## Martín Labs EMG

# Martin Laboratories EMG Discovering Battery Metal Assets Sweden and Norway

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## **Introducing Martin Laboratories EMG**

With seven Energy Metal Properties worldwide, Martin Laboratories EMG (MLE) is committed to powering the green energy, EV, and ESG revolution from the source.

Martin Laboratories EMG (MLE) has strategically acquired multiple advanced exploration stage projects with historic potential in Norway, Sweden, and Eastern Canada. We've located the Scandinavian projects with the help of our partners EMX Royalty Corp (EMX). Each project has the potential of containing these incredibly rare and valuable natural resources.

Perhaps the only factor more important than the acquisition of these materials: the environmental and social responsibility that take precedence on these projects. Known as ESG (Environmental, Social, and Governance Criteria), Martin Laboratories is dedicated to improving the state of the environments and communities in which our sites are located.

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## **Driven by an Experienced Team**





#### Ellis Martin CEO & Founding Director

A broadcast journalist, marketing consultant and serial entrepreneur with a career spanning four decades with a focus on the natural resources and biotechnology sectors.



Glen Harder LLB Director and Co-founder A corporate lawyer and proactive deal maker. He possesses deep experience and industry knowledge in international mining and finance.



#### Jeffrey C. Edelen Chief Geologist

Over 14 years of economic mineral exploration and research experience. His expertise is in generative exploration and project development with both foreign and domestic major and junior mining companies.



#### Johannes Holzäpfel VP of Exploration – Europe

Has over 8 years of experience in the mineral exploration industry. He worked in copper and gold exploration in Africa and Sweden.



Lidell Page, VP of Business Development A managing director of Overhill Capital, a private equity fund with approximately \$60 million in assets. Lidell is also a practicing attorney, working in finance, international, securities, and project finance.



Amanda McCallum BSc (Geo), BEd Geological Advisor A geologist, prospector, educator and communications specialist with over 20 years experience. Her primary areas of professional services include geoscience communications, geoscience products and services.

## **Driven by an Experienced Team** - Continued

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Michael Collins BSc, P.Geo Geological Advisor He specializes in mineral exploration, deposit modeling and project development; and has supervised projects in East Africa, South and Central America, and Southeast Asia.



Peter M. Dimmell, BSc, P.Geo. FGC – Strategic Geological Advisor A geologist / prospector / consultant who has been involved in mineral exploration for over 35 years. He brings considerable technical and geological experience to MLE.





Bob Mahin Geological Advisor Extensive experience in senior-level exploration and resource management. He has broad knowledge in project management, mineralization systems, drilling, and employee engagement.

Kendra Low Corporate Secretary Over 15 years of experience working in corporate and sustainability governance. An experienced corporate secretary, corporate and sustainability governance professional and business strategist.



Nancy Massicotte Corporate Communications Has been involved in the investor relations and public relations field for over 20 years, working with companies in various sectors including mining, technology, bio-tech,

and oil and gas.

## Why Did We Choose Sweden?

#### **Mining Jurisdiction**

- Well-established and transparent mining legislation updated in 2014<sup>1</sup>
- The total exploration investments in Sweden was ~\$109 million in 2019<sup>2</sup>

#### Low Cost

- Low energy cost ~ € 0.0641 / kWh<sup>3</sup>
- Low corporate tax rate (20.6%)<sup>4</sup>
- Small government royalty (0.2%)<sup>5</sup>

#### **Established Region**

- Sweden is the heart of Europe's mining industry—largest supplier of minerals to the EU.<sup>2</sup>
- Access to three world-class districts:
  - o Kiruna District,
  - o Skelleftea District, and
  - o Bergslagen District
- MLE's ~318,000 hectares within highly prospective ground in 2016-2021

#### **Regional Geology**

 Fennoscandian Shield comprised of Proterozoic aged rocks host significant endowments of Fe, Ni, Cu, Pb, Zn, Ag, and Au mineralization)

#### Infrastructure

- 8 active smelters in region, and accessible deep-water ports
- Excellent nationwide road and rail system

#### **Mining Culture**

- Rich mining history dating to 11<sup>th</sup> century
- Historic mining formed the backbone of Swedish society via Falun, Sala, and Kiruna mines
- Widespread cultural acceptance of mining

#### **Current Mining Activity**

Active mines: 12 active metal mines

#### Mining and Exploration Projects in Sweden

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Sources: <sup>1</sup>The Swedish Trade & Invest Council, Metals & Mining Sector Overview, 2016 & 2021. <sup>2</sup>E https://www.svemin.se/en/swedish-mining-industry/in-numbers/ <sup>3</sup>Eurostat, 2021 https://ec.europa.eu/eurostat/databrowser/view/ten00117/default/table?lang=en <sup>4</sup>Deloitte Touche Tohmatsu Ltd, International Tax Corporate Tax Rates, 2021.; <sup>5</sup>Hojem, P. (2015) Mining in the Nordic Countries: A comparative review of legislation and taxation, Nordic Council of Ministers p 66.

