

22 MAY 2014

# ASX ANNOUNCEMENT



## Viscaria Copper-Iron Project

### Confidence Upgrade to the D Zone Mineral Resource Estimate for Copper and Iron

#### Highlights

- **The D Zone Mineral Resource has been reclassified according to JORC 2012 guidelines.**
- **A portion of D Zone has been upgraded to Measured Mineral Resource classification.**
- **The upgraded Mineral Resource classification will result in less drilling required to complete further Feasibility Studies.**
- **The D Zone Prospect is one of four deposits that make up the Viscaria Copper-Iron Project.**

Avalon Minerals Limited ('Avalon' or 'Company') (ASX: AVI), is pleased to announce an upgraded Mineral Resource estimate for the D Zone Prospect on the Viscaria Project in northern Sweden (Figures 1 and 2). The Mineral Resource for D Zone is reported according to the guidelines outlined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code, 2012). Avalon commissioned Salva Resources Pty Ltd ('HDR|Salva'), mining consultants independent to Avalon, to conduct a review of previous studies.

The reclassification of the D Zone Mineral Resource to JORC 2012 was completed by a different independent mining consultant company to the previous D Zone Mineral Resource estimate. This involved a review of all the data and resource modelling and serves as a third party verification of the D Zone Mineral Resource estimate. No change was made to the overall tonnes and grade of the D Zone Mineral Resource.

Avalon's Managing Director, Malcolm Norris, said "The increase in resource category classification of the D Zone Mineral Resource is an extremely pleasing result and means that less drilling will be required to advance this resource to a level that will support future Feasibility Studies. We are systematically advancing the project studies to minimise risk and set the context for future investment options. The project has delivered a robust base case scenario at Scoping Study level and we are assessing options for expanding the base case".

The upgrading of a portion of the D Zone Mineral Resource to the Measured resource classification is the result of further Quality Control and Quality Assurance (QA/QC) validation of drill assay results and a continuity analysis of the variography of the resource estimate. The QA/QC validation of drill assay results involved completing a detailed investigation into assay results from the D Zone prospect prior to 2012, which improved the quality and confidence in the assay database. The portion of the D Zone Mineral Resource that was

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upgraded to the Measured resource classification was previously part of the Indicated resource classification and is within the D Zone open pit shell from the Viscaria Copper-Iron Project Scoping Study as announced on 9 July 2013.

### Mineral Resource Estimate

The copper and magnetite iron ore Mineral Resources whilst broadly coincident, are modelled and reported separately to avoid mixing geological domains. The Mineral Resources for D Zone are reported as:

- **13.6 million tonnes (Mt) @ 1.00% Cu above a 0.4% copper cut-off grade;**
- **25.6 million tonnes (Mt) @ 26.5% Fe at a cut-off above a 15% Mass Recovery grade.**

Table 1 and Table 2 display the Mineral Resources at D Zone for copper and magnetite iron according to Inferred, Indicated and Measured classification. Figure 3 and 4 display the grade versus tonnage curves for copper and iron respectively.

**Table 1: D Zone Mineral Resource for Copper-Gold reported above a 0.4% Cu cut-off**

Mineral Resource Category	TONNES (Mt)	Cu (%)	Copper Metal (t)
Measured	1.0	1.25	12,000
Indicated	4.2	1.02	43,000
Inferred	8.5	0.96	81,000
<b>Total</b>	<b>13.6</b>	<b>1.00</b>	<b>136,000</b>

**Table 2: D Zone Mineral Resource for Iron reported above a 15% Mass Recovery cut-off**

Mineral Resource Category	TONNES (Mt)	Fe (%)	Mass Recovery (%)	Recoverable Fe (Mt)
Measured	2.0	28.7	35.1	0.5
Indicated	9.7	27.2	33.1	2.2
Inferred	13.9	25.7	31.0	3.0
<b>Total</b>	<b>25.6</b>	<b>26.5</b>	<b>32.1</b>	<b>5.7</b>

**Note: Any discrepancies in the sums and weighted averages are introduced by rounding. Recoverable Fe = Tonnes x Mass Recovery x Fe % in concentrate (69% Fe) and is based on DTR test work at a 75 micron grind size.**

The D Zone Mineral Resources are reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code).

### **Geological setting of the D Zone deposit**

The D Zone deposit consists of a northeast-southwest oriented, magnetite ± chalcopyrite ± pyrite mineralised lens that steeply dips to the northwest. In the hanging wall of the mineralised lens is a sequence of rheologically strong mafic intrusive/extrusive rocks and in the footwall is a sequence of rheologically weak tuffaceous siltstones. This rheological difference has caused strain from a regional deformation/metamorphic event to be partitioned at this geological boundary, resulting in intense shearing. The shear zones appear to completely envelop the mineralised lens and therefore, it is possible that additional mineralised lenses could have been sheared away, representing further exploration targets.

The magnetite-rich mineralised lens appears to be fine-grained around the margins where it is in contact with the enveloping shear zones and semi-massive to massive towards the core of the lens. It is interpreted that the fine-grained nature of the magnetite around the margins of the mineralised lens is the result of deformational recrystallization controlled by the ductile shear zones.

