# ASX ANNOUNCEMENT



## FIRST HOLE AT VISCARIA D ZONE COMPLETED

#### Highlights

- The first diamond drill hole for 2015 at the Viscaria Copper Project D Zone, VDD 183, has been completed at 621.6m.
- VDD183 intersected a copper mineralised ironstone dominated sequence from 530m to 600m. The sequence contains 4 main copper mineralised intervals.
- VDD183 targeted high grade copper mineralisation outside the existing resource and down plunge from the previously drilled hole VDD166, which intersected 5.9m at 1.5% Cu and 13m at 1.6% Cu.
- Drilling has commenced on the second hole (VDD 184) located approximately 230m south, and targeting a similar depth.
- Exploration in the vicinity of Viscaria is also advancing with a planned ground magnetics survey to be followed by drilling at the recently defined Nihka magnetic and copper anomaly.

**Avalon Minerals Limited** ('**Avalon**' or '**Company**') (**ASX: AVI**) is pleased to announce that the first diamond drill hole of the 2015 program has been completed at Viscaria D Zone.

Drill hole VDD 183 was completed at 621.6m. The hole was drilled at -55 degrees towards 130 degrees (see figure 1 and figure 3).The hole intersected a mafic volcanic dominated sequence in the upper 530m of the hole, and then drilled through a 70m thick (downhole thickness) interval of variably altered, sheared and brecciated rock comprising ironstone (magnetite dominated rock), dolerite, and mafic volcanic.

Within the altered and ironstone sequence several intervals containing visible chalcopyrite have been recorded (see table 1 below). Samples have been despatched to the laboratory and assay results are expected to be returned within 3 weeks.

Avalon's Managing Director, Mr Malcolm Norris said, "This is an encouraging start to our drilling program and defines significant mineralisation approximately 120m away from previous drilling, and outside of the area of our resource estimates. The width of the mineralised domain is as predicted and suggests a thickening with depth. We are also looking forward to drilling at Nihka, and to advancing several other robust exploration targets in the immediate vicinity of Viscaria."

The intervals of mineralisation intersected in this drill hole are outside of the area containing the currently estimated mineral resources (see figure 3). The intersections are at least 120m down plunge from a previously drilled hole VDD166, which intersected 5.9m at 1.5% Cu and 13m at 1.6% Cu. The true widths of mineralisation in VDD 183 are estimated to be approximately 60% of the downhole widths.

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Planning is also underway to complete a ground magnetics survey over several targets in the Viscaria area.

The first area to be covered will be the Nihka target and the processed magnetic data will assist with targeting diamond drill holes. Diamond drilling at Nihka is expected to commence in late April or early May, and is following up a bedrock copper anomaly partly co-incident with a 900m x 300m magnetic anomaly, as announced on 9<sup>th</sup> April 2015.

Table 1: Summary drill hole log from hole VDD 183; Hole drilled at a dip of -55 degrees towards 130 degrees. Drill hole co-ordinates are 1,680,552mE, 7,537,486mN, RL 513m

From (m)	To (m)	Simplified Geology	Presence of Chalcopyrite
0	56	Mafic Volcanic	
56	74	Ultramafic talc schist	
74	269.8	Mafic Volcanic	
269.8	270	Ironstone with trace sulphide	Trace Chalcopyrite
270	460	Mafic Volcanic	
460	500	Dolerite	
500	530.4	Mafic Volcanic	
530.4	544	Intensely altered shear and breccia	
544	545.6	Ironstone	Minor Chalcopyrite
545.6	553.2	Ironstone	Blebby and disseminated Chalcopyrite
553.2	569.2	Altered dolerite and schist	Minor Chalcopyrite
569.2	573.6	Ironstone	Blebby and disseminated Chalcopyrite
573.6	574.5	Mafic Volcanic	
574.5	584	Ironstone	Blebby and disseminated Chalcopyrite
584	587.1	Altered dolerite and ironstone	Minor Chalcopyrite
587.1	589	Ironstone with trace sulphide	Trace Chalcopyrite
589	589.9	Vein	
589.9	595	Ironstone	Minor Chalcopyrite
595	600	Ironstone, altered tuff, calc-silicate	
600	604.5	Strongly altered calc-silicate	
604.5	621.6 (EOH)	Tuff with minor alteration	

*'ironstone' is a magnetite dominated rock which may also contain variable amounts of mafic rock, carbonate, and chalcopyrite* 



