

January 24, 2012

BY SEDAR

British Columbia Securities Commission Alberta Securities Commission Ontario Securities Commission

Dear Sirs/Mesdames:

Re: Technical Report for the Läntinen Koillismaa Project

Finore Mining Inc. is voluntarily filing the attached technical report titled "A Technical Review of the Läntinen Koillismaa Project, Finland for Finore Mining Inc." with an effective date of January 5, 2012 and an issue date of January 24, 2012 (the "Technical Report") for disclosure purposes. The Technical Report was prepared for Finore Mining Inc.

Yours truly,

FINORE MINING INC.

"Peter Hughes"

Per:

PETER HUGHES Chairman

A TECHNICAL REVIEW OF THE LÄNTINEN KOILLISMAA PROJECT, FINLAND FOR FINORE MINING INC.

prepared by

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1. SUMMARY

Watts, Griffis and McOuat Limited ("WGM") has prepared this report for Finore Mining Inc. ("Finore") in compliance with Canadian National Instrument 43-101 ("NI 43-101") standards for disclosure for mineral projects. Finore, formerly known as Otterburn Ventures Inc., had entered into an Option and Joint Venture agreement with Nortec Minerals Corp. to acquire the Läntinen Koillismaa ("LK") Project comprising the Kaukua, Haukiaho, Haukiaho East, Lipeävaara, and Murtolampi Claim Areas, Finland. This report is an update of the "Technical Review of Kaukua, Haukiaho, Lipeävaara, and Murtolampi Claim Areas, Finland" report ("Initial Report") originally prepared by WGM for Nortec Minerals Corp. ("Nortec") dated March 14, 2011. The Initial Report presented Mineral Resources of the Kaukua and Haukiaho deposits following the guidelines, standards and definitions adopted by the Council of the Canadian Institute of Mining Metallurgy and Petroleum ("CIM"). These mineral resources have been updated to reflect current metal prices. WGM understands that Finore's intended use of this report includes filing with securities regulators to support public disclosure, pursuant to Canadian provincial securities legislation, and, where required to comply with Finore's Finnish reporting obligations including disclosure on SEDAR and, if Finore chooses to do so, to support the requirements of the multiple listing applications of Finore to other stock exchanges, in addition to its current listing on Canadian National Stock Exchange ("CNSX").

Finore's Kaukua Property consists of three contiguous mineral claims, covering a total of 262.67 ha, and the Haukiaho Property has four contiguous mineral claims covering 372.34 ha. Applications for a further 3,150 ha have been submitted to the Ministry of Employment and the Economy of Finland, and are waiting to be registered. These claims and claim applications cover extensions of the existing mineral claims and an intermediate contiguous area, known as Haukiaho East and Lipeävaara.

The Finore properties are hosted by the Koillismaa Layered Igneous Complex ("KLIC"), which is one of the 2.5-2.4 Ga Fennoscandian Early Palaeoproterozoic layered complexes that were emplaced as part of a globally recognized episode of igneous activity that introduced layered intrusions and mafic dyke swarms worldwide. These igneous formations have a demonstrated high potential for Cr, Cu-Ni-PGE sulphide, PGE and Fe-Ti-V oxide mineralization, such as the well-known economic deposits hosted by the South-African Bushveld, Russian Monchegorsk and Finnish Tornio-Näränkävaara belt of intrusions.



The KLIC makes up the eastern most portion of the Tornio-Näränkävaara Belt and consists of two main sectors, *the Näränkävaara Intrusion* in the east and *the Western Intrusion* to the west.

The Western Intrusion has been uplifted and broken into a number of blocks due to multiphase tectonic events. Finore's five targets (Kaukua, Haukiaho, Haukiaho East, Murtolampi, and Lipeävaara) are hosted by four separate intrusive blocks covering an area of $15 \times 15 \text{ km}^2$ within the northernmost part of the Western Intrusion.

The igneous stratigraphy is identical in each block, consisting of a Marginal Series, which are tens to over hundred metres thick developed at the base or margins of the blocks, and an overlying Layered Series. The marginal series is characterized by a reversed fractionation trend, in which mafic lithologies at the very contact of the intrusions are succeeded by pyroxenitic and then by olivine bearing lithologies. This is contrary to that of the layered series, which is entirely composed of mafic cumulates having normal fractionation trend from basal gabbronorites to anorthosites at the top.

Most of the observed mineralization is typical of 'contact-type' PGE-Cu-Ni mineralization hosted by the marginal series. Four principal types of base metal - PGE mineralization have been identified within the Kaukua block. The available data from Haukiaho, Haukiaho East, Lipeävaara and Murtolampi indicates that only mineralization of types 2-4 are present, but not the first type:

- 1) Hangingwall-type Mineralization (contact-type).
- 2) Marginal Series-type Mineralization (contact-type).
- 3) Mixed Zone-type Mineralization (contact-type).
- 4) Reef-type Mineralization.

The Hangingwall-type mineralization is hosted in strongly foliated gabbronorite of the layered series just above the marginal series at Kaukua.

Marginal Series-type mineralization makes up over 70% of the metal deposition at Kaukua. The Marginal Series is dominated by pyroxenite that hosts sulphide assemblages comprised of pyrrhotite-chalcopyrite-pentlandite. The sulphide assemblage also occurs as medium-grained, disseminated aggregations. Sulphide content increases towards the base of the Marginal Series, which often indicates an increase in grade for both PGE and base metals.

Sulphide mineralization in the Mixed Zone-type at Kaukua varies in thickness between 30 and 40 metres. The Mixed Zone is dominated by xenoliths of granodiorite and quartzo-



feldspathic gneisses partially assimilated by the Marginal Series. Sulphides usually occur as fine-medium grained chalcopyrite and pyrrhotite disseminations in the basement unit and in cross-cutting gabbroic-pyroxenitic intrusives. Pyrite is also present.

The typical sulphide assemblage is pyrrhotite-chalcopyrite-pentlandite, and accessory sulphides include pyrite, sphalerite, galena and molybdenite. The main oxides are magnetite and ilmenite, with chromite present in trace amounts. The grades of PGE mineralization correlate roughly with the abundance of sulphides, particularly chalcopyrite. SEM-EDS studies reveal that most of the platinum-group minerals ("PGM") are arsenides, bismutotellurides, and arsenoantimonides. PGM are included in base metal sulphides, magnetite, and silicates and also occur along gangue mineral grain boundaries.

Finore's Joint Venture partner Nortec's exploration work over the past four years has been concentrated on the Kaukua target where they have completed about 10,000 m of drilling to date. The Haukiaho property has been subjected to exploration several times in history but no field work has been completed by Nortec to date. Historically, geophysical exploration at Kaukua and Haukiaho has consisted primarily of various IP and magnetic surveys, which has served to outline the magnetic phases of the KLIC and the typically disseminated Cu-Ni-PGE sulphide mineralization.

As part of Nortec's exploration efforts, a leading-edge 3D IP survey was carried out for Nortec by SJ Geophysics on the Kaukua property. The preliminary analysis presented by the contractor indicates an anomalous chargeability source accompanied by lower resistivity that is associated with the known mineralization. However, this interpretation should be carefully assessed by additional processing and analysis of the actual chargeability and resistivity data.

It was WGM's judgement that sufficient exploration work including drilling with data of sufficient quality along with metallurgical testwork had been compiled on these properties to warrant the preparation of a Mineral Resource Estimate for both the Kaukua and Haukiaho properties.

Historic drilling on the Haukiaho East claim area suggests similar style mineralization extents there from the adjacent Haukiaho claim area. Work to date, on the other claims is limited to only a few historic drill holes, sufficient only to verify the existence of mineralised lithologies similar to Kaukua and Haukiaho.

Mineral Resources

Kaukua

The mineral resource estimate for the Kaukua deposit is tabulated below. Ordinary Kriging was used to estimate the resources in the Kaukua deposit. Due to the presence of several metals contributing to the value of the deposit, a contained metal value approach was used to define the lower cutoff. The lower cutoff of C\$50/tonne was used.

	Mineral Resources Estimate Kaukua Deposit								
Classification	Lower	Density	Tonnes	Ni	Cu	Co	Au	Pd	Pt
	Cutoff	T/m^3	T x 1000	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
Indicated	> \$50	2.93	2,605	1,164	1,734	65	0.07	0.67	0.22
Inferred	> \$50	2.93	8,486	1,057	1,582	55	0.08	0.76	0.27

Haukiaho

The mineral resource estimate for the Haukiaho deposit is tabulated below. An inverse distance squared ("ID") method was used to estimate the resources in the Haukiaho deposit. Due to the presence of several metals contributing to the value of the deposit, a contained metal value approach was used to define the lower cutoff. The lower cutoff of C\$50/tonne was used. The resource is categorized as an inferred resource.

Mineral Resources Estimate Haukiaho Deposit

Lower Cutoff	Volume	Density	Tonnes	Ni	Cu	Co	Au	Pd	Pt
C\$ per Tonne	(m ³ x 1,000)	T/m ³	T x 1000	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
> \$50	5,863	2.86	16,768	1,518	2,418	59	0.11	0.28	0.10

Haukiaho Claim 11

The Haukiaho mineralized body extends to the adjacent claim (Haukiaho 11), which Finore has an agreement to acquire. The inferred mineral resources for this claim have been tabulated separately.

Mineral Resources Estimate Haukiaho 11 Claim Deposit Lower Cutoff Pd Volume Tonnes Ni Cu Co Au Pt Density $(m^3 x 1,000)$ C\$ per Tonne T x 1000 T/m³ (ppm) (ppm) (ppm) (ppm) (ppm) (ppm) 979 2.87 2,811 2,180 73 1,630 0.05 0.14 0.05 > \$50

Metallurgical Testwork

The PGE enriched Cu-Ni sulphide deposits at Haukiaho and Kaukua are believed to host similar styles of mineralization. Preliminary metallurgical work was carried out on the Haukiaho deposit by North Atlantic Natural Resources Ab in 2001 on material consisting of surface boulder samples. The results were similar to the more comprehensive mineralogy and metallurgical tests carried out on core samples from the Kaukua deposit in 2009 and 2010. As

the surface sample material used in the Haukiaho tests cannot be regarded as representative of the deposit it has only been acknowledged in this report and will have to be confirmed when testwork can be carried out on core material from the mineralized zones.

The results from the Kaukua mineralogical studies and the bench scale test work indicate that the nickel, copper and PGE can be concentrated with bulk sulphide flotation when the material is ground to 80% passing 75 microns with indicated recoveries of 86 to 89% Cu, 35-37% nickel, 44-50% Pt, 68-69% Pd, and 70-76% Au. The nickel recovery closely tracked the nickel mineralization associated with sulphides, with the silicates and other nickel species lost to tailings. Recognized variations in the style of mineralization were tested in four separate types of mineralization with a main composite combined in the estimated proportion of each type, being used for most of the test work. The concentrate produced graded in the order of 16 to 17% for combined Cu and Ni. Attempts to produce separate copper and nickel concentrates were not successful. Preliminary work was carried out on treating the bulk concentrate by hydrometallurgy as an option to marketing the concentrate to a smelter, appearing to be the most viable option.

Exploration Potential

The Koillismaa complex has an estimated magma volume greater than 2,000 km³. These volumes of basic magma provide large reservoirs of metals for ore forming processes and the Fennoscandian complexes are host to a number of known deposits, chrome (Kemi), Fe-Ti-V oxides (Mustavaara) and Ni-Cu-PGE sulphides (Monchegorsk). The contact-type base metal – platinum-group element mineralization hosted by the Koillismaa Complex represents significant potential for deposition of metals. Finore's properties cover about 26 km of the estimated 100 km total strike length of the zone which varies in thickness from metres to several tens of metres.

Mineralization in the contact-type deposits is particularly concentrated in structural positions, where the PGE-reef comes in contact with the marginal series due to angular discordance between marginal and layered series units. This kind of structural relationship is found in the northern Kaukua Block. Higher than average PGE tenor and frequent PGE enriched pockets have been encountered at Kaukua. The PGE reef encountered in Finore's Haukiaho claim has also been interpreted to have a similar structural setting which is supported by the relatively higher metal tenor in historic drilling.

WGM recommends that Finore continues its exploration program to upgrade the quality and quantity of the mineral resources at Kaukua and Haukiaho. Further compilation and review of all the existing data, including analytical and metallurgical test work will help to focus future exploration. Metallurgical work should also be extended to further investigate maximizing



the recovery of the PGE as well as Ni and Cu. This should go hand in hand with the selection and utilization of the most appropriate assay techniques to measure recoverable metals. Exploration to test the potential of the Lipeävaara, Murtolampi and especially Haukiaho East targets is also warranted.

More generally, quantitative interpretation of the prior geophysical surveys should be undertaken incorporating physical property data. In addition, the data from prior airborne magnetic and AEM surveys flown by GTK and other parties should be re-assessed to complement and assist exploration outside the known mineralized areas.

Given the extensive strike length (~100 km) of the favourable host for potential contact-type PGE-Au-Cu-Ni mineralization in the Koillismaa Complex as well as the Complex's potential to host reef type PGE deposits and chrome deposits, WGM encourages Finore to also explore for other potential mineralized areas within the Complex blocks, including possible associated gold mineralization in the underlying metasomatized rocks.

Recommended Budget

Following two stage exploration schema has been suggested to fulfill Finore's commitments to earn 49% interest of the Project by the Second anniversary of the Option and Joint Venture Agreement with Nortec Minerals Corp. Based on this schema Finore has contracted 10,000 m drilling program and started its execution in Haukiaho target on November, 2011.

Budget Estimate					
Task	Cost (C\$)				
Estimated budget for the First year					
Infill drilling of Kaukua 3,000 m	C\$400,000				
Infill drilling of Haukiaho 10,000 m	1,300,000				
Technical services, assays, and field office	300,000				
Permits, claim payments, landowner compensation, and legal	100,000				
Qualified Resource Estimation (NI 43-101)	100,000				
Total	C\$2,200,000				
Estimated budget for the Second year					
Infill drilling of Kaukua 4,000 m	C\$500,000				
Infill drilling of Haukiaho 4,000 m	500,000				
Scout drilling at Lipeävaara, Murtolampi, and Haukiaho East 7,000 m	900,000				
Metallurgy and engineering	300,000				
Technical services, assays, and field office	400,000				
Permits, claim payments, landowner compensation, and legal	300,000				
Qualified Resource Estimation (NI 43-101)	100,000				
Total	C\$3,000,000				
GRAND TOTAL	C\$5,200,000				

2. INTRODUCTION AND TERMS OF REFERENCE

2.1 INTRODUCTION

This report has been prepared for Finore Mining Inc. ("Finore") in compliance with Canadian National Instrument 43 101 ("NI 43-101") standards for disclosure for mineral projects. This report updates the "Technical Review of Kaukua, Haukiaho, Lipeävaara, and Murtolampi Claim Areas, Finland" initially ("Initial Report") prepared for Finore's Joint Venture partner Nortec Minerals Corp. ("Nortec") and dated March 14, 2011. Subsequent to that date on August 30th Nortec had entered into Option and Joint Venture Agreement with Otterburn Ventures Inc., who on September 27th completed its name change to Finore Mining Inc. The Initial Report presented estimated Mineral Resources of the Kaukua and Haukiaho deposits, following the guidelines, standards and definitions adopted by the Council of the Canadian Institute of Mining Metallurgy and Petroleum ("CIM"). The mineral resources were adjusted to reflect changes in metal prices since the preparation of the original mineral resource. These deposits form part of the Finore's Läntinen Koillismaa ("LK") Project. Finore's intended use of this report includes filing with securities regulators to support public disclosure, pursuant to Canadian provincial securities legislation, and, where required to comply with Finore's Finnish reporting obligations including disclosure on SEDAR and, if Finore chooses to do so, to support the requirements of the multiple listing applications of Finore to other stock exchanges, in addition to its current listing on Canadian National Stock Exchange ("CNSX").

The Initial Report and this independent report is prepared by Dr. Markku Iljina (EurGeol), Clifford J. Duke, P.Eng, Ross MacFarlane, P.Eng, and reviewed by Joe Hinzer, P.Geo., all Qualified Persons as defined by the Canadian National Instrument 43-101 and the companion policy 43-101CP.

2.2 TERMS OF REFERENCE

Watts, Griffis and McOuat Limited ("**WGM**") was engaged by Finore Mining Inc. to prepare an NI 43-101 technical report and Mineral Resources estimate on their LK Project in Finland suitable for filing with provincial regulatory agencies, the TSX-V Exchange and on SEDAR.

The scope of work as requested by Finore includes:

Report Preparation

WGM updating its previous technical report prepared for Nortec in March 2011, as required. WGM will prepare its NI 43-101 Technical Report and Mineral Resource estimate in



compliance with the rules and regulations pursuant to provincial securities regulatory bodies, other stock exchanges, including but not limited to the Toronto Stock Exchange and TSX Venture Exchange and on SEDAR.

Data Verification and Site Visit

As required by NI 43-101 a WGM QP will carry out a site visit as part of its technical due diligence review. WGM will not be conducting additional verification sampling since there have been no material changes since its previous reporting on this property. WGM will review the property ownership documentation and status of claims or agreements underlying the property, but will rely on the information provided by Finore.

2.3 SOURCES OF INFORMATION

The data used for the Mineral Resource Estimation, including the drill hole databases and topographic surveys of the Initial Report, was provided by Finore's present Joint Venture partner Nortec and adequately verified by the authors. Other sources of information are referenced throughout the document.

Sections 4 to 14, and of this report are mainly based on documentation provided by Finore and their Joint Venture partner from the Initial Report.

Drill hole assay results, lithological logs, geophysical data, metallurgical test results, and resource estimates completed by others on these properties, prior to the Nortec work were provided by GTK. Metallurgical studies were performed by SGS Lakefield Research Limited metallurgical laboratory in Vancouver and Lakefield, Canada, whose reports were also made available by Nortec.

2.4 DETAILS OF PERSONAL INSPECTION OF THE PROPERTY

Personal site visits were carried out by Markku Iljina on October 19 and December 20, 2011, to assess the project field activities, staffing and properties. These site visits did not include data verification or re-sampling as this was carried out by the authors for the preparation of the Initial Report for the Finore joint Venture partner Nortec and there have been no material changes since the previous reporting on this property except for the application of additional new claims.

2.5 UNITS AND CURRENCY

Metric units are used throughout this report unless specified otherwise, and recorded as: centimetres ("cm"), metres ("m"), kilometres ("km"), grams ("g") and metric tonnes ("t"); one million metric tonnes is designated as "1 Mt". Areas are reported in square kilometres ("km²"") or hectares ("ha") – 1 km² is equivalent to 100 ha. Platinum-Group Elements ("PGE") are quoted as: platinum ("Pt"), palladium ("Pd"), rhodium ("Rh"), iridium ("Ir"), ruthenium ("Ru"), and osmium ("Os").

Currencies used in this report are quoted in Canadian dollar ("C\$"), United States dollars ("US\$") and Euro (" \notin "). At the time of writing this report, the C\$ was approximately at par with the US\$. The US\$ and " \notin " exchange rate at the time of the report is approximately 0.74 (US\$/ \oplus).

3. RELIANCE ON OTHER EXPERTS

Watts, Griffis and McOuat Limited has prepared this report for Finore Mining Inc. The information, conclusions, and opinions contained in the sections of 5 to 14 of this report are based on the Initial Report to Finore's Joint Venture partner Nortec, in which Sections 9 to 12 were based on the Nortec in-house preliminary technical report by Ian Laurent and Turkka Rekola (2010).

Information for the property description, section 4.2., is provided by the Finore Mining Inc.

The authors, have reviewed the data for this and the Initial Report, and believe it to be complete and represent fairly the information presented pertaining to the property and that its interpretations and representations based thereon are valid, however WGM is unable to certify that the data provided to it, was free of omissions, errors, false statements, or misrepresentations, which may have influenced its conclusions.

WGM has reviewed the available information from government web sites in Finland and has been provided information from Finore pertaining to the current status of the land holdings as well as environmental and political factors. While WGM and the authors believe this data to be correct and factual WGM and the authors do not and are not qualified to provide an opinion on the legal status of the land titles and adequacy and compliance status of environmental and related permitting.

WGM is the copyright holder for this report and except for the purposes legislated under provincial securities laws any use of this report by any third party is at that party's sole risk.

4. PROPERTY DESCRIPTION AND LOCATION

4.1 LOCATION

The LK Project is situated in north central Finland approximately 60 km north of the company's exploration office in the village of Taivalkoski. The property is 130 km eastsoutheast of Rovaniemi and 160 km north-east of the port town of Oulu. The central point of the LK Project is located at longitude 28°10'29.13"E; latitude 65°56'46.36"N (Figure 1).

4.2 **PROPERTY DESCRIPTION**

Finore's Kaukua Property consists of three contiguous mineral claims, covering a total of 262.67 ha, and the Haukiaho Property has four contiguous mineral claims covering 372.34 ha (Table 1 and Figure 2). The original acquisition of the claims was made by Akkerman Exploration by ("AEbv") by map-staking. Applications for a further 3,150 ha have been submitted since that by Nortec to the Ministry of Employment and the Economy of Finland ("TEM"), and are waiting to be registered (Table 2, and Figure 2). None of the claims or claim applications are adjacent to nature conservation areas, with the closest being Kaukua North 3, which is 1.8 km from a Natura 2000 program area.

WGM has checked information sources provided by the Ministry of Employment and the Economy of Finland that show the claims have been granted and claim applications registered on those dates indicated in Tables 1 and 2. While WGM has no reason to doubt the claim validity WGM has not and is not qualified to conduct legal title searches.

