

SIRIUS RESOURCES NL

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Capital structure

Ordinary shares: 150,934,586
Performance shares: 2,200,000
60 cent options: 75,050,000
20 cent options: 4,000,000

Projects

Polar Bear: gold ,nickel

Fraser Range: gold, base metals

Youanmi: base metals, gold

Collurabbie: nickel, copper, PGM's



HIGHLIGHTS

- **Two new gold zones discovered at Polar Bear**
- **Inky nickel-copper deposit extended 70m down dip**

Exploration continued during the December 2011 quarter, with diamond drilling extending the Inky nickel-copper prospect (Youanmi) a further 70 metres down dip and aircore drilling defining two zones of strong gold anomalism at the Earlobe prospect (Polar Bear). Several of these holes ended in >1g/t gold material.

The Company continues to follow its strategy of focusing on its key prospects, rationalising its non-core properties and maintaining a global watching brief for quality opportunities.

CORPORATE

The Company has 150.9 million ordinary shares on issue, plus 2.2 million performance shares, 75.9 million options exercisable at 60 cents and 4 million options exercisable at 20 cents.

All 150.9 million ordinary shares and 2.2 million performance shares are now quoted following the release from escrow of 13.8 million ordinary shares and 2.2 million performance shares on 22nd December 2011.

The Company held its Annual General Meeting during the quarter, at which all resolutions were approved.

During the December quarter, approximately A\$1.3 million was spent on exploration and related administrative and corporate costs and at the end of the quarter cash at bank totalled approximately A\$3.7 million.

EXPLORATION

Youanmi

Sirius has a 70% interest in the Youanmi Joint Venture, with Mark Creasy retaining a 30% free carried interest to the completion of a bankable feasibility study and retaining titanium-vanadium-iron rights. The project covers the Youanmi intrusive complex and the surrounding felsic stratigraphy. The intrusive complex is prospective for mafic-ultramafic intrusion hosted nickel-copper-PGM mineralisation and the surrounding stratigraphy is prospective for volcanogenic massive sulphide (VMS) copper-zinc deposits.

Additional nickel-copper sulphide mineralisation was intersected in a new hole drilled down dip from previous drilling at the Inky prospect.

Diamond drill hole SYMD0015 intersected **2.6m @ 0.65% Cu, 0.54% Ni, 2.72g/t Ag** from 302.6m, some 70 metres down dip from the previously reported hole

SYMD0011, which intersected **4m @ 1.44% Cu, 0.82% Ni and 7.07g/t Ag** from 209m (see Figure 1).

