

ASX Announcement/Media Release

12 OCTOBER 2010

AVALON MOVES TO BANKABLE FEASIBILITY STUDY ON VISCARIA PROJECT AFTER DELIVERING POSITIVE PRE-FEASIBILITY STUDY

HIGHLIGHTS

- Pre-Feasibility Study confirms the technical and financial viability of the Viscaria Copper-Magnetite Project in Sweden.
- Forecast average annual production of:
 - **Base Case**
 - *1.5Mtpa for 37,800tpa of copper concentrate and 362,400tpa of iron concentrate over 10 years; or*
 - *3.0Mtpa for 75,700tpa of copper concentrate and 725,000tpa of iron concentrate over 5 years.*
 - ***Development Case**
 - *3.0Mtpa for 63,300tpa of copper concentrate and 735,000tpa of iron concentrate over 10 years.*
- Using long-term price assumptions, the 'Base Case' mining scenario is capable of generating significant revenues over a mine life of 5 or 10 years, with attractive Net Cash Flow, NPV₁₀ and IRR.
- Mining to occur from open pits accessing ore from the Mineral Resources at A Zone, B Zone and D Zone.
- Potential to significantly improve Project Net Cash Flow, NPV₁₀ and IRR through an alternative '*Development Case' mining scenario, based on additional throughput from a new exploration target at D Zone.
- Processing will include conventional crushing, grinding, flotation and magnetic separation circuits to produce copper and magnetite concentrates.
- Metallurgical test work completed to date indicates final concentrate recovery for copper of 90% and weight recovery for magnetite concentrate of 24%.
- Discussions progressing with potential customers.
- First ore delivery targeted for Q1 2013, subject to timely receipt of environmental approvals, completion of sales agreements and financing.
- Bankable Feasibility Study now underway based on 3.0Mtpa throughput.
- Resource and exploration drilling to re-commence in November 2010.

- **JORC – Exploration Targets**
- *It is common practice for a company to comment on and discuss its exploration in terms of target size and type. The information relating to exploration targets should not be misunderstood or misconstrued as an estimate of Mineral Resources or Ore Reserves. Hence the terms Resource(s) or Reserve(s) have not been used in this context. The potential quantity and grade is conceptual in nature, since there has been insufficient work completed to define them beyond exploration targets and that it is uncertain if further exploration will result in the determination of a Mineral Resource.*
- **The PFS Development Case** includes material that has not yet been discovered or defined and is considered an exploration target.

Avalon Minerals Ltd (ASX:AVI) is pleased to announce the results of the Pre-Feasibility Study (PFS) for its 100%-owned **Viscaria Copper-Magnetite Project** in Sweden's Kiruna region, which is being developed in close proximity to LKAB's Kirunavarra Iron Ore Operation.

The PFS has confirmed that the Viscaria Copper-Magnetite Project is an economically robust, long-life copper and iron ore concentrate project which will generate substantial returns for Avalon shareholders.

Under the mining proposal defined in the PFS, it is proposed that copper concentrates will be produced at a new processing facility at Viscaria and railed to smelters in either Sweden or Finland which currently receive other Scandinavian-area product. High-grade magnetite concentrate will also be produced and sold to LKAB for use in their pelletising facilities at Kirunavarra. Refer to Figure 1 for the locations of key infrastructure in the area.

Scandinavian copper smelters and LKAB have expressed strong interest in the concentrates to be produced from Viscaria.

The existing Mineral Resources, together with the potential for future significant exploration discoveries at Viscaria, underpin a long-life operation and provide Avalon with the ability to lock in competitive long-term contracts for the supply of key services for the project.

Summary of Key PFS Outcomes:

- Capital investment of US\$123M or US\$145M in the Base Case and US\$160M in the *Development Case
- Net Cash Flow (NCF) after tax from the life of the project of US\$148M or US\$129M in the Base Case and US\$356M in the *Development Case
- Defined Resource of 66.6Mt (10.8Mt Measured and Indicated) sufficient to underpin the initial 5 or 10 year production profile;
- Completion of mine planning and initial mine design confirms a favourable production output.