Chalcopyrite is closely associated with pyrite and most often occurs as veinlets, cross-cutting the semi-massive to massive magnetite mineralisation and is also commonly observed to be coating the individual magnetite grains. On a larger scale, this relationship is displayed by the chalcopyrite and pyrite mineralisation being concentrated along the outer margin of the overall magnetite mineralised lens, resulting in the best copper grades around the margins with decreasing copper grade towards the core of the lens of magnetite. This observation is interpreted to indicate that a copper and sulphur rich hydrothermal fluid came into contact with the magnetite mineralised lens and that the oxidised chemistry of the magnetite then caused copper and sulphur to be precipitated. It is also interpreted that this hot, copper and sulphur enriched fluid would have most likely been transported up from a deeper, hotter zone within this tectonic setting and therefore, the best copper sulphide mineralisation should be associated with the magnetite mineralised lens at depth, where it first came into contact with the magnetite. Therefore, it is interpreted that the exploration potential to increase the mineral resource for the D Zone mineral deposit at depth is high.

### **Drilling**

For this Mineral Resource, Avalon provided a total of 157 holes (25,792m) that were suitable for estimation or within resource model limits from previous drill programs. Drill holes are supported by detailed collar records, as well as down hole surveys and some quality assurance and quality control (QAQC) data. The D Zone deposit has been drilled on northwest-southeast sections spaced approximately 50 metres apart along the strike of mineralisation extending 1,260 metres. There are generally between five and eight drill holes per section, spaced approximately 25 to 50 metres across strike. The majority of the holes are drilled at an approximate angle of 60° from the horizontal at an azimuth of 135° (90° in local mine grid) in order to intersect the plane of mineralisation at a high angle. HDR|Salva has reviewed the data provided by Avalon and confirms that the information used for modelling is of sufficient quality to support a Mineral Resource for public reporting purposes.

### **Mineral Resource Interpretation**

The mineralised zone of the Viscaria D Zone deposit has been interpreted on 50 metre sections coincident with drilling. Mineralisation is generally dipping between 70° to the northwest and 85° to the southeast and has been intersected from the base of till and extends in places to around 500 metres below surface. Mineralisation is tightly constrained within 12 copper and 4 iron zones comprising high and low grade domains.

Avalon provided all 3-dimensional (3D) interpretations of the zones of mineralisation (domains) used in the Mineral Resource estimation. The 3D geological interpretation of the copper mineralisation is based primarily on cut-off grades in the drill hole data. Boundaries for low grade copper were generated where the copper grade was above 0.2% Cu,

with high grade copper domains being created where grade was above 0.8% Cu over at least a 2 metre width down hole. Copper grades also exist outside of these domains and within the iron domains.

The iron interpretations were created by Avalon using a combination of iron grade and lithological units. The high grade iron follows the boundary of the ironstone along strike, and extends away from the boundary where the composited grade was greater than 25% Fe. The low grade iron is based on grades of less than 25% Fe but greater than 15% Fe and generally forms a shell around the high grade iron domains. Very low grade areas were also interpreted where Fe% is less than 10%, and are commonly found to the west of the low grade domains. There is also one further iron domain occurring in the upper shear zone, where the zone outlines an area of 10% to 20% Fe.

### **Mineral Resource Estimation Methods**

Ordinary Kriging (OK) was used to estimate copper and iron into block models of the mineralisation wireframes/domains. The block model parent cells have dimensions of 5 mE by 20 mN by 10m Elevation, with sub-celling used to accurately represent the geometry and volume of the mineralisation models. The estimation parameters were optimised based on the drillhole data spacing and the models of grade continuity produced by an updated variography study of copper and iron.

Specific gravity data provided by Avalon was used to determine dry bulk density factors for estimating material tonnages. A relationship between iron grade and bulk density was derived and the resultant regression formula was applied across the model to determine dry bulk density. Where no iron grade was calculated in the model, a dry bulk density value of 2.9 t/m<sup>3</sup> was applied.

The Mass Recovery (%) values within the block model were calculated from total Fe (%) estimates using a regression formula. The regression formula was determined by carrying out a regression analysis between Mass Recovery (%) and total Fe (%) results from Davis Tube Recovery (DTR) test work.

### **Classification**

The following criteria were taken into consideration when assigning the confidence categories of Inferred, Indicated and Measured and reporting the Mineral Resource:

- A high quality check sampling (Quality Assurance and Quality Control or QA/QC) programme supports the analysis data.
- The location of drilling sample points are well constrained as all collars were surveyed by registered contract surveyors and the down hole location surveys were conducted at short intervals by gyroscopic and other down hole survey tools.
- Any hole not well supported by check sampling or location (drilled prior to 2000) is not included in the Mineral Resource estimation.
- In places, drill spacing is 25m and this is well within the range of total variance of semi-variogram modelling, which is generally over 50m.
- The value of Kriging variance indicates higher confidence in block estimates where drilling is 25m spaced.