IADLE 1.									
EXPLORATION CLAIMS - REGISTERED									
Target	Claim Name	Claim	Area	Application Date	Registration	Expiry Date			
		Number	(ha)		Date				
Kaukua	Kaukua 1	8401/1	99.70	16.05.2007	11.07.2008	11.07.2013			
Kaukua	Kaukua 2	8401/2	81.09	16.05.2007	11.07.2008	11.07.2013			
Kaukua	Kaukua 3	8401/3	78.20	16.05.2007	11.07.2008	11.07.2013			
Haukiaho	Haukiaho 1	8366/1	95.3	20.03.2007	21.10.2008	21.10.2013			
Haukiaho	Haukiaho 2	8366/2	89.7	20.03.2007	21.10.2008	21.10.2013			
Haukiaho	Haukiaho 3	8676/1	88.3	01.09.2008	07.04.2009	07.04.2014			
Haukiaho	Haukiaho 4	8676/2	99	01.09.2008	07.04.2009	07.04.2014			

TARLE 1

Source: Finland Ministry of Employment and the Economy, Oct. 28th, 2011

Watts, Griffis and McOuat FIN LKR / FIN_01_Loc_Map.cdr Last revision date: Tuesday 25 October 2011 *32*° 24° 26° 28° 30° Detailed $(\pm$ Мар lath wegiai Kittilä Sed Northern Sodankylä Europe SWEDEN Kolari FINLAND (EU Lohiniva Pelkosen S40 + NORWAY RUSSIAN 5 67 ESTONIA Salla Meltaus. ģ Mosco DENMARK Cor SWEDEN Pello Kemijärvi LATVIA loutsijärv LITHUANIA Vilnius BELARU 82 Œ ARCTIC CIRCLE Kemijärvi Rovaniemi FINLAND 66° Ylitornio Kuusamo Cervold **RUSSIA** 66° Ranua Tornio LK 20 100 0 Kemi PROJECT 431 Taivalkoski Kilometres Kuivaniemi UTM FINL-KKJ3 Zone 3 Tannila Pudasjärvi 65° 20 Haukipudas Hailuoto Oulu 65°-(+ Puolonka + Ammänsaari Suomussalmi Muhos Gulf of Liminka 83 Ulajarvi Bothnia Hyrynselmi Vaala Ristijārvi Raahe Rantsila Saraishierni Pallacro Pyhäjoki Vihanti Kestilä Qulujärtis 1 Oulainen ajaani 64°-Kalajoki Kuhmo Haapavesi Otanmäki Alay Ylivieska Himanka 88 Sukeva 64° Kärsämäki Nivala Kannus 368 ola A Haapajärvi Kälviä Toholampi Valtimo Nurmes Pyhajaru Kiuruves lisalmi Reisjärvi lieksa Rautavoara Terjärv Kaustinen Cestijärvi lilby Philipudgs Kinnula Evijarvi Figure 1. 13 Alahärmä **FINORE MINING INC.** Lappajārvi erho Vimpeli Mitasaari WITCH Lappa järvi Kyyjärv 63° apua **LK Project** Vesanto Alajärvi Karstula Finland, European Union Soini . Konginkangas • Suo Koortane Lehtimäk **Location Map** Suolahti ٥. T Cautala Graphics by Watts, Griffis and McOuat Limited After Ezilon (2009) 24° 26°





Target	Claim Name	Claim Number	Application Date
Kaukua	Kaukua 4	8713/1	26.11.2008
Kaukua	Kaukua 5	8713/2	26.11.2008
Kaukua	Kaukua 6	8713/3	26.11.2008
Kaukua	Kaukua 7	8713/4	26.11.2008
Kaukua	Kaukua 8	8713/5	26.11.2008
Kaukua	Kaukua 9	8713/6	26.11.2008
Kaukua	Kaukua 10	8713/7	26.11.2008
Kaukua	Kaukua 11	8713/8	26.11.2008
Kaukua	Kaukua 12	8713/9	26.11.2008
Kaukua	Kaukua 13	8713/10	26.11.2008
Kaukua	Kaukua 14	8713/11	26.11.2008
Kaukua	Kaukua 15	8713/12	26.11.2008
Murtolampi	Kaukua North 1	9167/1	25.07.2008
Murtolampi	Kaukua North 2	9167/2	25.07.2008
Murtolampi	Kaukua North 3	9167/3	25.07.2008
Kaukua	Kaukua West 1	9168/1	25.07.2008
Kaukua	Kaukua West 2	9168/2	25.07.2008
Kaukua	Kaukua East 1a	8664/1	25.07.2008
Kaukua	Kaukua East 1b	8664/2	25.07.2008
Kaukua	Kaukua East 2	8664/3	25.07.2008
Kaukua	Kaukua East 3a	8664/4	25.07.2008
Kaukua	Kaukua East 3b	8664/5	25.07.2008
Kaukua	Kaukua East 4	8664/6	25.07.2008
Lipeävaara	Lipeävaara 1a	8665/1	25.07.2008
Lipeävaara	Lipeävaara 1b	8665/2	25.07.2008
Lipeävaara	Lipeävaara 1c	8665/3	25.07.2008
Lipeävaara	Lipeävaara 2	8665/4	25.07.2008
Lipeävaara	Lipeävaara 3a	8665/5	25.07.2008
Lipeävaara	Lipeävaara 3b	8665/6	25.07.2008
Lipeävaara	Lipeävaara 4	8665/7	25.07.2008
Lipeävaara	Lipeävaara 5	8665/8	25.07.2008
Lipeävaara	Lipeävaara 6	8665/9	25.07.2008
Lipeävaara	Lipeävaara 7	8665/10	25.07.2008
Lipeävaara	Lipeävaara 8a	8665/11	25.07.2008
Lipeävaara	Lipeävaara 8b	8665/12	25.07.2008
Haukiaho East	Haukiaho East 1	9145/1	25.01.2011
Haukiaho East	Haukiaho East 2	9145/2	25.01.2011
Haukiaho East	Haukiaho East 3	9145/3	25.01.2011
Haukiaho East	Haukiaho East 4	9145/4	25.01.2011
Haukiaho East	Haukiaho East 5	9145/5	25.01.2011
Haukiaho	Haukiaho 11	8704/1	30.10.2008

TABLE 2.EXPLORATION CLAIMS - APPLICATIONS

Source: Finland Ministry of Employment and the Economy, Oct 28th, 2011.



There is no requirement to legally survey the boundaries of claims or claim applications in Finland; instead they are assigned Finnish coordinates by the Registry authority.

There is an old 1960s Outokumpu Oy ("**Outokumpu**") test mine pit at Haukiaho. The ore was brought to a concentrator located 7 km to the south. There are also several trenches made by the same company (c.1960-1990) on Finore's property. Many of these have been reclaimed. The now closed, fresh water canal, for the Mustavaara Fe-Ti-V mine (Figure 3) runs through Finore's property. Investigations to re-open the Mustavaara mine are currently taken by Mustavaaran kaivos Oy. In the Environmental Impact Assessment (ympäristövaikutusten arviointimenettely, YVA) the process water intake for the Mustavaara mine is from the River Sirniönjoki, which runs through Finore's Haukiaho East property. The water intake is upstream from Haukiaho East. WGM is not aware of any environmental liabilities associated with the project.

There are three types of licenses necessary to bring a mine from exploration to production in Finland. These are: mining permit, environmental permits (for rights to water supply and waste management), and building permits (for project infrastructure). In addition to these a number of other permits are necessary before the start of mining operations.

4.3 OPTION AND JOINT VENTURE AGREEMENTS

The following Option and Joint Venture agreements, in chronological order, are documented by Finore for their properties:

- 1. Earn-in agreements between Nortec Ventures Corp. and Akkerman Exploration by (Kaukua property) dated on July 26, 2007, and July 29, 2008.
- 2. Sale and purchase agreement between Nortec Ventures Corp. and Kylylahti Copper oy (Vulcan Resources Ltd) dated on October 7, 2009.
- 3. Option and Joint Venture Agreement between Nortec Minerals Corp. and Otterburn Ventures Inc. dated August 24th, 2011.

Subsequent to these agreements Nortec Ventures Corp. has changed its name to Nortec Minerals Corp. and Otterburn Ventures Inc. to Finore Mining Inc. Since agreement 2, Vulcan Resources ltd has merged with Universal Resources ltd.

While WGM has no reason to doubt validity of information on Option and Joint Venture agreements provided by the Finore WGM has not and is not qualified to conduct legal search of agreements.



4.3.1 EARN-IN AGREEMENT BETWEEN NORTEC VENTURES CORP. AND AKKERMAN EXPLORATION BV (KAUKUA PROPERTY)

In a Memorandum of Understanding ("MOU") dated July 26, 2007 between Akkerman Exploration bv ("**AEbv**") and Nortec Ventures Corp. (later Nortec Minerals Corp.) as amended October 26, 2007, January 29, 2008, March 26, 2008 and May 28, 2008, AEbv granted Nortec the exclusive right to enter into an Option Agreement ("Kaukua OA") dated July 29, 2008 pursuant to which Nortec has the option to earn a seventy percent (70%) participation interest in the Kaukua Property. As part of the MOU, Nortec had to incur Initial Exploration Expenditures (the "Minimum Expenditure") of O 50,000 on or before July 29, 2008 and to earn its 70% interest in the Kaukua property it must incur a further \oiint{A} 50,000 in exploration expenditures, for a total of O 0,000, before July 29, 2011. WGM understands that all these payments have been made.

In addition to incurring the above Initial Exploration Expenditures, Nortec will pay AEbv each of the following option premium amounts during the Earn in Period:

- i. within 15 days from the date the Licences were issued: €30,000 in cash;
- ii. within 15 days from the first anniversary of the MOU Date: €60,000; and,
- iii. On or before the second anniversary of the MOU Date: €100,000.

Nortec completed the Initial Exploration Expenditures before the second anniversary of the MOU date, and therefore was not required to make the second Annual Payment.

In the event that Nortec completes a Bankable Feasibility Study or incurs additional Exploration Expenditures in the amount of 2,500,000, within the three year period, Nortec will be deemed to hold a 80% Participation Interest and AEbv will be deemed to hold the remaining 20% Participation Interest. There was no net smelter return ("NSR") royalty fee included in this agreement.

On September 2009, Nortec signed an addendum to the current Kaukua OA with AEbv. The addendum stipulated that AEbv will transfer all of its remaining equity interest to Nortec, whereby the Company will obtain the full and undivided 100% ownership and control of the Kaukua Project in exchange for the additional 20% ownership. AEbv was granted a 2% Net Smelter Royalty ("NSR") on any future production from the property and retains the pending value added tax ("VAT") refunds applied by AEbv on VAT paid by Nortec on the expenditures incurred on the Property since 2007. Nortec has the option to purchase 1% of the NSR from AEbv for € million.



By the end of August 2009, Nortec had incurred over C\$3 million in exploration expenses on the Kaukua Property. This equated to an earn-in interest for Nortec of 74.2% and a holding interest for AEbv of 25.8%.

Based on the encouraging results from the Kaukua Main Zone, Nortec decided to proceed with the full 100% acquisition of the Kaukua Property. The 100% interest in the Kaukua Property has now been transferred to the Finland registered company, Nortec Minerals Oy, which is a 100%-owned subsidiary of Nortec Minerals Corp.

4.3.2 SALE AND PURCHASE AGREEMENT BETWEEN NORTEC VENTURES CORP. AND KYLYLAHTI COPPER OY (VULCAN RESOURCES LTD)

As part of its ongoing consolidation of PGE+Au-Cu-Ni projects in north central Finland, Nortec signed a sale and purchase agreement with Vulcan Resources Ltd ("**Vulcan**"). This agreement has allowed Nortec to acquire 100% of the Haukiaho Property in exchange for ten million (10,000,000) common shares in Nortec Ventures. Transfer of eight million have been executed for the transaction of Claims Haukiaho 1-4 from Vulcan to Nortec and the remaining two million will be transferred, when the application for Claim Haukiaho 11 is granted by the Ministry and transferred to Nortec.

4.3.3 OPTION AND JOINT VENTURE AGREEMENT BETWEEN NORTEC MINERALS CORP. AND OTTERBURN VENTURES INC.

The Option and Joint Venture Agreement ("OA") between Nortec Minerals Corp. and Otterburn Ventures Inc. gives Otterburn the option to earn up to an 80% interest in Nortec's Läntinen Koillismaa project. Under the terms of the "OA", Otterburn can earn its interest in the LK Project on payment of \$10.5 million in cash and securities to Nortec and by expending \$10 million on exploration within 3 years of signing the Option Agreement. The effective date ("Effective Date") of the OA shall be the date which is the later of the date CNSX and TSX Venture Exchanges the "OA" and the date of the "OA". By the acceptance made by TSX Venture Exchanges the effective date became 7th of September, 2011 ("Effective Date").

Otterburn can earn an initial 49% interest in the LK Project by: a) making payments totalling \$4.5 million in cash to Nortec; b) issuing the equivalent of \$2 million in shares of Otterburn; and, c) spending \$5 million on exploration within 24 months, including a firm commitment to spend a minimum \$2 million in the first 12 months. The payments of cash and securities will be carried out in 4 (four) instalments over 18 months from the Effective Date ("Option 1").

Otterburn can earn the remaining 31% interest by: a) making a payment of \$3 million in cash to Nortec on or before the 3 year anniversary from the Effective Date; b) issuing the equivalent of \$1 million in shares of Otterburn to Nortec; and, c) spending a further \$5 million on exploration on the LK Project ("Option 2").

Table 3 shows the schedule of the time-based payments and exploration expenditures.

TABLE 3.									
TIME BASED PAYMENTS AND EXPLORATION EXPENDITURES									
Dates	Cash	Shares	Direct Exploration Work Program						
Option 1 (49% Interest in the Properties)									
On or before the 5 th day following the Effective Date	\$900k	\$500k	N/A						
Sixth month after the Effective Date	\$1.0 mil	\$500k	N/A						
On or before the 12 th month after Effective Date	\$1.25 mil	\$500k	\$2.0 mil						
On or before the 18 th month after Effective Date	\$1.25 mil	\$500k	N/A						
On or before the 24 th month after Effective Date	N/A	N/A	\$3.0 mil						
Option 2 (80% Interest in the Properties)									
On or before the 36 th month after Effective Date	\$3.0 mil	<u>\$1.0 mil</u>	<u>\$5.0 mil</u>						
TOTAL	\$7.5 mil	\$3.0 mil	\$10.0 mil						

Otterburn will also issue 400,000 free trading shares from its treasury upon registration of the Haukiaho East claim applications by the Ministry of Employment and the Economy, Government of Finland. Nortec will retain a 2% Net Smelter Royalty on the Haukiaho and Haukiaho East claims. Otterburn has the right to purchase 1% for €1,000,000.

TSX Venture Exchange has accepted for filing the Option and Joint Venture Agreement between Nortec and Otterburn.

4.4 FINNISH MINING ACT

New Mining Act, in power since 1st of July, 2011, defines 'Exploration Permit' (malmietsintälupa) and 'Mining Permit' (kaivoslupa). Prior to acquiring an Exploration Permit a company can do a 'Reservation notification' (varausilmoitus) and can be granted the Reservation Decision (varauspäätös). The Reservation Decision gives a priority right to the company to apply for an Exploration Permit. Reservation Decisions also allow the company to conduct diamond drilling and light exploration field work with the landowner's prior consent. The fees of the Exploration Permit include EUR 20/hectare/year (for the first four years) for the compensation to landowner, and collateral to State, the amount of which will be decided by the Registry authority. The Exploration Permit gives to company the full rights to do heavier exploration work including test mining and construction of temporary roads and buildings if so permitted in the Exploration Permit granted by the Registry authority.



The new Mining Act will not apply to existing claims. However, the Act will affect new Exploration Permits, which have been applied for, but not granted before by the effective date of the new Act. Claims will be granted compliant to old Act in all other respects but the EUR 20/hectare/year compensation to landowner is applied while the claim fee defined by the old Act and paid to the State would be abolished. No collateral is required for Exploration permits applied prior to effective date of the new Act.



5. ACCESS, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 ACCESS

The Kaukua, Haukiaho, Haukiaho east, Lipeävaara, and Murtolampi claim areas are located in the municipality of Posio, Finland between the municipal centers of Posio and Taivalkoski (see Figure 1). There are a public main and by-roads crossing or touching all targets and access roads reach many corners of the property. Public roads are kept open all year round and the forest roads are maintained only during periodic logging activities. The main road between Posio and Taivalkoski is paved.

5.2 CLIMATE

Weather conditions are characteristic of the northern Fennoscandian climate with temperate summers and cold winters. During the summer months (June-August), temperatures range from 10°C to 25°C, and during the winter months (November-April) between -5°C to -30°C. The terrain is snow covered (0.6 to 1.2 m) in winters and bogs, lakes and rivers freeze every year for 4 to 5 months. The annual rainfall is 550 mm, distributed evenly throughout the year. Weather conditions do not interfere with open pit or underground mining anywhere in Finland. Water is plentiful around the properties, but permission must be obtained to use it.

5.3 LOCAL RESOURCES AND INFRASTRUCTURE

The nearest major city is Oulu (some 150,00 inhabitants), which is about 200 km away, and the towns of Rovaniemi and Kuusamo are located about 150 and 100 km from the claim areas, respectively. All these three centers have airports with daily scheduled flights to Helsinki, capital of Finland. The nearest major railway station is located in Rovaniemi. High voltage power line (110 kV) crosses the Haukiaho and Lipeävaara groups of claims and runs 4.5 km on the western side of the Kaukua mineralized body.

Region has mining heritage as the Mustavaara Fe-Ti-V mine (Figure 3) was running in 1974-1985. This mining generated mining related metal workshops the Telatek oy's factory being the flagship among these. Telatek oy is a producer of installation, maintenance, quality control and workshop services.



5.4 PHYSIOGRAPHY

The Haukiaho and Haukiaho east claim areas are mainly flat, boggy land, approximately 240 m asl, and are best accessible using crawler vehicles/forest tractor, Taivalkoski-Posio mainroad crosses the property along the border between claims Haukiaho 11 and Haukiaho east 1. The rivers Suojoki, Haukijoki and Löytöjoki crossing the claim area are rather wide and difficult to cross using vehicles even during the winters. However, the various parts of the claim areas are easily accessible by access tracks and nearby forest roads.

The Kaukua claim area is hilly about 200-260 m (asl) and partially crossed by an approximately 700 m long, glaciofluvial erosional channel with steep walls 35 m high and a pond in the depression. The terrain on either side of the channel is easily accessible by crawler vehicles/forest tractors. Eastern Kaukua and the Murtolampi claims areas are flat forests while large portions of western Kaukua and Lipeävaara claim areas are covered by lakes.

Vegetation is typical of the pine-tree dominated Fennoscandian coniferous forest belt. Spruce and birch are present in smaller amounts. The forest ground is covered by thin moss while the bogs are covered by a layer of peat.

5.5. LAND USE FORMS IN THE PROPERTIES

The great majority the property areas is in uninhabited forest subjected to logging from time to time. The Haukiaho and Haukiaho east Targets are wholly devoid of habitation. Some agriculture is taking place in all other target areas except Haukiaho.



6. HISTORY

This Section describes the exploration activities undertaken prior to acquisition of the properties by Finore's Joint Venture partner Nortec Minerals Corp. in 2007.

Copper and nickel showings hosted by the marginal series of the Western Intrusion of the Koillismaa Layered Igneous Complex were first documented by the Geological Survey and Outokumpu Oy in the early 1960s. The latter also carried out an extensive drilling campaign. This drilling campaign consisted of 75 holes and provided about 12 km of core. Thirty three of these holes were drilled on Nortec's Haukiaho and Haukiaho east properties where a small scale test mining operation was also undertaken. The original exploration carried out by Outokumpu Oy located sulphides in the Haukiaho, Haukiaho east and Lipeävaara areas. However, the first outcrop observations of PGE enriched sulphides from the Kaukua and Murtolampi areas were not discovered until the late 1980s by Outokumpu.

Exploration in the 1960s concentrated exclusively on copper and nickel. PGE-focused exploration started in the early 1980s, when highly anomalous PGE-enriched boulder samples (PGE+Au >10 ppm) were reported from the Haukiaho area. This was followed by detailed mapping, surface sampling and geophysical surveys, but no further drilling.

Outokumpu's completed a historical mineral resource in 1983, based on resampling of old drill core (Lahtinen 1983 and 1985). The estimate for Haukiaho to the depth of 100 m was 7.0 million tonnes @ 0.24% Ni, 0.38 Cu, 0.6 g Pd/t, 0.2 Pt and 0.2 Au using a cutoff grade of 0.7 wt% (Cu+2*Ni). This resource was made up of nine separate ore bodies ranging 0.2-2.3 million tonnes in size. These resources are historical in nature, not compliant with NI 43-101 and have not been reviewed by WGM and should not be relied upon.

In 1996, GTK started an extensive research and exploration program of the entire Koillismaa Complex. In the course of this program, drilling extended onto every one of the current Finore properties.

In 2000, the Swedish junior exploration company North Atlantic Natural Resources AB ("NAN") signed a contract with GTK and the Ministry of Trade and Industry (predecessor of TEM) of Finland ("KTM") optioning the claims. NAN conducted geophysical ground surveys on Nortec's present Haukiaho, Murtolampi, and Kaukua claim areas, but only drilled the Haukuaho area. Fugro Ltd flew a low-altitude aerial geophysical survey covering the area of Haukiaho, Haukiaho east, Lipeävaara and Kaukua. NAN also sent a 50 kg sample of



Haukiaho ore (surface boulders) for metallurgical tests to Lakefield Research Ltd in Canada before withdrawing from Koillismaa project in late 2002.

Detailed magnetic surveys have outlined the principal segments or blocks of this portion of the basal KLIC, and helped determine probable continuity and discontinuities. IP surveys have outlined a consistent polarisable unit which correlates with the mineralization encountered by the drilling.

The Kaukua, gradient IP and ground magnetic surveys have outlined the mineralized marginal units with good definition as a persistent, linear source of moderately high magnetic susceptibility and moderate chargeability, consistent with the descriptions of typical disseminated Cu-Ni-Fe sulphide mineralization. There is some variability displayed along strike, which may indicate thinner and/or weaker mineralization, or minor disruptions related to late cross faults.

The research and exploration program, by GTK and NAN (1996-2002), resulted in the delineation of two highly mineralized areas in the marginal series. These two areas, Haukiaho and Kaukua, were subjected to further exploration activity in 2004 including 2,628.20 metres of diamond drilling.

Historical mineralogical and metallurgical studies show a strong correlation between the sulphide content and the Ni, Cu and PGE tenor.

WGM prepared resource estimates for the Kaukua and Haukiaho deposits in February 2011. Those estimates are tabulated in Tables 4, 5 and 6.

TABLE 4. MINERAL RESOURCE ESTIMATE KAUKUA DEPOSIT									
Classification	Lower	Density	Tonnes	Ni	Cu	Со	Au	Pd	Pt
	Cutoff	T/m ³	T x 1000	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
Indicated	>C\$50	2.93	2,887	1,158	1,698	65	0.07	0.65	0.21
Inferred	> C\$50	2.93	9,225	1,047	1,546	55	0.08	0.73	0.26



TABLE 5. MINERAL RESOURCE ESTIMATE HAUKIAHO DEPOSIT

Lower Cutoff	Volume	Density	Tonnes	Ni	Cu	Со	Au	Pd	Pt
\$ per Tonne	$(m^3 x 1,000)$	T/m ³	T x 1000	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
> C\$50	6,358	2.86	18,179	1,500	2,404	56	0.11	0.26	0.09

TABLE 6. MINERAL RESOURCE ESTIMATE HAUKIAHO 11 CLAIM DEPOSIT

Lower Cutoff	Volume	Density	Tonnes	Ni	Cu	Со	Au	Pd	Pt
\$ per Tonne	(m ³ x 1,000)	T/m^{3}	T x 1000	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
> C\$50	881	2.89	2,542	1,593	2,205	62	0.04	0.12	0.04



7. GEOLOGICAL SETTING AND MINERALIZATION

7.1 GEOLOGY OF FINLAND

Finland lies within the predominantly Neoarchaean and Palaeoproterozoic Fennoscandian Shield, which is exposed over an area of more than 1 million km². The Fennoscandian Shield bedrock is subdivided into three broad domains, which consist of three crustal units, a Neoarchaean cratonic nucleus, flanked, on either side by Palaeoproterozoic mobile belts (Figure 3). To the north-east of the Karelian Craton, several distinct crustal units of both Proterozoic and Archean age (Kola–Lapland domain) record the amalgamation of Lapland granulite belt and greenstone belts to the Karelian Craton at around 1.9 Ga as a collisional tectonic regime. In contrast, the Svecofennian domain, to the SW of the Karelian Craton, is entirely Palaeoproterozoic in age, and indicates relatively rapid formation and accretion of new crust between about 1.97–1.80 Ga.

The Karelian Craton is characterized by extensive granitoids and higher grade gneiss domains surrounding narrow northerly trending greenstone belts. The major magmatic and metamorphic event had taken place around 2.84 Ga, although rocks up to 3.5 Ga are present in the Craton. Greenstone sequences of lower metamorphic grade were formed after this event. These greenstone sequences were subsequently deformed and intruded by tonalitic to granitic magmas between 2.75–2.69 Ga. The Kuhmo and Suomussalmi greenstone belts are the most extensive and well preserved supracrustal units in the Archean of Finland, outcropping over a strike length of nearly 200 km, though seldom exceeding 10 km in width. Both greenstone belts contain abundant tholeiitic and komatiitic volcanic rocks, together with related intrusive and subvolcanic cumulates, and lesser felsic volcanic and volcanoclastic units.