\*The nearby mine provide geologic context for MLE / EMX's Project, but this is not necessarily indicative that the Project hosts similar tonnages or grades of mineralization. Michael Sheehan, CPG, a Qualified Person as defined by National Instrument 43-101 and employee of the Company, has reviewed, verified and approved disclosure of the technical information contained in this presentation.

## Why Did We Choose Norway?

#### **Supportive Policy**

- 2013 National Mineral Strategy gave the Directorate of Mining ("DMF") new incentives to promote industry and foreign direct investment including:
  - o Predictable and efficient administration
  - Easier applications, larger areas, lower fees<sup>1</sup>

#### Low Cost

- Low energy costs ~ € 0.0417 / kWh<sup>2</sup>
- Low corporate tax rate (22%)<sup>3</sup>
- No government royalty, 0.5% royalty to landowner<sup>4</sup>

#### **Expanding Exploration**

- Dormant mining industry due to an oil-focused government agenda. Resulting in underexplored land.
- Limited competition gave MLE / EMX the opportunity to option ~400,000 hectares highly prospective ground
- NGU provided \$7.66M on geophysical exploration, geological mapping and resource evaluation in 2020<sup>1</sup>
- Increase in investments in exploration work for new deposits throughout the pandemic<sup>5</sup>

#### Infrastructure

- 6 processing facilities in region, and accessible deepwater ports
- Excellent nationwide road and rail system

#### **Mining Culture**

- Rich mining history dating to the 17<sup>th</sup> century
- Widespread cultural acceptance of mining
- Many communities developed around historic mining:
  - o Røros Copperworks
  - o Løkken Mine
  - Kongsberg silver

#### **Development and Production**

- DMF reported total revenue of \$179M\* for the metallic mineral industry in 2017<sup>2</sup>
- Active mines:
  - o Tellnes (Ti)
  - o Kvannevann (Fe)
  - Sydvaranger (Fe)
- Developing projects:
  - o Nussir (Cu)
  - Hurdal (Mo)
  - o Tellnes 2 (Ti)
  - Kodal (Phosphate)

#### Mining and Exploration Projects in Norway

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Sources: 1 Harde Fakta om Mineralnaeringen, (DMF), 2020, p 44.; 2 Eurostat, 2021, https://ec.europa.eu/eurostat/databrowser/view/ten00117/default/table?lang=en 3 Deloitte Touche Tohmatsu Ltd, International Tax Norway Highlights, 2021.; 4 Hojem, P. (2015) Mining in the Nordic Countries: A comparative review of legislation and taxation, Nordic Council of Ministers p 66.; 5 Harde Fakta om Mineralnaeringen, (DMF), 2020, p 4.

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# Skelleftea District, Sweden **Nickel Line** Njuggträskliden & Mjövattnet Ni-Cu-Co-PGE

## Njuggträskliden & Mjövattnet – Introduction

Regional nickel exploration became a focus of the Swedish Geological Survey ("SGU") and other state-run mining concerns in the 1970's and early 1980's, leading to the discoveries of MLE's Mjövattnet and Njuggträskliden nickel-copper-cobalt-PGE deposits along what became known as the "Nickel Line" in north central Sweden. These deposits and occurrences are located just outside of the Skellefteå Mining District, where Boliden AB has its regional headquarters and operates a smelting facility.

In the past few years, the recent emphasis on conversion to electric vehicles within the European Union and construction of a vehicle battery factory near Skellefteå has resulted in renewed interest in the Nickel Line and its nickel-copper sulfide deposits.

**Njuggträskliden Project** This deposit was discovered in the early 1970's via boulder tracing, which led to the identification of several mineralized outcrops. Multiple drill defined zones of nickel sulfide mineralization were delineated in the early 1980's, many of which were recognized as being enriched in PGE's, but only some of the collected drill core samples were analyzed for PGE's.

