12 September 2016

ASX ANNOUNCEMENT

AVALON MINERALS LTD

HIGH GRADE LITHIUM ASSAYS RETURNED FROM FIRST HOLE INTO KIETYÖNMÄKI LITHIUM PROJECT

Highlights

- **First assays from diamond drill hole KMDD001 from the Kietyönmäki Lithium deposit returned high grade lithium including 24.2m at 1.44% Li_2O.**
- **A total of six holes have been drilled to date and have confirmed a high grade spodumene bearing pegmatite dyke swarm.**
- **Peak 1m interval assays in KMDD001 are up to 2.5% Li_2O over intervals 25-26m, 37-38m and 59-60m.**
- **Assay results from the other holes drilled at Kietyönmäki will continue to be reported as they are received during September and October.**
- **The diamond drill rig is currently drilling at the nearby high grade Satulinmäki Gold prospect.**

Avalon Minerals Ltd **(ASX: AVI) ('Avalon'**) is pleased to report initial assay results from drilling at the high grade Kietyönmäki Lithium deposit in southern Finland.

Assay results from diamond drill hole KMDD001 have returned (downhole widths):

- **42.1m at 1.05% Li_2O** from 17.9m downhole
  - Including **24.2m at 1.44% Li2O** from 17.9m downhole
  - Including **9m at 2.00% Li_2O** from 29m downhole

Malcolm Norris, Avalon's Managing Director said:

"We are pleased to have obtained these high grade results in our first hole, which are consistent with our expectations, and confirm that the Kietyönmäki Lithium Project has the potential to evolve into a significant lithium project. There's some work we need to do to better understand the geology, however we are off to a very solid start of our exploration programme".

The diagrams below show the location of the drill holes in plan and section. Drill holes KMDD002 and 003 are on the same section as KMDD001 (figures 1 and 2) and show a thinning of the dyke, or a fault offset, at depth, but also show multiple dykes on the south side of the Main Dyke which require further exploration.

Drilling on the traverse 50m south-east has intersected a 23m thick (downhole) spodumene bearing pegmatite dyke in KMDD006 (figure 3), which is the continuation of the Main Dyke, and a new 6m wide (downhole) dyke. This hole is currently being logged and samples prepared for assay.

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Results from drilling 50m north-west with holes KMDD004 and 005 has been interpreted to show a fault offset to the west, the 'Kietyönmäki North Fault' (figures 1 and 4). This moves the target zone to the west and will be tested with additional holes in a future program.

Geological and assay results from all six diamond drill holes are to be interpreted and further drilling planned. The results from holes KMDD001 and KMDD006 suggest continuation of a thickened pegmatite dyke to the south-east and this trend is expected to be tested with further drilling once the drilling rig has completed the first pass test of gold targets at the nearby high grade Satulinmäki Gold prospect.

Figure 4 shows a more regional view of the distribution of pegmatites and target zones that require further drill testing.

Table 1: Table of intersections for KMDD001

From (m)	To (m)	Interval (m)	Li_2O (%)	Nb_2O_5 (ppm)	Ta_2O_5 (ppm)
14.00	15.00	1.00	0.60	131.80	111.36
17.88	60.00	42.12	1.05	73.55	75.95
Including, **17.88**	**42.05**	**24.17**	**1.44**	**85.43**	**91.82**
And including, 29.00	38.00	9.00	1.99	92.44	99.51
60.67	65.71	5.04	0.18	29.76	19.29
97.50	100.50	3.00	0.39	107.33	128.21

Nb_2O_5 and Ta_2O_5 values shown here are anomalous and are provided here to demonstrate that intervals that are anomalous in lithium, are also anomalous in elements that will require further investigation as the project advances and as mineral resources may be estimated. Globally, some lithium pegmatite deposits that are in production, or are being considered for development, also consider by-product credits which contain Nb_2O_5 and Ta_2O_5.

