



## GREENLAND MINERAL EXPLORATION NEWSLETTER

MINEX 41 · February 2012

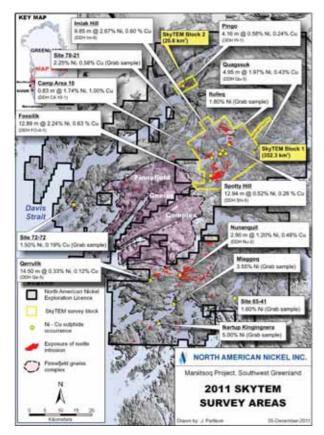
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## A world class nickel camp in Greenland?

On 31 January 2012 North American Nickel ("NAN") announced that the three-dimensional modelling (SkyTEM helicopter time domain) of electromagnetic (EM) data collected last fall over parts of its Maniitsoq project in southern West Greenland is complete and has identified three high-priority targets for follow-up this summer. Highlights from each target include:

Target B1-L – modelled as a 330 m x 100 m flat-lying conductor located 160 m below surface within a norite intrusion. The conductor is untested but past shallow drilling 100 m to 150 m above the conductor intersected weakly disseminated, nickeliferous sulphides grading up to 0.52% Ni and 0.26% Cu over 12.94 m, demonstrating that mineralising processes were at work in the intrusion.

- Target B1-B 700 m long, untested, near surface conductive zone. The characteristics and orientation of the conductor vary considerably along strike suggesting it is not formational. Magnetic data suggests that it is hosted in a large (2.5 km x 1.0 km) norite body.
- Target B1-J 170 m long by 16 m wide conductor that comes to surface and is directly coincident with the Imiak Hill showing, the most significant nickel occurrence discovered to date in the Maniitsoq licence area. The model shows that the Imiak Hill mineralization strikes parallel to most of the historical drilling and therefore has not been properly tested. The modelled body has very limited dip extent (21 m), but the best intersection on the showing (9.85 m averaging 2.67% Ni and 0.60% Cu) occurs 130 m below surface indicating that strong mineralization at surface is masking mineralization at depth.



**Left figure**: Map of North American Nickel's Maniitsoq project showing the location of significant nickel occurrences, norite host rocks and SkyTEM flight blocks.

**Right figure**: Flight block 1 with high priority targets outlined in red. (www.northamericannickel.com)



North American Nickel CEO Rick Mark states:

"The Maniitsoq project is progressing remarkably well. Our primary objective in 2011 was to employ today's airborne EM survey technology in this highly prospective nickel belt. Fifteen years ago Falconbridge and Cominco used fixed wing aircraft and the technology of the day searching for conductive bodies to indicate drill targets. It simply didn't work. After flying only 8% of our Maniitsoq license, we have proven that modern helicopter EM is much more effective than previous techniques used in this 75 km long belt of nickeliferous norites. Today's release describes, in detail, the first three targets we have identified in this potential nickel camp."

# Ironbark announces substantial resource upgrade at Citronen Fjord

On 9 January 2012 Ironbark Zinc Limited (Ironbark) announced a substantial resource upgrade in both grade and confidence at its wholly owned Citronen Fjord base metals project (Citronen) in North Greenland.

The resource upgrade is based on successful drilling conducted by the company during 2011 and is based on more than 60,000 m of diamond drilling since discovery. The resource remains open in almost every direction and exploration at Citronen has resulted in resource expansion every year.

