



GREENLAND MINERAL EXPLORATION NEWSLETTER

MINEX 34 · FEBRUARY 2009

GREENLAND – A TREASURE OF MINERAL RESOURCES

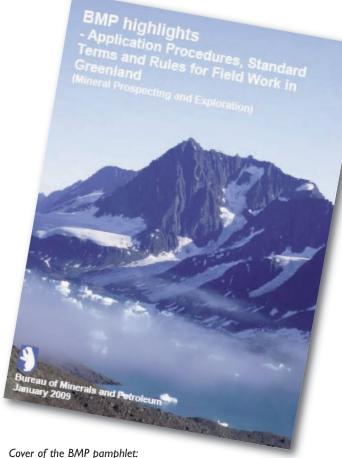
The Bureau of Minerals and Petroleum (BMP) has recently presented a pamphlet on conditions and information for the mineral industry regarding application procedures as well as standard terms and rules in relation to mineral prospecting and exploration in Greenland: 'BMP highlights'. The pamphlet is describing 'A treasure of mineral resources'; hinting at the vast potential for the mineral business. 'BMP highlights' is truly a 'treasure of information' for players in Greenland mineral exploration! The pamphlet was recently presented to the audience at the 'Roundup 2009' trade show on 25 –30 January in Vancouver, and it was well received.

The pamphlet summarises the role of the Bureau of Minerals and Petroleum (BMP) as the only authority under the Greenland Home Rule for administration of mineral resources in Greenland. The BMP office is located on the west coast of Greenland in the city of Nuuk - the capital of Greenland. The BMP is secretariat for the Joint Committee on Mineral Resources, which has been set up as a consultative body to follow mineral resources developments and make recommendations to the Greenland and Danish governments. The BMP acts on behalf of the Danish and Greenland political authorities in relation to license holders in Greenland. In its conclusion, the pamphlet stresses that the BMP administration operates as a one-door authority, where all applications and approvals are processed.

### **PDAC 2009 Greenland Presentation**

The Greenland authorities invite you to attend a seminar with oral presentations of the mineral resource opportunities and the economic potential of areas not yet covered by licences. The presentations will outline some of the under-explored areas and various themes to encourage action in new exploration initiatives. The themes of the session are:

- · Overview of licensing conditions in Greenland
- Outline of geology and mineral potential with emphasis on prospective regions
- Mineral potential of Palaeogene plutonic environments



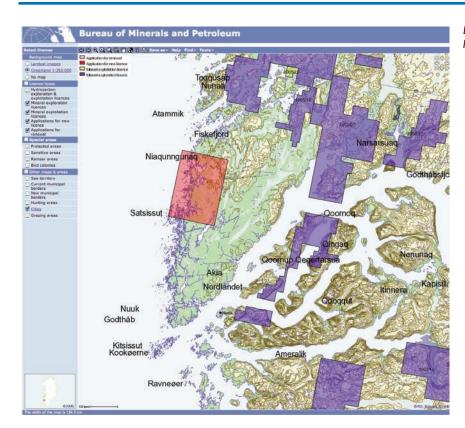
- IOCG possibilities projected to Greenland occurrences
- Statistical methods and mineral assessment programmes

Highlights of Greenland licensing

The venue of the session will be the Metro Convention Centre, South Building, Room # 711, on Monday 2 March 2009, 8:30 a.m. – 12:30 p.m.

## PGE-rich sulphides take the Prize in the annual Mineral Hunt competition

Ujarassiorit – the national mineral hunt for amateur geologists – has now ended for 2008, and the winners have received their awards.



Example of screen dump from the BMP license web page.

This year approximately 750 rock samples were submitted and 160 of these were analysed. The chemical analysis has revealed several samples with precious metals (gold, platinum and palladium) and some with copper and nickel.

### 1st-prize winner of Ujarassiorit 2008.

A rock sample collected north-east of the village of Kuummiut received the 1st prize of DKK 55,000 .The sample is a quartz-rich rock with iron sulphides containing 2% copper, 0.5% nickel, 0.23% cobalt as well as 1 g/t (combined) palladium and platinum. The submitted sample was collected by William Umerineq. He receives DKK 27,500 from the Bureau of Minerals and Petroleum and DKK 27,500 from the Bank of Greenland Industrial Fund. The sample points to a high potential for copper, nickel, palladium and platinum within the area near Tasiilaq.

#### 2<sup>nd</sup>-prize winner of Ujarassiorit 2008.

The 2<sup>nd</sup> prize winner receives DKK 25,000; DKK 12,500 from the Bureau of Minerals and Petroleum and DKK 12,500 from the Bank of Greenland Industrial Fund. The award is given for a float sample of recrystallised basalt characterised by a high content of copper. The sample contains 3.67% copper, which occurs as a thin green layer on the sample (malachite). In addition the sample has a minor gold content (1.9 g/t) and a content of uranium (472 g/t). The sample was collected near the village of Arsuk and is atypical compared to other known gold and copper samples from the area. The sample was submitted by Titken Lars Hansen from Arsuk.

### 3<sup>rd</sup>-prize winners of Ujarassiorit 2008.

Two 3rd prizes of DKK 10,000 from the Bureau of Minerals and Petroleum were awarded:

- A dark rock sample with long green fibrous crystals up to 5 cm long and muscovite. The sample is from Præstefjord, south-east of the town of Nuuk. The rock has a potential for handicraft (jade variety) with its striking green minerals. The sample was submitted by Peter Petersen, Nuuk.
- Quartz vein with pyrrhotite, containing small amounts of copper, palladium and platinum. The sample is from the village of Isortoq, west of Tasiilaq. The sample was submitted by Rasmus Sanimuinnaq from Isortoq.