PFS DETAILS

Mineral Resources

Avalon announced an updated resource estimate for the Viscaria Copper-Magnetite Project on 1 October 2010 and this announcement should be referred to for specific details.

The Mineral Resources for the Viscaria deposits have been estimated by Avalon and CSA Global in accordance with the Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves.

Resources are separated according to the mineralisation style of the copper deposits (A Zone, B Zone and Tailings Dam deposits) and copper-magnetite deposits (D Zone deposit) and are summarised as follows:

Viscaria Copper Deposit Mineral Resource as at 30 September 2010

Resource Classification	MT	Cu %	Zn %	Cu Metal ('000t)	Zn Metal ('000t)
Measured	6.7	2.47	-	165	-
Indicated	4.1	1.76	-	73	-
Inferred	46.4	0.68	0.06	314	27
TOTAL	57.2	0.97	0.05	552	27

Viscaria Copper-Magnetite Deposit Mineral Resource as at 30 September 2010

Resource Classification	MT	Cu%	Fe%	Cu Metal ('000t)	Fe Metal ('000t)
Inferred	9.0	0.55	26.9	49	2,415

Pit Optimisation and Mining

Pit optimisation studies and preliminary open pit mine designs were completed over resource wireframes for the A, B and D Zones. Preliminary mine designs were completed by CSA Global with input from Avalon and metallurgical, mining and geotechnical consultants.

Feed for the proposed processing facility is provided by the mining of wireframed copper and magnetite mineralisation using conventional open pit mining methods. Pre-existing underground mine openings will be intersected in and around the proposed A Zone open pit. Open voids potentially impacted by the proposed mine design will be backfilled prior to or during the mining phase.

Processing

For the purpose of the PFS, mining and processing rates of 1.5Mtpa and 3.0Mtpa were chosen. Conventional crushing, grinding, classification and concentration circuits comprising the following key processing steps have been proposed:

- Crushing and screening of ROM ore to 35mm
- Grinding and classification of feed to P80 of 106µm
- Copper recovery in Rougher, Scavenger and Cleaner flotation circuits with concentrate thickening and filtration
- Magnetite recovery incorporating Rougher LIMS, regrinding of LIMS concentrate to P80 of 38µm, Cleaner LIMS, concentrate and tailings thickening
- Tailings disposal to the existing partially-filled facility with periodic increases to capacity
- Loading of bulk copper concentrates for rail transport to Scandinavian smelters
- Pumping of thickened iron concentrates to neighbouring pellet facilities
- Water supply from existing underground facilities and open pit dewatering
- Site services from existing rail, power and transport facilities in and around the site.

PFS Case Details

The PFS has established two cases to consider the financial outcomes of mining and processing the identified mineralisation at Viscaria. The 'Base Case' is considered under two mining scenarios, based on mining 1.5Mtpa over 10 years or 3Mtpa over 5 years. The PFS is considered to have an accuracy of +/- 30%.

PFS key production outcomes include:

- Mining of 15.5Mt at 0.7% Cu and 20% Fe in the Base Case and 30Mt at 0.6% Cu and 23% Fe in the *Development Case;
- Ore feed rates of 1.5Mtpa or 3.0Mtpa in the Base Case and 3.0Mtpa in the *Development Case;
- Average copper concentrate production of 37,800 or 75,700 dry metric tonnes per annum (dmtpa) in the Base Case and 63,300dmtpa in the *Development Case;
- Average copper concentrate grade of 25% Cu, 3% Zn and 48gpt Ag;
- Average magnetite concentrate production of 362,400 or 725,000 dry metric tonnes per annum in the Base Case and 735,000dmtpa in the *Development Case; and
- Average magnetite concentrate grade of 69.5% Fe, 1.5% SiO₂, 0.1% Al₂O₃, 0.01% P, 0.03% Cu and 0.1% S at 24.1% weight recovery.

PFS Development Case

Avalon has identified extensions to the D Zone mineralisation which continue south of the D Zone Resource for approximately 5km. Geological investigation has confirmed the continuation of the D Zone stratigraphy and the presence of both copper and magnetite mineralisation similar in style to the D Zone mineralisation.