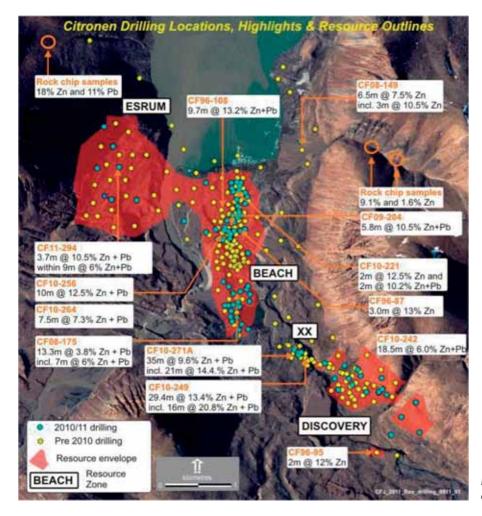
Resource highlights 2012;

- 53% increase in resources within the Indicated and Measured categories
- 11% increase in total contained metal inventory
- 10% increase in zinc + lead grade
- Resource upgrade calculated using the more conservative Ordinary Kriging method

The global resource at Citronen now stands at 13.1 billion pounds of zinc and lead. This is for material reported above a 2.0% zinc cut-off and represents an increase of 11% on the previous reported estimate of 132.6 Mt @ 4.0% zinc + lead for 11 billion pounds of zinc and lead (released in December 2010).

Due to the predominantly infill nature of drilling in 2011, there is no material change in the global tonnage of material at this 2.0% cut-off grade, but greater continuity of higher grade material has resulted in a better understanding of mineralisation (increased resource category) and honouring of higher grade material.

A target resource of 165 Mt to 190 Mt @ 5.7% to 6.5% zinc + lead (ASX release January 2010) highlights the significant upside potential of this world-class asset. The target resource may be updated following the 2012 resource upgrade.



Resource zones and significant drill intercepts at Citronen. (www.ironbark.gl)



The Navarana Fjord Zn occurrence is located within the area north of 81 degrees north. The deposit is associated with the Navarana Fjord escarpment which marks a shelf and trough facies shift in the Franklinian Basin. This facies border is believed to be one of the guiding controls on the formation of zinc mineralisations in North Greenland. Several zinc occurrences and zinc anomalies in stream sediment samples are associated with the structure.

# New set of licence terms for the area north of 81 degrees north

The area north of 81 degrees north has been closed temporarily for mineral applications. The area contains some of the biggest known zinc deposits in Greenland, and holds great potential for becoming the next major zinc region.

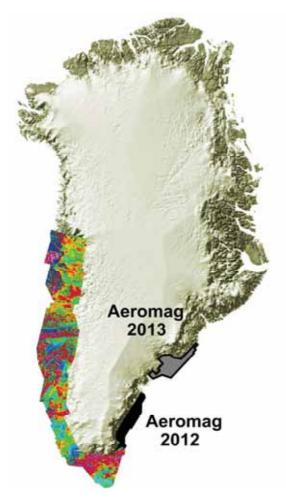
The BMP is currently developing a new set of licence terms for the area north of 81 degrees north which will make it even more attractive to explore the potential of North Greenland. A package containing the new terms, a new design of licence blocks, data for the area, and a time table for the opening of the area will be published at the BMP website in 2012 when the terms have been approved by the Greenland Government.

Current licences and licence applications will not be affected and will continue under current licence terms. For questions regarding the temporary closing of the area north of 81 degrees north, please contact the BMP (bmp@nanoq.gl).

### Aeromagnetic surveying of South-East Greenland

An airborne magnetic survey financed by the Government of Greenland is scheduled to take place during 2012 in South-East Greenland. The area is outlined in the map below and will be surveyed using 500m line spacing and flight lines oriented parallel to the coast. The 2012 survey will add new and important data to the existing database of modern aeromagnetic surveys for Greenland. In particular, the new survey data will be a valuable contribution to geological investigations and activities undertaken by GEUS as well as activities by prospecting companies.

A total of 40,000 line-km are expected for the 2012 survey, and will cover the southern part of the North Atlantic craton in South-East Greenland, which stretches from north of Kangeq (61°45'N) and further northward to Umiiviik (64°30'N). The craton is dominated by gneiss with only small supracrustal sequences of up to 1km in width and strikes of several km, including meta-ultramafic intrusions and several late-tectonic alkaline intrusions in the Skjoldungen area.



