# **ASX ANNOUNCEMENT**



# AVALON MINERALS LTD MARCH 2016 QUARTERLY REPORT

#### <u>Viscaria Copper Project, Sweden (Avalon - 100%)</u>

- Scoping Study released in December determined that the Viscaria Copper Project demonstrates robust project fundamentals with low technical risk;
- Work continues on increasing the scale of the Viscaria Copper Project, with the final two holes drilled in 2015, VDD 195 and 196, (drilled outside of the area of the updated 2015 Mineral Resource estimate) containing significant high grade copper intersections, indicating that further growth of the D Zone Mineral Resource estimate is to be expected with additional drilling in 2016;
- Additional geological and mine modelling studies on A and B Zone have enabled delineation of a larger open pit and captured more Mineral Resource into Mining Inventory to support a larger scale mining operation (see ASX announcement 5/4/16);
- The Viscaria Copper Project Environmental and Social Impact Assessment (ESIA) process is progressing to plan, and represents the critical path to final permitting.

#### **Corporate Highlights**

- A\$1.2 million in cash at 31 March 2016;
- Placement of approximately \$0.75M to existing major shareholders in March 2016 at \$0.016 per share;
- General Meeting to be held 10 May 2016 to seek shareholder approval for director participation in the March 2016 placement. Directors are seeking approval for them to purchase shares at \$0.016 per share.

#### **ASX: AVI**

#### REGISTERED OFFICE

Avalon Minerals Ltd
ABN 68 123 184 412
9 Gardner Close
Milton Qld 4064 Australia
P + 61 7 3368 9888
F + 61 7 3368 9899
info@avalonminerals.com.au
www.avalonminerals.com.au



#### **Exploration and Development Activities**

#### **Viscaria Scoping Study**

The findings of the Viscaria Copper Project (VCP) Scoping Study were presented in an ASX announcement dated 14 December 2015.

The Scoping Study considered a Base Case development proposition involving standard industry technology partnered with infrastructure opportunities and local equipment manufacturer support not seen by any competitor. The Scoping Study has determined that the VCP demonstrates robust project fundamentals with low technical risk.

The exploration upside is considered to be very strong as has been demonstrated in drilling results in late 2015, which further enhance the D Zone orebody by defining high grade mineralisation outside of the resource area.

Additional drilling is planned on proposed D Zone underground areas, and proposed A and B Zone open pit development areas to deliver additional resources and to support an increased production scenario of 2 million tonnes per annum or over 20,000 tonnes of copper per annum. A resource update will occur at the completion of this drilling, together with an update to the Scoping Study, with several key areas undertaken to a feasibility study level.

Further geological and mine modelling studies on A and B Zone during the quarter have enabled delineation of a larger open pit over a combined A and B Zone, primarily in the southern portion of the deposits. This has captured more Mineral Resource into Mining Inventory and supports the target case of a 2.0Mtpa mining operation. These results, and demonstration of potential further upside with inclusion of hangingwall and footwall lodes captured in the enlarged open pit, were presented in a corporate update released on April 5th, referred to below.

Additional A Zone underground mining (deeper than ~200m below surface) has not been included in the Scoping Study and represents significant upside to the contemplated Viscaria Copper Project development. Additional drilling is required to increase the A and B Zone underground resources and once this drilling is completed an updated Mineral resource will be estimated. The re-estimation will allow for pillars and skins that would not be mineable in an underground mining scenario.



Mineral Resource	Tonnes (Mt)		Tonnes (Mt) Grade (% Cu)	
A Zone#	21.6		1.5	
B Zone#	15	9.7	(	0.8
D Zone Open Pit*	3	3.1	0.8	
D Zone Underground*	8	3.0	1.4	
Total	52	2.4	1.2	
Mining Inventory	Tonnes (Mt) 2015	Tonnes (Mt) 2016	Grade (% Cu) 2015	Grade (% Cu) 2016
A Zone Open Pit @	2.6		1.3	
B Zone Open Pit ®	2.0		0.7	
Combined A & B Zone Open Pit®^		8.0		0.9
D Zone Open Pit®	1.6	1.6	0.9	0.9
D Zone Underground @^	3.8	5.0	1.5	1.5
Exploration target^		3.0-4.0		1.3-1.8
Total	10.0	18.0	1.2	1.2