The drilling data spacing, drill data quality, geological continuity and estimation confidence is sufficient to classify part of the Mineral Resource as Measured. The portion of the D Zone Mineral Resource that was upgraded to the Measured resource classification was previously part of the Indicated resource classification.



### Viscaria Copper-Iron Project

The D Zone Prospect is one of four deposits that make up the Viscaria Copper-Iron Project. D Zone and Discovery Zone are copper-magnetite iron ore deposits, while A Zone and B Zone are copper only deposits. The A Zone, B Zone and D Zone deposits are located in close proximity to each other and the Discovery Zone is located approximately 10kms to the south (Figure 2). The individual Mineral Resource estimates for each of these deposits are shown in Table 3 and Table 4.

**Table 3: Currently Defined Mineral Resource for Copper reported on the Viscaria Project above a 0.4% Cu cut-off.**

Resource Name	Classification	Tonnes (t)	Cu Grade (%)	Cu Metal (t)
A Zone	Measured	14,439,000	1.66	240,000
	Indicated	4,690,000	1.22	57,200
	Inferred	2,480,000	1.03	25,500
	<b>Subtotal</b>	<b>21,609,000</b>	<b>1.49</b>	<b>322,700</b>
B Zone	Measured	123,000	1.33	1,600
	Indicated	4,118,000	0.72	29,700
	Inferred	15,410,000	0.77	118,700
	<b>Subtotal</b>	<b>19,651,000</b>	<b>0.76</b>	<b>150,000</b>
D Zone Cu Resource	Measured	1,000,000	1.25	12,000
	Indicated	4,200,000	1.02	43,000
	Inferred	8,500,000	0.96	81,000
	<b>Subtotal</b>	<b>13,600,000</b>	<b>1.00</b>	<b>136,000</b>
Discovery Zone Cu Resource	Indicated	2,800,000	0.89	25,000
	Inferred	6,100,000	0.75	46,000
	<b>Subtotal</b>	<b>9,000,000</b>	<b>0.80</b>	<b>71,000</b>
<b>Overall Cu</b>	<b>Total</b>	<b>63,860,000</b>	<b>1.05</b>	<b>680,000</b>

**Table 4: Currently Defined Mineral Resource for Iron reported on the Viscaria Project above a 15% Mass Recovery cut-off.**

Resource Name	Classification	Tonnes (Mt)	Fe Grade (%)	Mass Recovery (%)	Estimated recoverable iron (Mt)
D Zone Fe Resource	Measured	2.0	28.7	35.1	0.5
	Indicated	9.7	27.2	33.1	2.2
	Inferred	13.9	25.7	31.0	3.0
	<b>Subtotal</b>	<b>25.6</b>	<b>26.5</b>	<b>32.1</b>	<b>5.7</b>
Discovery Zone Fe Resource	Indicated	3.0	40.6	53.2	1.1
	Inferred	6.7	37.7	49.0	2.3
	<b>Subtotal</b>	<b>9.7</b>	<b>38.5</b>	<b>50.3</b>	<b>3.4</b>
<b>Overall Fe</b>	<b>Total</b>	<b>35.3</b>	<b>29.8</b>	<b>37.1</b>	<b>9.1</b>

**Note:**

- The A Zone and B Zone Mineral Resources were prepared and first disclosed under the JORC Code 2004. They have not been updated since to comply with the JORC Code (2012) on the basis that the information has not materially changed since it was last reported.
- All Copper Mineral Resource estimates are reported above a block cut-off Grade of 0.4% Cu.
- All Iron Mineral Resource estimates are reported above a block cut-off of 15% Mass Recovery.
- Estimated recoverable iron is based on Davis Tube Recovery test work at a 75 micron grind size. Estimated contained iron is tonnes x mass recovery % x Fe % in concentrate (69% Fe).
- Total D Zone Measured, Indicated and Inferred Mineral Resource reported for the Copper above a cut-off grade of 0.4% Cu and Iron above 15% Mass Recovery are broadly spatially coincident. However, they are modelled and reported separately to avoid mixing geological domains.
- Total Discovery Zone Indicated and Inferred Mineral Resource reported for Copper-Gold above 0.4% Cu cutoff and for Iron above 15% Mass Recovery are broadly spatially coincident. However, they are modelled and reported separately to avoid mixing geological domains.
- Any discrepancies in the sums and weighted averages are introduced by rounding.

**For further information please visit [www.avalonminerals.com.au](http://www.avalonminerals.com.au) or contact:**

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### **Competent Persons Statement**

The information in this report that relates to exploration results is based upon information reviewed by Dr Quinton Hills who is a Member of the Australasian Institute of Mining and Metallurgy. Dr Hills 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 Hills consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to the D Zone and Discovery Zone Mineral Resources are based on the information compiled by Trevor Ellice who is a Member of the Institute of Mining and Metallurgy and is a full time employee of Salva Resources Pty Ltd (“HDR | Salva”). HDR | Salva are an independent mining consultancy who have been engaged by Avalon Minerals Limited to perform geological consulting on a fee for service basis. Mr Ellice has sufficient experience that is relevant to the style of mineralisation being considered and to the activity being undertaken 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 Ellice consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

The Mineral Resource estimate for the A Zone and B Zone prospects was compiled and prepared by Dr Bielin Shi (MAusIMM, MAIG) of CSA Global Pty. Ltd. who is a Competent Person as defined by the Australasian Code for the reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code) 2004 Edition and who consents to the inclusion in this report of the matters based on the information in the form and context in which it appears.