The northern part of the Karelian Craton, records a prolonged and episodic history of sedimentation, rifting and magmatism throughout the Early Palaeoproterozoic. The Central Lapland greenstone belt is the largest mafic-dominated province preserved in the entire shield. A sequence of bimodal mafic and felsic volcanics dated at around 2.5 Ga unconformably overlie the Archean basement and represent the onset of rifting. Continued rifting of the Archean crust resulted in the widespread emplacement of mafic and ultramafic layered intrusions between 2.5–2.4 Ga clustered to form Tornio-Näränkävaara Layered Intrusion Belt ("TNB") in Finland (see Figure 3). These TNB intrusions host the important Kemi chromite mine, and also contain widespread PGE-Ni-Cu enrichment. Clastic sediments discordantly overlie these layered intrusions, with further episodes of mafic magmatism





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recorded as sporadic lavas and sills dated at around 2.2 Ga, 2.10 Ga, and 2.05 Ga. The latest stage includes the Kevitsa Ni-Cu-PGE deposit and coincided with rifting and subsidence of the Karelian Craton margin.

7.2 REGIONAL GEOLOGY OF KOILLISMAA LAYERED IGNEOUS COMPLEX

The Koillismaa Layered Igneous Complex ("KLIC") of north central Finland (Figure 4) is part of the 2.5-2.4 Ga Fennoscandian Early Palaeoproterozoic layered complexes that were emplaced as part of a globally recognized episode of igneous activity that introduced layered intrusions and mafic dyke swarms worldwide. These igneous formations have been found to have potential for Cr, Cu-Ni-PGE sulphide, PGE and Fe-Ti-V oxide mineralization. Examples of well-known economic deposits of these types are the ones hosted by the South-African Bushveld, Russian Monchegorsk and Finnish Tornio-Näränkävaara belt of intrusions (Iljina and Hanski 2005).

The KLIC makes up the eastern most portion of the Tornio-Näränkävaara Belt and consists of two main sectors, the Näränkävaara Intrusion (see Figure 3) in the east and the Western Intrusion (Figure 4). These two intrusions were connected by an unexposed connecting dyke, which is shown as a strong positive magnetic and gravity anomaly (Alapieti 1982). This connecting dyke has also been interpreted as a Feeder Intrusion.

The Western Intrusion is rather thin despite its greater area with an average vertical thickness for the three major blocks of only 1-3 km, but the exposed igneous stratigraphy is as much as 3 km. The Western Intrusion is capped with felsic volcanic rocks that have recrystallized to form granophyre unit up to 1 km in thickness. In contrast, the footwall granite gneisses at the base of the intrusion have been partially melted and pervasively metasomatically altered to albite-quartz rock. Gabbroic igneous rocks, chemically different than the layered sequence, form the footwall locally such as underneath the Porttivaara, Tilsa, and Kaukua Blocks.

The Western Intrusion has been uplifted and broken into a number of blocks (see Figure 4) due to multiphase tectonic events. The Western Intrusion has been folded slightly and possibly even collapsed during the earliest, extensional, tectonic regime to form a synclinal structure between the Kuusijärvi and Lipeävaara Blocks (Karinen 2010). The supracrustal sequence deposited along this structure, is known as the Kuusijärvi synform. The igneous layering of the intrusive blocks to the south of the synform, dip to the north, (Tilsa to the NW) while the northern blocks dip to the south (Kaukua and Murtolampi) or west-southwest (Lipeävaara).

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The Cumulus stratigraphy of the Western Intrusion is divided into the Marginal Series or Zone and the overlying Layered Series. The Marginal Series can be up to a couple of hundred metres in thickness and be made up of differentiated cumulates ranging from gabbros and pyroxenites to peridotites. The Marginal Series can be repeated on surface due to tectonic movements at Porttivaara and Tilsa Blocks, in particular. The Layered Series is composed entirely of mafic cumulates.

7.2.1 ECONOMIC GEOLOGY OF THE KOILLISMAA COMPLEX

All mineralization types characteristic of layered mafic intrusions can be found in the Tornio-Näränkävaara Belt. These include accumulations of chromite and PGE-enriched base metal sulphides in the bottom parts of the intrusions (contact-type PGE deposits), stratiform PGE, chromite and magnetite enrichments higher in the cumulate sequences, and offset PGE-base metal deposits below the intrusions (Iljina and Hanski 2005). A world-class chrome deposit is located at the base of the Kemi intrusion and a magnetite gabbro layer of the KLIC has been exploited for vanadium. Potentially world-class reef-type PGE deposits are distributed among the intrusions of Penikat and Narkaus (Portimo Complex). Contact type PGE deposits show exceptionally high PGE concentrations in places, relative to what is typically found in basal sulphide mineralization. The location of the reefs and better grade contact-type deposits seems to be controlled by the megacyclic structure of the intrusions and/or periodic emplacement of magma of slightly variable compositions.

There are three principal mineralization types that have taken place in the Western Intrusion. The Rometölväs Reef in the layered series, forms erratic and low-grade base metal and PGE zone, approximately 20 m in thickness. These also contains even and fine-grained xenoliths (microgabbronorites), gabbropegmatites and anorthositic segregates, all in a gabbronoritic adcumulate. A thick (200 m) magnetite gabbro layer is found higher up in the layered sequence, and this layer has been exploited for its vanadium content at the Mustavaara Mine. However, the contact-type sulphide-PGE deposits, at the bottom and margins of every intrusive block of the Western Koillismaa Intrusion have the largest areal extent (see Figure 4). Due to tectonic sinking of the central part of the original Western Intrusion, the bottom parts of the intrusion and related base metal - PGE enrichment zones are exposed on the southern margins of the intrusive blocks of Pirivaara, Syöte, Porttivaara, and Kuusijärvi and on the northern to northeastern margins of the Lipeävaara, Kaukua, and Murtolampi blocks. Total strike length of the marginal zone is on the order of 100 km (Iljina 2004).


7.3 PROPERTY GEOLOGY

7.3.1 QUATERNARY GEOLOGY

Glacial drift covers the claim areas and only a small proportion of the bedrock outcrops. The drift ranges from 2–7 m thickness, although the overburden encountered drilling in the NE corner of the Kaukua deposit was approximately 30 m thick.

The bedrock underneath the till is unweathered and no true saprock is encountered; only the westernmost Haukiaho drill hole (3543/04/R393) encountered deeply weathered rock, obviously due to local fracture zones which cut the Kuusijärvi intrusive block in the west.

The glacial transport is from W-WNW and the transportation distances are short, being only a few hundred of metres in the Haukiaho area as indicated by the numerous ore boulders. On the other hand, sorted sands are also found in the Kaukua area in addition to the till.

7.3.2 KAUKUA

The Kaukua Block is c. 8 km^2 and is situated in the northern part of the Western Intrusion. The stratigraphy consists of a thick layered series dominated by mottled gabbronorites with sub-horizontal layering overlying a sequence of gabbros, pyroxenites and peridotites of the marginal series that are preferentially mineralised (Figure 5).

Syn-formational, east-west trending diabase dykes follow the sub-vertical cleavage plane, occasionally flexing and thickening along a shallow dipping contact between the upper mottled gabbronorites and lower pyroxenites and peridotites.

The Kaukua deposit has a strike length of approximately 1,000 m. The deposit dips south at a 20° to 30° angle. The Kaukua Fault divides the Kaukua main block in the south from the smaller northern block. The Kaukua Fault is a normal fault, bringing the northern mineralised succession located at depth in the southern block back to the surface in the north.

The stratigraphy of the Kaukua deposit is traditionally divided into layered series gabbronorites and marginal series pyroxenites and peridotites (Table 7). In gabbronorites subhedral augite grains, up to several cm in diameter, are the main cumulus phase with plagioclase of unknown composition as intercumulus phase. Quartz is also discovered as intercumulus mineral, primarily due to assimilation of basement granitoids or syn-formational silicification. Gabbronorites of the layered series contain xenoliths of hybrid





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gabbro/anorthosite of several centimetres in diameter. Mineralization of the layered series is usually weak with occasional, chalcopyrite and pyrrhotite dominating dissemination (reeftype). Cumulus phase augite has partly altered into chlorite, muscovite, tremolite and epidote.

Stre	tigraphic Unit	Average	Description
Traditional	Nortec	Thickness	Description
division	subdivision	T mexiless	
Layered series	Hangingwall	Up to 200 m?	Gabbronorite with occasional xenoliths of hybrid gabbro and molten basement material. Diabase dyke/sill at varying depths. Usually not mineralized. Signs of hydrothermal alteration.
	"Chlorite Schist"	1-3 m	Upper marker of marginal series. Sheared and tectonized. Sulphides as fracture fill (pyrrhotite and chalcopyrite). Strong hydrothermal overprint.
Marginal series	Marginal Series	10-100 m	Units of different types of pyroxenites and peridotites in random order. Sulphides as fine dissemination, aggregates and stringers (chalcopyrite and pyrrhotite). Occasionally strong hydrothermal overprint.
	Pyroxenite Marker	5-15 m	Augen textured pyroxenite. Two sub-types, one magnetite bearing the other sulphide bearing (chalcopyrite and pyrrhotite). Signs of hydrothermal alteration.
	Mixed Zone/Basal Gabbro	5-20 m	Mixed unit consists of remnants of marginal series and molten basement material. Sometimes sulphide bearing (mainly chalcopyrite). Occasional sections of Pyroxenite Marker (biotitizated).
Basement	Basement		Granitoidic rocks (granodiorite and granite), granite limited to northern part of the Kaukua deposit. Occasional pyrite grains. No signs of significant hydrothermal events (minor albitization).

TABLE 7.
STRATIGRAPHY OF THE KAUKUA DEPOSIT IN COMPARISON TO
TDADITIONAL SUDDIVISION

The contact between the layered series and the marginal series is normally sharp, occasionally tectonized. The upper most rock type of the marginal series is usually intensely sheared pyroxenite which exhibits strong signs of hydrothermal alteration (retrograde metamorphism).



This particular sheared pyroxenite has altered into chlorite schist and/or clay minerals. The presence of sulphides in this rock type is sporadic and difficultly prognosticated. When present they occur as fracture fill along the shear seams. Sulphides consist of elongated intergrown chalcopyrite and pyrrhotite aggregates with pentlandite inclusions in pyrrhotite. Chalcopyrite also occurs as independent grains/aggregates.

Below the sheared pyroxenite the middle part of the marginal series presents itself with varying units of pyroxenites and peridotites in random order. To date three different types of pyroxenites and two different types of peridotite have been identified by Nortec.

Pyroxenites can be divided into three different sub-types which all are perceived to contain sulphides with fluctuating grades. None of these three sub-types can be pointed as the most common. The first sub-type is fine grained and massive pyroxenite with possible sulphides as fine dissemination of chalcopyrite and pyrrhotite, chalcopyrite being the dominating sulphide. Aggregates of chalcopyrite and pyrrhotite with varying diameters have been discovered. The second sub-type is foliated pyroxenite, similar with one in the contact of the layered and the marginal series. The third sub-type, is augite adcumulate, with sulphides as very fine dissemination and occasional aggregates of chalcopyrite and pyrrhotite, chalcopyrite being the dominating sulphide (see Table 7).

Hydrothermal alteration can be identified in all of the three pyroxenite sub-types. Chlorite and talc alterations are the most apparent ones in which primary augite has been replaced by secondary chlorite, talc, epidote or clay mineral of unknown composition. Pyroxenites are seen to contain basement fragments as xenoliths, contacts between the xenoliths and the pyroxenite are either sharp or gradational depending on the degree of partial melting of the xenoliths. In some parts of the Kaukua deposit pyroxenites are influenced by peridotite veins which are, according to present assumption, interpreted to represent a possible secondary pulse of ultramafic magma into slowly cooling primary intrusion.

Peridotites are divided into two sub-types. The first one is very fine grained, almost aphanitic, massive peridotite which is usually barren. The second one is foliated and fine grained and occasionally sulphide bearing. The main mineralization types vary from fine dissemination and fracture fill to aggregates of up to several centimetres in diameter. Sulphides appear as pseudomorphs of olivine grains. The peridotite sections are not reported to contain any basement xenoliths. Both peridotite sub-types are intensely talc altered.

The mixed basement (basal gabbro) is located between the marginal series and basement granodiorite. The thickness of mixed basement/basal gabbro ranges from 5 m to over 30 m. This sequence consists of remnants of the marginal series and molten basement material,



sometimes sections of augen pyroxenites. Sulphides are sporadically present as chalcopyrite dominating chalcopyrite and pyrrhotite dissemination and aggregates.

Basement rocks around the Kaukua deposit are in most cases granodiorite and granite in addition to mafic rock chemically different from the main Kaukua intrusion. Granitic basement is limited to the northern part of the Kaukua deposit whereas granodiorite is the most common basement rock in the remaining part of the intrusion. The granodiorite is granular with approximately even sized grains of plagioclase, quartz and potassium feldspar with minor amounts of biotite.

7.3.3 HAUKIAHO AND HAUKIAHO EAST

The Haukiaho property (Figure 6) is situated 12 km to SSW from Kaukua and is hosted by the Kuusijärvi intrusive block, which itself is part of the Koillismaa Western Intrusion. The igneous stratigraphy of the Haukiaho is rather similar to that of the Kaukua although the repetition of pyroxenite and peridotite is less common in Haukiaho. The stratigraphic units are the same as well the metamorphic alteration of primary igneous minerals. Originally gabbroic plagioclase-pyroxene cumulates are now composed of (metamorphic) plagioclase and pale amphibole (tremolite-actinolite). Pyroxene cumulates are presently chlorite-amphibole rocks, often schistose, while the decomposition of the igneous olivine has given rise to serpentine, talc and magnetite. Minor metamorphic minerals include epidote, hornblende and biotite.

The granodioritic Archaean gneiss below the layered intrusion has pervasively metasomatized and is mineralogically albite-quartz rock, which often retains primary textures and structures (banding). This albite-quartz rock contains irregular patches, sometimes several metres thick, of mafic enclaves or dykes. The lower contact of the layered intrusion is sometimes impossible to map accurately. In the claim area, the albite-quartz rock is hundreds of metres thick (true thickness) and the unaltered footwall rocks have not been reached by any historic drill hole.

The footwall contact and the igneous layering are subvertical and dip NNE. The distance between the marginal series and the magnetite gabbro of the layered series, narrows towards to the west in the Kuusijärvi block and the two units actually are in contact in the westernmost Property area.

The Haukiaho mineralization resembles that of Kaukua both mineralogically and in style. The Haukiaho mineralization is hosted mainly by pyroxenitic and gabbroic cumulate lithologies. It is steeply dipping to north-north-east and is generally 15-40 metres thick.





Continuity along strike is very consistent. Like Kaukua, the mineralization is disseminated in character, but contains a few narrow massive sulphide veins. Pyrrhotite, pentlandite, chalcopyrite, and also pyrite in lesser amount, are the main sulphide minerals.

7.3.4 LIPEÄVAARA AND MURTOLAMPI

Lipeävaara is located between Kaukua and Haukiaho while Murtolampi is 2.7 km NNE from Kaukua. Much less is known on the geology of these intrusion blocks, but what is known is similar to that of Kaukua or Haukiaho. The same applies also to mineralization in terms of style and grade. The above information is based on published reports of GTK (Iljina 2004).

7.4 MINERALIZATION

7.4.1 GENERAL

Four principal types of base metal - PGE mineralization have been identified within the Kaukua block (see Table 7) and the available data from Haukiaho, Lipeävaara and Murtolampi indicates that this applies also to them with the exception of the first type:

- 1) Hangingwall-type Mineralization (contact-type, see section 8. 'Deposit types').
- 2) Marginal Series-type Mineralization (contact-type).
- 3) Mixed Zone-type Mineralization (contact-type).
- 4) Reef-type Mineralization.

The Hangingwall-type mineralization is hosted in strongly foliated gabbronorite of the layered series just above the marginal series. The reason, why it is classified as Contact type is that it doesn't have the characteristics of reef-type mineralization (high PGE, low base metals), but shares metal ratios and absolute metal grades similar to mineralization hosted by the marginal series proper.

Marginal Series-type mineralization makes up over 70% of the metal deposition at Kaukua. The Marginal Series is dominated by pyroxenite that hosts sulphide assemblages comprised of pyrrhotite-chalcopyrite-pentlandite. The sulphide assemblage also occurs as medium-grained, disseminated aggregations. Sulphide content increases towards the base of the Marginal Series, which often indicates an increase in grade for both PGE and base metals. There are occasional thin (<3 m wide) transition zones between the mineralized pyroxenite (Marginal Series) and the sulphide-bearing Mixed Zone that have low-grade or barren PGE mineralization.



Sulphide mineralization in the Mixed Zone-type at Kaukua varies in thickness between 30 and 40 metres. The Mixed Zone is dominated by xenoliths of granodiorite and quartzo-feldspathic gneisses partially assimilated into Marginal Series. Sulphides usually occur as fine-medium grained chalcopyrite and pyrrhotite disseminations in the basement unit and in cross-cutting gabbroic-pyroxenitic intrusives. Pyrite is also present. PGE are associated with the sulphides, and the highest values occur in chalcopyrite-rich domains. Upon moving deeper into the basement, pyrite becomes a dominant sulphide and PGE values decrease below detection limits.

The Kaukua PGE – base metals sulphide reef shares many similar features with the Rometölväs Reef described in the Syöte and Porttivaara blocks of the Koillismaa Intrusion. This Rometölväs Reef at Kaukua appears is low-grade, erratic enrichments disseminated within a 20 m thick gabbronorite adcumulate zone containing fine-grained xenoliths (known as microgabbronorites), gabbropegmatites and anorthositic segregates (Iljina, 2004; Karinen, 2010). The characteristic feature of the reef in Kaukua is frequent basement xenoliths. In the northern Kaukua this reef looks to come into contact to the marginal series due to angular discordance between the marginal series and layered series. When occurring right above the marginal series the Reef is actually determined as Hangingwall-type mineralization described above.

The metal ratios and chondrite normalised patterns identified by GTK, show a steady, moderately positive slope for PGE; Haukiaho with higher normalised Au content.

Typical sulphide assemblage is pyrrhotite-chalcopyrite-pentlandite (Photo 1), and accessory sulphides include pyrite, sphalerite, galena and molybdenite. The main oxides are magnetite and ilmenite, with chromite present in trace amounts. The grades of PGE mineralization roughly correlates with the abundance of sulphides, particularly chalcopyrite.

The four principal types of mineralization require different fundamental ore forming processes including syn- to post-genetic hydrothermal activity. Therefore, a polygenetic model is needed to explain the presence of PGE and base metal mineralization rather than a simple magmatic sulphide model. High grades are concentrated largely within the lower (marginal) gabbro and lower lying transitional (assimilated) zones. The granodioritic basement rocks immediately below the mafic-ultramafic intrusion are typified by a prominent hydrothermally altered low-grade mineralized section. Below this zone, the granodiorite is only sporadically altered and is largely barren, except where discrete chalcopyrite-rich quartz veins and sulphidized amphibolitic zones occur.





Photo 1. Photograph of sulphide mineralized drill core, Kaukua

7.4.2 PETROGRAPHY

There have been three petrological and microanalytical studies carried out by GTK on selected samples from the Kaukua drill core. The first study was an in-house GTK study done in 2002 on core samples taken from the GTK holes drilled in 1999. In 2008, Nortec contracted GTK to perform petrological and microanalytical study on samples from holes KAU07-002 and KAU07-007 drilled during Nortec's Phase I drill campaign in 2007. This study involved both a polarised light microscope and also a Scanning Electron Microscope with Energy Dispersive Spectroscopy analysis ("SEM-EDS"). An internal petrographic study conducted by Nortec began in October 2008 and was completed in the second quarter of 2009. SEM-EDS studies reveal that most of the platinum-group minerals (PGM) at Kaukua are arsenides, bismutotellurides, and arsenoantimonides (Johanson and Pakkanen 2008). Native forms and alloys are absent. PGM are included in base metal sulphides, magnetite, and silicates and also occur along gangue mineral grain boundaries. Pd-bearing minerals include isomertieite (Pd₁₁Sb₂As₂), members of the kotulskite-sobolevskite solid-solution (PdBi-PdSb), palladoarsenide (Pd₂As), majakite (PdNiAs), and paolovite (Pd₂Sn). The principal platinum carrier mineral is sperrylite (PtAs₂) while Bi-bearing moncheite (PtTe₂) is also present. Platinum-group sulphides are rare and those that have been identified belong to the vysotskite (PdS) - braggite ([Pd,Pt]S) series.



PGM mineralogy of Kaukua is practically identical to that observed from Haukiaho, where the following has been stated (Kojonen and Iljina 2001): "Most of the grains found occur within silicates as discrete grains. To lesser extent, the PGM are intergrown on the grain borders of sulphides. The grain size is less than 40 μ m, and most of the grains were 5-10 μ m in diameter. The major part of the PGM found belongs to the system (Pd+Ni)-Bi-Te including minerals merenskyite (62%), michenerite (1.3%), kotulskite (5%) and Pd-rich melonite (25.3%). Other PGM found were sperrylite (6%) and PGE-rich cobaltite which was observed within sulphides."

The common feature for all the rock types examined by Nortec was the varying degree of hydrothermal overprinting. Hydrothermal alteration was consistent and seen in all samples. The main alteration types were chlorite alteration of pyroxenes and olivine, talc alteration and serpentinization of peridotites, epidotization of pyroxenites, albitization and K-metasomatic alteration of mafic units (gabbronorite and diabase). Nortec interpreted these as evidence to suggest that the whole intrusion had undergone retrograde metamorphism of greenschist/low amphibolite facies. K-metasomatism was found to be epigenetic and associated with late presence of Na-K-Ca enriched fluids/phase (epidotization, K-metasomatism and albitization).

Sulphide mineralization was found to consist mainly of chalcopyrite, pyrrhotite, pyrite, and pentlandite of which the chalcopyrite was prevailing. Sulphides were discovered as dissemination, aggregates and stringers. Disseminations were usually in the intercumulus phase in pyroxenites, and peridotites, sometimes as pseudomorphs of cumulus minerals. Pentlandite was found as inclusions in pyrrhotite or as rims around pyrrhotite grains (Photo 2).

Based on the above findings Nortec concluded that the parental magma of the Kaukua deposit reached the point of sulphur saturation for sulphides to precipitate. However, it is improbable that parental magma itself contained enough sulphur to reach sulphur saturation through fractional crystallization. The source of additional sulphur still remains unknown.

WGM noted that Nortec has made adequate effort in the delineation of mineralization. However, to date mineral chemical studies are exclusively concentrated on the platinumgroup minerals and base metal sulphides. The silicates have been excluded.





Photo 2. Photomicrograph of polished section, chalcopyrite (cpy) +pyrrhotite (po) + pentlandite (pn) intergrown aggregates (Turkka Rekola, Nortec)



8. DEPOSIT TYPES

Platinum-Group Elements ("PGE") constitute of six main metals: platinum (Pt), palladium (Pd), rhodium (Rh), iridium (Ir), ruthenium (Ru), and osmium (Os). Economic PGE deposits are primarily exclusively hosted by mafic and ultramafic igneous rocks. On the basis of relative amounts (in economic value) of PGE and other metals, PGE deposits can be classified to 'PGE only' type of deposits, and deposits, in which PGE's are enriched along with the base metal sulphides (Table 8).

TABLE 8. CLASSIFICATION OF PGE DEPOSITS BASED ON RELATIVE METAL CONTENTS (in their economic value)

(in their containe value)					
Туре	Characteristics	Examples			
PGE important	Relative amount of PGE to base	-Platreef, Bushveld Complex, South Africa			
component along	metals, mainly Ni and Cu, vary from	-Norilsk, Russia			
with base metal	subordinate to economically most	-Sudbury Ni-deposits, Canada			
sulphides	important component. Often large	-Sudbury Cu-Pd stringer ores, Canada			
	tonnage, lower-PGE grade deposits	-Pechenga, Russia			
		-Ahmavaara and Konttijärvi, Finland (part of			
		Suhanko project)			
		-Kaukua and Haukiaho, Koillismaa, Finland			
'PGE only' type	The sole economic value comes from PGE. Typical other metals are Ni-Cu and Cr.	-Merensky and UG2 Reefs, Bushveld Complex, South Africa -JM Reef, Stillwater Complex, USA -Siika-Kämä Reef, Finland (part of Suhanko project)			

PGE deposits can also be classified according to hosting igneous system whether the deposits are hosted by intracontinental layered intrusions, other type of intrusions or volcanic extrusives including their feeder systems (Table 9). PGE deposits of intracontinental layered intrusions are further classified on their structural position in the intrusion. Structural positions to locate PGE deposits are depicted in Table 10 and Figure 7.

