459	716663	9370356	718	RK	NULL	NULL	2343.6	0.898	0
KTR460	717039	9370112	734	RK	2252.98	0.931	2341.5	0.826	1.318
KTR461	717182	9370136	966	RK	NULL	0.982	NULL	0.978	1.031
KTR462	717447	9370087	996	RK	2252.68	0.861	2341.09	0.758	0.995
KTR463	716431	9372237	474	RK	NULL	NULL	2348.74	0.951	0
KTR464	716073	9372277	532	FL	NULL	NULL	2345.55	0.935	0
KTR465	716012	9372221	541	RK	2250.44	NULL	2341.81	0.936	0
KTR466	715034	9372467	859	RK	NULL	NULL	2346.06	0.909	0
KTR467	715008	9372461	852	RK	NULL	NULL	2344.87	0.853	NULL
KTR468	715062	9372513	998	RK	NULL	NULL	2344.36	0.959	NULL
KTR469	715062	9372513	998	RK	2262.84	0.963	NULL	0.997	1.218
KTR470	715062	9372513	998	RK	NULL	0.956	NULL	0.976	1.073
KTR471	715059	9372478	983	RK	NULL	NULL	2331.28	0.988	0
KTR472	715053	9372455	984	RK	NULL	NULL	2344.85	0.873	0
KTR473	716370	9372035	523	FL	NULL	NULL	2348.06	0.966	0
KTR474	715567	9370469	538	FL	NULL	NULL	2346.5	0.878	0
KTR475	715526	9370358	568	RK	2252.18	0.953	2340.15	0.922	1.007
KTR476	715555	9370327	611	FL	2252.45	0.972	2341.46	0.931	1.064
KTR477	715665	9370217	624	RK	NULL	NULL	2349.04	0.937	0
KTR478	715662	9370414	616	RK	2252.32	0.955	2345.06	0.918	1.086
KTR479	715765	9370037	644	RK	NULL	NULL	2346.32	0.95	0
KTR480	715773	9370031	630	RK	NULL	NULL	2347.1	0.905	0
KTR481	715762	9370001	623	RK	NULL	NULL	2346.54	0.877	0
KTR482	715777	9369923	634	RK	NULL	NULL	2345.84	0.929	0
KTR483	715792	9369924	695	RK	NULL	NULL	2344.23	0.931	0
KTR484	715789	9369854	695	RK	NULL	NULL	2345.52	0.894	0
KTR485	715750	9369670	686	RK	NULL	NULL	2349.06	0.886	0
KTR486	715772	9369563	724	RK	2251.71	NULL	2346.54	0.91	0
KTR487	715653	9369035	824	RK	2251.87	0.969	2335.92	0.918	NULL

....Sample	East	North	RL	TYPE	2250wvl	2250D	2340wvl	2340D	CSM H2O
KTR488	715680	9369041	822	FL	NULL	NULL	2322.33	0.96	NULL
KTR489	715724	9368959	833	FL	NULL	NULL	NULL	0.997	NULL
KTR490	715845	9368874	842	RK	NULL	NULL	2346.12	0.848	0
KTR491	715398	9368766	740	RK	2251.91	NULL	2346.74	0.901	0
KTR492	715368	9368724	809	RK	2251.78	NULL	2346.06	0.878	0
KTR493	715543	9368614	916	FL	NULL	NULL	2344.59	0.937	NULL
KTR494	716183	9371916	480	FL	2252.6	0.955	2344.83	0.924	1.068
KTR495	716183	9371915	481	FL	2252.25	0.962	2342.87	0.932	NULL
KTR496	715363	9370450	501	FL	NULL	0.989	NULL	0.987	1.138
KTR497	715362	9370441	515	FL	NULL	NULL	2345.75	0.948	NULL
KTR498	715355	9370435	516	FL	NULL	0.987	NULL	0.982	1.045
KTR499	715290	9370365	541	FL	NULL	NULL	2347.23	0.965	0
KTR500	715250	9370333	561		NULL	NULL	NULL	0.993	0
KTR501a	715230	9370316	562	FL	NULL	0.99	NULL	0.973	1.264
KTR501b	715230	9370316	562	FL	2252.6	NULL	2339.83	0.93	0
KTR502	715172	9370297	619	FL	NULL	0.994	NULL	0.993	NULL
KTR503	715131	9370306	635		NULL	0.996	NULL	0.995	NULL
KTR504	715055	9370425		RK	2252.28	NULL	2344.95	0.944	0
KTR505	715048	9370435	599	FL	2251.46	0.96	2341.74	0.926	NULL
KTR515	714816	9370325	792	RK	NULL	NULL	2346.82	0.948	0
KTR578	714856	9369859	588	RK	2250.62	NULL	2346.45	0.88	0
KTR590	714438	9369757	716	RK	2252.74	NULL	2346.52	0.898	0
MATEP_KOTA					NULL	0.982	NULL	0.96	NULL
MHS1					2250.66	0.936	2339.69	0.906	1.015
MHS2					NULL	0.98	NULL	0.968	1.039

– Ends –