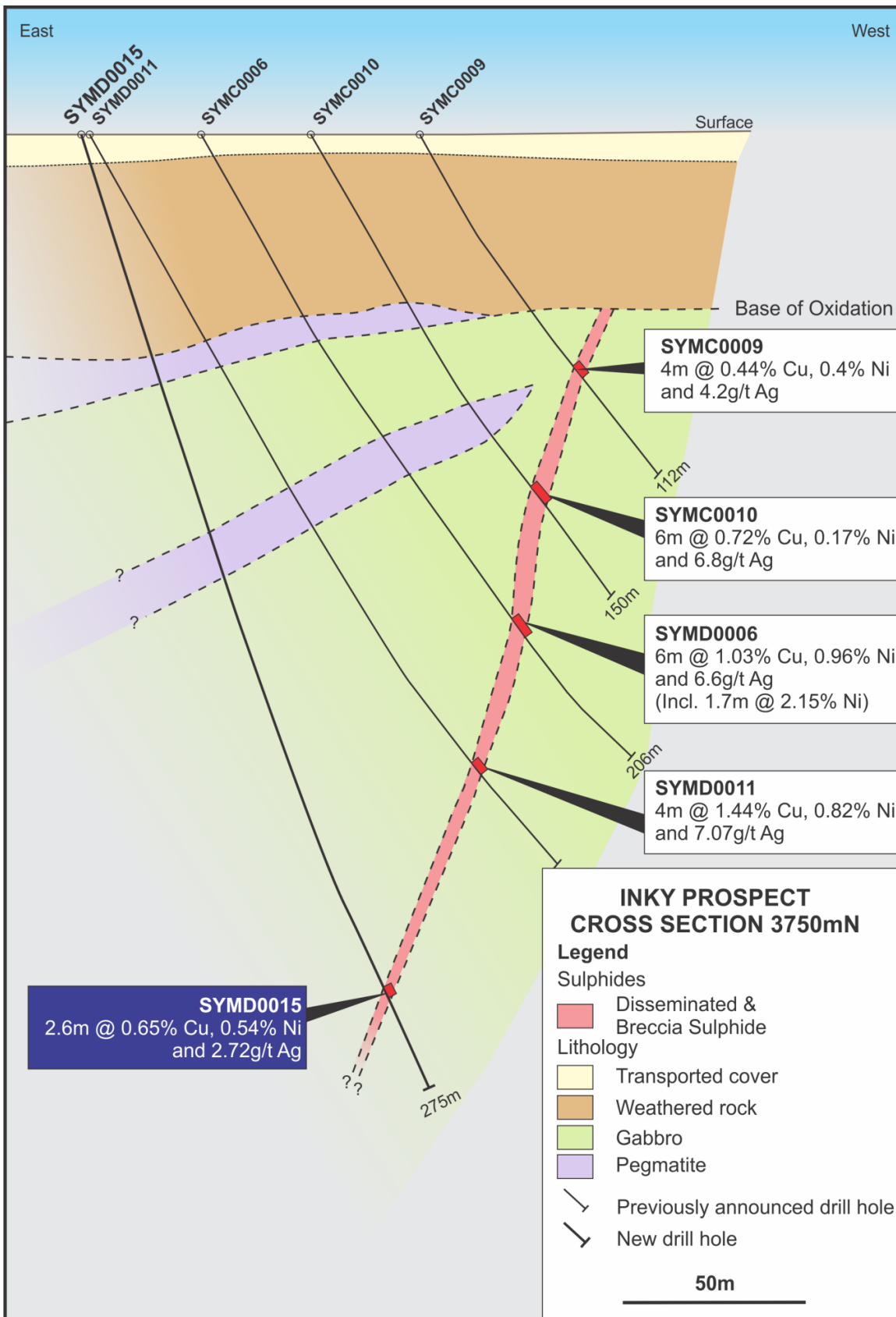


Figure 1. Cross section of the Inky prospect.

Sulphide mineralisation has now been defined over a vertical extent of 220 metres on this section and it is still open down dip below this level. The mineralisation is also open along strike in both directions.

Whilst this intersection is of a lower tenor than that in the previous hole, the extent of sulphide mineralisation is considered very encouraging, especially given that it has not yet been explored along strike. Further drilling will be undertaken along strike when a rig is available.

Two diamond holes were also drilled at Ram Well to test a coincident gravity anomaly and copper soil anomaly. However, these did not intersect significant nickel or copper mineralisation.

Polar Bear

Sirius owns 100% of the Polar Bear project. The project covers the southern continuation of the ultramafic stratigraphy which hosts the Kambalda and Widgiemooltha nickel deposits, and the southern continuation of the trend which hosts Avoca's Higginsville gold mine. It is largely concealed beneath the salt lake sediments and sand dunes of Lake Cowan.

A 67 hole aircore drilling program was undertaken at the Earlobe zone to identify near surface zones of gold enrichment greater than 0.1g/t as the first step in zeroing in on higher grade bedrock mineralisation. 28 of these holes intersected greater than 0.1g/t gold and 11 of these ended in mineralisation ranging from 0.2 to 1.58g/t gold.

The drilling, undertaken on a 100 x 50 metre grid, defined two discrete zones of supergene mineralisation (see Figure 2) concealed by more recent rocks and dune sands as follows:

Earlobe North zone

The Earlobe North zone is approximately 300m long, 130m wide, strikes NNE and is open to the NNE. Better intersections include:

- **19m @ 0.84g/t Au** from 28 metres to the end of hole, including **3m @ 1.58g/t Au** from 44 metres to the end of hole in drill hole SPBA0105.
- **22m @ 0.52g/t Au** from 44 metres to the end of hole, including **4m @ 1.05g/t Au** from 48 metres in drill hole SPBA0115.
- **7m @ 0.73g/t Au** from 72 metres to the end of hole, including **3m @ 1.30g/t Au** from 76 metres to the end of hole in drill hole SPBA0116.

The gold occurs as a broad sub-horizontal blanket which may reflect mineralisation at depth and the presence of greater than 1g/t gold at the end of several holes is considered highly encouraging (see Figure 3).

