

North American Nickel

A GOOD SUMMER IN GREENLAND





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North American Nickel (NAN) made significant progress this summer towards defining and expanding its world class nickel-copper property at Maniitsoq



Helicopter-assisted off-loading of equipment and supplies at NAN's Maniitsoq property in Greenland

Though it's barely six months since we last reported on progress at NAN's 3,601 square kilometre property, which encapsulates the nickel-rich Greenland norite belt (GNB) and where the company was embarking on an ambitious drilling programme, the results and the indication of future discoveries has been so encouraging that it is quite difficult to know where to start. As NAN's President and interim CEO Dr Mark Fedikow told us not that long ago: "This year we have said we will drill a minimum of 4,700 metres of core but that could be increased to as much as 10,000 metres if no unforeseen difficulties are encountered." With their efficient technical and drill team firing on all cylinders a total of 8,773 metres was drilled in 2014.

the subsurface. "We tested gravity because of the significant difference in density between norite and the surrounding felsic gneisses. Concurrently we ran deep time domain EM surveys (TDEM) in the same area. Both surveys started in early April and ran for a good six to eight weeks."

One question answered satisfactorily was that of how effectively the norite could be mapped below surface, using gravity surveys. "Starting with a desktop-sized outcrop we found we could map it as it plunges beneath a boulder field, or soils or younger rocks. We were very happy with the ground gravity results and with these and the TDEM in hand we continued our drill programme, with the goal of expanding the three targets there."

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That is impressive, as were the results obtained with high grade nickel, copper and PGM mineralisation, but there remain many more exploration targets identified and more geophysical surveying required. This summer's work focused mainly on the Imiak Hill complex, which includes Imiak Hill, Mikissoq (previously referred to as Imiak North) and Spotty Hill, three mineralised zones within 1.6 kilometres of one another, and Fossilik, another large area of norite. "We went into our 2014 drill programme with the game plan of getting onto the ground as early as possible, and we managed to get in and start ground geophysical surveys in April," says Fedikow. And these surveys were designed to test gravity as an effective tool to map mineralisation-hosting norite in

One headache that has not yet gone away was caused by the discovery that the very high nickel/copper mineralisation at Imiak Hill was truncated at depth by a fault. "Try as we might using down-hole pulse EM, but to date we have not been able to locate the remainder of that mineralised zone." Knowing that the mineralisation may not be far away is one thing, finding it another. It has been displaced downwards or sideways and its elusiveness is frustrating. However over the summer NAN seized an opportunity to benchmark on Hudbay Mineral's geophysical work at the Lalor zinc-copper-gold project in northern Manitoba. "They opened their books on their exploration approach to that body, which is the single most geophysically-surveyed massive



Dr. Mark Fedikow
President & Interim CEO

Mark has 35 years of industry and government experience as an exploration geochemist and mineral deposits geologist. He has worked for major and junior mining exploration companies and the Manitoba Geological Survey completing his employment at the Survey as Chief Geologist of the Mineral Deposits Section. In 2001, Mark was the recipient of the Provincial Geologists Medal, a Canadian national award for outstanding geoscientific achievement. Mark is also a Fellow of the Association of Applied Geochemists.

sulphide type deposit in the world,” Fedikow enthuses. For Greenland the chance to assess the use of some of the latest geophysical technologies, capable of sensing mineralised zones at depths of up to a kilometre, is compelling. Whatever it takes, the displaced norite will receive a great deal of attention in time for renewed exploration in 2015.

Spotty Hill, a large disseminated nickel sulphide zone with encouraging grades, was also drilled in 2014 with the intent to expand it and following the mineralisation to depth. It is, he explains graphically, a carrot shaped zone. “We intersected massive and near massive nickel-copper mineralisation encapsulated in the lower-grade disseminated material this year which bodes well for both grade and tonnage of the zone.” Spotty Hill hosts valuable platinum, and palladium, the so called platinum group metals or PGM as well as gold; the summer programme identified nearly one gram a tonne of these metals, giving useful added value to the project. Spotty Hill is still open at depth, and further drilling will take place there in 2015.

The third target in this complex, Mikissoq, also showed a mixture of disseminated and massive mineralisation, with what Fedikow describes as very significant nickel assays. However the greatest joy came unexpectedly with the results from 3,700 metres drilled in 22 holes, testing regional targets outside of the Imiak Hill Complex. No fewer than eight new mineralised zones were discovered, all hosted by norite to Mark Fedikow’s delight stating: “Each one of those eight targets has the potential to be another Imiak Hill! Next



year we will undertake more drilling on those eight targets trying to define the extent of the mineralised zones.” These regional discoveries have demonstrated that nickel-copper mineralisation has now been discovered from the northern portion of the GNB through the central area to the southern extremity of the belt over a distance of 75 by 15 kilometres. The exploration potential of the GNB is far from exhausted.

But the GNB is not the only table in NAN’s game. Further surprises came when airborne surveys showed an anomaly referred to as Pingo at the north end of the property, well outside the GNB. Fedikow explained Pingo as: “A very large two kilometre long sheet with very respectable

Did you know?

20 miles

Diameter of the meteor that created the Maniitsoq nickel deposit

10 kilometres

This year’s optimum drilling target

nickel and copper assays from our 2014 drilling.” These results are causing Fedikow and his colleagues to consider the exploration potential outside of the GNB Maniitsoq is proving to be a world class nickel sulphide exploration project, but it is possible that its potential to host multiple nickel sulphide deposits has hardly been, metaphorically or literally, scratched.

The Imiak Hill Complex is logistically feasible for mining purposes in terms of proximity to tide water and is the most advanced part of the project. Once a nickel-copper resource has been established an exploration road can be built to the nearby fjord and mining can commence. Concentrate would be shipped overseas, likely to Vale’s new nickel smelter

“Next year we will be going back and doing quite a bit more drilling on those eight targets trying to define how much is there”



“We are considering hydro electric schemes for the power supply, and how we might deal with transportation”

at Long Harbour Newfoundland. NAN is already thinking ahead to this phase. “We are contemplating hydro-electric schemes for the power supply, and how we might deal with transportation of the ore. Maniitsoq village which is adjacent to the property has generator power costing \$0.40 a kWh. We think that if we can develop a hydro-electric

power source we could knock that down to 3 or 4 cents. The more we can reduce our mining costs the better we are positioned to develop a nickel-copper ore body.”

Once operational the mine can produce and ship ore year round from the pack ice free south west Greenland coast. In the more immediate term, he hopes to address the short

season in which the remaining exploration work can be reliably carried out. One simple answer, he thinks, would be to have a country manager permanently stationed at Maniitsoq and able to mobilize stand by teams at short notice during off-season periods of clear weather. Even drilling, he thinks, could continue for most of the year once an initial resource has been established.

So the company is geared up for a very productive year in 2015. Given the buoyant prospects of the nickel market and backed by a long term commitment from its principal investor, Sentient Group and its supportive smaller investors, he is confident of funding a minimum 5,000 metre drilling programme next year and expand the sophisticated

airborne and ground geophysical surveying technologies we talked about earlier. The priority will still be production from Imiak Hill, but just look at the long term potential that is unfolding from the GNB itself - and the as yet uncertain but highly promising prospectivity of the remaining three quarters of this huge concession. **BE**

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