Map of the proposed areas scheduled for airborne magnetic surveys in 2012 and 2013.

The survey will be flown by a commercial geophysical contractor selected in a public tender procedure. GEUS will supervise the survey and will perform quality control and interpretation of the data. An option to extend the survey further north during 2013 is included in the surveying contract.

## BMP Marketing in China and Australia

#### China

For the first time, BMP attended the China Mining Congress & Expo 2011 in Tianjin in the beginning of November 2011. At the event, BMP hosted a technical session on the terms and conditions for exploring in Greenland, which was very well attended. The session also included talks about the fast growing global demand for metals, which has had a great influence on minerals exploration activities in Greenland. Over the past few years, the global focus has been on iron alloys, base metals and rare earth elements (REE), and Greenland has great potential for these types of ore.

The Greenlandic delegation was led by Minister Ove Karl Berthelsen together with civil servants from BMP. In addition to participating in the China Mining Congress & Expo 2011, the Greenlandic Minister had meetings in Tianjin with Vice Minister Wang Min from the Ministry for Land and Resources, and with several Chinese companies, and in Beijing the Minister met with Vice Prime Minister Li Keqiang.



Greenland Technical Session at China Mining 2011. The presenter is Nick Rose, Avannaa Resources Ltd.

The China visit was very successful both concerning the Greenland Exhibition, the Greenland Technical Session and the meetings with official Chinese State delegations and Chinese companies. Other Greenlandic companies such as Air Greenland A/S, Royal Arctic Line A/S, MT Højgaard A/S and Arctic Import A/S joined in the event.

#### **Australia**

For the third time, BMP hosted a Greenland Day in Perth. The event attracted great attention from both attendants and the media within the mining business such as newspapers, mining journals and radio broadcasting. The Mining Chronicle brought an article with the headline 'Arctic country touts for business in Perth' (January 2012, p. 35).

The article in the Mining Chronicle was in line with other media accounts of the event and the general awareness about the great potential for mineral deposits in Greenland. Around 100 Western Australians made sure they were on hand to hear the latest news on Greenland's world class prospectivity and current investors in the country. The attendees also heard updates from leading Australian and international resource companies with projects in Greenland, as the conference program covered a range of topics from operating conditions in Greenland and how to apply for mining licenses, to a review of the geological environment and the Greenlandic potential for mineral deposits.

# Gold-rich sample wins 1st prize in national mineral hunt competition

Ujarassiorit - the national mineral hunt for residents of Greenland – has ended for 2011, and the winners have received their awards. The submitted samples were investigated by BMP, who selected the most interesting rock samples for chemical analyses. The chemical analyses revealed several samples with interesting metals such as gold, molybdenum, copper and nickel.

#### 1st-prize winner of Ujarassiorit 2011

The winner of the 1st prize of DKK 55,000 tax-free was William Umerineq from Kuumiut. The sample is a graphite-garnet-gneiss with high gold values (11.1 g/t) and iron sulphides (18.2% iron). The sample is from Sermilik, northwest of Tiniteqilaaq in East Greenland.

#### 2nd-prize winner of Ujarassiorit 2011

The 2nd prize of DKK 25,000 tax-free was awarded to Karoline Oline Poulsen from Aappilattoq, who submitted a rock sample from a quartz-biotite-garnet-pyrite alteration zone with elevated values of gold (1.4 g/t). The sample was found east of Aappilattoq.

#### 3rd-prize winners of Ujarassiorit 2011

Two 3rd prizes of DKK 10,000 tax-free were awarded:

A copper-nickel sulfide ore in a mafic rock with elevated copper and nickel values (1,650 g/t copper and 1,460 g/t nickel) and high iron content (22%). The sam-



The 1st prize winning sample of Ujarassiorit 2011.

ple is from the fjord northeast of Aappilattoq and was submitted by Appollus Poulsen from Aappilattoq.