'*Contact type' deposits* are generally zones within the Marginal Series, which are tens to over hundred metres wide and have developed at the base or sides of mafic layered intrusions. The PGE concentrations are lower than in the '*reef-type' deposits* and the exploitability is based on large tonnages. Contact type mineralization are erratic in nature and in individual drill holes the highest PGE values can be found tens of metres above or below the contact of the intrusion; they are also variable along the strike. High-grade PGE enrichments, contact type and others, seem to be related to larger igneous events, but the size of the hosting intrusion is not necessarily the unambiguous requirement (Iljina and Lee 2005).



TABLE 9.	
CLASSIFICATION OF PGE DEPOSITS BASED HOSTING IGNEOUS SYSTEM	

Туре	Characteristics	Examples
Intracontinental layered intrusions	Represent exclusive geological environment for 'PGE only' type of deposits as well as for more highly PGE enriched 'contact-type' deposits. Well layered and composed of marginal and layered series. Can be formed by one single intrusion of magma to form magma chamber or by result of multiple injections of magma into already partly crystallized magma chamber.	 -Platreef, Bushveld Complex, South Africa -Merensky and UG2 Reefs, Bushveld Complex, South Africa -JM Reef, Stillwater Complex, USA -Ahmavaara and Konttijärvi, Finland (part of Suhanko project) -Siika-Kämä Reef, Finland (part of Suhanko project) -Kaukua and Haukiaho, Koillismaa, Finland
Other type intrusions	Generally smaller that intracontinental intrusions. Important hosts for Ni ores, which sometimes PGE enriched. Avoid of 'PGE only' type of deposits.	 -Number of PGE bearing Ni deposits in mafic-ultramafic intrusions of the mobile belts. -1.9 Ga old Svecofennian intrusions, Finland
Extrusive complexes	Hosted by volcanic sequences or their feeder systems. Always base metals (Ni, Cu) bearing. Avoid of 'PGE only' type of deposits.	-Norilsk, Russia -Pechenga, Russia -Raglan, Canada

TABLE 10. CLASSIFICATION OF PGE DEPOSITS BASED ON THEIR STRUCTURAL POSITION IN LAYERED INTRUSION

Туре	Characteristics	Examples
Contact-type	Locates on the margins and preferentially inside the intrusions. May extend some distances into the footwall rocks. Characteristically lower-grade, large tonnage deposits. Always base metal bearing. Thickness from several metres to several tens of metres, even up to few hundred metres.	 Platreef, Bushveld Complex, South Africa Ahmavaara and Konttijärvi, Finland (part of Suhanko project) Kaukua and Haukiaho, Koillismaa, Finland
Reef type	Form thinner layers higher in the stratigraphy of the intrusions. Thickness varies in general from half a metre to two metres and layers are very persistent along the strike extending often over the entire strike length of the hosting intrusion. Are generally 'PGE only' type, with only marginal base metal or chrome credit.	 -Merensky and UG2 Reefs, Bushveld Complex, South Africa -JM Reef, Stillwater Complex, USA -Siika-Kämä Reef, Finland (part of Suhanko project) -Rometölväs (Kaukua) Reef, Kaukua, Finland
Off-set type	Off-set deposits are located outside but close to layered intrusions. May occasionally be found kilometres away from intrusion margins. Are accompanied by contact-type deposits in the marginal series of the intrusion or komatiitic Ni deposits. The principal difference between contact- type and off-set type lies in metal ratios the off-set deposits being characteristically Cu-Pd dominated.	-Sudbury Cu-Pd stringers in footwall rocks -Cu-Pd stringers in the vicinity of Kambalda Ni deposits, Australia -Kilvenjärvi off-set deposit, Finland (part of Suhanko project)





The key conclusion is that the host rocks of contact-type PGE deposits are characterized by extensive and prolonged interaction of mafic magma with the surrounding host rock. This results in thick marginal zones, which is often characterized by a reversed fractionation trend, in which mafic lithologies at the very contact of the intrusions are followed first by pyroxenitic and further by olivine bearing lithologies. In this respect Kaukua and Haukiaho successions are identical to that of Suhanko Project area and are typical representatives for 'contact-type' PGE deposit.



9. EXPLORATION

Since Finore has not undertaken any direct exploration to date, this Section describes Finore's Joint Venture partner Nortec Minerals Corp.'s exploration activities since acquiring the properties in 2007.

Nortec's exploration program consisted mainly of geophysical ground measurements in addition to re-logging and sampling of historic drill core that is still available. Nortec nor Finore has to date not undertaken any outcrop mapping, geochemical surveys or surface sampling programs on any of its properties.

Nortec reports the following sequence of exploration activities completed since entering into an agreement with AEbv in early 2007.

9.1 GROUND GEOPHYSICAL SURVEY

The 'contact-type' PGE mineralization which is typically base metal sulphide bearing and commonly enriched in Cu and Ni. This feature leads to a broad geophysical IP signature characterized by elevated conductivity and especially chargeability. Nortec contracted SJ Geophysics, a geophysical contracting and consultancy firm from Vancouver, BC, Canada, in June 2008 to conduct a three-dimensional Induced Polarization (3DIP) test survey over the Kaukua property. The purpose of this ground geophysical test survey was to determine if IP could locate and trace potential sulphide mineralization and differentiate between possible similar responses from fine grained magnetite known to be present in the area. Data collection was carried out on a grid with lines spaces at 100 m, amounting to 20-line kilometres of survey.

9.2 RELOGGING AND SAMPLING OF GTK AND NAN HISTORIC DRILL HOLES

Ten GTK drill holes located within the Kaukua group of claims were re-logged in 2008 followed by the 2009-2010 re-logging and sampling of 58 holes derived from Haukiaho, Lipeävaara and Murtolampi groups of claims. Logging was done in accord with Nortec's coding formats for geological and geotechnical logging used in the company's own drilling program. The core was also photographed.



9.3 RESULTS AND INTERPRETATION OF EXPLORATION OPERATIONS

The computed inverted chargeability sections calculated from the 3DIP survey outline several anomalous sources which were generally observed to correlate with known and projected Cu-Ni mineralization as determined from drilling, and as seen in compiled cross-sections.

WGM has reviewed the surveys completed by SJ Geophysics and the technical report and data presented by Syd Visser, as well as exploration memos by Ian Laurent to Nortec, which provides an exploration overview recapitulating key aspects bearing on geophysical surveys for identified sulphide mineralization within the Kaukua property.

WGM accepts the following quotation from the geophysical surveys completed by SJ Geophysics as provided by the Nortec.

"Comparison of the resistivity and the chargeability shows that the chargeability is associated with a relatively low resistivity zone but right at a very high resistivity contact making it appear as though the high chargeability is sitting in a type of basin. With the exception of the area around the power line near the south of the grid the data collected in the survey grid was of very good quality and could differentiate between the very low background chargeabilities and only slightly elevated anomalous chargeabilities. The spherics which was bad during the survey period did hamper the quality somewhat but not sufficient to delay the survey and only a few parts of the survey were resurveyed to check quality. The data indicated that there was an elevated chargeability zone striking northwest to southeast across the central part of the survey Inside this elevated chargeability zone there were two distinct higher area. chargeability trends separated by a very high resistivity zone. The bottom and lateral extents of the anomalous chargeability also seemed to be marked by higher resistivity making it appear like a type of basin which contained the higher chargeabilities. The historic drilling which had anomalous results in sulphur, copper etc all seemed to correlate well with the higher chargeability anomaly in the northeast part of the anomalous zone. The high chargeability to the south appeared to have been barely missed by previous drilling therefore it is recommended to drill more into the central part of this anomaly. It is recommended that drilling be confined to the higher chargeability values and that the grid is extended to the south-east and possibly to the north-west on the northern side of the lake."

As a result of the re-logging Nortec confirmed the quality of GTK and NAN historic drill holes sampling and assay data and integrated this information into the drill hole Access dataset.



WGM observed that Nortec's exploration concentrated exclusively on known mineralized areas in Kaukua and was strongly guided by geophysics. The chosen approach is adequate given available budget and mineralization characteristics (good chargeability). WGM notes that re-logging of GTK and NAN drill core included all holes on Kaukua, Haukiaho and Murtolampi groups of claims, but excluded one hole on Lipeävaara. This excluded hole, however, is located outside of the anticipated mineralized zone. Also, no re-logging of historic drill holes in the Haukiaho east property is done till today. The study of old Outokumpu drill holes is also hampered by the fact that mineralised intervals are largely missing and hence no further sampling is possible as noted by the author in his site visit in 2010 to Finland National Drill Core Depot.

9.4 EXPLORATION POTENTIAL IN MURTOLAMPI AND HAUKIAHO EAST PROPERTIES

WGM notes, that the Kaukua and Murtolampi claim areas entirely cover the intrusive segments, while Haukiaho, Haukiaho east and Lipeävaara claims cover only the stratigraphically lower parts of the intrusive blocks mapped in this area. The entire stratigraphy of the Kaukua intrusive Block has been intersected by drilling, but drill hole information is limited to the lower intrusive units in other claim areas. Altogether Finore's claims cover a 26 km long section of the Koillismaa marginal zone. Mineralization has been confirmed by drilling along about 16 km, leaving 10 km largely untested.

Erratic ore grade drill hole intersections from the Murtolampi target, as exemplified in Figure 8, also indicates the presence of mineralization outside the more intensively explored areas of Kaukua and Haukiaho.



Figure 8. Drill hole profile with precious metal assays, Murtolampi block.



WGM also notes that the mineralized zone is likely to continue SE from Target Haukiaho to Target Haukiaho east as suggested by historic drilling (Figure 9).

It has been observed within other intracratonic layered mafic complexes, that the metal, especially PGE, grades tend to be structurally correlated in a way shown in Figure 7.

The contact-type deposits tend to be more highly mineralized in structurally favourable positions, where the PGE-enriched reef comes in contact with the marginal series due to angular discordance (see Figure 7). In the Bushveld complex, the Platreef has been interpreted to represent Merensky Reef and UG2 Reef in the Northern Bushveld (Iljina and Lee 2005). In Finland, a similar relationship is found in the Penikat and Portimo Complexes. Within the Koillismaa Complex this 'critical' structural position is discerned to likely be present in the Kaukua block, where a PGE reef merges with the marginal series in the northern Kaukua. This is also supported by higher average PGE tenor and more PGE enriched pockets encountered at Kaukua, unknown elsewhere in Koillismaa this far.

At Haukiaho, close to the eastern end of Finore's property (Haukiaho 11), historic drilling has intersected a low-PGE grade reef located structurally hundreds of metres above the marginal series. Going westwards increasingly higher layered series units are in contact with the marginal series. This is the anticipated favourable structural position where the reef is tentatively inferred, to be merging with the contact-type mineralization. This occurs in the western end of Haukiaho claims, where historic drilling has revealed higher PGE tenor than general found in Koillismaa. An anomalous high gold intersection of one metre @ 3.0 ppm Au has also been encountered in that area.

Based on the above structural interpretation and observations WGM infers that Haukiaho warrants further exploration and has the potential to host reasonable (economically significant) resources.







10. DRILLING

10.1 DRILLING PHASES

Finore started a 10,000 m drilling program in October 21st, 2011 and had completed 1,450 m in ten holes by the time of the second site visit (December 20th, 2011). These NQ2 size holes were infill holes in the westernmost Haukiaho target.

Finore's present core logging, sample processing and custody program follows the principles used by Nortec in their previous drilling. These include standard, spreadsheet-based logging format with validated fields, core cutting by Nortec staff and submitting samples to ALS Chemex facility in the town of Outokumpu. Holes are surveyed by Reflex Maxibor II ® gyro instrument by the drilling company, Nivalan Timanttikairaus oy. Only the logging and sample preparation facility are different, they now use facilities shared with Mustavaaran kaivos oy.

Finore's QAQC program comprises submitting sample blanks, and standard reference samples similarly to Nortec's program. Inter-laboratory check assays are scheduled to be made in a Finnish accredited geochemical laboratory Labtium. Standards inserted in the sample flow include AMIS (African Mineral Standards) 56 and AMIS 64 for PGE and base metals, and an in-house olivine diabase for precious metal blank. These standards were also used by Nortec in previous drilling phases. The interval of inserting is about 1/20 sample.

Visual check of these holes confirms sulphide mineralization to exist in expected sections in these holes. No assay results were available at the time of preparing this report.

Subsequent sections describe Finore's Joint Venture partner Nortec Minerals Corp.'s drilling since acquiring the properties in 2007.

Nortec has conducted four phases of exploration drilling over the Kaukua property since October 2007, for a total of 10,308 m (Table 11). The drill programs explored for shallow dipping PGE+Au-Cu-Ni mineralization, which trends east-west, dips to the south and plunges to the west-southwest.

The deepest hole KAU08-038 drilled to a depth of 403.95 m, while the average depth of the other holes was 202 m. Three different drill contractors have been used for the four phases of drilling. All holes (excluding KAU08-021 and KAU08-022) are inclined and oriented to the north. A few of the holes are sub-vertical (-85° to the north). Holes KAU08-021 and



KAU08-022 have been drilled to the northeast. Statistics of the four phases of diamond drilling are presented in Table 11, and the locations of drill holes on the Kaukua Property are shown in Figure 5.

STATISTICS OF PROJECT DRILLING						
(Phases, Contra	actors, and Used Eq	quipment	s 2007 to 2	009)		
Phase	Contractor	No. of	Metres	Drill Equipment	Downhole	
		Holes		(Ø)	Survey	
PHASE I (KAU07-001 - KAU07-007)	GTK	7	1,024.70	BQTK (40.7 mm)	No	
PHASE II (KAU08-008 - KAU08-014)	Suomen Malmi oy	7	1,163.89	NQ2 (50.7 mm)	No	
PHASE III (KAU08-015 – KAU08-038)	Nivalan	24	6,019.10	NQ2 (50.7 mm)	KAU08-017->	
	Timanttikairaus oy					
PHASE IV (KAU09-039 – KAU09-050)	Nivalan	<u>12</u>	2,100.00	NQ2 (50.7 mm)	Yes	
Timanttikairaus oy						
TOTAL		50	10,307.69			

TABLE 11.

The Phase I exploration drill program was carried out by the GTK Technical Services Group using a GM-100 based rig and BQTK equipment for 40.7 mm diameter core. From Phase II forward swivel drive drill rigs were used to produce NQ2 size core (50.7 mm). Downhole surveys were done by Nivalan Timanttikairaus oy using the Reflex Maxibor II ® gyro instrument for the hole KAU08-017 and later. All the drill hole collar coordinates have surveyed by a contract surveyor, Rovamitta oy.

Nortec had not done any drilling on the Haukiaho, Haukiaho east, Lipeävaara or Murtolampi properties.

10.2 **GEOLOGICAL LOGGING**

Lithological logging was done on drill core in two distinct stages by Nortec geologists. Logging included marking of lithological contacts, recording descriptive geology, core diameter, and a graphic log (till KAU08-018) depicting all down-hole data. All information was recorded on handwritten logs and subsequently entered into a digital database.

In the logging procedure the first stage was a summary log ("Quicklog") prepared at the drill sites as the core is being collected to take back to the core logging and storage facilities in Taivalkoski. The Quicklog records the geological intervals and any specific features such as zones of significant mineralization and/or alteration. The Quicklog was sent to Nortec management in the Vancouver office on a daily basis. Modification or adjustments to the drill program were based on these reports.



The "Quicklog" was followed by the second stage of geological logging called Detailed Log. This was carried out at the core facility and consisted of recording all the technical information about the drill hole and drill core, including a detailed code-based geological description of the core. A standard, spreadsheet-based, logging format with validated fields derived from a user-defined library, were designed to record all information. The drill hole specific spreadsheet includes validated worksheets for the following information:

- Collar information (x,y,z, dip, az, total depth, date etc.);
- Metadata information (drill rig specs, casing, core reductions etc.);
- Geology information (see below);
- Geotechnical information (see below);
- Downhole survey information (see below);
- Sampling information; and
- Sample submittal information.

The following fields were recorded in the geology section of the Detailed Log by Nortec geologist:

- From (m);
- To (m);
- Rock code (lithology code of up to six characters and used for domain and block modelling);
- Strat code (stratigraphic code of two characters);
- Colour;
- Grain size;
- Texture;
- Structure;
- Sulph_Style (disseminated, aggregates, vein, massive etc.);
- Sulph_Int (0 3, where 0 = no sulphides and 3 = >5% sulphides);
- cpy_int (chalcopyrite), po_int (pyrrhotite), py_int (pyrite), pent_int (pentlandite): intensity of the individual sulphides (scale of 0 3, where 0 = none and 3 = >5%);
- Ox_int (oxidation intensity, 0 = none and 3 = complete);
- Alteration;
- Alt_int (alteration intensity, 0 = none and 3 = complete);
- Vein_Type (3 or 4 character code for vein description); and
- Comments (description of interval up to 200 characters long).

10.3 GEOTECHNICAL LOGGING

Nortec has recorded Rock Quality Designation ("RQD") and Core Recovery for all holes. No density information was recorded during the geotechnical logging stage.

10.4 DRILL HOLE COLLAR SURVEY

All drill holes that are collared on the Kaukua Property (including GTK holes) have been surveyed by Mr. Jukka Pikkupeura, Land Survey Engineer from Rovaniemi based survey contracting company, Rovamitta Oy.

Rovamitta was also commissioned to survey historic drill holes at Haukiaho. This survey did, however, fail to locate many Outokumpu holes drilled in the sixties. In the case of these unfound drilling sites, original coordinates provided by Outokumpu, were used in the mineral resource estimate. The measured DGPS coordinates for discovered old Outokumpu drill holes indicate a difference of a few tens of metres in most cases. One hole did have a hundred metre difference.

Rovamitta used a Differential GPS method to determine the location of the drill holes. A Trimble GPS equipment using GNSS-technique was used giving horizontal accuracy to 0.01 m and a vertical accuracy of 0.02 m.

All coordinates are reported using the Finnish KKJ datum and projection and referenced to a multi-angle point 0 m1480. The elevation is based on the altitude system N60.

Rovamitta has delivered signed off documents on the results of surveys.

10.5 DOWNHOLE SURVEY

The Maxibor II downhole survey tool by REFLEX® was introduced as part of the drill program from drill hole KAU08-017 onwards. REFLEX Maxibor® II is an advanced instrument for highly accurate surveys and can be used in highly magnetic rocks, even inside metals drill rods.

Reflex Maxibor® II calculates the spatial coordinates along the drill hole path based on optical measurements of direction changes and gravimetric measurements of dip changes. Reflex Maxibor® II is managed from a handheld computer. An infrared communication link assures fast and reliable data transfer. Survey data is presented in tabular as well as in 2D and interactive 3D graphical format on the handheld computer.

The reports are presented using SProcess® and displayed per drill hole both graphically and in a table.



For the historic GTK drill holes, down hole dips were measured. For both the Outokumpu and NAN historic drill holes the drill hole starting dip and bearing was assumed for the entire length of the hole.



11. SAMPLE PREPARATION, ANALYSES AND SECURITY

11.1 CHAIN OF CUSTODY, SAMPLE PREPARATION AND SECURITY

This Section describes Finore's Joint Venture partner Nortec Minerals Corp.'s sample preparation and analytical procedures since acquiring the properties in 2007. It also includes WGM's due diligence of the analytical results.

Nortec staff was responsible for transportation of the drill core from site to core storage and logging facility in Taivalkoski, about 70 km from drilling site.

During the logging stage, the core was measured and sample intervals selected by Nortec staff. These intervals were marked on the core and on the core boxes. Nortec staff members cut the core samples with a diamond saw. These half core samples from drill holes KAU07-001 to KAU08-038 were sent to Labtium Oy (Labtium), and samples from KAU09-039 onwards were sent to ALS Chemex Laboratory (ALS Chemex) in town of Outokumpu. Standards were inserted into the sample flow by Nortec. No other than Nortec samples were treated in the room during the sample preparations.

Coarse rejects and pulps not used for assay were sent, by both laboratories, back to the issuer, which stores them in its core farm at Taivalkoski.

<u>11.2 SECURITY</u>

Nortec's Taivalkoski core storage facilities consist of 'warm' and unheated 'cold' storages in two separate buildings about 500 m apart. The 'warm' storage is exclusively in Nortec's use while the 'cold' one is shared with another tenant. Both storages are locked.

All project data are stored in Nortec's office server in Vancouver, with data backup.

11.3 SAMPLE ANALYSIS

Based on mineralogical studies the base metals, except Ni, are practically exclusively carried by sulphides like pyrrhotite, chalcopyrite, pentlandite, and pyrite. The Ni is, however, distributed between Ni-sulphides and Ni-bearing mafic silicates. The assay methods for base metals can roughly be classified as follows:

• 'Total' (like Labtium 720P), which gives the total concentration of metals in the rock;



- 'Sulphide selective' (like Labtium 240P), which gives metal content bound to sulphides, and;
- 'Partial', which gives metal concentrations in sulphide fraction plus some addition from silicate phases i.e. the resulting value is likely between the results received by 'total' and 'sulphide selective' methods.

As the selective sulphide leaching techniques are not accredited methods for assaying nickel in sulphides, Partial methods, such as an Aqua Regia leach (Labtium 510P and ALS Chemex ME-ICP41), were systematically used for the base metal analyses.

11.3.1 LABTIUM

The analyses for samples from drill holes KAU07-001 to KAU08-038 were performed by accredited geochemical laboratory, Labtium. Labtium is an independent, fully State owned laboratory outsourced from GTK in 2007. The laboratory codes used for the analyses are shown in Table 12.

	USED ASSAY METHODS, LABTIUM				
Labtium	Sample Preparation				
10	Drying of sample at 70°C				
31	Fine crushing >70% <2 mm with Cr-steel jaws				
35	Separate splitting of sample				
50	Pulverizing in hardened steel bowl (max. 4 kg)				
	Sample digestion/pre-concentration	Туре			
240	Ammonium citrate leach	sulphide selective			
510	Aqua regia leach at 90 °C	Partial			
704	Lead fire assay pre-concentration, 25g sub-sample	Total			
714	NiS fire assay pre-concentration/Te-coprecipitation	Total			
720	Sodium peroxide fusion, 0.2g sub-sample	Total			
	Finish	Metals			
240P	Multi-element analysis by ICP-AES	base metals			
+510P	Multi-element analysis by ICP-AES	base metals			
+704P	Determination of Au, Pd, Pt by ICP-AES	precious metals			
720P	Multi-element analysis by ICP-AES	base metals			
714M	Determination of all six PGE+Au with ICP-MS-technique	precious metals			

TABLE 12. USED ASSAY METHODS, LABTIUM

+ = accredited method

Labtium Aqua Regia leach with ICP-AES finish, method 510P, was used to assay base metal and sulphur, while Fire-Assay pre-concentration with ICP-AES finish, was used for precious metals. Sulphide selective (Labtium 240P) and total leach (720P) techniques were used for QAQC purpose (Section 11.4). Eighty samples were also assayed by Fire-Assay pre-concentration with ICP-MS finish for all six Platinum-Group Elements, Os, Ir, Ru, Rh, Pt, and Pd, and gold.