<sup>\* 2015</sup> JORC Mineral Resource estimate

 $<sup>^{\#}</sup>$  2014 JORC Mineral Resource estimate, based on initial work completed in Nov 2011; 0.4% COG all considered to be open-pittable

<sup>@ 2015</sup> Scoping Study Mining Inventory

<sup>^ 2016</sup> updated target Mining Inventory



	2015 Scoping Study	Target Case A and Expanded Case	
Process plant size	1.2Mtpa scenario	2.0Mtpa scenario	3.0Mtpa scenario
Strip ratio (LOM)	5.8	6.0	8.4
Process	Crush, grind and coppe	r flotation plant	
Recovery rates	90.2%	90.2%	90.2%
Copper Production			
LOM	107kt	200kt	260kt
Average per annum	12kt	21kt	30kt
Mine life	Minimum eight years, open	Minimum nine years, open	Minimum nine years
Development capital			
Site Infrastructure	US\$87m (A\$119m)	US\$115m	US\$145m
Underground	US\$15m (A\$20m)	US\$15m	US\$15m
Sustaining capital (LOM)			
Site Infrastructure	US\$10.6m (A\$14m)	US\$14m	US\$18m
Underground	US\$20.0m (A\$27m)	US\$35m	US\$35m
Cash operating cost			
LOM C1	US\$1.86/lb (A\$2.54/lb)		
LOM AISC	US\$2.10/lb (A\$2.87/lb)	Targeting <	U\$\$2.00/lb
Copper price	US\$3.25/lb (A\$4.45/lb)	US\$3.00	US\$3.00
Exchange rate			
AUD: USD	0.73	0.73	0.73
NPV pre-tax (7%)	US\$74m (A\$102m)	Targeting >US\$150 mill	
IRR pre-tax (%)	22%	Targeting >28%	
Payback period	3.7 years	<4 years	<4 years
Capital intensity	US\$7,335/† cu p.a.	~U\$\$5,750	~US\$5,100

### Environmental and Social Impact Assessment (ESIA) and Permitting

The Viscaria ESIA process is being progressed. These activities will deliver the necessary documents for application for a Permit to Mine from the Swedish Land and Environmental Court. The process is focussed on the immediate Viscaria area and supports planning for mine development within the granted Exploitation Concessions K3, K4, and K7.

The environmental permitting is the primary focus of activities at this stage to further de-risk the project and support ongoing scoping and feasibility studies. The main focus to date has been on hydrogeological assessments of the project, including packer testing and related permeability measurements. Applications have also been made to the relevant authorities for mining land use permits over the proposed project development area and water abstraction licencing.



#### **Discovery Zone**

As announced on 9 October 2015, the Heads of Agreement for the acquisition of the Discovery Zone copper-iron deposit has not been extended. Since the exploitation concession application had not been granted by 8 October 2015 (being two years from the initial A\$1 million payment), the initial payment made by Avalon is refundable by Hannans, and a Refund Notice has been issued.

The 90 day period for Hannans to make the refund payment expired on 7 January 2016. As at the date of this report Hannans is yet to make any payment and Avalon is considering its options with regard to recovery of this debt.

As announced on 28 October 2015, the Mines Inspectorate advised that the Discovery Zone exploitation concession application had been removed from further processing. Avalon has appealed this decision and the appeal process is currently underway in the Swedish courts.

#### **Tenements**

During the quarter, exploration tenement Viscaria No 3 was relinquished.

#### **Corporate**

Cash Resources - The Company's unaudited cash position for March 31, 2016 is A\$1.2 million.

Since late 2015 the Company has implemented a significant cost reduction programme involving the suspension of further drilling, redundancies, overhead reduction, 50% salary reduction for the management team and the deferral of Director's fees to allow it to manage its business through the current challenging times in the junior resources sector.

Limited funding is being directed towards advancing the ESIA and permitting activities that will further de-risk the Viscaria Project.

#### **Capital Raising**

On 29 February 2016 Avalon announced a placement to existing major shareholders under the Company's available capacity, at A\$0.016 per share, to raise approximately A\$0.8 million.