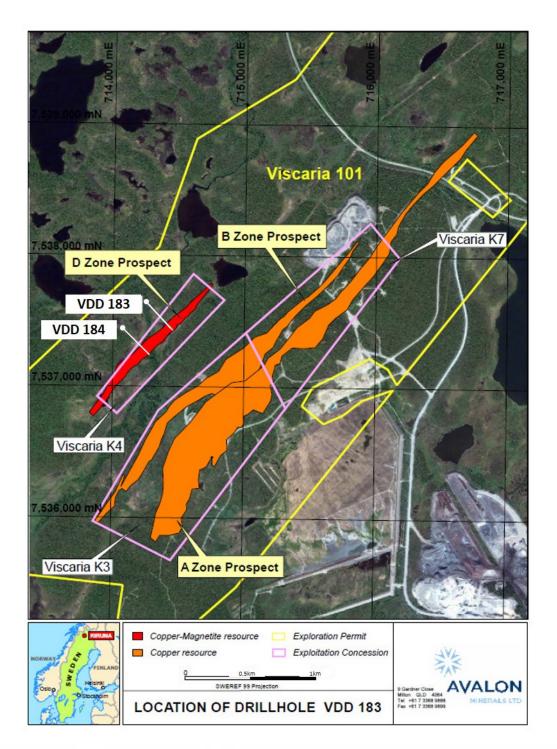


Figure 1 –Location of VDD 183 (completed) and VDD 184 (in progress) at the Viscaria Copper Project, D Zone

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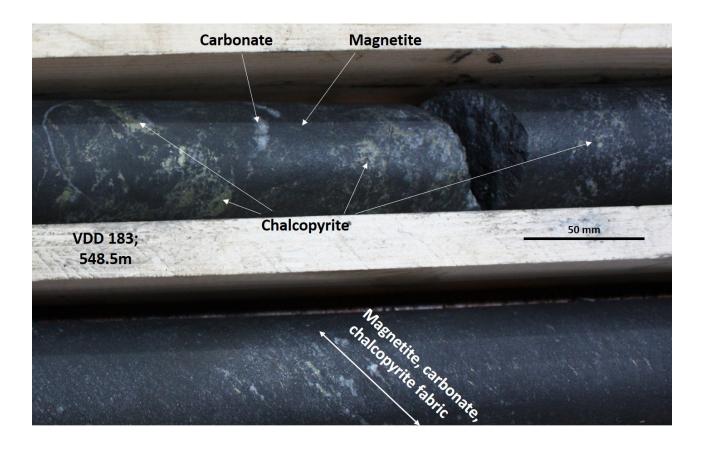


Figure 2: drill core from VDD 183 at 548.5m showing blebby chalcopyrite, and magnetitechalcopyrite-carbonate foliation



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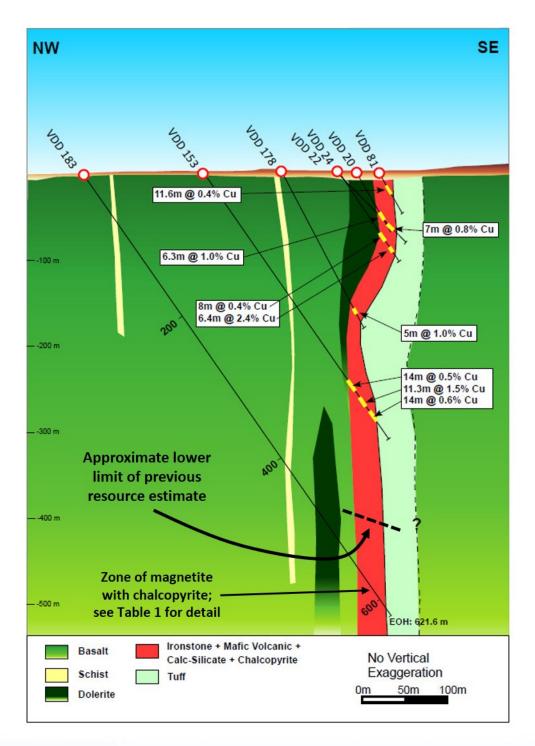


Figure 3: Drill hole cross section containing VDD 183 and previously drilled diamond holes



#### **Competent Persons Statement**

The information in this report that relates to exploration results is based upon information reviewed by Mr Malcolm Norris who is a Fellow of the Australasian Institute of Mining and Metallurgy. Mr Norris is a fulltime 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". Mr Norris consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

#### For further information please visit www.avalonminerals.com.au or contact:

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### APPENDIX 1 The following Table and Sections are provided to ensure compliance with the JORC Code (2012 Edition)

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 diamond drill core samples. The sampling was carried out using half core, generally at one meter intervals except where adjusted to geological boundaries.	
	• Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	• Core recovery was good and core aligned prior to splitting.	
	• 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 1m samples from which 3-5 kg was sent to the laboratory to be pulverised to produce a 250g sample. Then a 50g portion of this sample was then 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).	• The diamond core was HQ (63.5mm) and NQ (47.6 mm) in size (diameter).	
Drill sample recovery	• Method of recording and assessing core and chip sample recoveries and results assessed.	• Diamond core recovery data for this drilling was measured for each drill run and captured in a digital logging software package. The data has been reviewed and core recovery was approximately 100% throughout.	
	• <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	• Ground conditions at D Zone are good based on previous drilling, no extra measures were taken to maximise sample 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 has been established.	