The drill defined zones of mineralization at Njuggträskliden remain open at depth, and the NSG noted in their summary report that a 10 kilometer corridor of similar boulder clusters with nickel sulfide mineralization remains to be explored at Njuggträskliden. These occurrences all lie within the MLE license and represent considerable upside exploration potential. Since being drilled by the NSG, a few smaller companies have conducted limited exploration in the area, including twinning of some of the historic drill holes and reanalyzing some of the historic drill core for PGE's. However, little to no systematic exploration has taken place.

**Mjövattnet Project** One of the first nickel sulfide discoveries made along the Nickel Line, discovered in 1971. Mjövattnet nickel sulfide deposit occurs along a structural corridor of similar mineralized bodies, including the Lappvattnet Brannorna, and Lappbacken zones to the southwest, each of which have drill defined zones of mineralization, with the latter two also lying within the MLE license (Lappvattnet is currently held by a third party). Notes from the Swedish Geological Company ("NSG") in 1987 state that Mjövattnet has only been partly explored and its depth potential remains unknown. Likewise, several clusters of nickel sulfide bearing boulders lie to the northeast and southeast (the Frangsmyran, Holmsvattnet, Långbacken and Vallen occurrences), the bedrock sources of which have yet to be identified.

This combination of drill defined nickel sulfide mineralization, which remains open in multiple directions, and the upside potential near the clusters of mineralized boulders makes the Mjövattnet project particularly attractive for further exploration. Historic intercepts include 29m @ 1.6% Ni in MJN-73-003 and 28 m @ 1% Ni in MJO-70-001 at Mjövattnet.

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## Njuggträskliden & Mjövattnet – Project Locations





Two Ni-Cu-Co-(PGE, Au) sulfide projects positioned along Sweden's "Nickel Line"

## Nickel in Sweden Report – SGU-NSG 87007

"Nickel in Sweden" report\* published in 1987 summarizing nickel exploration in Sweden between 1968 and 1984; available as report "Prap 87007" from the Swedish Geological Survey.

MLE L	ICENSES SHOWN II	N BLUE			Grade	(wt %)		Cu	Со	Pt	
No.	Prospect Name	Million Tons	Ni	Cu	Со	S	Ni sph %	Cu + Ni	Co + Ni	Pt + Pd	Remark
1	Lappvattnet	1.000	1.00	0.21	0.02	4.40	8.60	0.17	0.02	0.750	
2	Brännorna	0.350	0.63	0.04	0.02	1.30	19.50	0.07	0.03		Cut-off=0.4 % Ni+Cu/3
4	Mjödvattnet	0.169	1.29	0.19	0.02	4.90	9.80	0.13	0.01		Cut-off=0.4 % Ni+Cu/2
16	Vallen	0.025	0.50	0.11	0.02	2.40	7.90	0.18	0.04		
27	Backviken	0.070	0.46	0.27	0.02	1.20	15.20	0.37	0.04	<0.35	
32	Rörmyrberget	4.239	0.61	0.06	0.02	1.40	16.10	0.09	0.03	0.650	11 bodies
35	Gårkälen	0.035	0.40	0.18	0.04	3.90	3.90	0.31	0.09		
46	Kälen	0.065	0.41	0.27	0.04	3.60	4.30	0.40	0.09		Cut-off=0.4 % Ni+Cu/3
57	Njuggträskliden	0.575	0.71	0.26	0.04	5.90	4.60	0.27	0.05	0.620	4 bodies

#### Table 1 – Indicated tonnage for mineralizations with 0.40 and 2.0% Ni as cut-off

These occurrences include Njuggträskliden and Mjövattnet-Brännorna, which have higher primary nickel contents than most of the occurrences that were discovered in the NSG programs. Very little work has been done on these programs since that era of exploration.

\*A Qualified Person has not performed sufficient work to classify the historic mineral resource estimates as current mineral resources, and MLE / EMX are not treating the estimates as current mineral resources. The historic estimates were reported as 'mineral inventories', which are considered to be broadly equivalent to inferred mineral resources. The historic estimates should not be relied upon until they can be confirmed. However, the drill-delineated mineralization as reported in the referenced SGU (Swedish Geological Survey) document is considered relevant. Additional work to verify or upgrade the historical estimates at Mjövattnet and Njuggträskliden as current mineral resources would include a) check assaying of historic assay results, b) confirmation drilling, and c) review/updating of the geologic interpretation.