45,663,438 shares were issued in relation to this placement on 8 March 2016.

In conjunction with the placement to existing major shareholders, three directors agreed to invest further funds into the Company on a pro-rata basis with the participating major shareholders in order to assist in funding the Company during the current challenging times in the junior resources sector. This additional funding provided by the three directors is in addition to a voluntary 50% salary reduction for the Managing Director and the deferral of Non-executive Director's fees.

These shares to be purchased by directors of Avalon Minerals Ltd at A\$0.016 per share (a 33% premium to the closing share price of Avalon shares of A\$0.012 on 12 April 2016), are subject to shareholder approval at the upcoming General Meeting to be held on 10 May 2016.



#### **Shareholder Information**

As at 31 March 2016, the Company had 378,353,560 fully paid ordinary shares on issue and 423 shareholders.

On 7 December 2015, the Company announced the establishment of an unmarketable parcel share sale facility to assist shareholders of unmarketable parcels to sell their Avalon shares without having to use a broker or incurring brokerage costs. The Company values all of its shareholders, however by facilitating the sale, the Company expects to reduce the administrative costs associated with maintaining a large number of small holdings.

Of the 631 Shareholders who held an unmarketable parcel of shares (3,666,347 shares in total), 152 elected to retain their shares, 8 purchased more shares to increase their holding above the unmarketable level, 11 disposed of their shares and the balance of 460 shareholders holding 2,418,839 shares had them sold for them under the facility at a price of \$0.02 per share.

#### **Research and Development Claim**

During the March quarter, in relation to the Research and Development ("R&D") claims received by the Company for the years ended 30 June 2013 and 30 June 2014, being \$2,765,114 (net of fees), the Company received a 'Certificate for Finding' under Section 27J of the Industry Research and Development Act 1986 ("the Act") from Innovation Australia. The notification advised that after a review by Innovation Australia they had found that Avalon's R&D activities were deemed to not be core or supporting activities under the Act. The decision of Innovation Australia is reviewable under Division 5 of the Act upon request to do so within 28 days of receiving the notice. The Company has requested this review, and is still of the opinion that the activities undertaken are valid R&D activities as per the Act.

The Company has continued to progress work on the R&D activities, with detailed experimentation work commencing in December 2015 investigating the novel concept of an acid chloride-sulphate leaching system to process both copper sulphide concentrates and oxide ore from the Viscaria Copper Project into high grade cathode copper. Acid sulphate leaching systems have not been commercialised for leaching chalcopyrite-bearing copper sulphide concentrates because chalcopyrite is difficult to leach. Addition of chloride ions to the acid copper sulphate system appears to hold promise for leaching of chalcopyrite concentrates. If a leaching system for chalcopyrite flotation concentrates is developed, it is highly likely that it can be combined with oxide from the Viscaria site as oxide ores can be leached in less aggressive conditions. This would enable both oxide and sulphide mineralisation to be processed, rather than just the high grade copper sulphide concentrate. The first chalcopyrite leach trial was completed at the end of the quarter with extremely positive results. Additional experiments will be run to establish optimum conditions in the next quarter, along with the combined oxide leach trials.





#### Notes Specific – March 2016 Quarter ASX Announcements

The following announcements, which relate to information in this Quarterly Report, were lodged with the ASX during the Quarter. Further details (including JORC 2012 Code Reporting Tables, where applicable) for the results summarised above can be found in the announcements:

Investor Presentation 18 January 2016

Avalon Minerals to complete Placement 29 February 2016

Appendix 3B Placement 8 March 2016

Half Yearly Report and Accounts 11 March 2016

Investor Update and Presentation 5 April 2016





Figure 1: Project Location



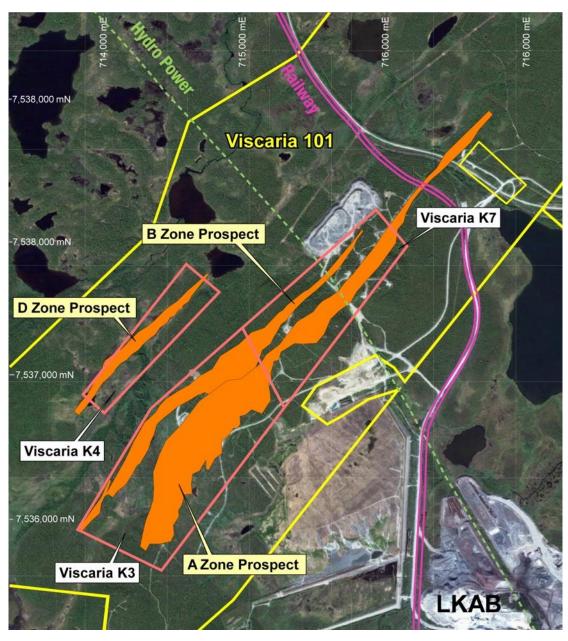
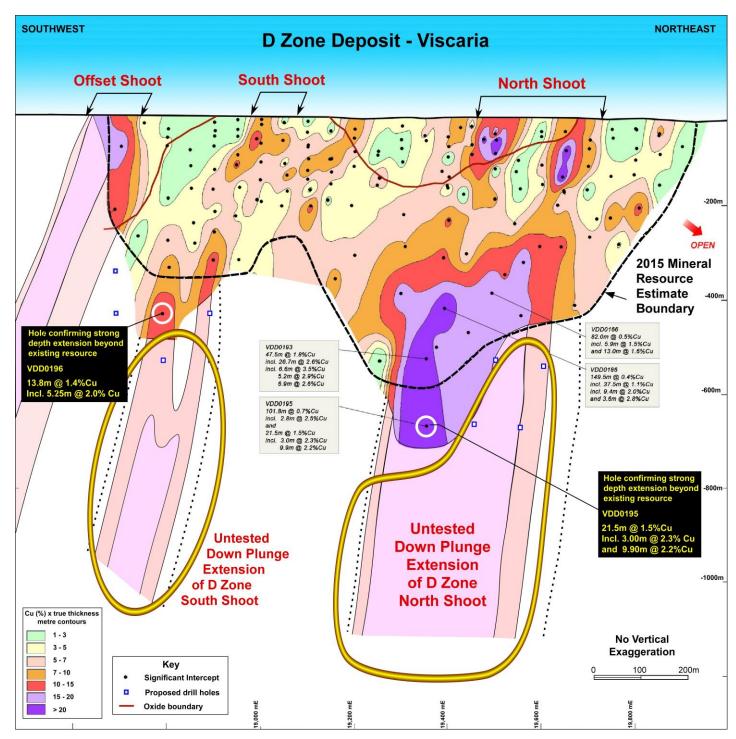


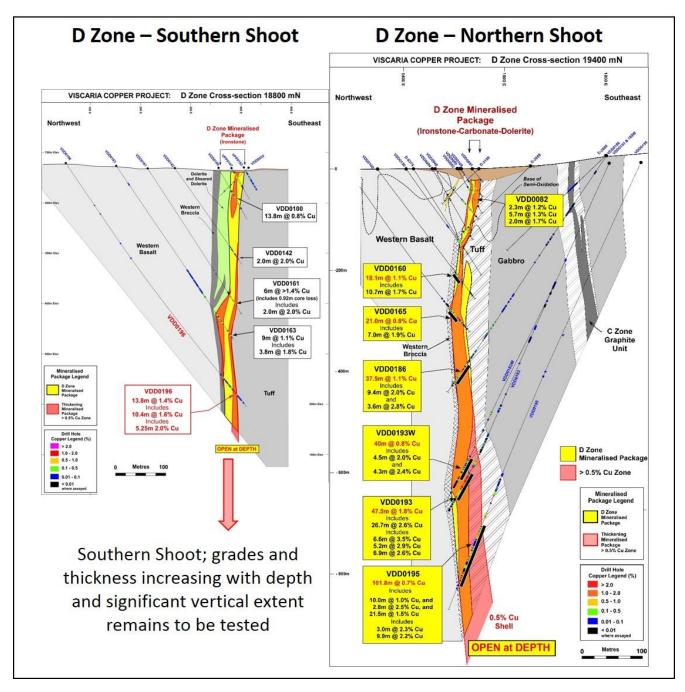
Figure 2: Location of the Viscaria Copper Project.





