

SIRIUS RESOURCES NL

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Projects

Collurabbbie:

Nickel, copper, PGM's

Fraser Range:

Nickel, copper, PGM's

Polar Bear:

Nickel, PGM's

Lawlers:

Nickel

Youanmi:

PGM's, copper, zinc, gold

Lake Wells:

Uranium, iron, gold


**ADDITIONAL PLATINUM GROUP METALS CONFIRMED
IN POLAR BEAR GOSSAN**

Sirius Resources (ASX:SIR) advises that it has received final assays of the previously announced nickel-copper-platinum-palladium enriched Polar Bear gossan, which confirm the presence of very high levels of the other platinum group metals in addition to those previously assayed (Table 1). The samples contain up to 1.93g/t rhodium (Rh), 4.54g/t ruthenium (Ru), 0.64g/t iridium (Ir) and 0.61g/t osmium (Os). Total PGM's plus gold ("6PGM+Au") range from 7.2g/t to 27.1g/t in ten of the eleven gossan samples collected along 40 metres strike length. Key gossan samples include:

- PBHK0010: 3.95g/t Pt, 4.06g/t Pd, 1.93g/t Rh, 4.16g/t Ru, 0.46g/t Os, 0.61g/t Ir and 0.03g/t Au for a total 6PGM+Au of 15.21g/t.
- PBHK0011: 2.98g/t Pt, 3.13g/t Pd, 1.00g/t Rh, 3.09g/t Ru, 0.26g/t Os, 0.39g/t Ir and 0.01g/t Au for a total 6PGM+Au of 10.87g/t.
- PBHK0014: 2.15g/t Pt, 5.35g/t Pd, 1.76g/t Rh, 4.54g/t Ru, 0.61g/t Os, 0.64g/t Ir and 0.28g/t Au for a total 6PGM+Au of 15.34g/t.

Like the high levels of nickel, copper, platinum and palladium reported in the ASX announcement of 23rd February 2010, the level of other PGM's in these samples far exceeds that usually found in nickel sulphide gossans in Western Australia.

In addition to the gossan samples, the adjacent Ni-Cu-Pt-Pd enriched weathered ultramafic rocks also contain unusually high concentrations of PGM's, with samples containing up to 0.28g/t Pt, 0.73g/t Pd, 0.05g/t Rh, 0.06g/t Ru and 0.97g/t 6PGM+Au.

Background

The gossan crops out on a small island known as Halls Knoll and is traceable over a strike length of 40 metres before it becomes concealed beneath the thin sediments of Lake Cowan, a largely dry salt lake (Figures 1 to 3). The gossan may not be the ultimate focus of exploration but is important in that it confirms the fertility of the ultramafic stratigraphy for magmatic nickel sulphide mineralisation. In particular, the high palladium content is diagnostic of gossans derived from massive nickel sulphides like those at Kambalda. Other geochemical indicators such as elevated levels of cobalt and chrome together with low zinc values support this view.

The location of the gossan - within a high magnesium ultramafic unit rather than on its basal contact - suggests it has either been structurally remobilised along a shear zone, and spatially detached from its original location, or that it is a hangingwall mineralised position.

Previous drilling in the vicinity of this gossan has been very restricted, with several shallow (up to ~100 metre) holes drilled in 1968 and seven holes drilled more recently by Platina Resources. Some of these holes are reported to have intersected narrow intervals of nickel sulphide mineralisation, including 0.5 feet grading 5.7% Ni from 329 feet (~100m) in HKD1, 0.6 feet grading 2.1% Ni from 92 feet (~30m) in HKD4, and 1m grading 1.27% Ni and 0.52g/t Pt+Pd from 250m in KNUTD7.

Sirius now has 100% ownership of the tenements and all mineral rights and has commenced exploration. Nickel sulphide orebodies usually occur on the basal contact of the host ultramafic unit, so the prime objectives of Sirius' nickel exploration will be to identify the immediate source of the gossan and then locate the as yet unexplored basal contact to identify the source of this sulphide, which, if present, may be up to one or two kilometres from the gossan. With Avoca's Higginsville (Trident) gold mine along strike to the north west, Sirius will also review the potential of the project for gold mineralisation.



Mark Bennett
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Table 1. Final base metal and PGM assays for rockchip samples from the Halls Knoll gossan.