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## Njuggträskliden – Mineralized Boulders





Two Ni-Cu-Co-(PGE, Au) sulfide projects positioned along Sweden's "Nickel Line"

## Njuggträskliden – Surface Exposures





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- 1. 70% of moraine formed by sulfide rich boulders
- 2. Mineralized subcrop and boulders
- 3. Weathered appearance of nickel rich boulders





## Njuggträskliden – Historic Drilling Work





## NSG (79-82): 60 DDH, Outukumpu (90-91): 17 DDH

Note: MLE / EMX have not performed sufficient work to verify the published drill data reported on this slide, and these data cannot be verified as being compliant with NI43-101 standards. These historically reported data should not be relied upon until they can be confirmed. However, the drilldelineated mineralization as reported in various public documents available online and from the SGU (Swedish Geological Survey) is considered relevant.

## Njuggträskliden – Historic Drilling Work





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## Njuggträskliden – Drilling





## Njuggträskliden – Drill Core





#### Massive Sulfide breccia (BH79001)



#### Disseminated Ni and Cu-rich sulfides in ultra-mafic intrusion (BH79018)

"Jackstraw" textures in meta peridotite

Styles of mineralization include disseminated and next textured types as well as massive sulfide bodies, which demonstrate saturation in the magmatic system(s). **Discovery of additional** zones of massive sulfide accumulations seems likely. "Jackstraw" textures are common in most of the significant nickel occurrences in Sweden.

## **Mjövattnet – Boulders and Drill Holes**





## Mjövattnet (Brännorna) – Historic Work





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## **Mjövattnet – Historic Drill Core**





Jackstraw texture in ultramafic rock (BH75020)

#### Massive sulfide mineralization (BH73004)

Detected	PPM	+/-	
Mn	417	109	
Fe	33.87%	1.03	
Со	149	12	
Ni	9.31%	0.28	
Zn	155	24	
As	50.00%	9	
Se	29	6	



Remobilized massive sulfide breccia (BH73004) Remob. Sulfide (BH73004)



#### Sulfide impregnation (BH73004)

\*Handheld XRF screen capture elemental data that has not been verified by conventional assay or analytical procedures, and thus is shown for illustrative and discussion purposed only. These data should not be relied upon until verified by methods compliant with NI43-101 protocols.

## Njuggträskliden & Mjövattnet Projects

## Size Potential and Business Case

- The historic mineral inventories at Njuggträskliden, Mjövattnet and Brännorna remain open at depth and have additional potential along strike.
- Multiple nickel sulfide-rich boulder clusters occur on both projects, the sources of which have yet to be identified.
- >10 km strike lengths of prospective ground on both projects.
- Both Mjövattnet and Njuggträskliden contain significant masses of massive sulfide mineralization; this is atypical of other nickel deposits in the area/region, which tend to be characterized by more disseminated and "net textured" styles of mineralization.
- The presence of massive sulfide accumulations suggests additional potential for discovery of high grade "pools" or other accumulations of massive sulfides in the magmatic system(s).
- High resolution ground magnetic surveys conducted by MLE / EMX are substantially improving the geologic models; this will be a key exploration tool.
- Additional modern geophysical and geochemical techniques can be applied to assist further discovery; MLE / EMX are actively applying state of the art geochemical techniques to detect mineral deposits beneath shallow till cover.

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## **Comparison to Other Deposits**



## Published 3-D model of Sakatti Ni-Cu-PGE deposit

2013 AngloAmerican Presentation to Association of Mining Analysts



The Sakatti project in Finland provides geologic context for MLE's Project, but this is not necessarily indicative that the Project hosts similar tonnage or grades of mineralization.

For more information:: https://www.ama.org.uk/wp-content/uploads/2013/09/Group-Exploration-Overview\_Association-of-Mining-AnalystsFINAL.pdf

## Njuggträskliden & Mjövattnet – Summary

- Both Njuggträskliden and Mjövattnet have occurrences and drill defined nickel sulfide mineralization developed along tens of km of strike extent.
- Mineralized boulders occur in clusters positioned down the direction of glacial ice transport the sources of several clusters have yet to be found.
- Historic mineral inventory estimates (non-NI43-101 compliant) have been published for both Njuggträskliden and Mjövattnet.
- No systematic PGE and precious metal assays some zones have high Pt and Pd grades, and high nickel grades overall.
- SGU Reports suggested extensions of mineralization at depth and along strike and recommended further drilling.
- Excellent logistics and access to both project area.