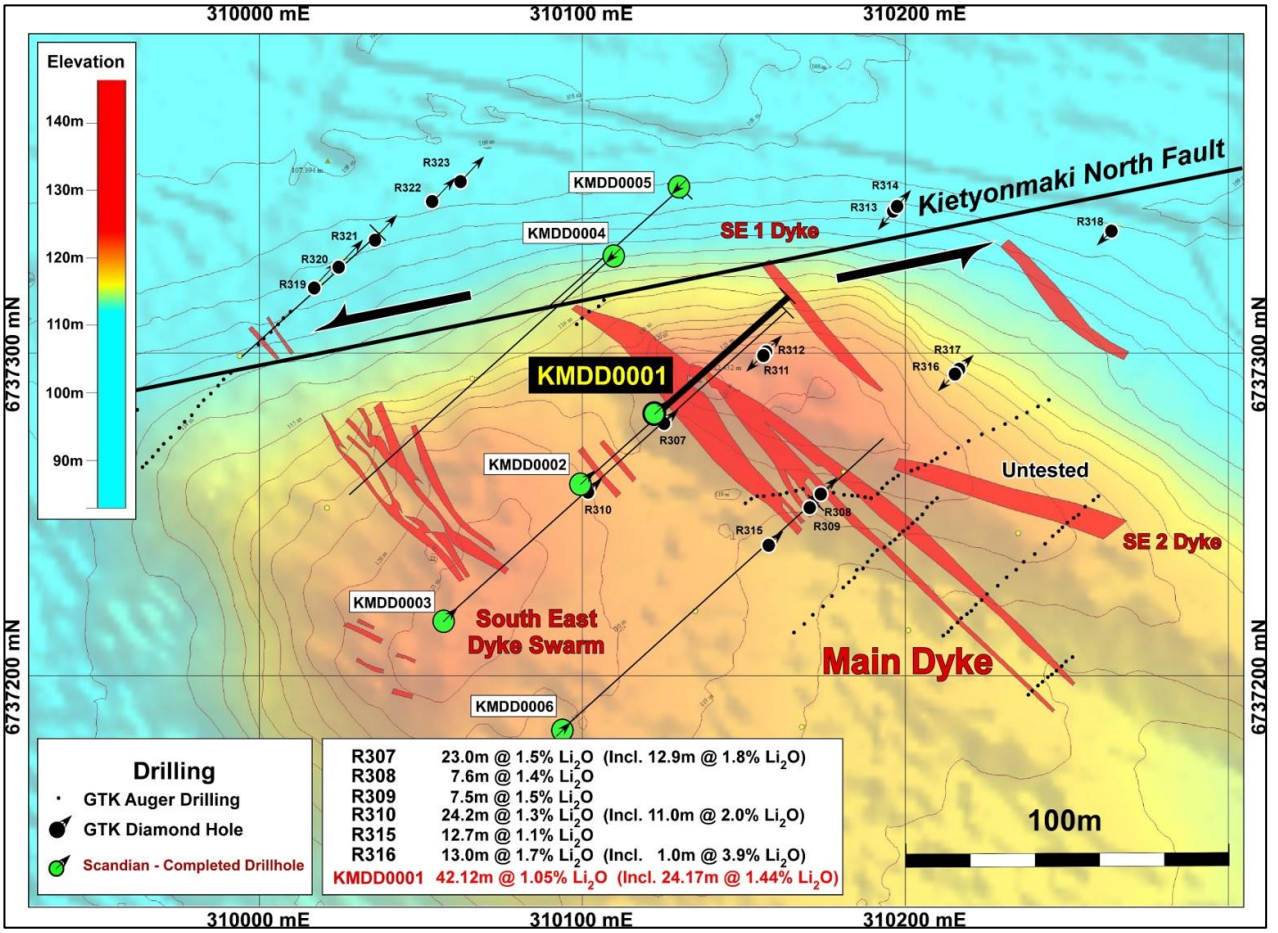

Figure 1: Plan view of Kietyönmäki lithium deposit showing collar positions for KMDD001 – 006 in green. The red domains are the outcrop positions of spodumene bearing lithium pegmatites. The background image is topography. The Kietyönmäki North Fault is interpreted to offset the main pegmatite dyke to the west. Figures 2 and 3 are cross sections on the lines of holes KMDD001-003, and KMDD006.