11.3.2 ALS CHEMEX

The analyses for samples from drill holes KAU09-039 to KAU09-050 were performed by ALS Chemex, an international laboratory group, with a base in Outokumpu, Finland. All samples are registered and prepared in town of Outokumpu and analysed at the major ALS Chemex facility in Vancouver, Canada. The laboratory methods used for the analyses are shown in Table 13.

ALS Chemex	Sample Description
PREP-31B	Standard preparation for drill samples. Includes log sample in tracking system, barcode, weigh, dry, fine crush entire sample to $>70\%$ passing 2 mm, split off up to 1 kg and pulverize split to $>85\%$ passing 75 um.
SHP-21	Labelling, packing and transport of a 100g labsplit by courier to ALS Chemex in Vancouver, Canada.
PGM-ICP23	Pt (0.005-10 ppm), Pd (0.001-10 ppm), Au (0.001-10 ppm) package by lead fire assay (30g nominal sample weight) with ICP-AES finish.
Au-GRA21	Au (0.05-1,000 ppm) by fire assay (30g nominal sample weight) and gravimetric finish. Used for gold overlimits from method PGMICP23.
PGM-ICP27	Ore grade Pt (0.03-100 ppm), Pd (0.03-100 ppm), Au (0.03-100 ppm) package by lead fire assay (30g nominal sample weight) with ICPAES. Used for overlimits from method PGM-ICP23.
ME-ICP41	Trace Level Method -35 elements by Aqua Regia acid digestion and ICP-AES. Quantitatively dissolves base metals for the majority of geological materials; however, major rock forming elements and more resistive metals are only partially dissolved.
(+)-OG46	Overlimit analysis –Ag (1-1,500 ppm), Cu (0.01-40%), Mo (0.00110%), Pb (0.001-20%), Zn (0.001-30%) by aqua-regia digestion and ICP-AES. Overlimits from ME-ICP41 will be automatically re-analysed using these methods.

TABLE 13.USED ASSAY METHODS, ALS CHEMEX

11.4 QUALITY ASSURANCE AND QUALITY CONTROL

The data used in the mineral resource estimation and the associated quality control and quality assurance (QAQC) data were provided to WGM by Nortec. Nortec QAQC program comprised submitting sample blanks, standard reference samples, and inter-laboratory check samples.



Additional checks were done by commissioning of sulphide selective and total nickel analyses on duplicate pulps in a schedule depicted in Table 14.

	ASSAY MET	TABLE 14. HOD COMBINATION	NS HOLE BY HOLE	E	
Hole	510P Partial	704P Total	720P Total	240P Sulphide specific	Ν
	Base Metals	Precious Metals	Base Metals	Base Metals	
	All Samples	All Samples	Every c. 8 Sample	Every c. 5-8 Sample	
LABTIUM					
KAU07-001 - 007	Х	Χ			7
KAU08-008 - 014	Х	Χ		Χ	7
KAU08-015 - 016	Х	Χ			2
KAU08-017 - 020	Х	Χ	Х		4
KAU08-021	no assays				1
KAU08-022 - 024	Х	Χ	X		3
KAU08-025 - 038	X	X		X	14
	ME-ICP41 Partial	PGM-ICP23 Total			
	Base Metals	Precious Metals			
ALS CHEMEX	All Samples	All Samples			
KAU09-039 - 050	X	X			12
N	49	49	7	21	50

x = used, -- = not used N = number of holes

11.4.1 SAMPLE BLANKS

Nortec inserted 60 sample blanks at the frequency of c. 1/65. Standards used, were AMIS (African Mineral Standards) 0025 and AMIS 0052, and an olivine diabase prepared by Nortec. Indicated concentration values for the blank standards are:

	Pd, ppb	Pt	Au	Cu, ppm	Ni
AMIS 0025	≤ 5	≤5	≤5		
AMIS 0052	≤ 5	≤ 5	1 ± 0.4	7 ± 2	4±2
Olivine diabase			Unknown		

Detection limits of the laboratories were:

	Pd, ppb	Pt	Au	Cu, ppm	Ni
Labtium	10	10	10	1	3
ALS Chemex	5	5	1		

Performance of laboratories for precious metals is depicted in Figure 10. Three samples, out of 52 assayed in Labtium, returned distinct anomalous values, most likely derived from sample preparation in Nortec facility or subsequently in the laboratory. The anomalous low values of the sample 13 is real and correct as that sample was assayed by method 705P, which is otherwise identical with 704P, but is based on assaying of 50 g sub-sample after Fire-Assay pre-concentration. Method 705P has detection limit of 5 ppb for precious metals.





Figure 10. Precious metal assay results of blank samples

All eight blank samples assayed by ALS Chemex were olivine diabase. Low number of samples renders it impossible to make any firm conclusions although results (see Figure 10) suggest that the chosen rock type may prove to be good source material for blank samples after further testing.

Indicated values for base metals were only available for AMIS 0052, which was only assayed by Labtium with the results shown in Figure 11. Results show clear contaminated samples or instrument "memory" from previous samples and instrument drift. For Cu the indicated value of 7 ± 2 ppm was not reached, the average being 22 ppm (excluding high peak of 700 ppm, sample 40). Results for Ni were similar to Cu except that about one third of the assay results were within the range of indicated values for Ni (4 ± 2 ppm). The excess of Ni and Cu visible



in blank samples are not, however, observed in the assays of ore grade standards (Table 15) or inter-laboratory check samples (Table 16).



Figure 11. Base metals assay results of blank samples

TABLE 15.STATISTICS OF REFERENCE SAMPLE ASSAYS FOR BASE METALS

AMIS	Cu,	ppm	Ni,	ppm
	Standard	Lab. Ave.	Standard	Lab. Ave.
0002	1300±212	1351	1860±230	1888
0009	907±91	926	1214±133	1199
0056	1377±107	1375	1940±165	1894
0064	664±49	655	1046±82	1047

STATISTICS OF INTER-LABORATORY CHECK SAMPLES								
Α	Labtium average	ALS Cheme	k average	Correlation coefficient				
Pd, ppb	1197	1153		0.989				
Pt	401	401		0.988				
Au	168	114		0.242				
Cu, ppm	2133	2049		0.883				
Ni	1232	1171		0.990				
_								
В	Pd	Pt	Au	Cu	Ni			
RPE>10%	7.8%	8.3%	42.9%	6.9%	1.2%			
RPE>20%	1.6%	0.7%	22.6%	1.8%	0.0%			

TABLE 16. STATISTICS OF INTER-LABORATORY CHECK SAMPLES

A. Averages of precious and base metal assays in Labtium and ALS Chemex laboratories and correlation coefficients.

B Proportion of relative percentage error (RPE, relative error of assay pair in percent) exceeding 10% and 20% percent.

11.4.2 REFERENCE MATERIAL

Reference samples were inserted in the sample stream to check the accuracy of the assay laboratories. Reference material was purchased from AMIS and comprised of four different certified standards prepared from Platreef (AMIS 0002 and 0056) and Merensky Reef (AMIS 0009 and 0064) PGE and base metal deposits of the Bushveld Layered Complex, South Africa. Each assay sample batch contained both Platreef and Merensky Reef references in equal number. For drill holes KAU07-001 to KAU08-017 pair AMIS (0002-0009) was used, but was subsequently replaced by the pair AMIS (0056-0064) with DDH KAU08-017 having all four references (Table 17). Totally 112 reference samples were inserted into the Kaukua sample stream of about 4,000 samples.

TABLE 17. STATISTICS OF REFERENCE SAMPLE ASSAYS FOR PGE

AMIS	Ν	Drill hole	Pd, ppm				Pt, ppm			
			Standard	Lab. Ave.	Diff, %	Off Range	Standard	Lab. Ave.	Diff, %	Off Range
0002	14	1-17	0.89 ± 0.066	0.84	-9.1	5	0.82 ± 0.112	0.76	-6.9	1
0009	14	1-17	0.95 ± 0.06	0.95	+0.5	0	1.80 ± 0.14	1.72	-4.6	1
0056	41	17-50	0.88 ± 0.08	0.83	-6.2	10	0.81 ± 0.10	0.82	+1.2	1
0064	43	17-50	0.58 ± 0.06	0.57	-1.3	0	1.24 ± 0.12	1.23	-1.2	2
	112				-3.8*	15			-1.5*	5
*	* average difference of all samples.			Diff.%	difference	e between recommended concentration and laboratory				
Ν	number of samples.					average in	average in percent.			
Lab. ave. laboratory average.				Off range	number of	number of samples off the given range of standard.				

Figure 12 and Table 17 present the results of the reference samples assays for PGE. In general, both laboratories used by Nortec (Labtium and ALS Chemex) succeeded to produce the recommended concentrations given by the reference provider. Nevertheless, the results of the pair AMIS 0002/0009 (28 samples), exclusively analysed in Labtium, are rather systematically below the standard and in five cases 'off range' i.e. exceeding the standard deviation given by AMIS. On the other hand, the laboratory performances with the pair AMIS 0056/0064 is better. Sixty five of the pair AMIS 0056/0064 were assayed by Labtium and 19 by ALS Chemex. The number of 'off range' readings were nine for Labtium and two for ALS Chemex. Laboratory results for platinum are closer to recommended concentrations of standards than for palladium. This may suggest slight 'less-than-real' values for Pd assay program (see Table 14) gave rather uniformly equal metal concentrations for each check sample lending support that there is no significant systematic difference between the laboratories and poorer performance with certain standards may be attributed to mineralogy and petrography of the standards, which might have been difficult to both laboratories.





Figure 12. PGE assay results of AMIS reference samples horizontal lines (Pd dashed) indicate the recommended concentrations for each standard

AMIS 0002 had certified recommended value for gold while only provisional concentration values were given to other standards. WGM observed laboratory performance for AMIS 0002 was excellent.

Figure 13 and Table 13 present the results of the reference sample assays for base metals. Compared to PGE, the laboratory results were found to be better within the range of recommended values. Instrument drift, however, is visible with some clear off-set values as well. The off-set readings are well below recommended concentrations indicating more probably laboratory failure than contamination of the sample.



Figure 13. Base metal assay results of AMIS reference samples



11.4.3 INTER-LABORATORY CHECK ASSAYS

Before commissioning ALS Chemex at the beginning of the Fourth drilling phase $(KAU09-039 \rightarrow)$ Nortec sent a mix of pulps and coarse rejects, formerly assayed in Labtium, to ALS for due diligence. Total amount of these inter-laboratory check samples were 443 of which 245 were pulps. Sample selection represented different mineralization types and lithologies and covered drill holes KAU07-001 to KAU08-026.

Plots of the assay results received from the two laboratories are depicted in Figure 14. The match between the results was found to be good for all elements other than gold. Statistics of inter-laboratory check assays is presented in Table 16. Apart from Au, the calculated averages are close to each other with maximum difference of 4% in Cu. Relative error is less than 10% in over 90% of the sample pairs again with the exception of Au.



Figure 14. Results of ALS Chemex assays (vertical axis) versus Labtium assays of interlaboratory check samples. Precious metals in ppb and base metals in ppm



The poor reproducibility of gold assays is an ubiquitous feature for Kaukua mineralization, not only in *inter-laboratory* check samples, but also between pulp duplicates of *intralaboratory* checks as observed by GTK (Iljina *et al*, 2005). This feature can likely be attributed to larger grain size (nugget effect) and petrographic properties of gold bearing minerals.

11.4.4 DENSITY MEASUREMENT

Nortec did not do density determinations of their own but used values measured by GTK from drill core and bore holes made in 1999 and 2004. GTK surveys included laboratory measurements of c. 5 cm long drill core samples with 1 m spacing (1999 drilling) and downholes probing using a Wellmac Instrument, which measured point densities using a gamma-gamma method (2004 drilling). WGM calculated averages for each mineralised rock type and used these values for the mineral resource estimate.

11.5 WGM DUE DILIGENCE

11.5.1 KAUKUA

Thirty independent samples were collected from three drill holes of Kaukua for due diligence testing by WGM. Each sample was quarter cut core representing the same intervals formerly sampled by Nortec. Each sample was assayed using the Labtium sulphide specific method 240P for base metals and fire-assay method 704P for precious metals. The results are depicted in Figures 15 to 19.



Figure 15. Kaukua. Nortec Cu 510P versus WGM Cu 240P, ppm





Figure 16. Kaukua. Nortec Ni 510P versus WGM Ni 240P, ppm



Figure 17. Kaukua. Nortec Pd 704P versus WGM Pd 704P, ppb




Figure 18. Kaukua. Nortec Pt 704P versus WGM Pt 704P, ppb



Figure 19. Kaukua. Nortec Au 704P versus WGM Au 704P, ppb

The correlation between the WGM and Nortec assay results was found to be good but somewhat scattered, most likely due to the fact that a quarter core is compared to the original half core sample, although still from the same interval. The widest scatter is in gold. The Nortec nickel concentrations are systematically higher than the WGM sulphide specific concentrations due to the included silicate nickel, which is discussed in detail in Section 24.1.



<u>11.5.2</u> HAUKIAHO

A similar study, was also conducted for Haukiaho, where WGM collected 19 samples from four holes originally drilled and sampled by Swedish junior company NAN. In addition to NAN, the Haukiaho deposit had also been drilled by Outokumpu and GTK. The mineralized intervals in holes of the former had practically been exhausted in earlier sampling phases and adequate re-sampling was no longer possible. The GTK holes were excluded because of the mode of in-house quality control using standards and blanks that GTK had in place.

Instead of original laboratory certificates NAN's internal spreadsheets, provided to GTK for archiving, were used for due diligence. Outcome of the due diligence in NAN's Haukiaho assay results is shown in Figures 20 to 24. Equally good correlation was found between the WGM assay results and the NAN results as between the WGM and Nortec results in Kaukua, and with similar remarks on gold and nickel.



Figure 20. Haukiaho. NAN Cu versus WGM Cu 240P, ppm





Figure 21. Haukiaho. NAN Ni versus WGM Ni 240P, ppm



Figure 22. Haukiaho. NAN Pd versus WGM Pd 704P, ppb





Figure 23. Haukiaho. NAN Pt versus WGM Pt 704P, ppb



Figure 24. Haukiaho. NAN Au versus WGM Au 704P, ppb



11.5.3 WGM CONCLUSION, QUALITY ASSURANCE AND QUALITY CONTROL

It is the opinion of WGM that the assay results of the certified standards and results of the blanks, inter-laboratory duplicates, and WGM due diligence samples show that a reasonable level of confidence can be attributed to the drill sample assays used in the Mineral Resource Estimate of the Kaukua deposit.

For the Haukiaho project assays were performed over a long time span, from the early eighties to 2004, and by three different laboratories commissioned by Outokumpu, GTK, and NAN. However, given the existence of in-house quality control utilized by the GTK laboratory and the good correlation of WGM due diligence samples with the NAN assay results, WGM is sufficiently confident in the quality of data to support an Inferred Mineral Resources for the Haukiaho deposit, Section 14.



12. DATA VERIFICATION

Qualified Person, Markku Iljina ("MJI") carried out a field visit to Nortec properties, as well as company's field office and sample preparation facilities at Posio and Taivalkoski when preparing the Initial Report for Finore Joint Venture partner Nortec Minerals Corp. in 2010. Discussion with technical personnel, were conducted whenever appropriate. Site visits were also extended (in 2010) to Finland National Drill Core Depot at Loppi in order to collect check samples from historic Haukiaho drill holes. About ten drill holes were studied during the site visit trips to verify the correctness of logs and logging procedures. WGM collected 55 drill cores samples (1/4 split core from sections and ½ core from new sections) to verify both Nortec (Kaukua) and historic (Haukiaho) assay results. An additional 19 samples were taken from Haukiaho cores from zones of visible sulphide dissemination observed to extend outside of assayed intervals in the historic drill core.

MJI made new site visits for the preparation of this report for the Finore Mining Inc. on October 19, and December 20, 2011. This visit extended to company's office and sample handling facilities as well as to new properties acquired since the previous visit in 2010.

Part of the data verification is also based on MJI previous experience conducting research and exploration in the Koillismaa area, including the Kaukua and Haukiaho targets, while employed by GTK from 1996-2005.

Qualified persons, Markku Iljina and Clifford J. Duke carried out random check on the Kaukua database used in the Mineral Resource Estimate by comparing database to laboratory results and drill core logs. QA/QC procedures are presented in Chapter 11. Based on its verification of data reviewed, WGM finds the data to be of sufficient quality for use in a Mineral Resource Estimate.

The database for the Haukiaho Mineral Resource Estimate was constructed by WGM from the files Nortec had acquired from GTK. WGM also examined the Finland Mining Register, made available by the Ministry of Labour and the Employment dated October 28, 2011, to assure itself of the adequateness of the land tenure depicted in Tables 1 and 2.



13. MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 GENERAL

This Section describes mineral processing and metallurgical tests made by Finore's Joint Venture partner Nortec Minerals Corp.

The PGE enriched Cu-Ni sulphide deposits at Haukiaho and Kaukua are believed to host similar mineralization. Preliminary metallurgical work was carried out on the Haukiaho deposit by North Atlantic Natural Resources in 2002 Although the work was preliminary in nature and used surface bolder material as samples, the results were similar to the more comprehensive mineralogy and metallurgical tests carried out on core samples from the Kaukua deposit in 2009 and 2010. The following summarizes the most comprehensive results from the Kaukua testwork and are believed to be generally representative of both deposits at this early stage of process development work.

13.2 SAMPLE MATERIAL TESTED

Six separate samples of drill core from the Kaukua deposit were selected on the basis of variations in the lithology and style of mineralization. Each of the samples was subjected to a head analysis and was used individually in the testwork as well as forming part of a master composite sample. The composite was prepared using 60% pyroxinite, 15% peridotite, 5% gabbronorite and 20% mixed basement which is the estimated proportions that the deposit is believed to contain based on the current drilling. The head analysis of the sample material tested is shown in Table 18.

SAMPLE MATERIAL HEAD ANALYSIS								
Sample	Cu	Ni	Pt	Pd	Au	Fe	S	MgO
	%	%	g/t	g/t	g/t	%	%	%
Master Composite	0.22	0.20	0.31	0.94	0.08	7.47	0.60	15.0
Mixed Basement Composite	0.18	0.17	0.22	0.65	0.07	6.13	0.69	12.0
Pyroxenite	0.24	0.18	0.30	0.79	0.08	5.67	0.77	7.66
Gabbronorite	0.17	0.17	0.26	0.79	0.06	6.17	0.62	11.2
Peridotite	0.15	0.14	0.05	0.19	0.07	5.87	0.28	10.6
New Master Composite	0.15	0.22	0.20	0.53	0.05	7.94	0.64	22.5

TABLE 18.SAMPLE MATERIAL HEAD ANALYSIS



13.3 MINERALOGY

In 2009, a mineralogical study was carried out on core samples from the Kaukua deposit by SGS Vancouver using Quemscam, XRD and D-SIMS techniques and documented in a report entitled "The Mineralogy of Kaukua Samples, and It's Implication to Processing prepared for Nortec Ventures Inc" and dated July 22, 2009. The study was carried out on a master composite sample and four separate samples selected on the basis of variations in the lithology. The study focused on the distribution of the main sulphide minerals and the host rock mineralogy to guide the process development testwork. The master composite was used to study the PGE and PGM occurrences relative to the sulphide minerals.

The mineralogical analysis indicated that the sulphide composition was about 35% chalcopyrite and 17% pentiandite with the balance pyrite and pyrrhotite. The main gangue and host mineral was talc at approximately 1.2%. The PGE mineralogy had 10% as solid-solution in pentlandite and 90% as discrete platinum-group minerals. At the grind of 80% passing 75 microns the PGEs are 38% liberated PGM, 27% as PGE in the pentlandite or PGM as locked particles in sulphides, and 35% as PGM locked in silicates.

Based on the relatively coarse grain size of the sulphides and the free PGM at a grind of 80% passing 75 microns the mineralogy work correctly concluded that a bulk sulphide float was the probable process route with the possibility of a regrind circuit. It was concluded that the metallurgy was similar in nature to the Lac des Isles deposit.

13.4 METALLURGICAL TESTWORK

Very preliminary metallurgical tests were carried out by Lakefield Research for North Atlantic Research on the Haukiaho deposit in 2005 on surface sample material to assess bulk sulphide flotation. A summary of these results were documented by GTK in 2005 in a report entitled "The Haukiaho and Kaukua PGE-Cu-Ni-Au prospects in Koillismaa Layered Igneous Complex, Finland" published in 2005/1/10.

In 2010, a series of process development tests were carried out at the SGS facility in Vancouver on 161 core samples from the Kaukua deposit selected from recognized variations in mineralogy and lithologies. The results of the testwork were documented in a report entitled "Metallurgical Testwork on a Cu/Ni/PGE Ore from the Kaukua Deposit prepared for Nortec Minerals Corporation" dated August 19, 2010. The scope of work included communition tests, preliminary optimization of liberation, flotation tests as well as testing the metallurgical response of recognized variations in the deposit lithology and mineralogy. The



testing of bulk sulphide flotation was guided by the mineralogy work previously completed in July 2009.

Preliminary testwork was also completed on production of a separate copper concentrate in addition to a copper-nickel-PGE concentrate. Preliminary hydrometallurgical tests were carried out to assess leaching of the concentrate as an alternative to marketing a concentrate.

COMMUNITION 13.4.1

Communition tests were carried out on the four different styles of mineralization to determine the grinding power requirements. The four different styles of mineralization were gabbronorite, peridotite, pyroxenite, and a mixed basement composite. Bond work indices and semi autogenous grinding indices were determined for the four sample types as well as the grinding power requirements (CI) as determined by the CEET program. Comparison of the results indicates significant variation in the grinding power requirements with gabbronorite composite requiring significantly more grinding than the peridotite. This aspect of the project will require further testwork and attention to the probable mix of ore types that would be processed in a commercial operation to ensure the installed power in the grinding circuit will reach the desired capacity. The communition test results are shown in Table 19.

GRINDABILITY TEST SUMMARY				
Sample	CEET	SPI	Bond Work Index	
	(CI)	(min)	(kw/t)	
Mixed Basement Composite	11.6	181.4	11.9	
Pyroxenite Composite	21.8	171.7	10.6	
Gabbronorite Composite	17.1	250.6	13.6	
Peridotite Composite	20.2	88.30	7.90	

TARLE 10

13.4.2 FLOTATION TESTING

A series of batch rougher flotation tests were carried out to compare the response under differing reagent dosages and grind sizes. The tests indicated that a grind size of 80% passing 80 microns was adequate with reagent dosages of 90 g/t frother and 60 g/t of collector yielding optimum flotation recovery. Comparison of the results of each ore type showed that the flotation response of peridotite yielded the best recoveries. Preliminary testing of stage grinding did not appreciably improve the results.



The flotation kinetics indicated that copper flotation was quite rapid with over 90% recovery reached in 12 minutes but the nickel recovery only reaching in the order of 51% and directly proportional to the nickel sulphide portion of the mineralization. The other forms of the nickel occurrence do not respond to flotation concentration. The rougher flotation indicated approximately 80% of the PGE are recovered as a high kinetic fraction with a slower portion of an estimated 4% not likely possible in a commercial flotation circuit. The flotation testing indicated that the PGE portion would report with a 10 to 13% concentrate weight yield where 93% of the copper was recovered and 51% of the Ni. The indicated grade of the concentrate would be in the order of 16 to 17% Cu plus Ni. The PGE recoveries indicated were 44 to 50% for Pt, 68 to 69% for Pd and 70 to 76% for Au.

The indications of testing regrind prior to the cleaner flotation step did not show any benefit to the grade or recovery with some tests showing a drop in recovery. The cleaner circuit consisted of four stages with a scavenger stage on the first stage.

A brief test work program was carried out to assess separation of the bulk flotation concentrate into separate copper and nickel concentrates. The most successful test produced a copper concentrate of 26.4% copper and 73.6% recovery with 5.5% Ni at a 35% recovery. No further work was completed.