Sample	Type	Ni, %	Cu, %	Co, %	Pt, g/t	Pd, g/t	Os, g/t	Ir, g/t	Ru, g/t	Rh, g/t	Au, g/t	6PGM +Au, g/t
PBHK02	Gossan	0.52	2.27	0.03	3.66	8.13	0.20	0.20	1.07	0.73	0.15	14.13
PBHK04	Gossan	0.59	0.43	0.03	3.78	3.58	0.17	0.27	1.23	1.00	0.04	10.07
PBHK07	Gossan	1.09	0.29	0.04	3.51	1.55	0.15	0.19	1.00	0.75	0.02	7.17
PBHK13	Gossan	0.23	0.45	0.02	3.26	11.35	0.43	0.37	3.29	1.45	0.10	20.26
PBHK14	Gossan	1.14	3.21	0.03	2.15	5.35	0.61	0.64	4.54	1.76	0.28	15.34
PBHK20	Gossan	0.27	0.44	0.01	1.46	22.66	0.19	0.25	1.69	0.79	0.02	27.07
PBHK03	Gossan	0.69	0.71	0.03	1.97	2.16	0.26	0.43	2.42	1.60	0.01	8.86
PBHK10	Gossan	1.15	0.78	0.05	3.95	4.06	0.46	0.61	4.16	1.93	0.03	15.21
PBHK11	Gossan	0.75	1.11	0.10	2.98	3.13	0.26	0.39	3.09	1.00	0.01	10.87
PBHK16	Gossan	1.19	0.32	0.02	0.13	0.52	0.01	0.01	0.04	0.02	0.03	0.75
PBHK19	Gossan	0.68	0.63	0.03	1.84	1.87	0.24	0.38	2.71	1.23	0.02	8.29
PBHK06	Ultramafic	0.40	0.49	0.02	0.10	0.27	0.01	0.01	0.06	0.05	0.03	0.55
PBHK09	Ultramafic	0.43	0.65	0.01	0.11	0.24	0.01	0.01	0.04	0.03	0.07	0.52
PBHK15	Ultramafic	0.87	0.25	0.04	0.16	0.73	0.01	0.01	0.03	0.02	0.01	0.97
PBHK17	Ultramafic	0.54	0.07	0.02	0.28	0.57	0.01	0.01	0.02	0.01	0.02	0.91
PBHK05	Caprock	0.10	0.07	Nil	0.58	0.86	0.03	0.09	0.32	0.44	Nil	2.33
PBHK08	Caprock	0.10	0.20	Nil	0.37	0.67	0.02	0.02	0.16	0.13	0.01	1.39
PBHK12	Soil rubble	0.67	8.20	0.02	0.50	0.73	0.01	0.03	0.17	0.10	0.01	1.69

Figure 1. Detailed location plan of the gossan and sampling points.

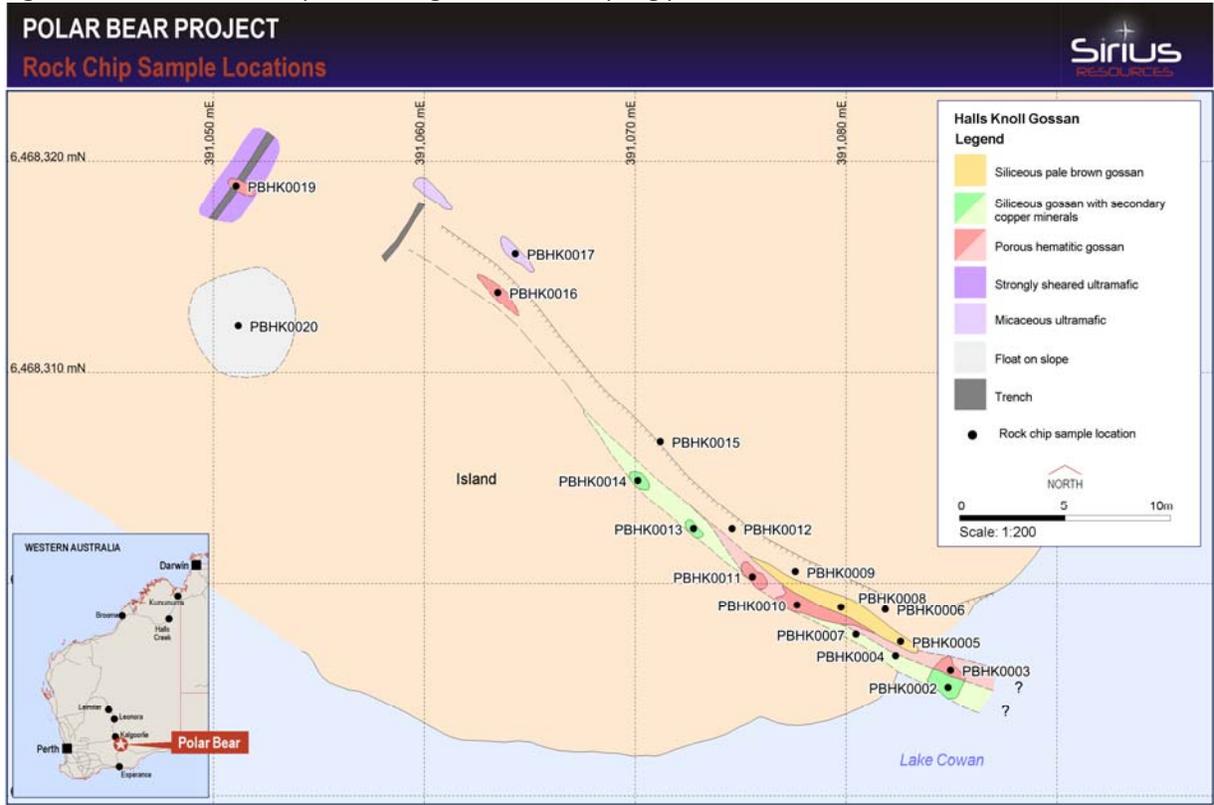


Figure 2. Photograph showing the extent of the gossan at Halls Knoll.



Figure 3. Gossan sample: hematite–limonite-silica with secondary copper and nickel minerals.



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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 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 and rotary air blast (RAB) drilling samples are collected as 1 metre samples and composited where stated. Core samples are taken as half core sampled to geological boundaries where appropriate. PGM assays in this report are based on lead and nickel sulphide collection fire assay digests, and xxx finish. Base metal assays in this report are based on four acid digest and inductively coupled plasma mass spectrometry (ICPMS), inductively coupled optical emission spectrometry (ICPOES) and atomic absorption spectrometry (AAS) finish at Genalysis Laboratory in Perth, Western Australia. The accuracy and precision of analytical results is monitored by the use of internal laboratory procedures and certified standards and subsequent statistical analysis to ensure that results are representative.