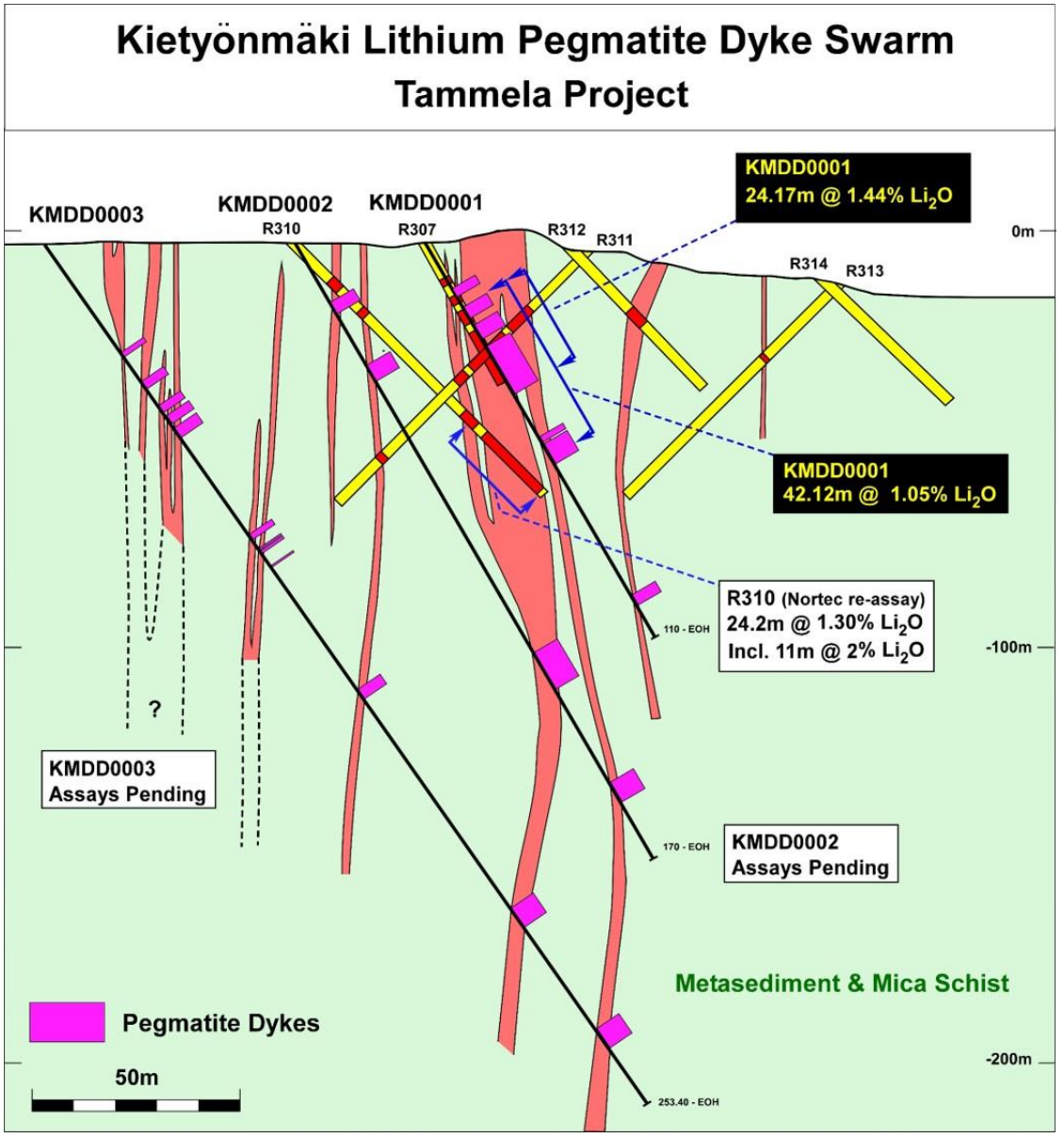

Figure 2: Cross section showing the interpreted distribution of lithium pegmatite dykes in recently completed drill holes KMDD001 – 003, and in historical holes drilled by the Finnish Geological Survey (R307, 310-314).