The four variability samples were tested to the same optimized conditions and showed some variation in metallurgical response. The results show that mixed basement and pyroxenite composites achieved a copper recovery above 93% with a 10% mass pull while gabbronorite recovery was 86.5%. Peridotite reached a copper recovery of 96% with a 30% mass pull due to the talc content. Nickel recovery was about 62% for mixed basement and pyroxenite composites at 10% mass pull while nickel recovery from the gabbronorite was low at about 40% due to the nickel contained in silicates. The recovery of PGE from gabbronorite and pyroxenite was 60 and 75% respectively. PGE recovery from peridotite was 30% at a 90% mass pull but this substantially reduced the Cu, Ni, and PGE grades.

13.4.3 CONCENTRATE QUALITY

The type of concentrate produced can result in limited smelter capacity to enable a high return on concentrate sales. In addition to the copper and nickel grades the MgO content can have a negative impact on potential smelters and the return. Test work on the Kaukua deposit demonstrated that the MgO in the bulk concentrate can be maintained in the acceptable 4% range with the use of depressants. Separation of the concentrates into a copper concentrate and nickel concentrate may result in a nickel concentrate with a grade too low to market due to the low head in the deposit that occurs as a recoverable nickel sulphide. Indications from the test work are that a saleable concentrate can be produced by bulk sulphide flotation.

13.4.4 CONCENTRATE LEACHING

A sample of concentrate from the flotation testing on the Kaukua deposit was subjected to hydrometallurgy to leach the copper, nickel, gold, platinum, and palladium. The process applied at SGS Lakefield was the PLATSOL process and the results are documented in a report entitled "Treatment of the Kaukua Concentrate using the PLATSOL Process Preliminary Assessment".

In preparation for leaching the concentrate was ground to 80% passing 20 microns and subjected to a 10 g/l sulphuric acid leach at a temperature of 225°C and oxygen over pressure of 100 psi for 120 min. Greater than 90% of the payable metals was leached with 99.8 Cu and 98.8 Ni. Test work did not proceed past leaching but it did demonstrate that high extractions to solution could be achieved.

14. MINERAL RESOURCE ESTIMATES

Mineral resource estimates of the polymetallic mineralization at Finore's Kaukua and Haukiaho deposits were completed for nickel, copper, cobalt, gold, platinum and palladium. The resources were estimated with Gemcom version 6.2.4, using data from 50 Finore holes (drilled by Nortec) and 10 historic holes for Kaukua, while all the Haukiaho holes were historic.

Database used for Kaukua resource estimate was originally delivered in November 2010 for the Nortec report, while the database for Haukiaho was reassembled from historic databases acquired by Nortec from GTK and subsequently provided to WGM. The digital drill hole data was provided in spreadsheets that were imported into Gemcom.

14.1DEFINITIONS

The classification of mineral resources and mineral reserves used in this report conforms with the definitions standards provided in the final version of National Instrument 43-101 ("NI 43-101"), which came into effect on February 1, 2001, as revised on December 11, 2005. The Definitions Standards includes further changes to maintain compatibility with the new version of National Instrument 43-101, effective June 30, 2011. We further confirm that, in arriving at our classification, we have followed the guidelines and standards by the Canadian Institute of Mining Metallurgy and Petroleum ("CIM") Council adopted on November 27, 2010. The relevant definitions for the CIM Standards/NI 43-101 are as follows:

A **Mineral Resource** is a concentration or occurrence of diamonds, natural solid inorganic, or natural solid fossilized organic material including base and precious metals, coal, and industrial minerals in or on the Earth's crust in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge.

An **Inferred Mineral Resource** is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.



An **Indicated Mineral Resource** is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics, can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed.

A **Measured Mineral Resource** is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity.

A **Mineral Reserve** is the economically mineable part of a Measured or Indicated Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This Study must include adequate information on mining, processing, metallurgical, economic and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified. A Mineral Reserve includes diluting materials and allowances for losses that may occur when the material is mined.

A **Probable Mineral Reserve** is the economically mineable part of an Indicated and, in some circumstances, a Measured Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This Study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified.

A **Proven Mineral Reserve** is the economically mineable part of a Measured Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This Study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction is justified.

14.2 EXPLORATORY DATA ANALYSIS

Exploratory data analysis ("EDA") is the application of statistical tools to elucidate characteristics of the data, such as the shape of the relative frequency distribution and cumulative frequency distributions, as shown on histograms and probability plots, and statistics such as the mean, standard deviation and coefficient of variation.



The coefficient of variation ("CV") is the standard deviation divided by the mean. This is a useful tool to measure the relative dispersion of a distribution. A CV, which is less than one, generally depicts syngenetic deposits. Coefficients of variation of one to two are typical of hydrothermal processes. The presence of high-grade shoots or veins may cause the CV to reach three. Where the CV is greater than three, the mixture of two or more distinct oreforming processes (or mineralization) can sometimes be identified.

The CV's for the resource elements of each deposit are tabulated in Table 20, and suggest that high grade zones may be present in the Cu and Au sample populations used to estimate the Kaukua resource.

TABLE 20. COEFFICIENT OF VARIATION FOR MAJOR ELEMENTS				
Element	Kaukua	Haukiaho		
Со	1	1		
Cu	3	1		
Ni	2	1		
Au	4.22	2.01		
Pd	1.88	1.45		
Pt	1.7	1.16		

Identification of the spatial continuity by means of variography is an EDA tool, which is later used to perform kriging. Variography is used as part of the kriging parameters allowing the software to assign weights to the sample points. Kriging weights are estimated based on spatial autocorrelation between sample points. Kriging is typically used for spatial prediction where the data are expected to follow a trend varying in both mean (expected value), and variance by location.

In general, variography is done on composite-sized volumes, which are nominally of equal length. This is because the variance of a distribution is inversely proportional to the volume of sample used. Use of unequal length composites can distort the frequency distributions and make variography very noisy.

14.2.1 KAUKUA ASSAYS

A total of 4,577 assay intervals from the 50 Finore holes and 10 historic R series drill holes were used to define the zone of mineralization of the deposit. Data analysis was conducted by creating probability and histogram plots of the major economic elements.



The Co probability plot (Figure 25) seems to exhibit a lognormal population, defined by a straight line on the cumulative probability curve, with a secondary, higher grade population of assays >200 ppm.







The Cu probability plot (Figure 26) seems to exhibit a lognormal population, defined by a slightly curved line on the cumulative probability curve, with a sharp break, and linear extension above 8,000 ppm suggesting a secondary high grade population.



Figure 26. Kaukua. Data analysis for Cu



The Ni probability plot (Figure 27) seems to exhibit a lognormal population, defined by a straight line on the cumulative probability curve. A second population of higher grade samples is indistinct, but seems to exist above 2,500 ppm.



Figure 27. Kaukua. Data analysis for Ni



The Au probability plot (Figure 28) exhibits a lognormal population up to 1 ppm. Above 1 ppm the distribution becomes erratic with no clear trend. This suggests that capping the high grade outliers at 1 ppm is appropriate.







The Pd probability plot (Figure 29) shows a lognormal population, up to 5 ppm. A sharp break in the slope of the cumulative probability curve at 5 ppm suggests that a secondary population may exist. All values remain close to the original trend and no capping is needed.



Figure 29. Kaukua. Data analysis for Pd





The Pt probability plot (Figure 30) seems to exhibit a lognormal population, defined by a straight line on the cumulative probability curve. No capping is necessary.

Figure 30. Kaukua. Data analysis for Pt



14.2.2 HAUKIAHO ASSAYS

A total of 1,612 assay intervals were identified for the Haukiaho deposit. The drill holes included 37 drill holes on the Finore owned claims, eight drill holes on a claim that Finore has applied for on the eastern end of the deposit (Haukiaho 11), and three holes that lay outside the claim boundaries. Different sampling campaigns have produced sample intervals that would locally overlap each other. Two separate assay tables were set up to handle this. Each assay table was composited separately, although the same composite parameters were used for each table. The sample composites were then combined for the grade estimation routine. Most of the overlapping sample intervals were created by sampling for different elements. Where overlapping sample intervals were created for the same element, two composites would be used by the estimation routine, for the same drill hole interval.

The Co probability plot (Figure 31) seems to exhibit a lognormal population, defined by a straight line on the cumulative probability curve. The data points depart from the main trend above 250 ppm, suggesting that capping at 250 ppm would be appropriate.



Figure 31. Haukiaho. Data analysis for Co



The Cu probability plot (Figure 32) seems to exhibit a slope change at 1,000 ppm suggesting a secondary high grade population. The higher grades remain on slope and do not require capping.



Figure 32. Haukiaho. Data analysis for Cu



The Ni probability plot (Figure 33) seems to exhibit a lognormal population, defined by a straight line on the cumulative probability curve. No capping is necessary.



Figure 33. Haukiaho. Data analysis for Ni



The Au probability plot (Figure 34) exhibits a lognormal population up to 0.5 ppm. Above 1 ppm the distribution is not clear, but seems to maintain a linear trend, suggesting that capping the high grade outliers is unnecessary.



Figure 34. Haukiaho. Data analysis for Au



The Pd probability plot (Figure 35) seems to exhibit a smooth lognormal population, up to 1 ppm. A sharp break in the slope of the cumulative probability curve at 1 ppm suggests that capping the higher grade values at that point is appropriate.



Figure 35. Haukiaho. Data analysis for Pd



The Pt probability plot (Figure 36) seems to exhibit a smooth lognormal population, up to 0.4 ppm. A sharp break in the slope of the cumulative probability curve at that point suggests capping the higher grade values at that point is appropriate.



Figure 36. Haukiaho. Data analysis for Pt

14.3 BULK DENSITY

Density measurements have been taken by two different methods on each of the properties. Laboratory measurements of the rock density have been recorded, and in-situ densities have been recorded by down hole surveys using a Wellmac Instrument probe that measured point densities with a gamma-gamma method. The Wellmac densities have not been used, due to their wider variation, and the existence of actual rock density measurements.

<u>14.3.1 KAUKUA</u>

There are 925 density measurements (Figure 37) recorded for the 2007 "R" series of GTK drill holes. The author has cross referenced the rock type at the point where the density was measured, and estimated an average density for each of the main rock types from this data. The average density for each rock type was then applied to each sample interval in the database.

<u>14.3.2 HAUKIAHO</u>

There are 2536 density measurements (Figure 38) recorded for the "R" series of drill holes. The author has cross referenced the rock type at the point where the density was measured, and estimated an average density for each of the main rock types from this data. The average density for each rock type was then applied to each sample interval in the database.

14.4 GEOLOGICAL INTERPRETATION

Both the Kaukua and Haukiaho deposits have been interpreted as parts of a layered mafic igneous complex. The rocks hosting the deposit include pyroxenites, peridotites, and gabbros. Geological modelling is limited to the defining the mineralization zone that is contained within the complex. An estimated net value was determined for each assay in the database. This value was calculated using the formula:

$$\frac{(Co\ ppm * \$45) + (Cu\ ppm * \$7.5) + (Ni\ ppm * \$21) + (Au\ ppm * 42000) + (Pd\ ppm * 17500) + (Pt\ ppm * 52000)}{1000}$$

Metal values used are approximate three year average price per kilogram, in C\$. These values are not intended for economic analysis, but rather to standardize the values of the different metals to a common point, for modelling purposes.





Figure 37. Kaukua density measurements





Figure 38. Haukiaho density measurements



14.4.1 KAUKUA

The deposit was modelled on a series of vertical east looking sections across the deposit on 25 m spacing, which approximated to the spacing and primary orientation of the drill holes. Rings constraining the mineralization were digitized on the sections where drilling was present. Net values greater than C\$40 were included inside the wireframe. A second set of north looking sections was created on 50 m spacing, and a second set of rings was digitized on these sections, linking the first set of vertical section rings together.

A series of three holes, about 500 m south of the deposit contained significant mineralized sections (Figure 39). These intersections were modelled as a separate entity and are referred to as the "South zone". Based on current drilling, the south zone is not connected to the main zone, as the distance between the intersections is too great.



Figure 39. Typical section with digitized rings (Kaukua 3553525E)

From these two sets of rings, wireframes were created that contained the bulk of the mineralization (Figure 40). Wireframe models are typically rendered to make them easier to interpret visually. The wireframe was verified as mathematically correct in Gemcom, and visually correct by comparison with the drill holes. Zones of mineralization were identified in the drill holes by intersecting the drill holes with the wireframe.





Figure 40. Oblique view, looking north-east, of digitized rings (Kaukua)

Wireframes were created for two different zones of mineralization (Figure 41). The largest wireframe (Main) was given a rock code of 100 to identify it for the estimation routine. The second wireframe (South), lies further to the south and was assigned a rock code of 120.



Figure 41. Rendered Kaukua wireframes of mineralized zone (red) and diabase (green)

An additional wireframe model of the diabase was also created. The diabase is interpreted to be a later stage geological intrusion, that cross cuts the mineralization. The volume of the mineralized envelope that intersects the diabase was removed from the mineralized zone prior to estimation.

The topography around the Kaukua deposit is relatively flat lying. A topographic surface provided by Nortec matched the drill hole collar elevations well, and was used for this estimation. A bedrock surface was created from the overburden lower contacts as listed in the drill logs.

<u>14.4.2 HAUKIAHO</u>

The Haukiaho deposit was modelled on a series of vertical sections striking 005° Az across the deposit on 50 m spacing. Rings constraining the mineralization were digitized on the sections where drilling was present. Net values greater than \$40 were included inside the wireframe. An additional ring was digitized in plan view to link the sections together. The deposit is divided into three different zone, East, Central, and West. Each zone is given its own rock code to identify it during the grade estimation procedure. The three zones are separated by two major faults that cross cut the Haukiaho deposit. These were modelled as surfaces, and the mineralized envelopes were trimmed at the fault surfaces to more accurately reflect the offset at the fault. In addition, a late diabase intrusion was also included in the model (Figure 42). The mineralized envelope was trimmed with the diabase prior to resource estimation.



Figure 42. Rendered wireframe of Huakiaho deposit showing faults and diabase (looking south)

An additional surface representing the bedrock surface was created from the diamond drill hole logs. A "best fit" surface was created using the basal contacts of the overburden. The bedrock surface was used to trim the upper extent of the mineralized envelope.

14.5 SPATIAL ANALYSIS

When frequency distributions are skewed, a very small number or proportion of samples may represent a large amount of the contained metal in the resource. Frequently these samples may be scattered through the deposit and not restricted to spatially identifiable or continuous zones. Sometimes small clusters of high-grade mineralization may be present, and it may or may not be possible or practical to restrict their influence. Other times the very high-grade samples may be the result of laboratory errors; pulps sometimes segregate high specific gravity materials like electrum or pyrite and may produce biased results if the pulps are not re-homogenized prior to aliquot selection for analysis.

Even when the assays are valid, linear interpolation (weighted average) grade estimation methods can be adversely affected. When these methods are used, the inclusion of a high-grade sample will have a greater influence on the estimate than a lower grade sample. This can lead to undue projection (or smearing) of the effect of high-grade material into areas for which there is no evidence in hand that the high-grade material continues to occur. Under such circumstances, restriction of the influence of the higher grade material is mandatory.

14.5.1 KAUKUA CAPPING

Cumulative probability curves were plotted for each of the major elements. On the basis of a review of probability and histogram plots, it was concluded that there is reasonable justification for capping the gold values. The sulphide elements appear to have a secondary linear trend, possibly reflecting some secondary enrichment. After analyzing the assay data for the Kaukua deposit, the capping system was applied (Table 21).

IADLE 21.		
KAUKUA DEPOSIT CAPPING PROTOCOL		
Capping Level		
No Capping		
No Capping		
No Capping		
1.0 ppm		
No Capping		
No Capping		

TADIE 11

Capping was performed on the assay data, prior to any sample compositing.

14.5.2 HAUKIAHO CAPPING

Cumulative probability curves were plotted for each of the major elements. On the basis of a review of probability and histogram plots, it was concluded that the capping protocols would be implemented (Table 22).

TABLE 22. HAUKIAHO CAPPING PROTOCOL			
Element	Capping Level		
Со	250 ppm		
Cu	No Capping		
Ni	No Capping		
Au	No Capping		
Pd	1.0 ppm		
Pt	0.4 ppm		

Capping was performed on the assay data, prior to any sample compositing.

14.5.3 COMPOSITES - KAUKUA

Core length statistics indicate that the average sampling interval is 1.1 m, and the maximum sample length is 3 m. Only seven samples are greater than 2 m long. Based on this information, and on block size, two metre long composites were created. This length allowed for a few samples of greater length to be broken, without affecting the variance and shorter samples to be combined to produce a sample of proper support.

Assays were composited into 2 m downhole lengths honouring the interpreted geological solids. No composites were generated outside the 3D wireframe. If the drill hole intervals within the solids were not assayed, sample composites were not generated for that section of the drill hole.

Commonly the compositing of downhole assays results in a fractional length for the last sample in a given hole. Composite remnants, which are composites less than 2 m in length, are unavoidable if the hard geological boundaries are to be honoured. WGM did not use composites less than one metre long in estimating the grade.





Figure 43. Kaukua sample lengths

14.5.4 COMPOSITES - HAUKIAHO

Core length statistics show a wide variation in sample length. Both the mean and median sampling intervals are about 1.4 m, but the maximum sample length is nearly 20 m (Sample 149664 DDH R617). Some of these very long samples occur in drill holes that are not used to define or estimate the mineralized envelope. Some are only partially contained within the mineralized envelope. There are 11 sample intervals more than 4 m long, and an additional 56 are greater than 3 m long, in the database. Longer composites will tend to "over smooth"



grade variances in the resource. Based on this information, and on block size, 4 m long composites were created. This length allowed for a few samples of greater length to be broken, without affecting the variance, and shorter samples to be combined to produce a sample of proper support.



Figure 44. Haukiaho sample lengths


Assays were composited into 4 m downhole lengths honouring the interpreted geological solids. No composites were generated outside the 3D wireframe. If the drill hole intervals within the solids were not assayed, sample composites were not generated for that section of the drill hole.

Commonly the compositing of downhole assays results in a fractional length for the last sample in a given hole. Composite remnants, which are composites less than 4 m in length, are unavoidable if the hard geological boundaries are to be honoured. WGM did not use composites less than two metres long in estimating the grade.

VARIOGRAPHY 14.5.5

Identification of the spatial continuity within a deposit is by means of variography, which is later used to perform kriging. Variography is used as part of the kriging parameters that allow the grade estimation software to assign weights to the sample points, based on their direction and distance from the block being estimated. Kriging weights are estimated based on spatial autocorrelation between sample points. Kriging is typically used for spatial prediction where the data are expected to follow a trend varying in both mean (expected value), and variance by location. In general, variography is done on composite-sized volumes, which are nominally of equal length.

Variograms were generated only for the Kaukua deposit using the 3D Variography function contained within Gemcom. There was insufficient data for the Haukiaho deposit to warrant generating variograms. The variogram parameters generated are listed in Table 23.

VARIOGRAM PARAMETERS-KAUKUA DEPOSIT										
Co Cu Ni Au Pd Pt										
Model Type	Spherical	Spherical	Spherical	Spherical	Spherical	Spherical				
Nugget	0	210146	4680	0	0	0				
Sill	457.85	959616	218837	0.0035	0.1977	0.0196				
Principal Azimuth	135.88	127.03	129.13	116.29	137.12	127.46				
Principal Dip	0	0	0	0	0	0				
Intermediate Azimuth	225.88	217.03	219.13	206.29	227.12	217.46				
Range X	51.45	51.5	46.34	34.43	104.15	78.33				
Range Y	27.44	26.6	30.18	34.43	104.15	49.13				

TABLE 23.

14.6 RESOURCE BLOCK MODEL

14.6.1 KAUKUA DEPOSIT

A block model (Table 24) was generated in Gemcom using a 10 m x 10 m x 3 m block size. A smaller vertical block size was used to reflect the increased vertical variability of the deposit. Gemcom defines the block model origin using a minimum X, minimum Y, maximum Z format.

TABLE 24.

KAUKUA BLOCK MODEL PARAMETERS							
Description							
Number of Blocks:	Columns	88					
	Rows	45					
	Levels	85					
Origin and Rotation:	Х	3553025					
	Y	7317200					
	Z	290					
	Rotation	0					
Block Size:	Column size	10					
	Row size	10					
	Level size	3					

Within the block model, folders were set up for Rock Type, Density, Percent, Co_ppm,

Cu_ppm, Ni_ppm, Au_ppm, Pd_ppm, Pt_ppm, Au-ID and Ni-ID.

Each of the wireframe zones identified in the Kaukua deposit was coded with a different rock type number. The Rock Type folder was updated so that any blocks touching the wireframe were given the Rock Type code of that wireframe. This insured that assay values in one part of the mineralized zone did not 'cross over' between the zones during the estimation process.

The Percent model folder contains values that represent the percentage of the block that is inside any particular wireframe. The percent model is used to estimate the tonnage of the block that was contained within the wireframe.

The various element folders contain the grade estimates for their respective elements. Grades in these folders were estimated using ordinary kriging ("OK"). The Au-ID and Ni-ID folders contain the grade estimates for their respective elements. Grades in these folders were estimated using an inverse distance method ("ID"). This was done to verify the estimation.

14.6.2 HAUKIAHO DEPOSIT

A block model was generated in Gemcom using a 25 m x 25 m x 25 m block size (Table 25). The rather large block size is a reflection of the low data density available for the Haukiaho deposit. Gemcom defines the block model origin using a minimum X, minimum Y, maximum Z format.

TABLE 25.

HAUKIAH	HAUKIAHO BLOCK MODEL PARAMETERS						
Description							
Number of Blocks:	Columns	180					
	Rows	50					
	Levels	10					
Origin and Rotation:	Х	3546100					
	Y	7306300					
	Ζ	270					
	Rotation	0					
Block Size:	Column size	25					
	Row size	25					
	Level size	25					

Within the block model, folders were set up for Rock Type, Density, Percent, Co_ppm, Cu_ppm, Ni_ppm, Au_ppm, Pd_ppm, and Pt_ppm.

Each of the wireframe zones (West, Centre and East) identified in the Haukiaho deposit was coded with a different rock type number. Individual block models were created for each of the zones, where the Rock Type folder was updated so that any blocks touching the wireframe, was given the Rock Type code of that wireframe. This insured that assay values in one part of the mineralized zone did not 'cross over' between the zones during the estimation process.

The Percent model folder contains values that represent the percentage of the block that is inside any particular wireframe. The percent model is used to estimate the tonnage of the block that was contained within the wireframe.

Once the block values were interpolated, the partial models were combined to create a Standard model for reporting purposes.



14.7 INTERPOLATION PLAN

14.7.1 KAUKUA DEPOSIT

The Kaukua deposit resource estimate was prepared using OK, and the Ni and Au results were checked using an ID method. The estimations were designed as a two pass system. The first pass estimated a block only if a minimum of two drill holes and three data points were found within the restrictive search ellipsoid equalling the Ni variogram range (Figure 45). The second pass allowed a block to be interpolated if it was not interpolated during the first pass, and if a minimum of two data points from were found within a sample search ellipsoid equal to four times the Ni variogram range. Table 26 summarizes the search distances and right hand rotations for estimating a block, as well as minimum and maximum number of composites required.

TABLE 26.INTERPOLATION PARAMETERS

	Samples Used				Ranges (m)	Rotation Scheme		
	Min	Max	Holes	X	Y	Z	Z	X	Z
Pass 1	3	6	2	46.34	30.18	15.11	129	-20	0
Pass 2	2	6	1	185.3	120.7	60.4	129	-20	0



Figure 45. First pass Ni search ellipse and wireframe model looking down toward the north-east. DDH traces are green



Search ranges for the first pass were based on the Ni variogram ranges. The second pass ranges are equal to 4x the Ni variogram ranges, and were implemented to populate those areas of the model where drilling was more widely spaced. The Ni variogram was used as a baseline, as it is the primary economic component of the Kaukua deposit.