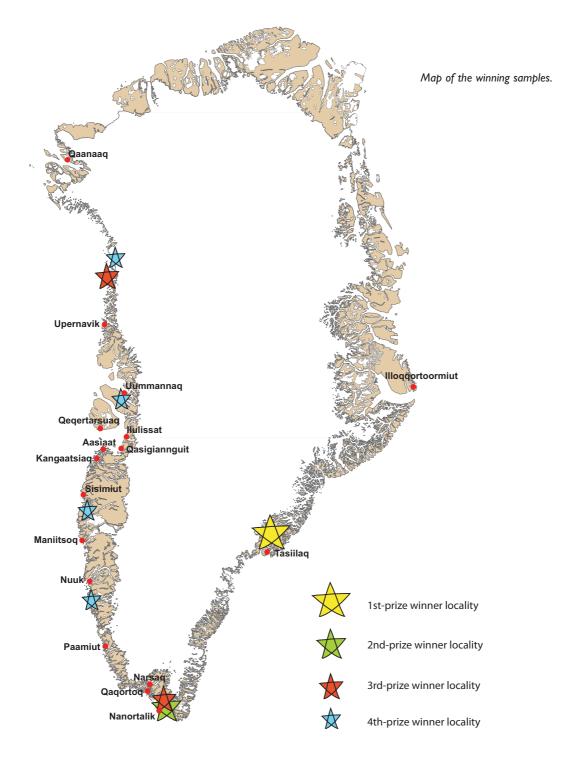
Two samples with high values of molybdenum
 (>10,000g/t and 4,850g/t) from Niaqorsuup Saarlia,
 north of Kullorsuaq, collected by Jens Martin Jensen
 from Kullorsuaq. The samples give additional information to a prize-winning sample (from 2009) from the
 same area, as they also contain elevated copper and
 platinum (up to 1,780 g/t copper and 0.09 g/t platinum).

#### 4th-prize winners of Ujarassiorit 2011

Four 4th prizes of each DKK 5,000 tax-free were awarded:.

 A copper-molybdenum sulphide ore within a gneiss comprising 6,650 g/t copper and 802 g/t molybdenum. The sample is from Nassuttooq south of Attu and was submitted by Laura Jensen from Narsaq.

- A quartz vein with pyrite alterations in granite with 1.1 g/t gold. The sample was collected at Qaarsut by Niels T. Lynge from Qaarsut.
- A kimberlite from a new locality at Itilleq in the kimberlite province between Kangerlussuaq and Sisimiut.
   The collector is Marie Madsigne Dahl Bech from Itilleq.
- Apatite crystals with elevated yttrium values (100 g/t) indicating an alkaline environment unknown for this area. The sample is from Nunatarsuaq, east of Amdrup Island, Upernavik, and was submitted by Ane Amalie Jensen from Kullorsuaq.



Ujarassiorit has now run for more than 20 years. From every post office, free of charge, residents of Greenland can submit rock samples for further geological examination. More information about Ujarassiorit can be found on: www.ujarassiorit.gl. Ujarassiorit is run and financed by BMP, the Government of Greenland, www.bmp.gl. (See also Fact Sheet No. 21, 2009).

## **BMP-GEUS** workshop on sediment-hosted zinc deposits in Greenland

On From 30 November to 2 December 2011 BMP and GEUS conducted a workshop on the quantitative assessment of sediment-hosted zinc deposits in Greenland as part of the on-going assessment of selected deposit models and commodities in Greenland.

The workshop made use of a standardised process in which 13 invited experts (geologists) discussed and assessed the possibility of finding deposits in pre-defined areas ('tracts'). Data, literature and maps related to the known zinc mineralisations in Greenland and the predefined areas were compiled and made available to the participants before the workshop. The data provided the basis for the overall assessment, and for discussions and estimates.

The workshop will be documented in a GEUS survey report mid-2012. However, a brief description of the most important results and conclusions from the workshop are available now in Geology & Ore no. 21.