### 4th-prize winners of Ujarassiorit 2008.

Four 4th prizes of DKK 5,000 from the Bureau of Minerals and Petroleum were awarded to in-situ samples containing exceptional minerals or with special characteristics:

- Gneiss with iron sulphides and chalcopyrite (0.3% copper). The sample is from Nuuk and was submitted by Muku Thorin.
- Molybdenite and iron sulphides from a coarse grained mafic rock near the town of Kangaatsiaq submitted by Anders |ørgen |eremiassen.
- Pure magnetite from a pegmatite in the Niaqornaarsuk area. Submitted by Otto Petersen from Niaqornaarsuk.
- Gneiss with malachite from Nordre Strømfjord (Nassuttooq). The sample was submitted by Eva R. Inusugtoq from Attu.



Re-installing the Black Angel cable car. One of the blasters is preparing charges before blasting another slice of rock at the upper terminal of the cable car (600m above fjord level). The view of the fjords below is obstructed by low-lying clouds. Courtesy: Angus & Ross plc.

The samples submitted came from all over Greenland. Geographically the prize-winning samples are from Aasiaat to Arsuk in West Greenland and in the Tasiilaq area in East Greenland.

Ujarassiorit is the national mineral hunt competition for amateur geologists and it has run for 19 years. Residents of Greenland can submit rock samples for further geological examination, free of charge, at any post office.

Ujarassiorit is administered by the Bureau of Minerals and Petroleum of the Greenland Home Rule government: www.bmp.gl.

### Black Angel Off-Take and capital financing agreements with MRI

Angus & Ross plc (Black Angel Mining A/S) announced on 7 January 2009 that it has entered into a life-of-mine off-take agreement with MRI (MRI Trading AG) to sell the expected production of zinc and lead concentrates from its Black Angel mine in Greenland. The sales price will be based on the LME Settlement Price, as published in the Metal Bulletin, and adjusted for treatment charges, with appropriate penalties and premiums. The market value of

the concentrates will be paid as they are produced, even though shipment may not be possible for several months due to climatic conditions.

A&R has been working with MRI for several months to improve the operational performance as set out in the Bankable Feasibility Study. To this end a number of additional studies were undertaken by SGS Mineral Services and Wardrop Engineering to determine the most efficient way to produce a concentrate on site at Maarmorilik. The outcome of this work is the design of a mill, to be built inside the mine, which will use an optical ore sorting system to separate the ore from the host rock, followed by conventional froth flotation to produce saleable zinc and lead concentrates. This change to the operational plan increases the need for capital expenditure by approximately US\$10m, but it significantly reduces operating costs, to the extent that it is now expected that, during Phase 1, the average production cost of one tonne of zinc or lead will enable Black Angel to be a low-quartile producer.

Once the project financing is fully available, it will take approximately 18 months to build the mine and its processing plant, and the first shipment of concentrate could be achieved during 2011.

Further reading on the Black Angel lead-zinc deposit can be found in the issue of Geology & Ore, No. 2 (second edition, December 2006), which is obtainable free of charge from GEUS @GEUS.DK or at the PDAC booth # 0417.

### Announcement of the 3rd Biannual Workshop: 'Resources and Geology in Greenland and North-East Canada'

 First circular on the 3rd Biannual Workshop, to be held in Nuuk, Greenland, 2–3 September 2009

This workshop is the third in a series, aiming at bringing together scientists working in Greenland and Canada. The first workshop was held in Kangerlussuaq in October 2005, focusing on geological correlation and mineral resources on either side of Baffin Bay, as well as exchange programs for researchers. The second workshop was attached to the annual GAC-MAC meeting in Yellowknife in 2007, with the advantage of a broader audience and interesting field trips. In 2009, the venue for the workshop will be Nuuk, the capital of Greenland. The focus of this workshop will be the geological relations and possible correlations, similarities and differences between Canada and Greenland. In the light of their strengthened co-operation, the BMP and GEUS will focus on research and datacollection covering the North Atlantic Craton in forthcoming years. Collaborating groups are the BMP, GEUS, and the GSC.





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### Tentative workshop programme

The main programme will be over two days from Wednesday, 2 September to Thursday, 3 September, 2009. There will be talks and discussions in three sessions:

- · Geology and correlation across Baffin Bay
- Metallogeny and commodities (Au, Ni, W, Cu)
- · Exploration, mining, and data-collection
- Additional plans for pre- and post-conference field visits to gold occurrences at Storø, Qussuk, Isua (+ iron) and the Seqi Olivine deposits (and mine)

### The Toronto Trade Show 2009 - Greenland welcomes visitors

The Greenland tradition of participating in the annual PDAC conference and trade show in Toronto, Canada will continue in 2009 with oral presentations, activities and exhibits. You are invited to visit our booth (0417), on 1–4 March 2009 as well as the special Greenland hospitality event on the 3 March at the Royal York Hotel. The presentations, exhibits and material will focus on new exploration targets in Greenland as well as universal information on the mineral resources potential.

Stop by and meet the Greenland experts, who will be ready to tell you about geology, licensing and logistics. Please note the separate invitation on page 1 to the seminar on the 2009 Greenland presentation, 2 March 2009 in room # 711.

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

New issues have been published in the series 'Geology & Ore' and 'Fact Sheets' (on Greenland mineral resources). The publications can be obtained free of charge from GEUS. E-mail minex@geus.dk for a copy.

 2009 Geology & Ore No 14: Plutonic environments in Greenland: a potential for new discoveries, 12 pp
 2009 Geology & Ore No.15: Mineral Resource Assessments in Greenland, 12 pp
 2009 Fact Sheet No 20: The unexplored mineral potential of

2009 Fact Sheet No.20:The unexplored mineral potential of South-East Greenland, 2 pp



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