Earlobe South zone

The Earlobe South zone is 400m long, 120m wide, strikes NW and is open to the NW. Better intersections include:

- **32m @ 0.37g/t Au** from 40 metres to the end of hole, including **4m @ 1.87g/t Au** from 44 metres in drill hole SPBA0138.
- **9m @ 0.35g/t Au** from 64 metres to the end of hole in drill hole SPBA0141.

At the Earlobe South zone the gold occurs as a broad sub-horizontal blanket that appears to be more strongly developed at the western end of the drilling traverses, which may reflect a bedrock source to the west of the recent drilling (see Figure 4).

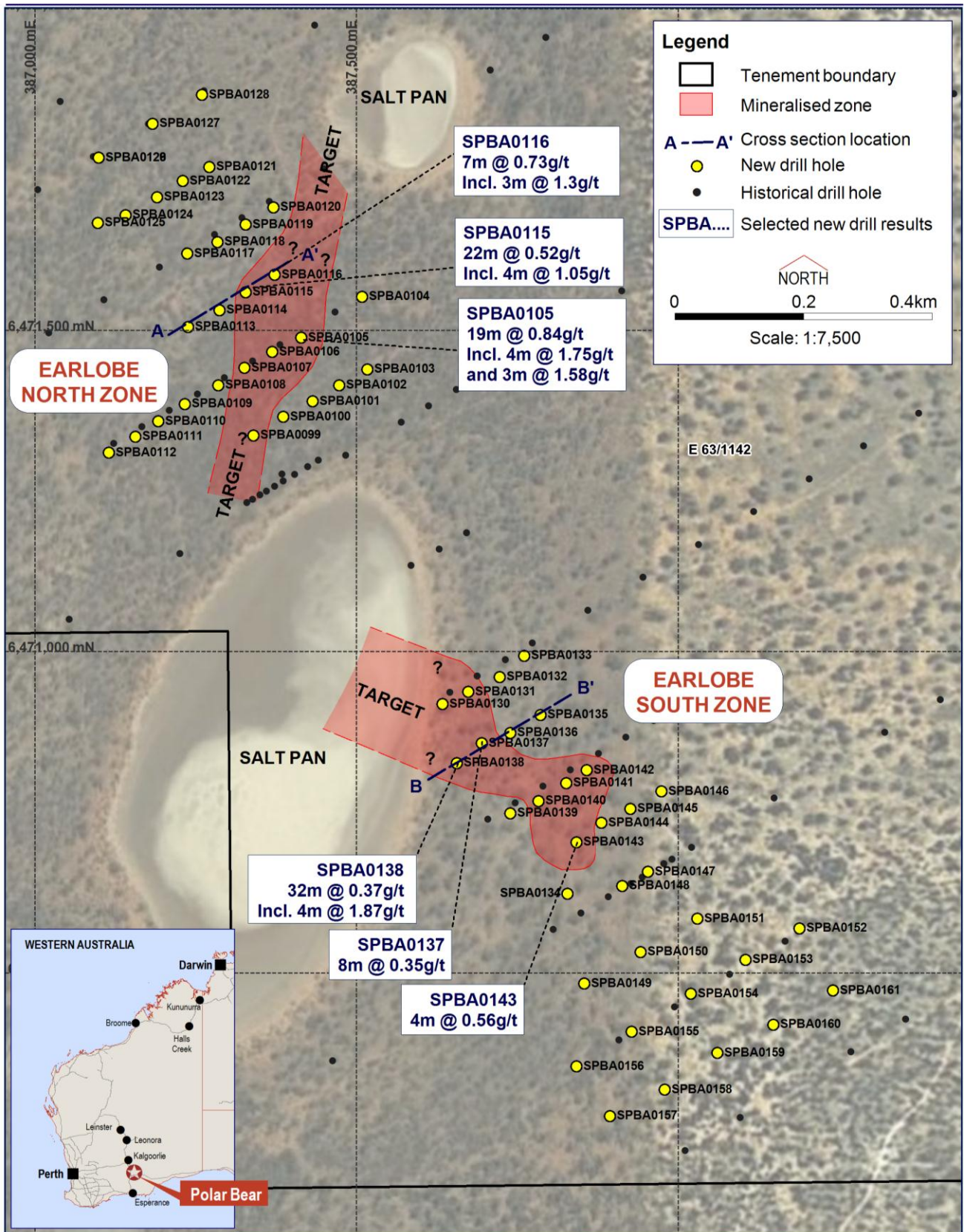


Figure 2. Plan of aircore drilling at the Earlobe prospect, showing the north and south zones.