Figure 1 – Project Location

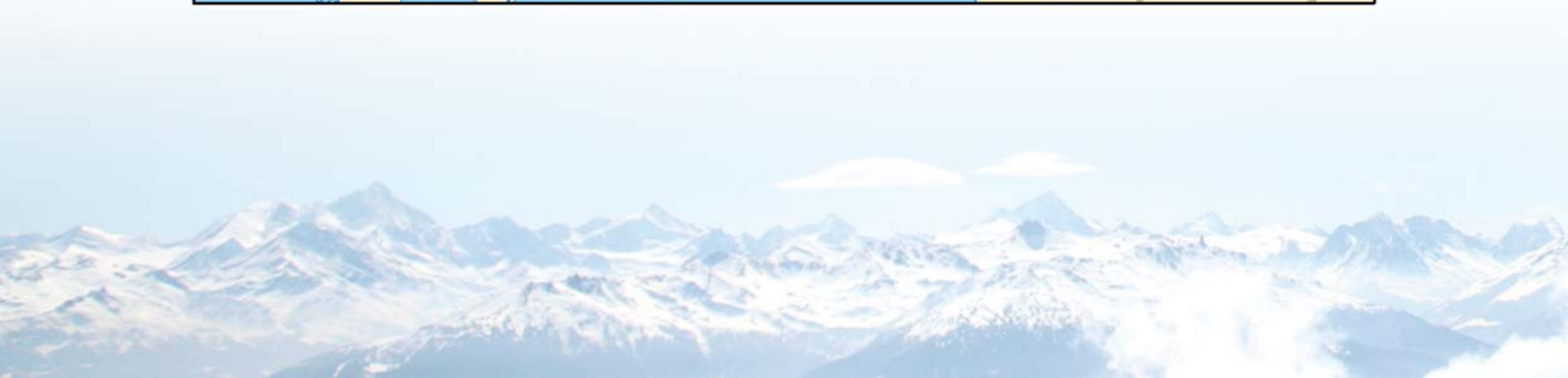
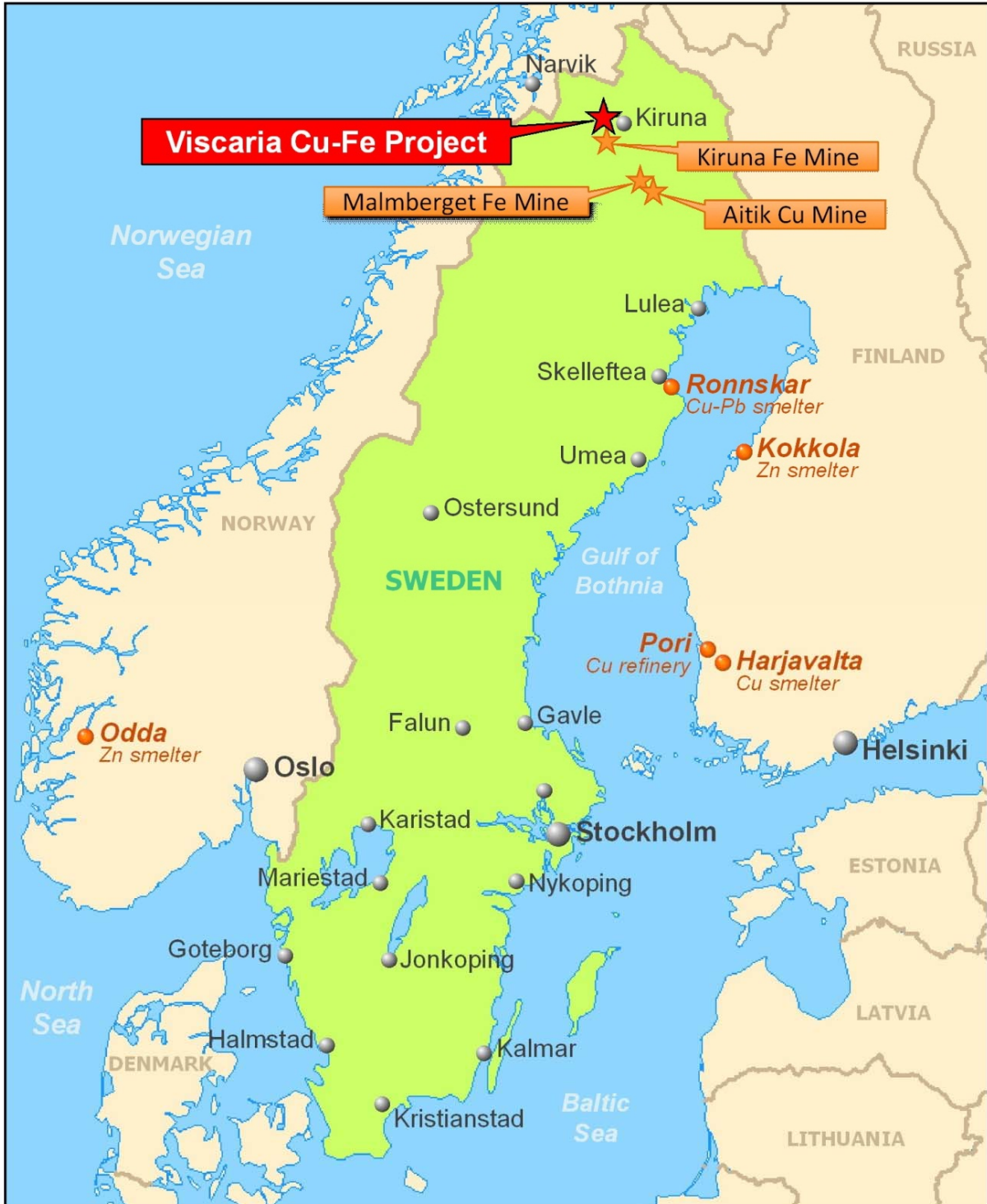