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## **Southern Norway**

# **Ni-Cu-Co-PGE**

## Flåt, Bamble & Brattåsen – Introduction

The Norwegian Projects are part of a belt of nickel sulfide deposits and occurrences in southern Norway which allowed Norway to become the world's major producer of nickel in the 1870's. In the late 1920's, Falconbridge Nickel Mines Ltd, which operated nickel mines in the Sudbury District of eastern Canada, acquired the regional smelting and processing facility in Norway known as "Nikkelverk A/S", which still operates today.

This led to decades of exploration by Falconbridge, during which time Falconbridge and its partners discovered and advanced a number of nickel sulfide prospects, including each of MLE's Norwegian Projects. After being acquired by Xstrata in 2006, Falconbridge's regional exploration programs were curtailed, and the projects were abandoned shortly thereafter. These projects largely remained idle until acquired by MLE / EMX over the past two years.

**Flåt Project** The Flåt mine (pronounced like "float" in English) was one of the largest historic nickel producers in Norway, producing over 2.5 million tonnes of mineralized material, and was in operation from 1872 through World War II. MLE's exploration licenses surround the historic Flåt mine and cover the lateral and downward projections of the body of mineralization that was historically mined. Drilling by Falconbridge on the MLE licenses in the 1970's failed to reach the projection of the mineralization at depth below the mine, and subsequent geophysical surveys defined additional targets that were never tested. We believes these to represent "walk up" drill targets on the project. The land position has recently been expanded to include geophysical anomalies to the north and east. This represents a target-rich environment with known production.

**Bamble Project** The Bamble nickel-copper-cobalt project covers a large area (11,000 hectares) with numerous nickel and copper prospects and historic mine workings. Remarkably, only limited historic drilling has taken place within the project area, and several key mineralized intercepts were never followed up. Social concerns in this area are a non-issue and the exploration premise is excellent as it is an area of historic quarrying, metal and gemstone mining. Falconbridge and its JV partner Blackstone Ventures, Inc. made the project a focus between 2004 and 2009, but little to no exploration has taken place since along the project's 20 kilometer trend.

**Brattåsen Project** The Brattåssen property spans 5,000 hectares. The site hosts promising nickel, cobalt and copper deposits. Sulfide mineralization occurs in the gabbroic body near the contact of underlying pyroxenite. Falconbridge drilled the property in 2006 follow up is needed at the Seljåsen target. The Brattåsen magnetic anomaly remains unexplored with work done before 2000 is largely undocumented.

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## Flåt, Bamble & Brattåsen – Overview & Locations

- 3 Ni-Cu-Co Sulfide properties located in southern Norway
- Excellent infrastructure:
  - ✓ Rail
  - ✓ All season roads
  - ✓ Power
- Deep water port with waterline access
- Ni smelters in region
- Mining friendly jurisdiction
- Geologic terrain analogous to Voisey's Bay



#### **Overview Map of Southern Norway Nickel Projects**

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## Flåt, Bamble & Brattåsen – Voisey's Bay Analogy



ESPEDALEN		CRITERIA		VOISEY'S BAY			
	ralization within metamorphosed tes and gabbros	Style of system		Ni-Cu-Co mineralization within troctolite- norites and gabbros in an anorthosite complex			
<ul> <li>Age of intrusio</li> <li>1,200 – 1,180 M</li> </ul>		Age		Age of intrusions: 1,340 Ma			
• Ni from 1-2.88 and Co co-pro		Endowments		li from 3-5% with Cu and Co co-products**			
	Volsey's Bay North America	Greenland	ntic Shiel	<ul> <li>Markan Markan Mar</li></ul>			

## Flåt, Bamble & Brattåsen – Historic Highlights

- Norsk Hydro explored the region from 1968–1973. Sulfidmalm AS, in association with Falconbridge, and later Blackstone Ventures, performed extensive exploration from 2004 to 2009; Airborne geophysics 2005-2006 by NGU.
- Historic production from 1859 1884 and 1915 1917

#### • Total mining of 55,000 t at 1.12% Ni and 0.46 % Cu.\* Mined to a depth of ~80m.

• Further shallow DDH at Meinkjær and other prospects returned encouraging results that were not economic during the time of drilling