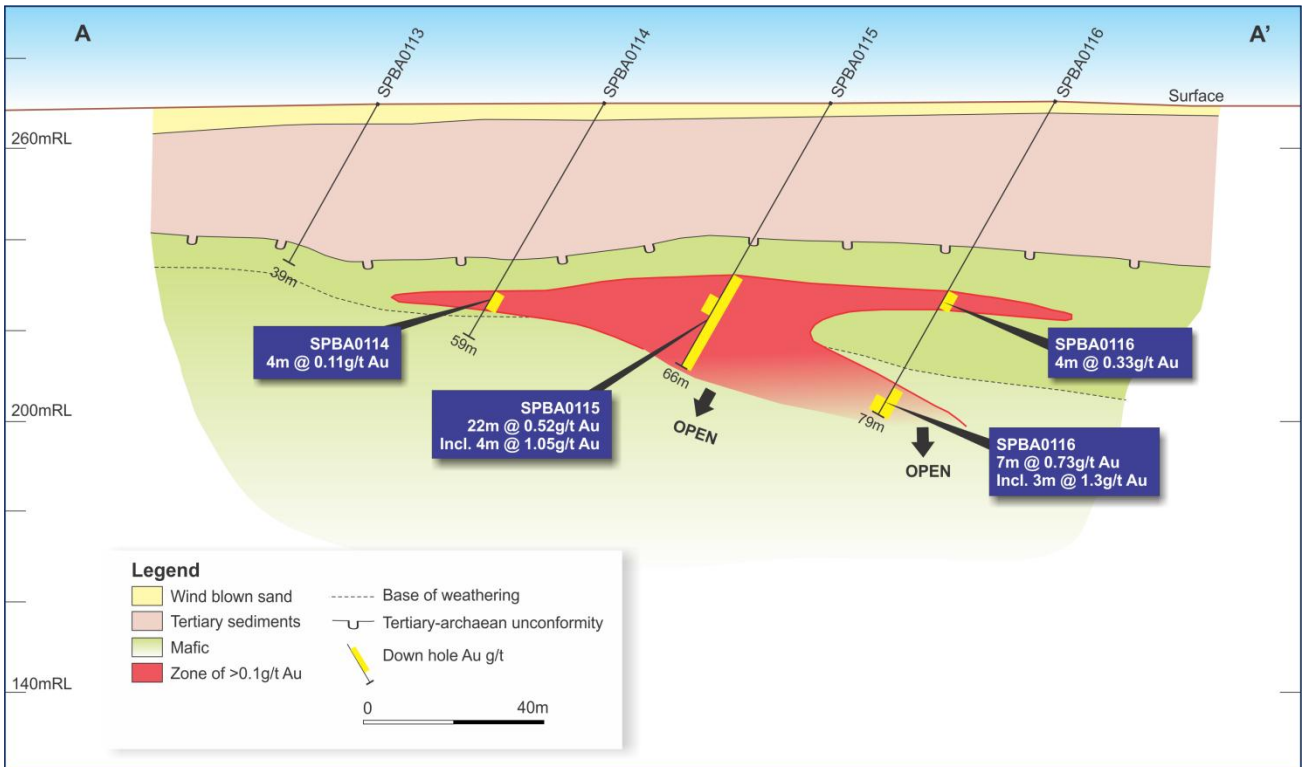


Figure 3. Cross section of line 14300N (A-A¹ in Figure 1) at the Earlobe North zone, based on recent reconnaissance aircore drilling.