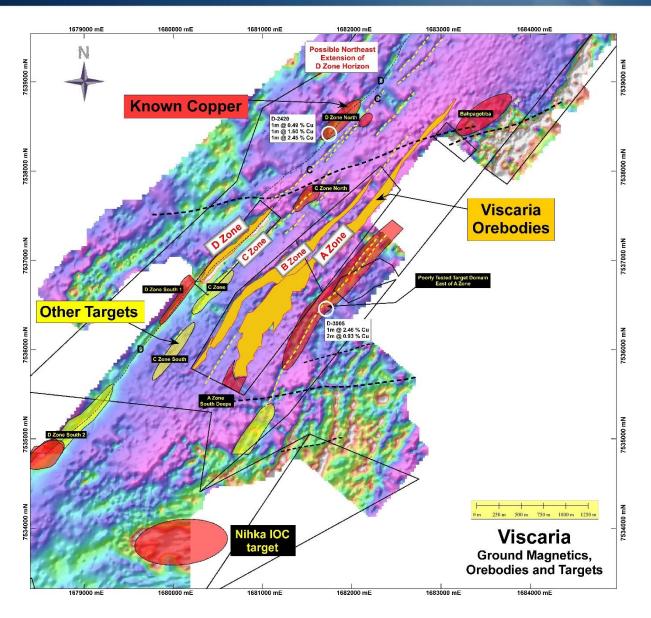
**Figure 3:** Schematic long section showing Cu grade (%) x interpreted true ore zone thickness contours for D Zone ironstone hosted copper mineralisation at the Viscaria Copper Project. Quoted intercepts are downhole intervals. Southwest plunging lenses of improving grade and thickness at depth are being defined as further drilling is undertaken. The 2015 Mineral Resource estimate includes data from holes up to VDD 194 only (excludes VDD 195 and 196).





**Figure 4:** D Zone drill hole cross sections showing results from VDD 195 and 196 and the developing higher grade southern and northern shoots.





**Figure 5:** Location of targets relative to the Viscaria Copper Project development area (A, B and D Zones). Background image is ground magnetic data.



#### **TENEMENT SCHEDULE**

At the end of the quarter, the Company holds the following tenements:

Tenement Holder	Tenement Name	Location	Status	Ownership
Avalon Minerals Viscaria AB	Viscaria No 1	Norrbotten, Sweden	Granted	100%
Avalon Minerals Viscaria AB	Viscaria No 2	Norrbotten, Sweden	Granted	100%
Avalon Minerals Viscaria AB	Viscaria No 3	Norrbotten, Sweden	Relinquished	100%
Avalon Minerals Viscaria AB	Viscaria No 101	Norrbotten, Sweden	Granted	100%
Avalon Minerals Viscaria AB	Viscaria No 107	Norrbotten, Sweden	Granted	100%
Avalon Minerals Viscaria AB	Viscaria No 112	Norrbotten, Sweden	Granted	100%
Avalon Minerals Viscaria AB	Viscaria No 113	Norrbotten, Sweden	Granted	100%
Avalon Minerals Viscaria AB	Huornas No 1	Norrbotten, Sweden	Granted	100%
Avalon Minerals Viscaria AB	Huornas No 2	Norrbotten, Sweden	Granted	100%
Avalon Minerals Viscaria AB	Viscaria K No 3	Norrbotten, Sweden	Granted	100%
Avalon Minerals Viscaria AB	Viscaria K No 4	Norrbotten, Sweden	Granted	100%
Avalon Minerals Viscaria AB	Viscaria K No 7	Norrbotten, Sweden	Granted	100%
Avalon Minerals Viscaria AB	Nihka East	Norrbotten, Sweden	Granted	100%
Avalon Minerals Adak AB	Rakkurijärvi No 1	Norrbotten, Sweden	Granted	100% (to be transferred to HNR*)
Avalon Minerals Adak AB	Rakkurijärvi K No 1	Norrbotten, Sweden	Application	100% (to be transferred to HNR*)
Avalon Minerals Adak AB	Goddevarri	Norrbotten, Sweden	Granted	100%

<sup>\*</sup>HNR – Hannans Reward Ltd (ASX:HNR); pending appeal against Swedish Mines Inspectorate decision to dismiss the processing of the Exploitation Concession Application

#### **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 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". 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.