#### **Blackstone Grab Sample Values:**

- Nystein mine dump: 1.95% Ni, 0.43% Cu, 0.17% Co and 2.10% Ni, 0.15% Cu, 0.06% Co\*\*
- Meikjaer / Stoltz waste dump: 2.88% Ni, 0.08 Cu, 0.12% Co, 0.06g/t Pt. 0.20 g/t Pd \*\*
- MLE / EMX claims cover 8 historical nickel mines within an extensive mineral belt (8 km x 20 km) with numerous late mafic / ultramafic bodies of approximately Voisey's Bay age
- ~30 known Ni and Cu occurrences with numerous artisan mines
- Structural and geophysical targets, open at depth and along strike of historic mines

\*Historic production values and assay results quoted above are from \*Brickwood, J. D. 1986. The geology and mineralogy of some Fe-Cu-Ni sulphide deposits in the Bamble area, Norway. Norsk Geologisk Tidsskrift 66, 189–208, and from \*\* Blackstone press release: Blackstone Ventures Press Release, September 07, 2005. <u>https://martinlabsemg.com/wp-content/uploads/2022/08/Blackstone.pdf</u> respectively. MLE / EMX have not performed sufficient work to verify the published assay data reported above, and these data cannot be verified as being compliant with NI43-101 standards. These historically reported data should not be relied upon until they can be confirmed, but MLE / EMX believe this information is considered reliable and relevant.

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## Flåt Project – Ni-Cu-Co

- 4,700 hectares
- Mined from 1872 1946
- At one point, this was largest mine in Europe
- Historical Production: 2.6 Mt @ 0.75% Ni, 0.47% Cu, 0.06% Co\*

### **Targets:**

- Deposit's extension has not been tested. Walk up drill target
- Greenfield potential remains at prospects east of historic Flat Mine

NOTE: Historic production values quoted above are from NGU, from (Ore Database, 2013). MLE / EMX have not performed sufficient work to verify the published data reported above, but MLE / EMX believe this information is considered reliable and relevant.

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\*Source: Haral, 1947. Flat Nickel Mine; Norwegian Geologic Survey; Journal Article. NGU. https://aps.ngu.no/pls/oradb/minres\_deposit\_fakta.Main?p\_objid=5253&p\_spraak=N



Geologic Map of Flåt Project

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## Flåt Project – Historic Work



#### Historic Photo of Flåt Mine



**Vertical Longitudinal Section of Flåt Mine\*** 

#### 1960's

Sulfidemalm A/S completes soil survey and geologic mapping

#### 1970's

• 809 m drill hole meant to test down-plunge extension of ore deposit. *The hole never encountered footwall lithology.* This drill hole overstepped and missed.

#### 2005 & 2006

- Blackstone claims Flat mine
- Airborne mag/EM employed to identify shallow (within 100m) target
- 3 drill holes to test extension of deposit were proposed
- Blackstone sold to Xtrata in 2006 and drill holes were not completed

#### **Next Steps**

- Soil Sample at greenfield prospects to east
- Drill test Flåt Mine extension

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## Flåt Project – Ni-Cu-Co – Historic Work

- Host: Plagioclase-rich diorite
- Morphology: pencil-shaped body plunging at 45° southward, flattens at depth
- 2 types of mineralization:
  - Disseminated mineralization (up to 15% sulfides)\*
  - Massive mineralization with pyrrhotite as veins/fracture filling



Figure: Conceptual cross-section detailing mineralization styles at Flåt. Blackstone's 2006 proposed drillholes that were never completed.

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\*Source: Bjørlykke, H. 1947. Flat nickel mine. Norges geologiske undersokelse, Bulletin168b, 1–39.

## Flåt Project – Ni-Cu-Co – Recent Fieldwork



Recent fieldwork identified massive sulphides in host diorite outcrops and noted elevated percentages of sulphides in a nearby gabbro. In these outcrops, pyrrhotite appears to be associated with pentlandite.