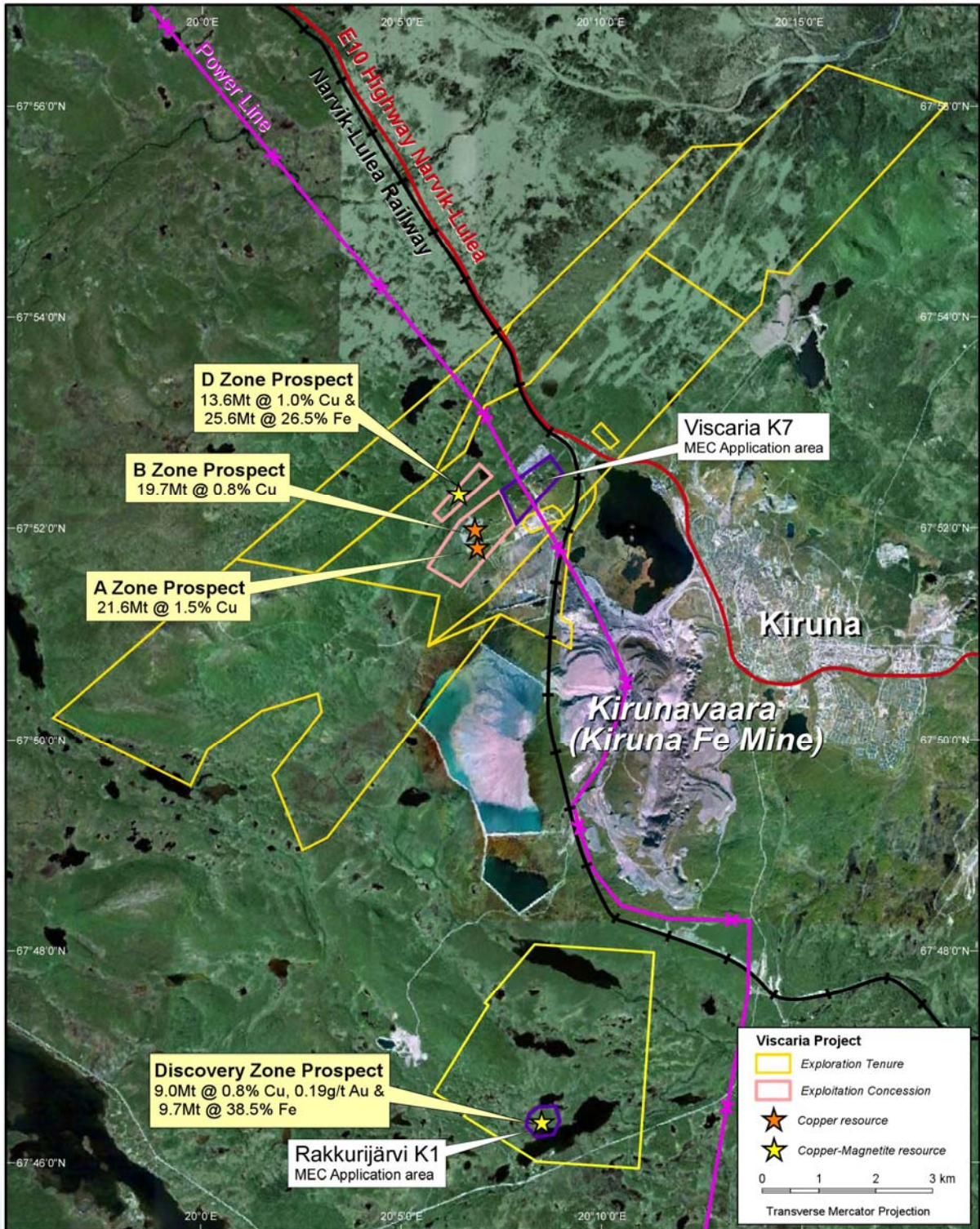
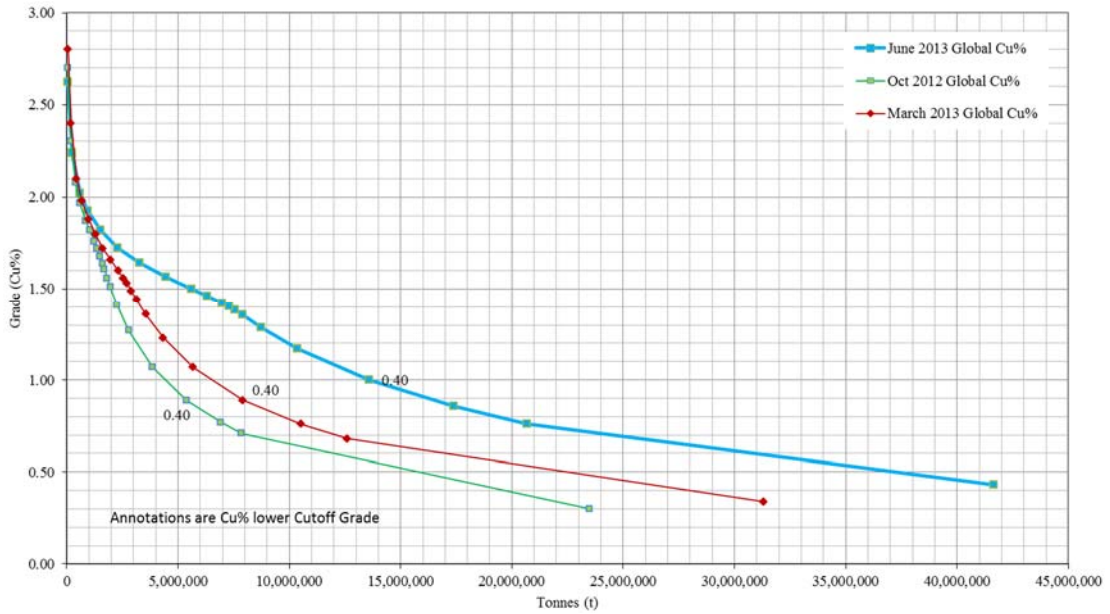