## **TABLE 1 – Section 1: Sampling Techniques and Data**

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 were logged for lithology, weathering, structure (diamond core), mineralogy, mineralisation, colour and other features. Logging and sampling was carried out according to Avalon's internal protocols and QAQC procedures which comply with industry standards.
	• Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	• Drill samples are logged for lithology, weathering, structure (diamond core), mineralogy, mineralisation, colour and other features. Core is photographed both wet and dry.
	• The total length and percentage of the relevant intersections logged.	• All drill holes are logged in full from start to finish of the hole.
Sub-sampling	• If core, whether cut or sawn and whether quarter, half or all core taken.	• Half core was used to provide the samples that were assayed and reported here. Half core is left in the core trays.
techniques and sample	• If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	Core samples collected.
preparation	• For all sample types, the nature, quality and appropriateness of the sample preparation technique.	<ul> <li>Avalon samples were sent to the ALS Sample Preparation Facility in Pitea, Sweden for sample preparation. The standard ALS sample preparation for drilling samples is: drying the sample, crushing to size fraction 75% &gt;2mm and split the sample to 250g portion by riffle or Boyd rotary splitter. The 250g sample is then pulverised to 85% passing 75 microns and then split into two 50g pulp samples. Then one of the pulp samples was sent to the Vancouver ALS laboratory for base metal analysis.</li> <li>The sample preparation is carried out according to industry standard practices.</li> </ul>
	• Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	<ul> <li>Avalon used an industry standard QAQC programme involving Certified Reference Materials "standards" (with Cu grades ranging from near cut-off, average resource grades and very high grades) and blank samples, which were introduced in the assay batches.</li> <li>Standards, blanks and duplicates were submitted at a rate of 1 in 20 samples or one standard, blank and duplicate per hole if the hole has less than 20 samples.</li> <li>The check assay results are reported along with the sample assay values in the preliminary and final analysis reports.</li> </ul>
	• 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.	<ul> <li>For diamond core, the routine sample procedure is to always take 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).</li> <li>Once assay results are received the results from duplicate samples are compared with the corresponding routine sample to ascertain whether the sampling is representative.</li> </ul>

Criteria	JORC Code explanation	Commentary
	• 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.
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.	<ul> <li>Avalon used assay method was ME-ICP81, which involves sample decomposition by sodium peroxide fusion. They are then analysed by ICP-AES. The lower detection limit for copper using ME-ICP81 is 0.005% and the upper detection limit is 50%.</li> <li>This analysis technique is considered suitable for this style of mineralisation.</li> </ul>
	• 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 other measurement tools/instruments were used.
	• 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.	<ul> <li>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.</li> <li>The check sampling results are monitored and performance issues are communicated to the laboratory if necessary.</li> </ul>
Verification of sampling and	• 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.
assaying	• The use of twinned holes.	• Twin holes have not been drilled in this area.
	• Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	• Avalon sampling data were imported and validated using an Access database package.
	Discuss any adjustment to assay data.	• Assay data has not yet been received.
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.	<ul> <li>Surface collar co-ordinates are surveyed by Differential GPS in Swedish co-ordinate system RT90 gon vast (west) 2.5 by qualified local contract surveyors to a high level of accuracy (1-3cm).</li> <li>It has been standard procedure to use the same contract surveyors to survey collar points since Avalon's involvement, so there is high confidence that all the surface drill holes at A Zone are supported by accurate location data.</li> <li>High quality down-hole dip and azimuth survey data are recorded.</li> </ul>