## **Bamble Project – Ni-Cu-Co**

- 110,000 hectares
- Mined from 1859-1884 and 1916-1920.
- Mineralization associated with late norite intrusions
- Historic production: 55,000 Tonnes of 1.12% Ni and 0.46 % Cu\*

#### Targets

- Zones of intense deformation coincident with troctolite-norite bodies/ host to 8 historic mines and multiple artisan workings
- Structural intersections / zones of focused fluid flow

NOTE: Historic production values quoted above are from Blackstone press release, 2005. MLE / EMX have not performed sufficient work to verify the published data reported above, but MLE / EMX believe this information is considered reliable and relevant. \*Blackstone Ventures. Press Release, September 07, 2005. https://martinlabsemg.com/wp-content/uploads/2022/08/Blackstone.pdf





#### **Geologic Map of Bamble Project**

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Prospect

EMX Project

## **Bamble Project – Ni-Cu-Co**

## Intensely deformed amphibolite to granulate facies migmatite and gneiss cross-cut by amphibolite-grade metamorphosed troctolite-norite and gabbroic intrusions.

- Locally intense scapolite albite alteration. Mineralized within and along intrusive margins; occurs as disseminated, semimassive to massive chalcopyrite, pyrite, pyrrhotite, and pentlandite.
- Host to several historic mines and numerous mineral occurrences.

NGU AEM Survey 2005-06



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## **Bamble Project – Mineralization**

Examples of magmatic Ni-Cu-Co mineralization from historic mine dumps within the Bamble license.



Mineralized rock from Vissestad Mine: 5.05% Ni, 0.15% Cu, 0.15% Co

\*Assay values quoted above are from Blackstone press release, 2005. MLE / EMX have not performed sufficient work to verify the published assay data reported above, and these data cannot be verified as being compliant with NI43-101 standards. These historically reported data should not be relied upon until they can be confirmed, but MLE / EMX believe this information is considered reliable and relevant. \*Blackstone Ventures Press Release, September 07, 2005. https://martinlabsemg.com/wp-content/uploads/2022/08/Blackstone.pdf





**Vissestad Mine Waste Pile** 



Mineralized rock from Nystein Mine: 1.95% Ni, 0.43% Cu, 0.17% Co

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## Brattåssen Project – Ni-Cu-Co

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- 5,000 hectares
- Sulfide mineralization occurs in gabbroic body near the contact of underlying pyroxenite

### **Targets:**

- Falconbridge 2006 drilling needs follow up at Seljåsen target
- Unexplored Brattåsen
   magnetic anomaly





**Geologic Map of Brattåssen Project** 

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## **Brattåssen Project – Target**

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- Work before 2000's largely undocumented
- Falconbridge (via Blackstone) claims 2004-2006:
  - o Ran regional UTEM survey
  - Drilled 10 exploration DDH holes at Mesel and Seljåsen targeting EM conductors

## Seljåsen Results:

- SE07-04: 19m 0.21% Ni, 0.09% Cu
  - including **1m @ 1.04% Ni, 0.17% Cu** (95 m depth)\*
- Brattåsen magnetic anomaly has not been drill tested

\*The historical drilling was reported in Blackstone Nickel's Report of Exploration Activities from 2008 (NGU, BV4965 MLE / EMX have not performed sufficient work to verify the Blackstone drill data reported above, and these data cannot be verified as being compliant with NI43-101 standards. These historically reported data should not be relied upon until they can be confirmed. MLE / EMX have not performed sufficient work to verify the published data reported above, but MLE / EMX have believe this information is considered reliable and relevant



Airborne TMI of Brattåsen Targets

## Flåt, Bamble & Brattåsen – Summary

- Located in a historically prolific nickel belt which was explored by Falconbridge in early 2000's
- Falconbridge was acquired by Xstrata in 2006, these projects were left abandoned with a multitude of untested targets
- **Flåt Project:** Walk-up drill targets down-dip and along strike from historically significant nickel mine
- Bamble Project: > 20 km trend of nickel sulfide occurrences which is largely unexplored
- **Brattåsen Project:** shallow drilling has never been followed up and a significant magnetic anomaly is completely untested
- Projects located within 50km of Glencore's Nikkelverk Refinery
- Excellent jurisdiction and accessibility to all projects via paved roads
- In close proximity to Norway's newly-planned battery factory

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## **MLE Exploration Plans for 2022**

- Exploration work has commenced on the projects, and consists of new surface mapping, sampling and geophysical programs.
- Additionally, several known/existing targets are to be fast-tracked to the drill stage, with drilling expected to commence as soon as possible.
- LME / EMX will be assisting with design and implementation of the exploration programs, which will leverage the Company's regional presence and exploration methodologies that have been honed and refined over the past decade of work in the area.



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## **MLE Contact Information**



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