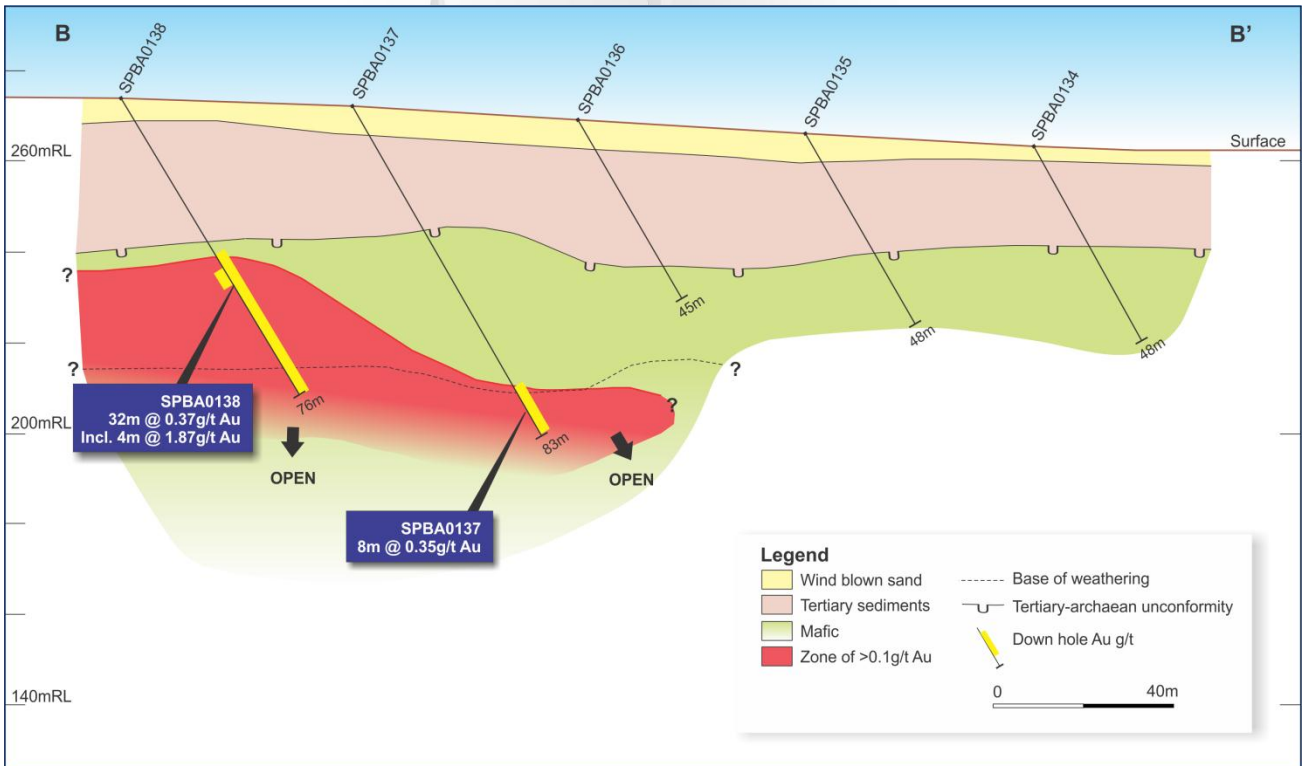


Figure 4. Cross section of line 13500N (B-B¹ in Figure 1) at the Earlobe South zone, based on recent reconnaissance aircore drilling.

Follow up drilling of these zones will be a priority for Sirius in 2012, with RC drilling scheduled to commence in February. The Earlobe prospect is situated approximately 5km southeast of Alacer's (formerly known as Avoca) Nawoc gold prospect where previous drill intercepts have included 5m @ 11.4g/t Au from 30m in LCA0182 and 4m @ 33.0g/t Au from 103m in LCC006.

In addition, recent geological work has confirmed that the Polar Bear project straddles the south-eastern continuation of the package of rocks that hosts Alacer's 2 million ounce Trident gold mine at Higginsville. The gold mineralisation at Higginsville is controlled by a NNE trending shear zone (known as the "line of lode") and is localised where this shear zone intersects favourable host rocks. Similar structures occur within Sirius' project area and testing of these Trident analogue structures will also be a priority for Sirius in 2012.

Fraser Range

Sirius has a 70% interest in the Fraser Range Joint Venture, with Mark Creasy retaining a 30% free carried interest to the completion of a bankable feasibility study. The project covers over 100 kilometres strike length of the Tropicana belt – part of the Proterozoic Albany-Fraser Province to the south of the Independence/Anglogold Tropicana gold discovery. The package is considered highly prospective for Tropicana-style gold mineralisation and mafic-ultramafic intrusion hosted magmatic nickel-copper-platinum group metal (PGM) deposits.