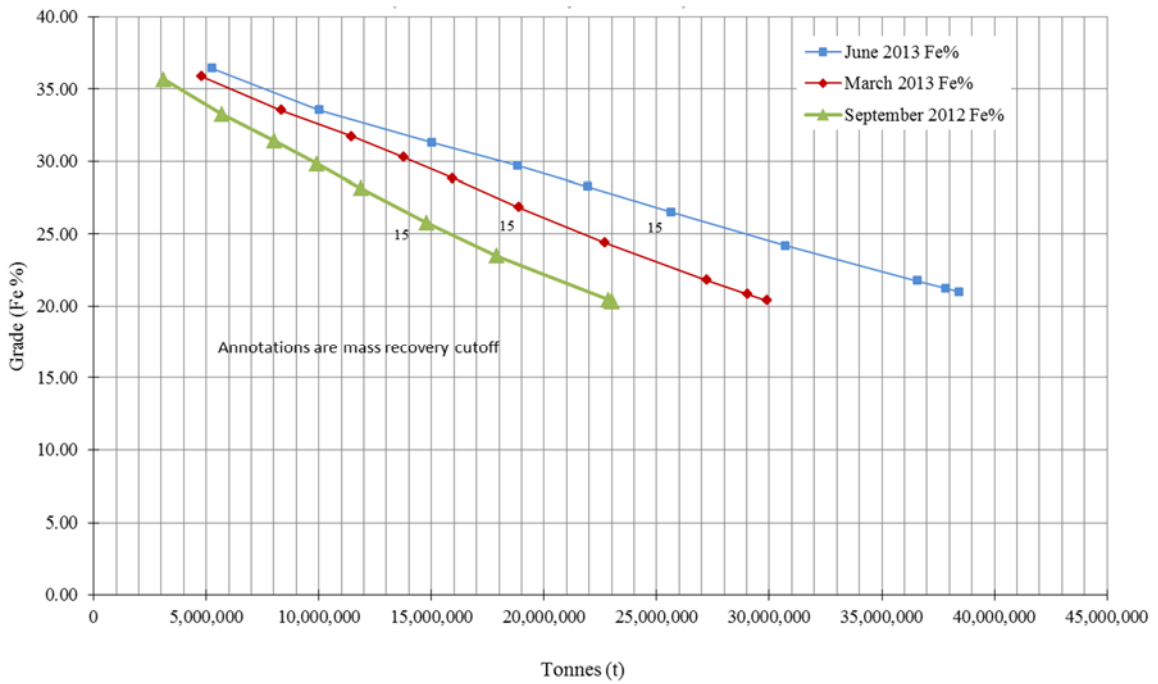
Figure 2 – Location of D Zone Mineral Resource, in relation to the A Zone, B Zone and Discovery Zone Mineral Resources