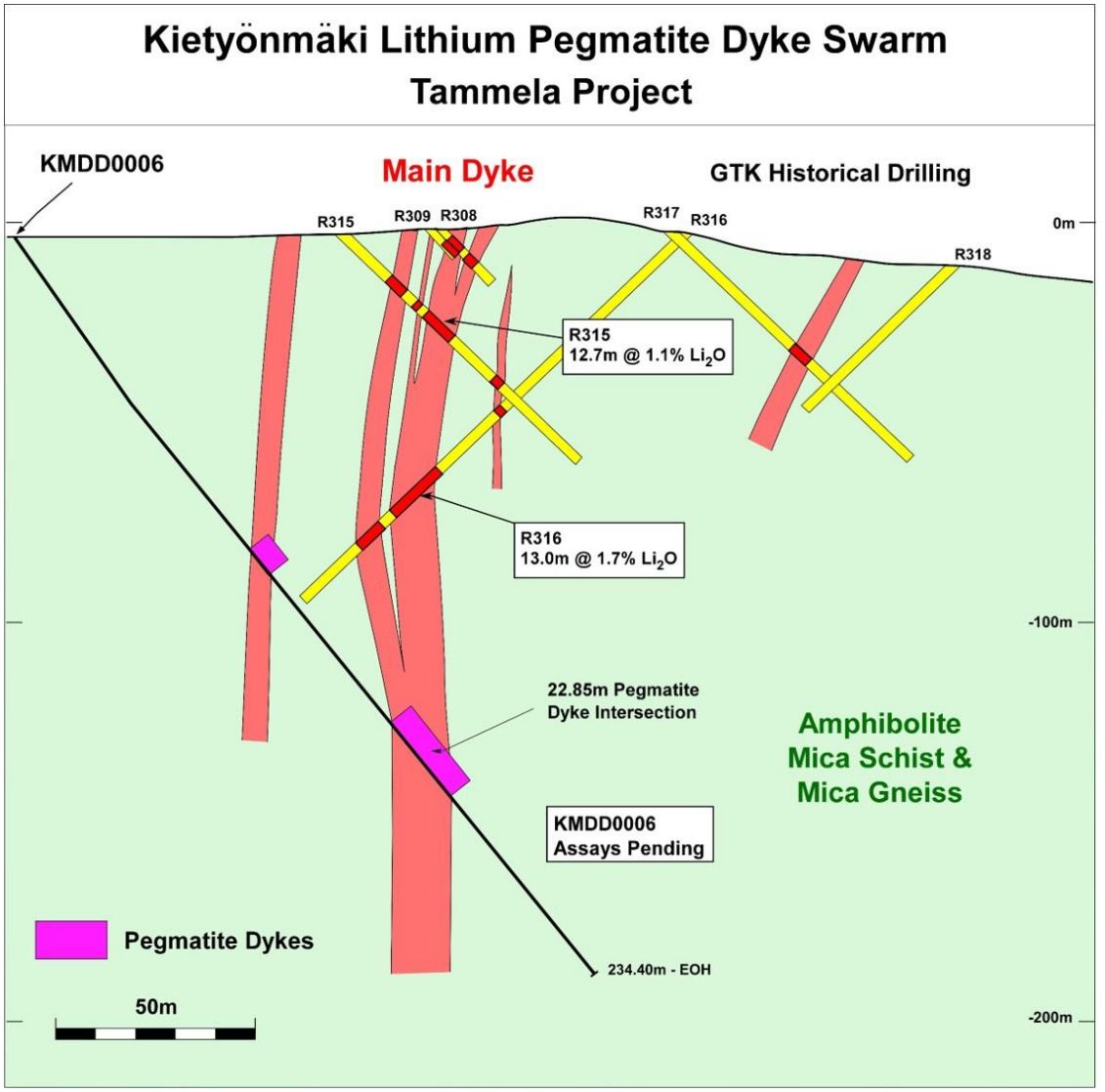

Figure 3: Cross section showing the interpreted distribution of lithium pegmatite dykes in recently completed drill hole KMDD006, and historical holes drilled by the Finnish