A stratigraphic diamond hole was drilled beneath the nickel enriched zone at the Eye prospect. This hole confirmed the presence of strongly metamorphosed ultramafic and mafic rocks.

Broad spaced RAB drilling is planned for the first quarter of 2012 with the aim of defining the extent of the nickel enrichment blanket and the zone of greatest enrichment, as a precursor to further RC drilling.

An electromagnetic (EM) survey has also been planned to cover this area.

Collurabbie

Sirius has a 70% interest in the Collurabbie Joint Venture, with Mark Creasy retaining a 30% free carried interest to the completion of a bankable feasibility study. The project is located along strike from Falcon's Olympia nickel-copper-platinum group metal (PGM) discovery and is concealed by more recent rocks, and is effectively unexplored. The area is considered prospective for mafic-ultramafic intrusion hosted magmatic nickel-copper-platinum group metal (PGM) deposits of a style similar to those of the Raglan belt in Quebec, Canada.

No work was undertaken during the quarter.

A handwritten signature in black ink, appearing to read "Mark Bennett".

Mark Bennett
Managing Director and CEO

Competent Persons statement

The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by Dr Mark Bennett, who is an employee of the company. Dr Bennett is a Member of the Australasian Institute of Mining and Metallurgy and a Fellow of the Australian Institute of Geoscientists and has sufficient experience of relevance to the styles of mineralisation and the types of deposits under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2004 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr Bennett consents to the inclusion in this report of the matters based on information in the form and context in which it appears.

Exploration results are based on standard industry practices, including sampling, assay methods, and appropriate quality assurance quality control (QAQC) measures. Reverse circulation (RC), aircore (AC) and rotary air blast (RAB) drilling samples are collected as composite samples of 4 or 2 metres and as 1 metre splits (stated in results). Mineralised intersections derived from composite samples are subsequently re-split to 1 metre samples to better define grade distribution. Core samples are taken as half NQ core or quarter HQ core and sampled to geological boundaries where appropriate. For soil samples, PGM and gold assays are based on an aqua regia digest with Inductively Coupled Plasma (ICP) finish and base metal assays may be based on aqua regia or four acid digest with inductively coupled plasma optical emission spectrometry (ICPOES) or atomic absorption spectrometry (AAS) finish. In the case

of reconnaissance RAB, AC, RC or rockchip samples, PGM and gold assays are based on lead or nickel sulphide collection fire assay digests with an ICP finish, base metal assays are based on a four acid digest and inductively coupled plasma optical emission spectrometry (ICPOES) and atomic absorption spectrometry (AAS) finish, and where appropriate, oxide metal elements such as Fe, Ti and Cr are based on a lithium borate fusion digest and X-ray fluorescence (XRF) finish. Sample preparation and analysis is undertaken at Genalysis Intertek and Ultratrace laboratories in Perth, Western Australia. The quality of RC drilling samples is optimised by the use of riffle and/or cone splitters, dust collectors, logging of various criteria designed to record sample size, recovery and contamination, and use of field duplicates to measure sample representivity. The quality of analytical results is monitored by the use of internal laboratory procedures together with certified standards, duplicates and blanks and statistical analysis where appropriate to ensure that results are representative and within acceptable ranges of accuracy and precision. Exploration results obtained by other companies and quoted by Sirius have not necessarily been obtained using the same methods or subjected to the same QAQC protocols. These results may not have been independently verified because original samples and/or data may no longer be available. Where quoted, nickel-copper intersections are based on a minimum threshold grade of 0.3% Ni and gold intersections are based on a minimum gold threshold grade of 0.1g/t Au unless otherwise stated. All sample and drillhole co-ordinates are based on the GDA/MGA grid and datum unless otherwise stated.

Mineral Resources, if stated, have been estimated using standard accepted industry practices, as described in each instance. Top cuts have been applied to the composites based on statistical analysis and consideration of the nature and style of mineralization in all cases. Where quoted, Mineral Resource tonnes and grade, and contained metal, are rounded to appropriate levels of precision, which may cause minor apparent computational errors. Mineral Resources are classified on the basis of drillhole spacing, geological continuity and predictability, geostatistical analysis of grade variability, sampling analytical spatial and density QAQC criteria, demonstrated amenability of mineralization style to proposed processing methods, and assessment of economic criteria.



Appendix 5B

Mining exploration entity quarterly report

Introduced 1/7/96. Origin: Appendix 8. Amended 1/7/97, 1/7/98, 30/9/2001, 01/06/10.