14.7.2 HAUKIAHO DEPOSIT

The Haukiaho deposit resource estimate was prepared using an ID method. The estimations were designed as a two pass system. The first pass estimated a block only if a minimum of two drill holes and three data points were found within the restrictive search ellipsoid that was slightly larger than the section spacing. The second pass allowed a block to be interpolated if it was not interpolated during the first pass, and if a minimum of two data points from were found within a sample search ellipsoid large enough to populate most of the blocks in the model. Table 27 summarizes the search distances and right hand rotations for estimating a block, as well as minimum and maximum number of composites required.

	INTERPOLATION PARAMETERS									
	Sa	umples Us	sed	R	Ranges (m	ı)	Rotation Scheme			
_	Min	Max	Holes	Х	Y	Ζ	Z	Х	Ζ	
Pass 1	3	6	2	75	75	20	-20	90	0	
Pass 2	2	6	1	250	250	50	-20	90	0	

TABLE 27.INTERPOLATION PARAMETERS

14.8 MINERAL RESOURCE CLASSIFICATION

Several factors were used to determine the mineral resource classification:

- CIM requirements and guidelines;
- Experience with similar deposits;
- Spatial continuity of the deposit; and
- Confidence in the data.

No known environmental, permitting, legal, title, taxation, socio-economic, marketing or other relevant issues are known to the authors that may affect the estimate of a mineral resource. Mineral reserves can only be estimated on an economic evaluation that is used in a Prefeasibility or a Feasibility study on a mineral project, thus no reserves have been estimated. As per NI 43-101, mineral resources that are not mineral reserves do not have economic viability.



Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories. An Inferred Mineral Resource has a lower level of confidence than that applied to an Indicated Mineral Resource. An Indicated Mineral Resource has a higher level of confidence than an Inferred Mineral Resource but has a lower level of confidence than a Measured Mineral Resource.

Due to the uncertainty that may be attached to Inferred Mineral Resources, it cannot be assumed that all or any part of an Inferred Mineral Resource will be upgraded to an Indicated or Measured Mineral Resource as a result of continued exploration. Confidence in the estimate is insufficient to allow the meaningful application of technical and economic parameters or to enable an evaluation of economic viability worthy of public disclosure. Inferred Mineral Resources must be excluded from estimates forming the basis of feasibility or other economic studies.

14.8.1 KAUKUA DEPOSIT

The Kaukua deposit resource is divided between indicated and inferred resources. In most areas, the drilling is too widely spaced to verify the continuity of grade between the drill holes. In the interpolation process, these were areas where the blocks did not generally fall within the variogram range of two drill holes. Of the 26,485 blocks that represent the mineralized zone, only 3024 were assigned values in the first pass of the estimation routine, which required samples from two different drill holes to be within the variogram range. The section of the deposit that was comprised largely of the blocks identified in the first pass, was classified as an indicated resource. The indicated resource is outlined in Figure 46.

14.8.2 HAUKIAHO DEPOSIT

The Haukiaho deposit resource is classified as an inferred resource (Figure 47). The drilling to date is too widely spaced to verify the continuity of grade between the drill holes. The mineralized envelope has been interpreted on most sections on the basis of a single drill hole.

The claim that covers the eastern end of the deposit was not wholly owned by Finore at the time this report was prepared. As such, the resources in that claim are tabulated separately.









Figure 47. Haukiaho deposit and claim status



14.9 MINERAL RESOURCE TABULATION

<u>14.9.1 KAUKUA</u>

The mineral resource estimate for the Kaukua deposit is tabulated in Table 28. Ordinary Kriging was used to estimate the resources in the Kaukua deposit. Due to the presence of several metals contributing to the value of the deposit, a contained metal value approach was used to define the lower cutoff. The lower cutoff of C\$50/tonne was defined using the formula:

(Co ppm * \$45)+(Cu ppm * \$7.5)+(Ni ppm * \$21)+(Au ppm * 42000)+(Pd ppm * 17500)+(Pt ppm * 52000) 1000

Metal values used are approximate three year average price per kilogram in C\$. These values are not intended for economic analysis, but rather to standardize the values of the different metals to a common point.

TABLE 28. KAUKUA RESOURCE ESTIMATE									
Classification	Lower Cutoff C\$ per Tonne	Density T per M ³	Tonnes T x 1000	Ni (ppm)	Cu (ppm)	Co (ppm)	Au (ppm)	Pd (ppm)	Pt (ppm)
Indicated	> \$100	2.94	51	1,259	2,380	64	0.15	1.65	0.51
	> \$90	2.93	136	1,285	2,366	67	0.14	1.35	0.43
	> \$80	2.93	352	1,322	2,328	69	0.12	1.07	0.35
	> \$70	2.93	862	1,281	2,132	67	0.10	0.89	0.29
	>\$60	2.93	1,689	1,225	1,899	66	0.08	0.77	0.25
	> \$50	2.93	2,605	1,164	1,734	65	0.07	0.67	0.22
	> \$40	2.93	3,243	1,108	1,645	64	0.07	0.61	0.20
	>\$30	2.93	3,446	1,083	1,611	64	0.07	0.59	0.19
Inferred	> \$100	2.92	221	1,346	2,570	59	0.17	1.56	0.51
	> \$90	2.92	509	1,293	2,370	58	0.15	1.37	0.46
	> \$80	2.93	1,486	1,219	2,111	56	0.13	1.14	0.40
	>\$70	2.93	3,078	1,155	1,957	55	0.11	1.00	0.36
	>\$60	2.93	5,290	1,107	1,764	55	0.10	0.89	0.31
	> \$50	2.93	8,486	1,057	1,582	55	0.08	0.76	0.27
	>\$40	2.93	11,047	1,010	1,468	54	0.08	0.68	0.24
	>\$30	2.93	11,832	990	1,423	54	0.07	0.66	0.23

14.9.2 HAUKIAHO

The mineral resource estimate for the Haukiaho deposit is tabulated in Table 29. An inverse distance squared (ID) method was used to estimate the resources in the Kaukua deposit. Due to the presence of several metals contributing to the value of the deposit, a contained metal value approach was used to define the lower cutoff. The lower cutoff of C\$50/tonne was defined using the formula:

```
(Coppm * \$45) + (Cuppm * \$7.5) + (Nippm * \$21) + (Auppm * 42000) + (Pdppm * 17500) + (Ptppm * 52000)
                                    1000
```

Metal values used are approximate three year average price per kilogram in C\$. These values are not intended for economic analysis, but rather to standardize the values of the different metals to a common point. The resource is categorized as an inferred resource.

	HAUKIAHO RESOURCE ESTIMATE								
Lower Cutoff C\$ per Tonne	Volume M ³ x 1000	Density T/m ³	Tonnes T x 1000	Ni (ppm)	Cu (ppm)	Co (ppm)	Au (ppm)	Pd (ppm)	Pt (ppm)
> \$100	96	2.77	266	2,262	3,361	75	0.22	0.51	0.20
> \$90	326	2.81	918	2,067	3,070	71	0.21	0.48	0.19
> \$80	650	2.84	1,849	2,065	3,055	69	0.16	0.37	0.14
>\$70	2,571	2.85	7,340	1,813	2,657	75	0.12	0.32	0.12
>\$60	3,989	2.86	11,415	1,664	2,567	67	0.12	0.31	0.12
>\$50	5,863	2.86	16,768	1,518	2,418	59	0.11	0.28	0.10
>\$40	7,852	2.86	22,463	1,426	2,344	48	0.09	0.22	0.08
>\$30	10,171	2.86	29,128	1,340	2,218	44	0.07	0.18	0.06

TABLE 29.

The Haukiaho deposit extends eastward onto a claim (Haukiaho 11) which Finore has the right to acquire, however because this transaction is not yet completed WGM has prepared an stand alone resource estimate for this claim The inferred resource that lies on that claim is tabulated in Table 30.

HAUKIAHO 11 CLAIM RESOURCE ESTIMATE									
Lower Cutoff	Volume	Density	Tonnes	Ni	Cu	Co	Au	Pd	Pt
C\$ per Tonne	$M^3 \ge 1000$	T/m^3	T x 1000	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
>\$100	0	0.00	0	0	0	0	0.00	0.00	0.00
> \$90	0	3.11	0	2,283	2,148	170	0.17	0.37	0.10
> \$80	19	3.11	60	1,972	2,454	164	0.14	0.31	0.11
>\$70	42	3.03	126	1,917	2,571	160	0.11	0.26	0.06
>\$60	481	2.88	1,387	1,863	2,810	25	0.02	0.05	0.01
> \$50	784	2.89	2,265	1,669	2,327	53	0.04	0.11	0.04
> \$40	1,156	2.89	3,342	1,412	1,957	75	0.06	0.14	0.06
> \$30	1,299	2.89	3,752	1,356	1,856	73	0.06	0.15	0.06

TABLE 30.



14.10 BLOCK MODEL VALIDATION

14.10.1 KAUKUA

The Kaukua deposit mineral resource estimate was validated by:

- Comparing contained metal differences between OK and ID estimation methods;
- Visual comparison of block grades with drill hole assays; and
- Comparison with previous estimates.

Both OK and ID methods are globally unbiased. Introducing a lower cutoff grade introduces a bias. Comparing the contained metal predicted by the OK estimate with the ID estimate (Table 31) provides a global evaluation of the resource estimate. OK is a generally preferred method for block estimation, as it takes block size into account.

COMPARISON BETWEEN OK AND ID ESTIMATION METHODS								
Classification		Tonnes	Ni OK	Ni ID ²	% change	Au OK	Au ID ²	% change
		T x 1000	(ppm)	(ppm)	(kg Ni)	(ppm)	(ppm)	(kg Au)
Indicated	>\$100	51	1,259	1,255	0%	0.15	0.15	0%
	> \$90	136	1,285	1,313	-3%	0.14	0.15	0%
	> \$80	352	1,322	1,373	-5%	0.12	0.13	0%
	>\$70	862	1,281	1,322	-4%	0.10	0.10	0%
	> \$60	1,689	1,225	1,236	-1%	0.08	0.09	0%
	> \$50	2,605	1,164	1,173	-1%	0.07	0.08	0%
	> \$40	3,243	1,108	1,120	-1%	0.07	0.07	0%
	>\$30	3,446	1,083	1,096	-1%	0.07	0.07	0%
Inferred	> \$100	221	1,346	1,348	0%	0.17	0.17	0%
	> \$90	509	1,293	1,322	-3%	0.15	0.15	0%
	> \$80	1,486	1,219	1,250	-3%	0.13	0.14	0%
	>\$70	3,078	1,155	1,181	-3%	0.11	0.12	0%
	> \$60	5,290	1,107	1,123	-2%	0.10	0.10	0%
	> \$50	8,486	1,057	1,058	0%	0.08	0.09	0%
	> \$40	11,047	1,010	1,004	1%	0.08	0.08	0%
	>\$30	11,832	990	982	1%	0.07	0.08	0%

TABLE 31. COMPARISON BETWEEN OK AND ID ESTIMATION METHODS

Ordinary Kriging produced global grade estimates that are very similar to that predicted by the ID method. This comparison illustrates that the resource estimate is sound, but the block values in the ID resource estimate are less variable than those of the OK estimate.

A comparison with the previous estimate, prepared by WGM in February 2011 indicates that the current estimate has a slightly lower tonnage, at a slightly higher grade. This is consistent with the changed metal valuations used in this report.



		COMPARIS	T SON WITH P	ABLE 32. REVIOUS I	KAUKUA I	ESTIMATE	C		
	Classification	Density T per M ³	Tonnes T x 1000	Ni (ppm)	Cu (ppm)	Co (ppm)	Au (ppm)	Pd (ppm)	Pt (ppm)
February 2011	Indicated	2.93	2,887	1,158	1,698	65	0.07	0.65	0.21
October 2011		2.93	2,605	1,164	1,734	65	0.07	0.67	0.22
Change		0.00	-282	6	36	0	0.00	0.03	0.01
February 2011	Inferred	2.93	9,225	1,047	1,546	55	0.08	0.73	0.26
October 2011		2.93	8,486	1,057	1,582	55	0.08	0.76	0.27
Change		0.00	-739	10	36	0	0.00	0.03	0.01

A visual comparison of the block grades with local diamond drill holes shows a good correlation between the two. Figure 48 shows a representative section.



Figure 48. Vertical section showing Ni grades, block model and diamond drill holes (Kaukua)



14.10.2 HAUKIAHO

The Haukiaho resource estimate was verified by comparing drill hole assay values with local block values in the model. A visual comparison of the block grades with local diamond drill holes shows a good correlation between the two. Figure 49 shows a representative section.



Figure 49. Haukiaho Ni grades, block model and diamond drill holes

A comparison with the previous estimate, prepared by WGM in February 2011 indicates that the current estimates have a slightly lower tonnage, at a slightly higher grade. This is consistent with the changed metal valuations used in this report.

HAUKIAHO RESOURCE COMPARISON WITH PREVIOUS ESTIMATE								
	Density	Tonnes	Ni	Cu	Со	Au	Pd	Pt
	T per M ³	T x 1000	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
February 2011	2.86	18,179	1,500	2,404	56	0.11	0.26	0.09
October 2011	2.86	16,768	1,518	2,418	59	0.11	0.28	0.10
Change	0.00	-1,411	18	14	3	0.00	0.02	0.01

TABLE 33

TABLE 34.

HAUKIAHO 11 CLAIMS RESOURCE	COMPARISON WITH PREVIOUS ESTIMATE

	Density	Tonnes	Ni	Cu	Co	Au	Pd	Pt
	T per M ³	T x 1000	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
February 2011	2.89	2,542	1,593	2,205	62	0.04	0.12	0.04
October 2011	2.89	2,265	1,669	2,327	53	0.04	0.11	0.04
Change	0.00	-277	76	122	-8	-0.01	-0.01	-0.01



15. MINERAL RESERVE ESTIMATES

Not applicable.

16. MINING METHODS

Not applicable.

17. RECOVERY METHODS

Not applicable.

18. PROJECT INFRASTRUCTURE

Not applicable.

19. MARKET STUDIES AND CONTRACTS

Not applicable.



20. ENVIRONMENTAL STUDIES, PERMIT, AND SOCIAL OR COMMUNITY IMPACT

None of the Finore's properties are located on or near any nature conservation areas, with the closest being Kaukua North 3, which is 1.8 km from a Natura 2000 program area. Natura 2000 is a nature conservation program established according Finnish national legislation and in accordance to directive given by European Union. Natura legislation entail that all actions taking place in or outside of the area should be assessed for its possible impacts on the Natura area. Finore's properties are in the River Iijoki drainage basin and some of the waters down river belong to Natura 2000. This is not categorically preventing mining, but necessitates appropriate consideration in the Environmental Impact Assessment procedure.

Environmental Impact Assessment (ympäristövaikutusten arviointimenettely, YVA) procedure as defined by Finnish national legislation and authority instructions forms the basis for environmental permitting process. Finore or any preceding property owners have not done base line or other environmental studies to document the present conditions and status of environment, which would form the first step in YVA procedure.

About 1.5 km of the strike length of anticipated Lipeävaara mineralized zone locates under the lake Kulojärvi while the documented and anticipated mineralized zones in all other Finore properties are virtually in forested and swampy lands.

Mining on Finore's properties would affect living of the people in the hamlets of Kaukua, Kuloharju and Sirniö (Figure 2) and relocation of some people is unavoidable in the case mining of the delineated Kaukua deposit. The anticipated mineralized zone of Lipeävaara runs mostly in permanently inhabited area and larger number of relocations of people would be required if mining takes place on Lipeävaara property. In contrast, Murtolampi, Haukiaho, and Haukiaho east lack permanent settlement.

Finore's property regions have mining heritage as the Mustavaara Fe-Ti-V mine was in operation in 1974-1985. The positive impact of the mining on the local economy is still visible in number of metal workshops, some of which are today emerged to global manufacturing companies as exemplified by Telatek oy. The positive attitude of people in average is expressed by the decision of the Municipality of Taivalkoski to become a shareholder to Mustavaaran Kaivos oy, who is currently studying technical possibilities to reopen the old mine.



Based on WGM's observation during the site visits, all personnel working on the project were equipped with appropriate PPE (personal protective equipment) and adhered to industry safety practices and guidelines.

All field work (to the extent observed) was carried out with due respect to environmental guidelines and Mining Act. WGM is not aware of any difficulties with the local community or authorities, and is not aware of any environmental or labour related rulings against the company.

21. CAPITAL AND OPERATING COSTS

Not applicable.

22. ECONOMIC ANALYSIS

Not applicable.



23. ADJACENT PROPERTIES

As of October 28, 2011 there were no nearby (5 km radius) claims or claim reservations adjacent to Nortec's claims/claim applications except for the Haukiaho east 1 claim application, which touches a claim application of Kevitsa Mining oy, a Finland daughter company of First Quantum Minerals Ltd (see Figure 9). Mustavaaran Kaivos oy application for mining concession locates about 1.6 km from Finore claim application area.

Within the same belt of layered intrusion complexes hosting the Koillismaa Complex, mining is currently taking place at Kemi (close to Tornio, see Figures 3), 160 km to the west, for chrome. Mining concession has also been granted for exploitation of Suhanko contact-type PGE-Cu-Ni deposit at Portimo Complex (Figure 3) located 95 km to the west.



24. OTHER RELEVANT DATA AND INFORMATION

24.1 DISTRIBUTION OF METALS BETWEEN SULPHIDE AND SILICATE PHASES

This study was originally prepared for NI 43-101 report for Finore Mining Inc.'s Joint Venture partner Nortec Minerals Corp.

WGM as part of its NI 43-101 data review carried out a study to define the inter-element ratios in the sulphide fraction composition. One objective of the study was to examine the distribution of the metals between the silicate and sulphide phases, presented here. The full version of the study is presented in the Appendix 1.

Thirty-three samples, each about one metre long of quarter core, were collected from three drill holes and each sample was subjected to total and sulphide selective assays using Labtium methods 720P (total) and 240P (sulphide specific). Details of the assay methods are presented in Tables 12 and 13. The difference in metal concentrations received by these two methods is believed to be indicative of the amount of metal tied up in the silicates and hence unrecoverable during sulphide flotation. In addition to the WGM due diligence samples, the Nortec database of Labtium 240P assay results was also incorporated, increasing the number of holes for which the comparative analysis was undertaken to seventeen, also covering all the rock types hosting the Kaukua ore.

Mineralogical studies indicate, that Cu, PGE, and Au, are carried almost exclusively by sulphide minerals chalcopyrite, pentlandite, pyrrhotite and pyrite or other minerals susceptible to sulphide flotation. The Ni and Co are also hosted in silicates in addition to the sulphides. The principal Ni and Co carrying silicates are olivine, pyroxene, chlorite, serpentine, talc and amphibole.

In order to determine the proportion of nickel reporting to the silicates, a comparison between assay methods 510P and 240P was made (Figure 50). The analysis reveals that "silicate nickel" can vary in a wide range. A sample which assayed 2,000 ppm Ni (using assay technique 510P) may have recoverable Ni content (using assay technique 240P) of ranging from 1,400-1,900 ppm and silicate nickel range of 100-600 ppm. Given to similar leaching technique and ICP-AES finish these results received for Labtium 510P would be applicable also for ALS Chemex ME-ICP41 results.





Figure 50. Kaukua - Nortec Ni assays (510P) versus sulphidic Ni (240P). Points closer to intersecting 1:1 line have lesser amount silicate nickel

Figure 51, depicts the sulphide hosted nickel versus the total nickel derived separately from ultramafic and mafic hosts. The 240P/720P trend line intersects zero sulphidic nickel at 500 ppm of total Ni for the gabbroic host and at 1,000 ppm for the ultramafic host. These values approximate the theoretical quantity of silicate nickel in the rock types mentioned.



Figure 51. Kaukua. Sulphidic nickel content versus total nickel in gabbroic (red diamonds) and pyroxenitic (blue diamonds) hosts





Figure 52, compares partial 510P and sulphide specific 240P assay results for cobalt. The comparison indicates that the cobalt from silicate minerals is 0-50 ppm in a range of 0 to 150 ppm of cobalt in 510P results.



indicates 50 ppm surplus of silicate Co

The following conclusions can be drawn from the distribution of nickel and cobalt between the sulphide and silicate phases.

- The *nickel* occurring in silicate minerals ranges from 100-600 ppm in Labtium 510P / ALS Chemex ME-ICP41 assay results (see Figure 50);
- The *cobalt* occurring in silicate minerals ranges from 0-50 ppm in the range of 0 to 150 ppm Co in Labtium 510P / ALS Chemex ME-ICP41 assay results (see Figure 52); and
- Silicate nickel contents in gabbroic and pyroxenitic host rocks are c. 500 and c. 1,000 ppm, respectively (see Figure 51).

24.2 CORPORATE SOCIAL RESPONSIBILITY

Corporate social responsibility ("CSR") policies are seen as the manifestation of a company's approach to addressing the interests, concerns and objectives of various stakeholders (including national, regional government, local authorities, indigenous people, local communities, employees and competitors) and their often-varying needs. Finland has a history of applying stringent environmental, health & safety and worker protection laws to its



mines. Sound CSR policies and practices may significant enhance the likelihood of a project's success and would minimize potential project delays.

As part of its project risk assessment WGM undertook a review of Nortec's CSR policies and programs. While there is no universally accepted metric for measuring CSR performance, WGM has applied the United Nation's Global Compact as its yardstick for evaluating Nortec. WGM has used a self-administered questionnaire that company officials completed to evaluate their compliance with twenty-two principles in areas of human rights, labour, environment and anti-corruption.

While WGM has determined that Nortec does not have a formal CSR policy, the company does have policies that address the core issues that collectively define CSR.

The results of the self-evaluation are as follows:

- Human Rights. Nortec has put in place policies designed to promote:
 - ✓ Safe and healthy working conditions;
 - ✓ Ensure non-discrimination in hiring practices;
 - \checkmark Prevent the hiring of forced and / or child labour;
 - ✓ Ensuring that the company's operations do not displace individuals, groups or communities;
 - ✓ Protect the security and safety of local communities through adherence to international guidelines and standards for securing their operations; and
 - ✓ Protection of worker's human rights.
- Labour Standards. Policies are in place that:
 - \checkmark Ensure the rights of workers to join trade union;
 - \checkmark Respect the rights of unions to organize and advance the interests of workers;
 - ✓ Ensure that employment contracts clearly state the terms and conditions of service, the freedom of workers to leave, etc.;
 - ✓ Clearly state the procedures for recruitment, placement, training and advancement; and
 - ✓ Provide grievance procedure to address complaints, handle appeals and provide recourse for employees.
- Environment. The company promotes greater environmental responsibility through the application of the following:
 - ✓ A Code of Conduct that confirms the company's commitment to minimize the impact of its operations on the environment;
 - ✓ Policies that promote the 'triple bottom line' of sustainable development;
 - \checkmark Working with suppliers improve environmental performance in the supply chain; and



- ✓ Procedures to measure, track, and communicate sustainability principles into business practices that conform to international best practice.
- Anti-Corruption. Nortec has developed policies to:
 - ✓ Combat corruption; and
 - ✓ Report progress (e.g., Annual Report, news releases) to regulators, investors, employees, and communities.

Based on these results, WGM's observations during its field visit and general knowledge of the company's operations in Finland, WGM has concluded that Nortec has accepted CSR as part of its corporate ethos, which is expected to minimize the potential risks associated with future CSR obligations.