Geological Survey (R308-309, 315-318).

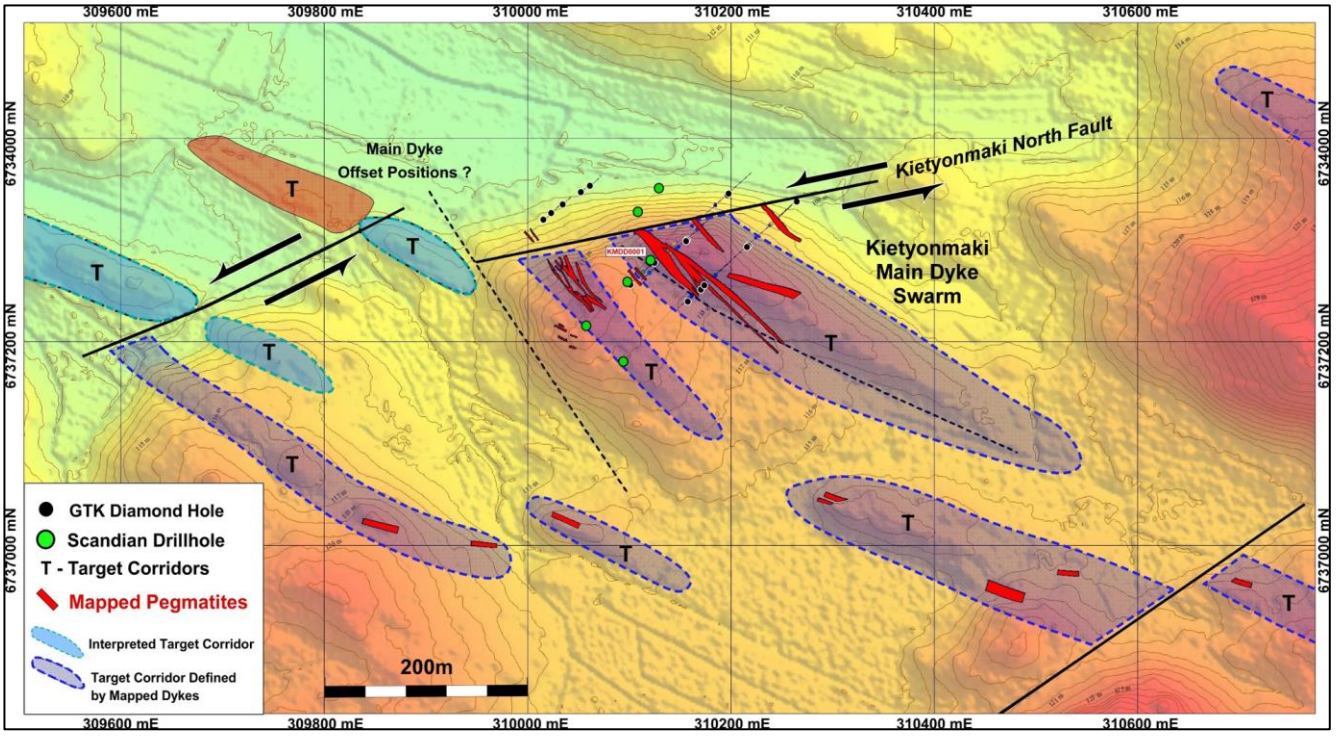

Figure 4: Current interpretation of pegmatite dyke distribution, target areas and fault offsets. Image background is topography.