Avalon has established an exploration target for this area between 30 and 50 million tonnes of material at 0.4% to 0.7% Cu and 25% to 30% Fe.

Avalon has modelled the effect of an additional 15 million tonnes of production of D Zone material over and above the 10-year Base Case mining scenario at the rate of 1.5 Mtpa to determine the impact on the financial outcomes of the project.

Capital Cost Estimate

Capital cost estimates were prepared by MSP Engineering, Promet Engineers and other consultants. The estimated capital costs breakdown for the Project PFS is as follows:

Description	Capital Cost US\$M		
	PFS Base Case		*PFS Development Case
	10 Years	5 Years	10 Years
Mine Site Costs	2.7	2.7	3.3
Process Plant Costs	80.7	105.4	105.4
Infrastructure Costs	5.1	5.1	5.1
Owner's Costs	10.0	10.7	13.0
Total Project Capital Costs	98.5	123.9	126.8
Sustaining Capital	14.0	4.0	16.0
Contingencies	10.5	17.6	17.6
Total Project Capital Allowance	123.0	145.5	160.4

**The PFS Development Case includes material that has not yet been discovered or defined and is considered an exploration target.*

Operating Cost Estimate

The average annual operating cost estimate for the concentrate operations in Sweden at full production is as follows:

Description	Operating Cost US\$ / Tonne Ore Feed		
	PFS Base Case		*PFS Development Case
	10 Years	5 Years	10 Years
Mine Site Operating Costs	17.34	17.16	14.80
Processing Cost	13.00	13.00	13.00
Transport, Treatment and Refining Costs – Mine to Plant – Sweden	2.37	2.37	2.03
Administration and Royalties	3.08	2.51	2.00
Total Average Production Cost	36.48	35.72	32.24

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Financial Evaluation

Extensive financial modelling has been undertaken for both the copper and magnetite concentrate operations in Sweden. A summary of the financial analysis and model outcomes is shown below.

The financial results in the PFS are based on a copper price of US\$5,510 per tonne of copper (US\$2.50/lb. copper) and US\$95.90 (US\$1.38/dmtu) per tonne of iron concentrate. Exchange rates of 0.75 Euro = 1.00 US\$ have also been used throughout the financial analysis.

Items	Unit	PFS Base Case		*PFS Development Case
		10 Years	5 Years	10 Years
Revenue	US\$M	893	893	1613
Project NPV ₁₀ after tax	US\$M	37.7	45.8	125.6
Project IRR after tax	%	20.0	24.8	33.4
Payback period	Years	4.2	2.9	2.9
Life of Mine Cash Surplus after tax	US\$M	148	129	356

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SUMMARY

Avalon's Board is delighted with the outcome of the PFS, which has demonstrated the robust nature of the Viscaria Copper-Magnetite Project from both a technical and financial perspective and provides a strong foundation for the Company to proceed with a Bankable Feasibility Study

(BFS) for the Project. The BFS will commence immediately and study the 3.0Mtpa throughput option for both the Base Case and *Development Case mining scenarios.

The successful development of the Viscaria Project is expected to bring significant benefits to the City of Kiruna and the country of Sweden through increased employment and construction of a second major mining operation in the region.

The key areas of focus for Avalon over the coming months will be to secure all the required environmental approvals for the Viscaria Project in a timely fashion and to complete the resource drilling programs at B and D Zones to convert Inferred Resources to Measured and Indicated. Drilling to define the extent of mineralisation within the 30-50Mt D Zone Extension exploration target is also planned and is set to commence in November 2010.

The board of Avalon would like to take this opportunity to thank all of its staff, consultants and contractors for the significant effort in delivering the PFS on time, which paves the way for the development of a substantial new copper/iron ore development in Sweden.

The successful development of the Viscaria Project will deliver substantial long-term returns for Avalon shareholders and make an important contribution to the continued expansion and development of Sweden's world class copper and iron ore mining industry.