#### **AVALON MINERALS LIMITED** ABN 68 123 184 412

Web site: www.avalonminerals.com.au Email: info@avalonminerals.com.au

Stock Exchange Listing

Australian Stock Exchange ASX Code: AVI

**Investor Information Contacts:** 

Mr Gavin Leicht - Company Secretary Avalon Minerals Limited Tel: 07 3368 9888

Email:

gavin.leicht@avalonminerals.com.au

**Shareholder Enquiries:** 

Share registry matters should be directed to:

Computershare Investor Services

Phone: 1300 850 505

Website: www.computershare.com.au

Issued capital:

Ordinary shares: 378,353,560 (AVI)

(at 31 March 2016)

Directors:

Graham Ascough – Non-Executive Chairman Malcolm Norris - CEO/Managing Director Crispin Henderson – Non-Executive Director

Don Hyma - Non-Executive Director

**Registered Office:** 

9 Gardner Close Milton Queensland 4064 Phone: 07 3368 9888

Fax: 07 3368 9899

**Company Secretary:** 

Gavin Leicht

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

Avalon Minerals Limited T: 07 3368 9888 E: info@avalonminerals.com.au www.avalonminerals.com.au

*Rule 5.3* 

# **Appendix 5B**

# Mining exploration entity quarterly report

Introduced 01/07/96 Origin Appendix 8 Amended 01/07/97, 01/07/98, 30/09/01, 01/06/10, 17/12/10

Name of entity	
Aval	on Minerals Limited
ABN	Quarter ended ("current quarter")
68 123 184 412	31 March 2016

# Consolidated statement of cash flows

Cash f	lows related to operating activities	Current quarter \$A'000	Year to date (9 months)
Cash	lows related to operating activities	Ψ1 000	\$A'000
1.1	Receipts from product sales and related debtors	-	-
1.2	Payments for (a) exploration & evaluation	(765)	(3,732)
	(b) development	-	-
	(c) production	-	-
	(d) administration	(439)	(1,486)
1.3	Dividends received	-	-
1.4	Interest and other items of a similar nature received	0	14
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes received	-	-
	(gross amount - R&D tax rebate)		
1.7	Other (provide details if material)	-	-
	Net Operating Cash Flows	(1,203)	(5,204)
	Cash flows related to investing activities		
1.8	Payment for purchases of:		
	(a) prospects	-	-
	(b) equity investments	-	-
	(c) other fixed assets	=	(26)
1.9	Proceeds from sale of:		
	(a) prospects	-	-
	(b) equity investments	-	-
	(c) other fixed assets	-	-
1.10	Loans to other entities	-	-
1.11	Loans repaid by other entities	-	-
1.12	Other (provide details if material)	-	-
	Net investing cash flows		(26)
1.13	Total operating and investing cash flows		
	(carried forward)	(1,203)	(5,230)

<sup>+</sup> See chapter 19 for defined terms.

### Appendix 5B Mining exploration entity quarterly report

1.13	Total operating and investing cash flows (brought forward)	(1,203)	(5,230)
	Cash flows related to financing activities		
1.14	Proceeds from issues of shares, options, etc.	731	3,225
1.15	Proceeds from sale of forfeited shares	-	-
1.16	Proceeds from borrowings	-	-
1.17	Repayment of borrowings	-	-
1.18	Dividends paid	-	-
1.19	Capital raising costs	(10)	(37)
	Net financing cash flows	720	3,187
	Net increase (decrease) in cash held	(483)	(2,043)
1.20	Cash at beginning of quarter/year to date	1,658	3,209
1.21	Exchange rate adjustments to item 1.20	9	18
1.22	Cash at end of quarter	1,814	1,814

Payments to directors of the entity and associates of the directors Payments to related entities of the entity and associates of the related entities

•		Current quarter \$A'000
1.23	Aggregate amount of payments to the parties included in item 1.2	78.8
1.24	Aggregate amount of loans to the parties included in item 1.10	-
1.25	Explanation necessary for an understanding of the transactions	

1.25	Explanation necessary for an understanding of the transactions		
	Director's remuneration.	78.8	

## Non-cash financing and investing activities

	assets and liabilities but did not involve cash flows		
	Nil		
2.2			
2.2	Details of outlays made by other entities to establish or increase their share in projects in which the reporting entity has an interest		

Details of financing and investing transactions which have had a material effect on consolidated

+ See chapter 19 for defined terms.