About Avalon

Avalon has an advanced portfolio of exploration and development projects in Scandinavia. The portfolio comprises:

1. The Kietyönmäki lithium pegmatite project in southern Finland which is currently being drill tested. The project is part of an earn-in JV with Canadian company Nortec Minerals Corp., where Avalon can earn up to an 80% interest (see ASX announcement dated 19th May 2016). Historical drilling by the Geological Survey of Finland (GTK) identified a high grade lithium pegmatite deposit including diamond drill intersections of up to 18m at 1.8% Li_2O. Proposed work will deliver a mineral resource estimate and preliminary metallurgical studies by the end of 2016.
2. The Viscaria Copper project in northern Sweden which has a completed Scoping Study and is moving towards PFS and permitting to allow for mine development. The project has a mineral resource estimate of 52.4 Mt at 1.2% Cu, and a Mining Inventory considered for the 2016 Scoping Study Update (see ASX announcement dated 5th April 2016) of 18Mt at 1.2% Cu. Considerable exploration upside exists and low technical risk extensional drill targets have been defined to increase the resource estimate.
3. The Satulinmäki and Riukka gold prospects in southern Finland. These prospects have received shallow diamond drilling by GTK and are now the subject of plans for follow-up drilling by Avalon. Intersections include 18m @ 4.1g/t Au from 50m downhole, including 3m @ 9.3g/t Au, and 4m @ 10.3g/t Au in drill hole R391 at Satulinmäki. The Satulinmäki and Riukka gold prospects are included in the earn-in JV with Canadian company Nortec Minerals.

4. A portfolio of early stage lithium exploration projects in Sweden and Finland. These cover areas of documented lithium bearing pegmatite rocks and are being advanced to allow for drill testing in 2017.

Competent Persons Statement

The information in this report that relates to exploration results is based upon information reviewed by Dr Bruce Rohrlach who is a Member of the Australasian Institute of Mining and Metallurgy. Dr Rohrlach is a full-time employee of Avalon Minerals Ltd and has sufficient experience which is 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". Dr Rohrlach consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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APPENDIX 1

Table listing current holes drilled at Kietyönmäki by Avalon, through subsidiary company Scandian Metals.

Hole ID	Collar Easting	Collar Northing	RL	Dip	Magnetic Azimuth	EOH Length (m)
KMDD0001	310125	6737279	119.50	-60	36.86	110
KMDD0002	310101	6737257	120.00	-60	36.86	170
KMDD0003	310057	6737217	121.20	-55	36.86	253.4
KMDD0004	310108	6737328	113.32	-60	216.86	221.7
KMDD0005	310129	6737351	109.14	-60	216.86	182.4
KMDD0006	310094	6737183	119.86	-55	36.86	234.4

APPENDIX 2
The following Table and Sections are provided to ensure compliance with the JORC Code (2012 Edition)

TABLE 1 – Section 1: Sampling Techniques and Data

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 downhole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.*	• The results announced here are from recently completed diamond drill holes and historical diamond drill core samples drilled in 1985 by the Geological Survey of Finland (GTK) and subsequently re-logged and selectively re-sampled by Nortec Minerals Corp. 17 drill holes were completed by GTK and Nortec's check sampling was from one drill hole, R310. • Assays for KMDD001 are from recently completed drilling undertaken by Avalon Minerals through subsidiary Scandian Metals.
	• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*	• Core recovery has been documented and measured and is very good indicating representative samples from identified intervals.
	• *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.*	• Diamond drilling was used to obtain typically ~1m samples, or samples over other intervals as dictated by geological boundaries, from which 3-5 kg were sent to the laboratory to be pulverised to produce a 500g sample. Then an aliquot portion of this sample was used for multi-element analysis.
Drilling techniques	• *Drill type (eg 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).*	• Diamond drill core.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.*	• Diamond core recovery data has been measured and recorded.
	• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*	• Good core recovery has been delivered from the recently completed drilling. A comprehensive selection of historical drill holes has been viewed and also shows good core recovery.
	• *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 relationship between sample recovery and grade is evident.