For companies specifically interested in exploring for zinc in North Greenland, it is now possible to download a data package from the BMP and GEUS websites, containing geological maps, descriptions of mineral occurrences, geochemistry data, summary of geophysical data as well as GIS data. The package also includes a GEUS report summarising and documenting the work undertaken in relation to the data package.



Scenery from the BMP-GEUS assessment workshop on sediment-hosted zinc deposits in 2011.

## No change in zero-tolerance policy

Even though the Government of Greenland (Naalakkersuisut) approved new provisions in the standard terms for exploration approvals last year, permitting environmental, safety and health studies in cases where an increased level of radioactive elements has been found, exploitation of radioactive elements is still not allowed in Greenland.

The Mineral Resources Act prescribes that before an approval for actual mining and production of a mineral concentrate can be granted, the mining company responsible for the activity must document that it can implement the activity in a responsible manner in terms of the environment and health, and that it can mitigate any impacts on the environment. Furthermore, the Act prescribes that an Environmental Impact Assessment must be drawn up on how such a project will impact the surrounding environment, before an approval for mining can be granted. It is therefore an indispensable requirement in the present Mineral Resources Act - now and in the future - that all mineral resource activities must be carried out in a responsible manner in terms of safety, health and the environment, as well as in compliance with best international practice.

Radioactive substances are found naturally in our surroundings, and radioactive radiation will never be zero. Mining of ore will therefore almost always involve minor background radiation levels. The zero-tolerance policy applies to mining projects in which the content of radioactive elements exceeds the natural background radiation.

For further questions, please contact BMP (bmp@nanoq.gl)

## **Greenland Day at the PDAC** in Toronto

"Greenland Exploration Highlights" will be the theme for presentations at this year's half-day Greenland Day session, from 9 am to 12 noon, on 5 March 2012 in room 206 DC at the Metro Toronto Convention Centre, North Building.

Greenland has experienced a very positive development of mineral licence interests during the last five years, when the number of mineral licences has more than tripled. Many of the companies involved in exploration and exploitation activities in Greenland are domiciled in North America, Australia and Europe.

At the Greenland Day session, BMP and GEUS will present highlights and the latest results from exploration in Greenland. The newest data from the 2011 field campaign in South-East Greenland will be released at the session. The geology has been reinterpreted based on new data gathered during the 2009-2011 field seasons. New initiatives concerning zinc in North Greenland, a new



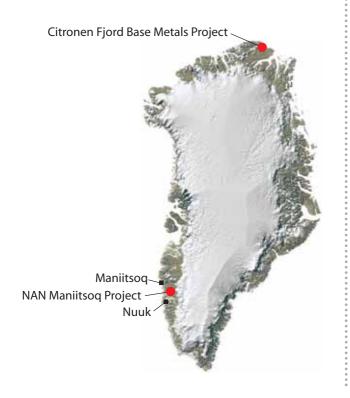


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Greenland web portal and fingerprinting results of rubies will also be highlighted.

All are welcome to attend the Greenland Day session. For logistic purposes, please sign up for the presentations with BMP. For registration and further information or for requests for individual meetings, please contact Martin Scheuerlein, BMP (mars@nanoq.gl). A full programme can be viewed at the BMP website: www.bmp.gl.

You are also invited to visit the Greenland booth (#417) at the Trade Show on 4 to 7 March. The exhibit will focus on geological environments and the potential for location of Zn-resources, Greenland Cu & Ni and REE potentials, and more. Stop by the booth and meet the experts, who will be ready to tell you about the 'hot' themes of Greenland resources.



# New issue of the series 'Geology & Ore' and 'Fact Sheets' with themes on Greenland exploration and mining

2012, Geology & Ore No. 21:

The zinc potential in Greenland, 12 pp.
2012, Fact Sheet No. 26:

Greenland Mineral Resources Portal, 2 pp.







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