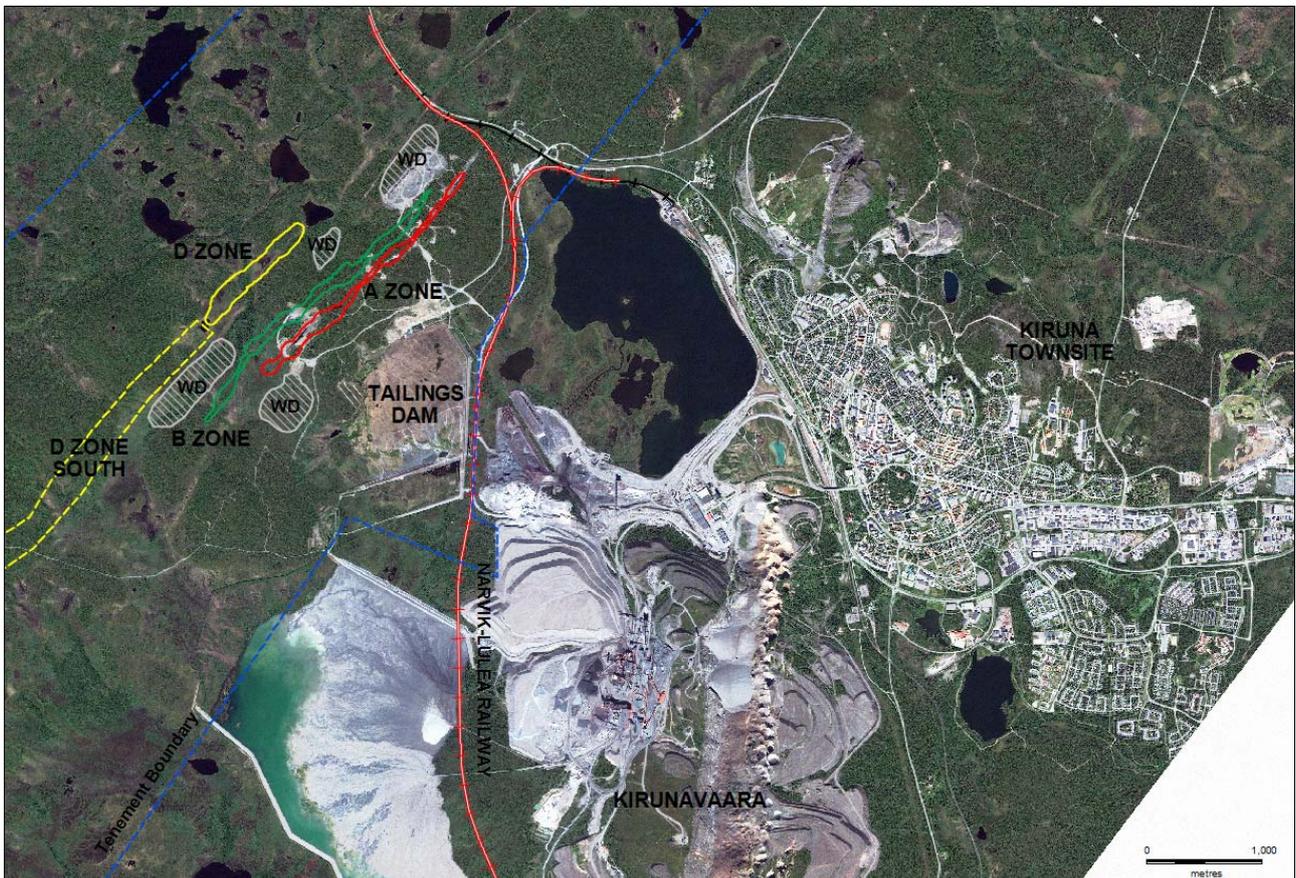


Figure 1. Viscaria Project layout, showing the proximity of the Kiruna townsite, infrastructure and the Kirunavaara mining and processing operations of LKAB.

Competent Person's Statement

The information in this report that relates to A Zone Mineral Resource, Tailings Dam Mineral Resource and exploration targets is based upon information reviewed by Mr Andrew Munckton BSc (Mining Geology) who is a Member of the Australasian Institute of Mining and Metallurgy.

Mr Munckton 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 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Munckton consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The Mineral Resource estimate for B Zone and D Zone has been compiled and prepared by Mr. David Williams (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.

– ENDS –

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