Criteria	JORC Code explanation	Commentary
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.*	• Drill samples have been logged for lithology and geotechnical data by contracting group Palsatech Oy under the guidance of Avalon Minerals.
	• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.*	• Drill samples were logged for lithology and hence logging is qualitative. • The logging procedure includes core photography, geological and geotechnical logging, and representative specific gravity measurements.
	• *The total length and percentage of the relevant intersections logged.*	• All drill holes were logged in full from start to finish of the hole.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.*	• Half core was sampled and the remaining core is stored in a secure core storage facility operated by Palsatech.
	• *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.*	• Core samples.
	• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*	• Half drill core samples received by ALS Minerals (Pitea) were logged in on receipt, weighed, dried at high temperature in drying ovens and then coarse crushed with 90% passing 3.36mm. The crushed samples were then individually split using a rotary splitter, with a 500g split sent to ALS in Ireland for pulverisation in an Agate Mill. The remaining coarse reject was stored at ALS Minerals in Pitea for future metallurgical work requirements.
	• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*	• Avalon has used an industry standard QAQC programme involving Certified Reference Materials "standards" (with Li grades ranging from near cut-off, average grades and high grades) and blank samples, which were introduced in the assay batches. • Standards, blanks and duplicates were each submitted at an approximate rate of 1 in 30 samples or one standard, blank and duplicate per hole if the hole has less than 20 samples. • The check assay results are reported along with the sample assay values in the preliminary and final analysis reports.
	• *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.*	• For diamond core, the routine sampling procedure is to collect the half/quarter core to the right of the orientation line (looking down hole) or the cut line (in cases where the orientation line was not reliable). • Once assay results are received the results from duplicate samples are compared with the corresponding routine sample to ascertain whether the sampling is representative.
	• *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• Sample sizes are considered to be appropriate and correctly represent the style and type of mineralisation.
	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	• All pulps of the samples were analysed by two methods. ○ 1) Lithium plus a selection of 18 major and minor elements were analysed by Peroxide Fusion followed by ICP-AES analysis (ME-ICP81x).

Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests		○ 2) Niobium and tantalum plus a selection of 12 trace elements were analysed by lithium borate fusion followed by ICP-AES analysis (ME-MS85). • In addition, a selection of samples from pegmatite were also analysed for lithium by a second method involving a 4-acid digestion followed by ICP-AES analysis (Li-OG63).
	• *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.*	• No handheld XRF measurements were taken on this hole.
	• *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.*	• The values of the standards range from low to high grade and are considered appropriate to monitor performance of values near cut-off and near the mean grade of the deposit. • The check sampling results are monitored and performance issues are communicated to the laboratory if necessary.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.*	• Photographs of sampled intervals are taken and the Competent Person for exploration results for this announcement has viewed photographs of the core.
	• *The use of twinned holes.*	• Twin holes have not been drilled in this area in this program. However, hole KMDD001 was drilled adjacent to historical hole R307 and the geological and assay results are similar over common intervals.
	• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*	• Nortec data and the Finnish Geological Survey data have been sighted in reports for historical drilling. • All documentation has been carried out under the direction of Avalon Minerals by contract geologists and Palsatech staff. Standard data entry procedures have been documented.
	• *Discuss any adjustment to assay data.*	• Assayed values of Li were converted to Lithium Oxide values (Li_2O) for reporting 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.*	• Surface collar co-ordinates will be surveyed by Differential GPS at the end of the drilling program. • High quality down-hole dip and azimuth survey data are recorded.
	• *Specification of the grid system used.*	• The current projection used for map preparation in Finland is ETRS-TM35FIN, with Datum EUREF89
	• *Quality and adequacy of topographic control.*	• No reports of topographic control have been sighted.
	• *Data spacing for reporting of Exploration Results.*	• The historical drilling was comprised of 17 drill holes on three traverses at approximately 30 and 60m apart. Current drilling is within the area of the historical drilling.