Name of entity

Sirius Resources NL

ABN

46 009 150 083

Quarter ended ("current quarter")

31st December 2011

Consolidated statement of cash flows

Cash flows related to operating activities	Current quarter \$A'000	Year to date (6 months) \$A'000
1.1 Receipts from product sales and related debtors	-	-
1.2 Payments for (a) exploration & evaluation (b) development (c) production (d) administration	(1,173) - - (205)	(2,170) - - (420)
1.3 Dividends received	-	-
1.4 Interest and other items of a similar nature received	46	237
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Other	-	-
Net Operating Cash Flows	(1,332)	(2,353)
Cash flows related to investing activities		
1.8 Payment for purchases of: (a) prospects (b) equity investments (c) other fixed assets	- - -	- - -
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	-	-
Net investing cash flows	-	-
1.13 Total operating and investing cash flows (carried forward)	(1,332)	(2,353)

+ See chapter 19 for defined terms.

1.13	Total operating and investing cash flows (brought forward)	(1,332)	(2,353)
	Cash flows related to financing activities		
1.14	Proceeds from issues of shares, options, etc.	-	-
1.15	Proceeds from sale of forfeited shares	-	-
1.16	Proceeds from borrowings	-	-
1.17	Repayment of borrowings	-	-
1.18	Dividends paid	-	-
1.19	Other	-	-
	Net financing cash flows	-	-
	Net increase (decrease) in cash held	(1,332)	(2,353)
1.20	Cash at beginning of quarter/year to date	5,047	6,068
1.21	Exchange rate adjustments to item 1.20		
1.22	Cash at end of quarter	3,715	3,715

**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	133
1.24	Aggregate amount of loans to the parties included in item 1.10	-

1.25 Explanation necessary for an understanding of the transactions

Salaries paid to directors in the quarter including superannuation

Non-cash financing and investing activities

2.1 Details of financing and investing transactions which have had a material effect on consolidated assets and liabilities but did not involve cash flows

None noted

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

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	-	-

+ See chapter 19 for defined terms.

Estimated cash outflows for next quarter

	\$A'000
4.1 Exploration and evaluation	1,090
4.2 Development	-
4.3 Production	-
4.4 Administration	213
Total	1,313

Reconciliation of cash

Reconciliation of cash at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts is as follows.	Current quarter \$A'000	Previous quarter \$A'000
5.1 Cash on hand and at bank	632	1,964
5.2 Deposits at call	3,083	3,083
5.3 Bank overdraft	-	-
5.4 Other (provide details)	-	-
Total: cash at end of quarter (item 1.22)	3,715	5,047

Changes in interests in mining tenements

	Tenement reference	Nature of interest (note (2))	Interest at beginning of quarter	Interest at end of quarter
6.1 Interests in mining tenements relinquished, reduced or lapsed				
6.2 Interests in mining tenements acquired or increased	E63/1372	Tenement granted in the Fraser Range Joint Venture	-	70%

+ 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)	N/A	N/A	N/A	N/A
7.2 Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs, redemptions				
7.3 +Ordinary securities	150,934,586	150,934,586	N/A	Fully Paid
7.4 Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs	-	13,800,000	N/A	Released from escrow
7.5 +Convertible debt securities (description)	N/A	N/A	N/A	N/A
7.6 Changes during quarter (a) Increases through issues (b) Decreases through securities matured, converted	-	-		
7.7 Options (description and conversion factor)	250,000 37,500,000 600,000 1,350,000 500,000 1,650,000 33,000,000 200,000 4,000,000	- - - - - - - - -	Exercise price 60 cents 60 cents 60 cents 60 cents 60 cents 60 cents 60 cents 20 cents	Expiry date 31/08/2012 31/08/2014 28/09/2014 01/11/2014 31/10/2015 27/11/2015 31/12/2012 18/2/2016 28/11/2016
7.8 Issued during quarter	4,000,000	-	20 cents	28/11/2016

+ See chapter 19 for defined terms.

- 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.
- 4 The definitions in, and provisions of, *AASB 1022: Accounting for Extractive Industries* and *AASB 1026: Statement of Cash Flows* apply to this report.
- 5 **Accounting Standards** ASX will accept, for example, the use of International Accounting 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.

+ See chapter 19 for defined terms.