**Figure 3 - D Zone Mineral Resource Grade tonnage chart for copper. This graph also shows how the D Zone Copper Mineral Resource has grown over time.**



**Figure 4 - D Zone Mineral Resource Grade tonnage chart of iron. This graph also shows how the D Zone Iron Mineral Resource has grown over time.**



**Appendix One – Assessment of resource estimation (JORC 2012 Table 1, relevant sections 1 and 3)**

Criteria	Assessment
<b>Sampling techniques</b>	Diamond core and RC chip samples included in resource estimate. Sampling generally one meter adjusted to geological boundaries and consistent with industry standard.
<b>Drilling techniques</b>	NQ and HQ diamond core. Reverse circulation (RC) drilling (5.5" diameter) face sampling hammer
<b>Drill sample recovery</b>	Core recoveries acceptable in mineralised zones (80.4% drilling over 80% core recovery). No sample recovery information recorded for RC drilling or the two 'D-' prefix holes used in the estimate.
<b>Logging</b>	Geology logged according to established procedures consistent with known industry practice. Procedures sighted by competent person.
<b>Sub-sampling techniques and sample preparation</b>	Samples sent to ALS Scandinavia, in Pitea for sample preparation. The standard ALS sample preparation for drilling samples follows drying the sample, crushing to size fraction 75% >2mm, the split the sample to 250g portion by riffle or Boyd rotary splitter. The 250g sample is then pulverised to 85% > 75 microns.
<b>Quality of the assay data and laboratory tests</b>	<p>All samples relied upon in the Mineral Resource Estimate are from quality commercial laboratory analysis by the following procedures.</p> <p>Pulverised subsample (250g) is sent to a laboratory in Vancouver for analysis method ME-ICP61 (for samples prior to July 2010, 34% of samples used in the estimation) and ME-ICP81 (for samples later than July 2010, the remaining 66%).</p> <p>Method ME-ICP61 is an assay method used to determine low-grade base metals. It consists of a four acid digestion, followed by an analysis using Inductively Coupled Plasma - Atomic Emission Spectroscopy (ICP-AES). The lower detection limit for copper using ME-ICP61 is 1 ppm, and the upper detection limit is 10,000 ppm (1%). All samples with copper content higher than 10,000 ppm Cu are analysed with assay method Cu-OG62 that is optimized for accuracy and precision at high concentrations. The lower detection limit for copper using Cu-OG62 is 0.001% and the upper detection limit is 40%.</p> <p>ME-ICP81, 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%.</p> <p>Only samples analysed by the above techniques are included in the Mineral Resource estimation.</p> <p>2690 samples were submitted for Davis Tube Recovery (DTR) testwork. The DTR method determines the percentage of the rock that is magnetite, and can be separated from gangue material in a magnetic separation plant and is expressed as a weight/weight percentage at a given grind size. The chemical analysis is made by assay method ME-XRF11, which is a lithium borate fusion technique coupled with X-Ray fluorescence (XRF). The lower detection</p>

	limit for iron using XRF-11 is 0.01% and the upper detection limit is 75%. The DTR test is performed at ALS Iron Ore in Perth, Western Australia.
<b>Verification of sampling of assaying</b>	An extensive check-sampling programme supports analysis. For sampling completed prior to July 2010, standards were submitted at a rate of about 1 per 20 samples, blanks and duplicates at a rate of 1 per 50. After July 2010 standards, blanks and duplicates were submitted at a rate of 1 in 20 samples. The values of the standards range from low to high grade and are appropriate to monitor performance of values near cutoff and near the mean grade of the deposit. The check sampling results are monitored and performance issues are communicated to the laboratory when they occur. Several issues have been identified, like a small magnitude, low bias on one of the iron assays and lack of homogeneity of the blank material. These issues are not material to the accuracy of the estimation and QA/QC procedures are appropriate to support the Mineral Resource for public reporting.
<b>Location of data points</b>	<p>Licensed contract surveyors surveyed the majority of collar co-ordinates to high accuracy (1-3cm) – however the survey type is not recorded in the database. 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 drill holes at D Zone are supported by accurate location data.</p> <p>High quality down-hole dip and azimuth survey data support the majority of the drill holes. A number of survey techniques and tools have been used and method is recorded in the drilling database. The survey methods include north seeking gyroscopes (21% of records), gyroscopes (27%), flexit (34%) and reflex down-hole (9%) survey tools. Those records with unknown survey type (2%) have been excluded from the resource estimate.</p>
<b>Data spacing and distribution</b>	Data spacing is regular on east west aligned cross-sections, spaced 50m along the 1.4km strike. In some places there are 25m spaced infill drill holes. Data spacing is sufficient to establish continuity between drill holes. Sampling is generally taken over 1 meter intervals, adjusted to geological boundaries. To regularize, sample intervals are composited to 1m for estimation.
<b>Orientation of the data in relation to geological structure</b>	Drilling orientation provides high angle mineralised intersections consistent with appropriate and representative sampling.
<b>Sample security</b>	Due attention has been given and tamper proof bags used when shipping pulps for final analysis.
<b>Audits and review</b>	<p>List of studies into Viscaria D Zone:</p> <p>Williams, D and Vos, M, Mineral Resource Estimate, Avalon Minerals Limited, Viscaria Copper Deposit Zone A south, Kiruna – Sweden, September 2008. <i>CSA Global report supplied to Avalon minerals.</i></p> <p>Hewlett, A and Reidy, P, Mineral Resource Summary Report, Viscaria Copper Deposit, Kiruna, Sweden, March 2008. <i>CSA Global report supplied to Avalon minerals.</i></p> <p>Beckett, S, and Willaims, D, Mineral Resource Estimate, Avalon Minerals Limited, Viscaria Copper Deposit Zones B and D, Kiruna – Sweden, September 2010. <i>CSA Global report supplied to Avalon minerals.</i></p> <p>Shi, B, Technical Summary on Viscaria D Zone Mineral Resource Estimate, 22 November 2011. <i>CSA Global Memorandum to Mr Andrew Munckton, Avalon Minerals.</i></p>