Criteria	JORC Code explanation	Commentary
Data spacing and distribution	• *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.*	• Sufficient continuity in both geology and mineralisation has been established based on geological mapping and cross-section representation.
	• *Whether sample compositing has been applied.*	• No sample compositing was done.
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.*	• Drilling orientations were appropriate for the predominantly high angle of the mineralised intersections providing representative samples.
	• *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.*	• The company does not believe that any sample bias had been introduced which could have a material effect.
Sample security	• *The measures taken to ensure sample security.*	• A secure sample management system has been established and documented and involves the drilling contractor, Avalon consultants, personnel from contracting group Palsatech, and the assay laboratories.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No audits were completed.

TABLE 1 – Section 2: Exploration Results

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 Kietyönmäki lithium occurrence is covered by approved exploration claims, under the Finnish Mining Act.
	• *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.*	• Exploration claims are valid and are held by Nortec Minerals Corp. Avalon has an earn-in joint venture with Nortec to explore the claims.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• The historic drilling at Kietyönmäki was undertaken by the Finnish Geological Survey in 1985, and was re-logged and re-sampled by Nortec Minerals Corp. in 2010.

Criteria	JORC Code explanation	Commentary
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Kietyönmäki lithium occurrence occurs in a pegmatite dyke swarm.
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:* *a. easting and northing of the drill hole collar* *b. elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* *c. dip and azimuth of the hole* *d. down hole length and interception depth* *e. hole length.*	• Appendix 1 in this announcement shows the Avalon drill holes, their co-ordinates and dips and azimuths. • Details of the historical drill holes are referenced to Nortec Minerals Corp reports at http://www.nortecminerals.com/index.php. • 17 drill holes were completed by GTK on 3 traverses. Holes were drilled at -60 and -45 degree angles, and in opposite directions so that good cross section representation of the geology was established. The deepest hole was to 130m EOH at -45 degrees which tested to ~90m below surface.
	• *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.*	• Information included above.
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.*	• The Weighted Averaging method is used to calculate drill hole intersections for the lithium grade based on the assay results received, and the down hole width of the assayed interval.
	• *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 results in this announcement show both aggregated intercepts and specific higher grade intercepts within the broader interval. The aggregated intercepts are identified based on the start and finish of anomalous Li2O values typically greater than 0.5%, and defined on the basis of the presence of pegmatite dykes.
	• *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• Metal Equivalents have not been applied.
Relationship between mineralisation widths and intercept lengths	• *If the geometry of the mineralisation with respect to the drill-hole angle is known, its nature should be reported.*	• The orientations of the mineralised horizons are interpreted to be sub-vertical based on geological mapping and cross-sectional interpretation.
	• *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 length, true width not known').*	• See above – estimated true widths are approximately 60% of intersected widths based on cross section construction.
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.*	• See Figures in this announcement for maps and cross-sections showing distribution of drill collars.

Criteria	JORC Code explanation	Commentary
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.*	• Figures 1, 2 and 3 above shows the geological interpretation on cross section of this hole relative to surrounding drill holes.
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.*	• No other significant geological data has been reviewed at this stage.
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).*	• Drilling is ongoing. Channel sampling of outcrops is also in progress, and review of historical data is underway. Exploration for additional pegmatite dykes in the immediate area of the drilling is underway.
	• *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 exploration reservation areas have been applied for which cover the interpreted extensions of the prospective domains.