2.1

Nil

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#### Financing facilities available

Add notes as necessary for an understanding of the position.

		Amount available \$A'000	Amount used \$A'000
3.1	Loan facilities	-	-
3.2	Credit standby arrangements	-	-

### Estimated cash outflows for next quarter

		\$A'000
4.1	Exploration and evaluation	310
4.2	Development	-
4.3	Production	-
4.4	Administration	175
	Total	485

# **Reconciliation of cash**

show	nciliation of cash at the end of the quarter (as n in the consolidated statement of cash flows) to lated items in the accounts is as follows.	Current quarter \$A'000	Previous quarter \$A'000
5.1	Cash on hand and at bank	413	611
5.2	Deposits at call	771	1,047
5.3	Bank overdraft	-	-
5.4	Other (provide details)	-	-
	Total: cash at end of quarter (item 1.22)	1,814	1,658

## Changes in interests in mining tenements

- 6.1 Interests in mining tenements relinquished, reduced or lapsed
- 6.2 Interests in mining tenements acquired or increased

Tenement reference	Nature of interest (note (2))	Interest at beginning of quarter	Interest at end of quarter
Viscaria No 3 relinquished	100%	100%	0%
N/A			

<sup>+</sup> See chapter 19 for defined terms.

**Issued and quoted securities at end of current quarter**Description includes rate of interest and any redemption or conversion rights together with prices and dates.

		Total number	Number quoted	Issue price per security (see note 3) (cents)	Amount paid up per security (see note 3) (cents)
7.1	Preference +securities (description)	-	-		-
7.2	Changes during quarter	-	-	-	-
7.3	<sup>+</sup> Ordinary securities	378,353,560	378,353,560		
7.4	Changes during quarter (a) Increases (b) Decreases through returns of capital, buy-backs	45,663,438	45,663,438	1.6 cents	1.6 cents
7.5	+Convertible debt securities (description)	-	-	-	-
7.6	Changes during quarter	-	-	-	-
7.7	Options (description and conversion factor)	5,200,000 5,600,000	Nil Nil	Exercise Price 6 cents 8 cents	Nil Nil
	Performance Rights	7,148,000	Nil	Nil	
7.8	Issued during quarter	-	-	-	-
7.9	Exercised during quarter		-	-	1
7.10	Expired during quarter Options	Nil		-	-
	Performance Rights	980,000		-	-
7.11	Debentures (totals only)	-	-		
7.12	Unsecured notes (totals only)	-	-		

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<sup>+</sup> See chapter 19 for defined terms.

# **Compliance statement**

- This statement has been prepared under accounting policies which comply with accounting standards as defined in the Corporations Act or other standards acceptable to ASX (see note 5).
- 2 This statement does give a true and fair view of the matters disclosed.

Sign here: Date: 14 April 2016

(Company Secretary)

fund to

Print name: GAVIN LEICHT

#### **Notes**

- The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity wanting to disclose additional information is encouraged to do so, in a note or notes attached to this report.
- The "Nature of interest" (items 6.1 and 6.2) includes options in respect of interests in mining tenements acquired, exercised or lapsed during the reporting period. If the entity is involved in a joint venture agreement and there are conditions precedent which will change its percentage interest in a mining tenement, it should disclose the change of percentage interest and conditions precedent in the list required for items 6.1 and 6.2.
- 3 **Issued and quoted securities.** The issue price and amount paid up is not required in items 7.1 and 7.3 for fully paid securities.
- The definitions in, and provisions of, AASB 6: Exploration for and Evaluation of Mineral Resources and AASB 107: Statement of Cash Flows apply to this report.
- Accounting Standards ASX will accept, for example, the use of International Financial Reporting Standards for foreign entities. If the standards used do not address a topic, the Australian standard on that topic (if any) must be complied with.

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<sup>+</sup> See chapter 19 for defined terms.