	<p>Mujdrica, S, Viscaria D Zone Mineral Resource, 28 September 2012. <i>Xstract Mining Consultants Memorandum to Dr Quinton Hills, Avalon Minerals.</i></p> <p>Readford, M, Viscaria D Zone Mineral Resource Update, 25 March 2013. <i>Xstract Mining Consultants Memorandum to Dr Quinton Hills, Avalon Minerals.</i></p> <p>Readford, M, Viscaria D Zone Mineral Resource Update – Mineral Resource Statement, 25 June 2013. <i>Xstract Mining Consultants Memorandum to Dr Quinton Hills, Avalon Minerals.</i></p>
<b>Database integrity</b>	All historical data is validated and migrated into a SQL based database, based on the 'Acquire' data structure. Data is audited on entry for interval error and significant data changes are resolved. A procedure exists to standardise data entry.
<b>Site visits</b>	Competent person has not visited site, however Avalon staff are on the ground in Sweden and have visited the site often.
<b>Geological interpretation</b>	The geological interpretation has not changed from previous estimates. The geological interpretation has been conducted by Avalon geologists on a cross sectional basis using a combination of iron, copper grade and lithology. There are 6 high grade (>0.8% Cu cut-off) copper domains, 6 low grade (>0.2% Cu cutoff) copper domains as well as high and low-grade iron domains modelled above 30% Fe and 15% Fe respectively. The extent of oxidation has also been wireframed. The geological interpretation is robust and has been audited by the competent person.
<b>Dimensions</b>	The mineralisation is steeply dipping, occurs over a strike length of 1.4km and extends down dip to 450m below surface.
<b>Estimations and modeling techniques</b>	The Mineral Resource has not been re-estimated at this time but relies on block modelling completed in June 2013, supplied to Avalon by Xstract Mining Consultants. Iron and copper grades are estimated using Ordinary Kriging into parent cell blocks of 5 mE x 20 mN x 10 mRL. Sub-blocking to 1 mE x 2 mN x 1 mRL was used to model volume representatively.
<b>Moisture</b>	Dry bulk density used.
<b>Cutoff parameters</b>	Mineral Resource estimates are reported separately for copper and iron. The copper is reported above a block grade cutoff of 0.4% Cu and the iron is reported above a block cutoff of 15% mass recovery.
<b>Mining factors or assumptions</b>	Avalon have conducted open pit optimisation studies of the previous Viscaria D Zone resource estimates and a large portion of the Mineral Resource was selected by the optimisation for mining according to mining assumptions used.
<b>Metallurgical factors or assumptions</b>	To calculate recoverable iron metal content, a 69% Fe magnetite concentrate has been used based on metallurgical testwork. Whilst the mineralization does contain some oxide, the resource is not categorized as oxide, transitional or fresh. Work is currently underway to better characterise the oxide, transition and fresh material and implications for metallurgical recovery. A round of drilling specifically for the purpose of metallurgical test work is being planned.
<b>Environmental factors or assumptions</b>	Avalon has been granted an Exploitation Concession for this area. It is assumed that only mining activities will be undertaken at D Zone and a processing facility built on the site of the old Viscaria Mine processing plant, situated near the A Zone prospect. The Viscaria Mine

	was in operation between 1982-1997 and it is assumed that mining approvals will be more likely to be obtained because the site is already disturbed.
<b>Bulk density</b>	The dry bulk density is determined by regression formula from correlation with iron grade.
<b>Classification</b>	A review of location data, check sampling (QA/QC) and drilling spacing for all drilling used to estimate the Mineral Resource has upgraded parts of the deposit to Measured; where there are infill drill holes spaced 25m between section lines, geological continuity is good, and the quality of the drilling and sample location data is high. Elsewhere where data points are spaced on 50m section lines the Mineral Resource estimate is classified as Indicated. Classification is downgraded to Inferred where sampling is inadequate to model local variability of iron and copper grades and confidence geological continuity and estimation is low. Location and amount of Inferred material have not changed from previous estimates.