Criteria	JORC Code explanation	Commentary		
	• Specification of the grid system used.	RT90 Map projection parameters:		
		Parameter	Value	
		Reference Ellipsoid	Bessel 1841	
		Semi Major Axis	6377397.155 m	
		Inverse Flattening (1/f)	299.1528128	
		Type of Projection	Gauss-Krüger (Transverse Mercator)	
		Central Meridian:	E15°48'29.8" (2.5 gon West of the Stockholm Observatory)	
		Latitude of Origin	0°	
		Scale on Central Meridian	1	
		False Northing	0 m	
		False Easting	1500000 m	
		• RT90 gon vast North.	(west) 2.5 grid nor	th is situated 4.01° to the east of True
	• Quality and adequacy of topographic control.	scanning) that v cadastral and la metre square an surfaces and 60 topographic surf estimation. The	was purchased from nd registration auth d is specified as ac cm in planimetry. Yace was considered	ten from LIDAR data (airborne laser m Lantmäteriet (the Swedish mapping, nority). Data point resolution is 0.5 per ccurate to 20cm in elevation on distinct The level of accuracy of the LIDAR d adequate for the purposes of resource ic surface has also been verified by the y co-ordinates.
Data spacing and distribution	• Data spacing for reporting of Exploration Results.	<ul> <li>The drilling was from surface and intersected a point approximately 120m from the nearest drill hole. Data spacing was sufficient to establish continuity between drill holes.</li> <li>Diamond drill sampling was generally taken over 1 meter intervals except when adjusted to geological boundaries.</li> </ul>		

Criteria	JORC Code explanation	Commentary
	• 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 to support the classification of the Company's existing Mineral Resources under JORC Code2012.
	• Whether sample compositing has been applied.	• No sample compositing was done.
Orientation of data in relation	• 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.
to geological structure	• 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 on the resource model, particularly given the good correlation of mineralisation between holes.
Sample security	• The measures taken to ensure sample security.	<ul> <li>Avalon sampling procedures indicate individual samples were given due attention.</li> <li>ALS is an internationally accredited laboratory that has all its internal procedures heavily scrutinised in order to maintain their accreditation.</li> </ul>
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	<ul> <li>Avalon's sampling techniques and data have been audited multiple times by independent mining consultants during the process of reporting a JORC Compliant Mineral Resource on the various mineral deposits that make up the Viscaria Copper Project (A Zone, B Zone, D Zone). These audits have always resulted in the conclusion that Avalon's sampling techniques and data are industry standard and suitable for the purposes of reporting a JORC Compliant Mineral Resource.</li> <li>All historical data has been validated and migrated into an access database. Checking was carried out at the data entry stage for interval error and any significant data issues were resolved. Procedures exists to standardise data entry and senior geological staff from Avalon regularly vetted sampling procedures.</li> </ul>

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 D Zone Prospect is covered by Exploration Permit Viscaria nr 101. The D Zone Mineral Resource is also covered by Exploitation Concession Viscaria K nr 4.
	• 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 Permit Viscaria nr 101 is valid till the 16/10/2015. Exploitation Concession Viscaria K nr 4 is valid till the 16/01/2037.
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	• The historic drilling at the D Zone Prospect was completed by Viscaria AB (owned by Outokumpu OY) during the period 1985 till 1997.
Geology	• Deposit type, geological setting and style of mineralisation.	• The D Zone deposit is interpreted to be either a volcanic hosted massive sulphide-type (VHMS) ore system or an iron oxide copper gold-type(IOCG) ore system. This deposit has subsequently been strongly attenuated by shearing associated with a lower amphibolite facies metamorphic event. Subsequent to the lower amphibolite facies metamorphism and associated deformation, these rocks have been overprinted by locally constrained shear zones displaying retrograde, greenschist metamorphic mineralogy (chlorite, epidote, actinolite, and talc).
Drill hole Information	<ul> <li>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:</li> <li>a. easting and northing of the drill hole collar</li> <li>b. elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>c. dip and azimuth of the hole</li> <li>d. down hole length and interception depth</li> <li>e. hole length.</li> </ul>	• Details of the drill holes discussed in this announcement are in the body of the text.

Criteria	JORC Code explanation	Commentary
	• 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 in announcement.
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.	• Weighted Averaging method will be used to calculate drill hole intersections for copper grade once assay results are received.
	• 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.	• It is not expected that aggregation of results will be applied once assay results are received
	• The assumptions used for any reporting of metal equivalent values should be clearly stated.	• Metal Equivalents will not be applied.
Relationship between mineralisation widths and	• If the geometry of the mineralisation with respect to the drill-hole angle is known, its nature should be reported.	• The orientation of VDD0183 is at a moderate and acceptable angle to the mineralization at the D Zone Prospect. The mineralised interval, from other nearby drilling, is sub-vertical indicating that the estimated true width of the mineralized intersection is approximately 60% of the down hole thickness of the mineralization.
intercept lengths	• 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.
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 for maps and cross-sections showing distribution of drill collars.
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.	• A report of the preliminary geological log of this hole has been included in the announcement.
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.	• A report of the preliminary geological log of this hole has been included in the announcement.

Criteria	JORC Code explanation	Commentary	
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).	• Exploration for further extensions of the D Zone Mineral Resource is currently in progress.	
	• Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.		