24.3 PARTICIPATION IN INDUSTRY-UNIVERSITY RESEARCH PROJECTS

Finore Mining continues participation in a collaborative Industry-University research project titled Beneficiation of Platinum-Group Minerals in Sulphide-Poor Platinum Deposits – BEPGE, headed by the University of Oulu. This collaboration was initiated by Nortec Minerals. The second phase of this (BEPGE2) started early in 2010 and is ongoing. It includes the Department of Geosciences and the Department of Process and Environmental Engineering from the University, GTK, and about ten corporate partners represented by mining companies, laboratories, and instrumentation technology companies. BEPGE/BEPGE2 projects research beneficiation by performing mineralogical/petrological studies and testing various rock communition, flotation and other mineral procession methods.

Nortec and subsequently Finore have committed to expend totally \notin 40,000 for two years in BEPGE2 projects. Within the project several tens of samples have been sent for testing and a M.Sc. Study is currently underway. WGM finds this collaboration project supportive for the efforts to improve recovery of metals in the concentration processes.



25. INTERPRETATION AND CONCLUSIONS

The Koillismaa Layered Igneous Complex ("KLICK") in Finland, hosting Finore's LK Project, is one of the largest among the c. 2.45 Ga old Fennoscandian mafic layered complexes comparable to such world-class complexes as the Duluth Gabbro. The Koillismaa complex has an estimated magma volume greater than 2,000 km³. These volumes of basic magma provide large reservoirs of metals for ore forming processes and the Fennoscandian complexes are host to a number of known mines, chrome (Kemi), Fe-Ti-V oxides (Mustavaara) and Ni-Cu-PGE sulphides (Monchegorsk).

The contact-type base metal – platinum-group element mineralization hosted by the Koillismaa Complex has a significant potential for economic deposits. Finore's properties cover about 26 km of the estimated 100 km total strike length of the favourable contact zone which varies in thickness from metres to several tens of metres.

Mineralization in the contact-type deposits is particularly concentrated in favourable structural positions, where the PGE-reef comes in contact with the marginal series due to angular discordance between marginal and layered series units. This kind of structural setting is found in the northern Kaukua Block. Higher than average PGE tenor and numerous PGE enriched pockets have been encountered at Kaukua which are unknown elsewhere in the Koillismaa complex.

A similar favourable structural setting has also been speculatively interpreted for the projection of the PGE reef encountered in drilling on Finore's Haukiaho claim which is supported by the relatively higher metal tenor observed in historic drilling.

WGM concludes, based on the above structural interpretation and observations, that, further exploration warranted with good potential that it hosts economically significant mineral resources.

There is also significant potential for gold on the Finore properties. Koillismaa contact type base metal – PGE mineralization is *characteristically enriched in gold with* the Pt/Au ratio often being close to one. The Archean footwall gneisses below the Koillismaa layered intrusions is pervasively sodium metasomatised giving rise to albite-quartz rock (ab-qz rock). The high Pt/Au ratio in the Koillismaa contact-type shows a rough positive correlation with the thickness of the footwall albite-quartz rock. The Haukiaho area has hundreds of metres of ab-qz rock bordering them on the footwall side and the Pt/Au ratio is close to one. An erratic high gold intersection of one metre @ 3.0 ppm Au has been encountered at Haukiaho.



The metasomatism, that produced the ab-qz rock, is interpreted to slightly predate mafic magmatism and where present in large volume, to have been the source rock of large quantities of metals including gold. WGM suggests that the extensive fluid activity, the observed ab-qz metasomatism and the documented presence of gold, may provide a new avenue for exploration.

WGM has determined that Finore's Joint Venture partner Nortec has compiled and generated sufficient exploration data and that the data is of sufficient quantity and quality to warrant the preparation of a the mineral resource estimate following the guidelines and definitions adopted by the CIM for both the Kaukua and Haukiaho deposits presented herein.

The comparison of in situ metal values per tonne of ore of Finore's Kaukua and Haukiaho deposits (Table 35) shows that precious metals (Pd, Pt, and Au) constitutes approximately 50% and 20% respectively of the total values of the Kaukua and Haukiaho deposits, half of the remaining value being in nickel. This emphasises the importance of precious metals and nickel recoveries and metallurgical test work focussed on maximizing the recoveries of these metals.

The comparison shown previously in Table 35 also indicates Kaukua and Haukiaho deposits to have similar in-situ metal grades, but having lower tonnages compared to some other similar contact-type deposits in production or in advanced development stage.

With respect to geophysical exploration, the evident disseminated character of the mineralization, as described in core logs, supports the demonstrated effectiveness of IP, but also suggests that mineralization is unlikely to be conductive on any practical scale, and hence likely not amenable to effective utilization of conventional EM whether in airborne, ground or borehole surveys, although magnetotellurics could help map deeper portions of the KLIC.

Based on the descriptions of mineralization and photos of selected mineralized core samples and the present review of the available maps and reports on past surveys, as well as from extensive experience in exploring other similar mafic/ultramafic complexes, the surveys are judged to have been sensibly conceived and satisfactorily executed, plotted and qualitatively interpreted. The qualitative geophysical interpretation advanced in the reports reviewed is judged to be sensibly grounded in both the survey data and geophysical understanding.



TABLE 35. COMPARISON OF KAUKUA AND HAUKIAHO IN-SITU VALUES (C\$/T) OF ORE WITH SOME SIMILAR TYPE OF ORE DEPOSITS

	Finore Mining LK Project			Gold Fields Suhanko Project			First Quantum Minerals		North American Palladium		Marathon PGM Corp.			
	Kaukua Haukiaho		Konttijärvi ¹		Ahmavaara ¹		Kevitsa ²		Lac des Iles ³		Geordie Lake ⁴			
	Con	C\$/t	Con	C\$/t	Con	C\$/t	Con	C\$/t	Con C\$/t		Con C\$/t		Con C\$/t	
Pd	0.74	13.43	0.26	4.55	0.95	16.63	0.82	14.45	0.15	2.63	3.18	55.65	0.61	10.68
Pt	0.26	12.93	0.09	4.83	0.27	14.04	0.17	8.84	0.21	10.92	0.26	13.52	0.04	2.08
Au	0.08	3.26	0.10	4.26	0.07	2.94	0.10	4.20	0.11	4.62	0.22	9.24	0.05	2.10
Cu	0.16	12.13	0.24	17.88	0.10	7.50	0.17	12.75	0.41	30.75	0.072	5.40	0.37	27.75
Ni	0.11	22.72	0.15	32.22	0.05	10.50	0.07	14.70	0.28	58.80	0.086	18.06	-	-
in-situ value	64.48		63.73 51.61		54.84		107.72		101.87		42.61			
size	11.09 Mt		19.5	58 Mt	75.24	4 Mt	187.8 Mt		240.1 Mt		36.04 Mt		32.42 Mt	

Concentrations (Con) of precious metals in ppm and base metals in wt%. Mt, million tonnes.

Used metal prices: Pd 17,500 C\$/kg, Pt 52,000 C\$/kg, Au 42,000 C\$/kg, Cu 7,500 C\$/kg, and Ni 21,000 C\$/kg

Sources of information:

¹ Measured, Indicated and Inferred Resources, Technical Report, Mineral Resource Estimate, and Preliminary Economic Assessment (Scoping Study) of the Suhanko Project Northern Finland by Aker Kværner, P&E Mining Consultants Inc. for North American Palladium Ltd (Sept. 1st, 2006).

² Measured and Indicated Resources, First Quantum Minerals' press release March 30th, 2011.

³ Measured and Indicated Resources, Technical Report on the Lac des Iles Mine, Thunder Bay, Ontario, Canada by Scott Wilson Roscoe Postle Associates Inc. for North American Palladium Itd (March 13th, 2009).

⁴ Measured and Indicated Resources, Technical Report and Resource Estimate 2010 update for the Geordie Lake Property, Northern Ontario, by Python Mining Consultants Inc. for Marathon PGM Corp. (June 4th, 2010).



However, quantitative interpretation, via modelling of the geophysical features observed over the mineralized zones and incorporating physical property measurements to guide both forward and inverse modelling, appears not to have been undertaken, and could play a useful role as deeper drilling is undertaken. In particular, before finalizing further drill targeting, it would be strongly advised to carry out additional data processing, analysis and interpretation of the recent 3D IP survey by SJ Geophysics, to ensure that the computed inversions are not distorted by various reported data acquisition problems or by computational artifacts and satisfactorily represent the significant variations in resistivity and chargeability.



26. RECOMMENDATIONS

WGM recommends that Finore continues exploration program to upgrade the quality and quantity of the mineral resources at Kaukua and Haukiaho. Compilation and review of all existing data, including analytical and metallurgical test work can also help to focus exploration. Preliminary metallurgical work should also be extended to further investigate maximizing the recoverability of PGE, as well as, Ni and Cu. Exploration to test the potential of the Lipeävaara, Murtolampi and especially Haukiaho east targets is also warranted.

Specifically WGM recommends additional diamond drilling at Kaukua and Haukiaho. The drilling should focus both on exploring the extensions of the mineral resource at Kaukua and infill drilling to upgrade the quality of the mineral resource at Haukiaho. This would include drilling to test areas of the property where the mineralized marginal series is known to occur close to surface (Lipeävaara and Murtolampi) but has not been tested at depth.

WGM believes continuing the preliminary review of the existing analytical database, started by WGM as part of its due diligence work for this report will enable Finore to enhance its exploration targeting. WGM's preliminary study of the composition of the sulphide fraction shows, that valuable information for guiding both exploration and metallurgical test work can be acquired from appropriate chemical analyses. Therefore the inclusion of sulphide selective and total whole-rock analyses to the analytical scheme is strongly recommended.

Finore has developed an exploration budget estimate (Table 36) of C\$5.20 million to meet their exploration commitment to earn 49% interest of the Project by the Second anniversary of the Option and Joint Venture Agreement with Nortec Minerals Corp. Based on this schema Finore has contracted 10,000 m drilling program and started its execution in Haukiaho target on November, 2011.

Given the extensive strike length (~100 km) of the favourable host for potential contact-type PGE-Au-Cu-Ni mineralization in the Koillismaa Complex as well as to the Complex's potential to host reef type PGE deposits and chrome deposits, WGM encourages Finore to also look for other potential areas for acquisition.

As part of the future exploration and evaluation efforts, it is recommended to Finore carry out a more complete quantitative interpretation of prior geophysical surveys. This reinterpretation, which should incorporate or be constrained by measured physical properties, would provide important insights related to pursuing mineralization at depth and to identifying and testing weak, secondary targets along strike from known mineralization. This



should be complemented by careful re-processing, re-analysis and re-evaluation of the actual data for the 2008 3D IP survey.

Task	Cost (C\$)						
Estimated budget for the First year							
Infill drilling of Kaukua 3,000 m	C\$400,000						
Infill drilling of Haukiaho 10,000 m	1,300,000						
Technical services, assays, and field office	300,000						
Permits, claim payments, landowner compensation, and legal	100,000						
Qualified Resource Estimation (NI 43-101)	100,000						
Total	C\$2,200,000						
Estimated budget for the Second year							
Infill drilling of Kaukua 4,000 m	C\$500,000						
Infill drilling of Haukiaho 4,000 m	500,000						
Scout drilling at Lipeävaara, Murtolampi, and Haukiaho East 7,000 m	900,000						
Metallurgy and engineering	300,000						
Technical services, assays, and field office	400,000						
Permits, claim payments, landowner compensation, and legal	300,000						
Qualified Resource Estimation (NI 43-101)	100,000						
Total	C\$3,000,000						
GRAND TOTAL	C\$5.200.000						

TABLE 36. BUDGET ESTIMATE

Future exploration at Kaukua and Haukiaho by deeper drilling to extend the known mineralized trends along strike should utilize appropriate advanced surface geophysical exploration techniques as well as borehole geophysics, depending on the particulars of the mineralization encountered, host characteristics and depth.

Advanced IP methods, coupled with detailed magnetic surveys, are clearly the geophysical tactics most likely to yield relevant exploration information and targets. EM is discernibly less applicable than IP in further exploration for additional zones of disseminated Cu-Ni-PGE sulphide mineralization in the unexplored sectors of the marginal series of the KLIC, but it would be useful to re-examine any available AEM and aeromagnetic data acquired by GTK and predecessor companies in this district.

Deep exploration of the marginal series of the KLIC might be aided by magnetotellurics and/or high-resolution seismic reflection surveying where considered appropriate, but would need to be preceded by a reasonably comprehensive study of physical property measurements, including the seismic properties of the KLIC units and underlying Archean basement.



Borehole geophysical methods should also be considered in support of deeper drilling, Borehole methods have greatly assisted in the continuing deep exploration and discoveries at Sudbury and elsewhere. Pertinent down hole methods could include:

- Down hole magnetics to locate and characterize magnetic mineralization, particularly offhole; and
- Down hole IP/Resistivity to characterize sulphide mineralization on a volumetric basis, and/or to search for off-hole mineralization.

Additional metallurgical test work is also required. In order to improve the metal recovery, the focus of these studies should be to understand the distribution of PGE between the base metal sulphides and PGM and the nickel distribution between sulphides and silicates.



27. DATE AND SIGNATURE PAGE

This report titled "A Technical Review of the Läntinen Koillismaa Project, Finland for Finore Mining Inc." dated January 5, 2012, was prepared and signed by the following authors:

Date effective as of January 5, 2012.

signed by " Markku Iljina " signed by " *Clifford J. Duke* "

Dr. Markku Iljina, EurGeol. Senior Associate Geologist Clifford J. Duke, P.Eng. Senior Associate Geological Engineer

signed by " *Joe Hinzer* "

Joe Hinzer, P.Geo. President



CERTIFICATE

I, Markku J. Iljina, do hereby certify that:

- 1. I reside at Harjukatu 5, 96100 Rovaniemi, Finland.
- 2. I am a Senior Associate Geologist with Watts, Griffis and McOuat Limited, a firm of consulting geologists and engineers, which has been authorized to practice professional engineering by Professional Engineers Ontario since 1969, and professional geoscience by the Association of Professional Geoscientists of Ontario.
- 3. This certificate accompany the report "A Technical Review of the Läntinen Koillismaa Project, Finland for Finore Mining Inc." dated January 5, 2012.
- 4. I am a graduate from the University of Oulu with a M.Sc. Degree in 1986 and Ph.D. Degree in 1994, and I have practised my profession continuously since 1986. My experience includes various exploration and research mainly in Ni-Cu-PGE projects in Europe, NW Russia, Australia, and North American continent. Scientific experience includes co-chairmanship of IGCP Project 479 ("Sustainable Use of the Platinum-Group Elements in the 21st Century") and leadership of collaborative Tacis Project ("Strategic Mineral Resources of Lapland Base for the Sustainable Development of the North") between European Union and Russia.
- 5. I am a European Geologist (#575) licensed by European Federation of Geologists.
- 6. I am a "Qualified Person" for the purpose of NI 43-101.
- 7. I visited the Finore property in October, and December, 2011.
- 8. I am solely responsible for Sections 2 to 10. With co-authors I am jointly responsible for Sections 1 and 11 to 13, and 15-26.
- 9. I am independent of the issuer as described in Section 1.5 of NI 43-101.
- 10. I have worked in the property areas in 1981 and later in 1996-2005 when being employed by Outokumpu Oy and Geological Survey of Finland. I'm a co-author of a NI 43-101 compliant "Technical Review of the Kaukua, Haukiaho, Lipeävaara, and Murtolampi Claim Areas, Finland for Nortec Minerals Corp." prepared within WGM. I have not worked for Finore Mining Inc. or its Joint Venture partner Nortec Minerals Corp. in the Property areas or elsewhere.



- 11. I have read NI 43-101, Form 43-101F1 and the technical report and have prepared the technical report in compliance with NI 43-101, Form 43-101F1 and generally accepted Canadian mining industry practice.
- 12. As of the date of the technical report, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

signed by " *Markku Iljina* "

Dr. Markku Iljina, EurGeol January 5, 2012



CERTIFICATE

I, Clifford J. Duke, do hereby certify that:

- 1. I reside at Box 15 Group 310 RR#3, Beausejour, Manitoba, Canada, R0E 0C0.
- 2. I am a Senior Associate Geological Engineer with Watts, Griffis and McOuat Limited, a firm of consulting geologists and engineers, which has been authorized to practice professional engineering by Professional Engineers Ontario since 1969, and professional geoscience by the Association of Professional Geoscientists of Ontario.
- 3. This certificate accompany the report "A Technical Review of the Läntinen Koillismaa Project, Finland for Finore Mining Inc." dated January 5, 2012.
- 4. I am a graduate from the University of Manitoba with a B.Sc. Degree in Geological Engineering in 1984. I have taken a course in Geostatistical Mineral Resource / Ore Reserve Estimation and Meeting the New Regulatory Environment at the McGill University in 2008. I have practised my profession continuously since 1984. I have over 25 years of experience in exploration and production as a geological engineer. I have worked on base metal, gold and uranium exploration projects in Canada. I have worked in gold, tantalum, lithium and spodumene producing mines, and I have estimated resources and reserves for precious metal and base metal deposits.
- 5. I am a Professional Engineer licensed by Association of Professional Engineers and Geoscientists of the Province of Manitoba (#23030). I am a member of the Canadian Institute of Mining Metallurgy and Petroleum (#144450), and the Prospectors and Developers Association of Canada (#220047). I am Director and Treasurer of the Manitoba Prospectors and Developers Association.
- 6. I am a "Qualified Person" for the purpose of NI 43-101.
- 7. I did not visit the Finore property.
- 8. I am solely responsible for Section 14. With co-authors I am jointly responsible for Sections 1, 3 and 12.
- 9. I am independent of the issuer as described in Section 1.5 of NI 43-101.
- 10. I am a co-author of a NI 43-101 compliant "*Technical Review of the Kaukua, Haukiaho, Lipeävaara, and Murtolampi Claim Areas, Finland for Nortec Minerals Corp.*" prepared within WGM. I have not worked for Finore Mining Inc. or its Joint Venture partner Nortec Minerals Corp. in the Property areas or elsewhere.



- 11. I have read NI 43-101, Form 43-101F1 and the technical report and have prepared the technical report in compliance with NI 43-101, Form 43-101F1 and generally accepted Canadian mining industry practice.
- 12. As of the date of the technical report, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

signed by " *Clifford J. Duke* "

Clifford J. Duke, P.Eng. January 5, 2012



CERTIFICATE

I, Joe Hinzer, P.Geo., do hereby certify that:

- 1. My home address is 6395 Russell Street, Niagara Falls, Ontario, Canada, L2J 1P4.
- 2. I am the President of Watts, Griffis and McOuat Limited, a firm of consulting geologists and engineers, which has been authorized to practice professional engineering by Professional Engineers Ontario since 1969, and professional geoscience by the Association of Professional Geoscientists of Ontario.
- 3. This certificate accompany the report "A Technical Review of the Läntinen Koillismaa Project, Finland for Finore Mining Inc." dated January 5, 2012.
- 4. I am a graduate from the University of Waterloo in 1971 with a B.Sc. in Earth Sciences, and from the University of Western Ontario in 1977 with a M.Sc. in Geology, and have been practicing my profession continuously since 1972. My relevant experience includes 40 years of field exploration and project management for both gold and base metal projects. This includes 8 years of gold exploration and miming in Cote d'Ivoire, and due diligence for gold exploration in Ghana, Tanzania and Zimbabwe all on structurally controlled and quartz vein hosted mineralization. In addition, I have worked for many years on a variety of greenstone gold exploration projects in Canada including, Val d'or, Timmins, Kirkland Lake and Red Lake as well as epithermal and mesothermal gold due diligence projects in British Columbia, Arizona, New Mexico, Nevada and China.
- 5. I am a Professional Geologist licensed by the Association of Professional Geoscientists of Ontario (Membership Number 0146). I am also a member and Director of the Prospectors and Developers Association of Canada, a Vice-Chair of Planning Committee of the PDAC, a Fellow of the Geological Association of Canada, and Chair of the Canadian Institute of Mining, Metallurgy and Petroleum (Toronto Branch).
- 6. I am a "Qualified Person" for the purpose of NI 43-101.
- 7. I did not visit the Finore property.
- 8. I have reviewed and provide editorial input for entire report as required and I am jointly responsible for Sections 1 and 2 and 25 and 26.
- 9. I am independent of the issuer as described in Section 1.5 of NI 43-101.



- 10. I am a co-author of a NI 43-101 compliant "*Technical Review of the Kaukua, Haukiaho, Lipeävaara, and Murtolampi Claim Areas, Finland for Nortec Minerals Corp.*" prepared within WGM. I have not worked for Finore Mining Inc. or its Joint Venture partner Nortec Minerals Corp. in the Property areas or elsewhere.
- 11. I have read NI 43-101, Form 43-101F1 and the technical report and have prepared the technical report in compliance with NI 43-101, Form 43-101F1 and generally accepted Canadian mining industry practice.
- 12. As of the date of the technical report, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

signed by " *Joe Hinzer* "

Joe Hinzer, P.Geo. January 5, 2012


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APPENDIX 1: WGM STUDY ON THE COMPOSITION OF THE SULPHIDE FRACTION

WGM STUDY ON THE COMPOSITION OF THE SULPHIDE FRACTION

INTRODUCTION

This study was originally prepared for NI 43-101 report for Finore Mining Inc.'s Joint Venture partner Nortec Minerals Corp.

WGM as part of its NI 43-101 data review carried out a study to define the inter-element ratios in the sulphide fraction composition. The main objective was to study the representativeness of the metallurgical test sample, the amount of recoverable nickel, and the accuracy of the assay methods used to measure it.

Some metals, in the Kaukua and Haukiaho deposits, particularly the nickel and cobalt, are distributed between silicate and sulphide minerals (phases) in the rock. The distribution of a metal between silicate and sulphide phases effects the metal recoverability as the metals bound to silicates tends not to be recovered in a sulphide flotation.

Definition of the terms used in the following discussion:

Recoverable and sulphidic	The amount of nickel occurring as sulphide minerals and		
nickel, Ni _{s-wr}	therefore amenable to recovery in sulphide flotation		
Silicate nickel	The amount of nickel occurring as silicate minerals		
Total nickel	The amount of nickel occurring as both silicate and sulphide		
	minerals		
Metal concentration in	The amount of metal in the 100% sulphide concentrate		
sulphide fraction, M _{sf}	extracted from the rock		

Thirty-three samples, each about 1 metre long of quarter core, were collected from three drill holes and each sample was subjected to total and sulphide selective assays using Labtium methods 720P (total) and 240P (sulphide specific). Details of the assay methods are given in Table 12 of this report. The difference in metal concentrations obtained by these two methods is interpreted as being the amount tied up in the silicates and hence not recoverable by sulphide flotation. In addition to the WGM samples, the Nortec database of Labtium 240P assay results were also used, which increased the number of holes analysed to seventeen which covered all the rocks types hosting the Kaukua ore.

BASE METAL CONCENTRATIONS IN KAUKUA SULPHIDE FRACTION

Mineralogical studies indicate, that Cu, PGE, and Au, are carried almost exclusively by sulphide minerals chalcopyrite, pentlandite, pyrrhotite and pyrite or other minerals susceptible to sulphide flotation and Aqua Regia leach of methods Labtium 510P and ALS Chemex ME-ICP41. Whereas some of the Ni and Co are also hosted in the silicates in addition to the sulphides. The principal Ni and Co carrying silicates in Kaukua rocks are chlorite, serpentine, talc and amphibole. Primary magmatic carriers, olivine and pyroxene, are mostly decomposed, but occasionally form almost 100% of the rock.



Both Labtium and ALS Chemex describe the assay methods used (Labtium 510P and ME-ICP41) as partial and the Ni derived from silicates in the assay results is dependent on the silicate mineralogy due to sample leaching techniques. In order to determine the proportion of silicate nickel, a comparison between analytical methods 510P and 240P was made (Figure 1). The analysis reveals that surplus nickel (derived from silicates) can vary in a wide range. A sample which assayed 2,000 ppm Ni (510P) may have recoverable Ni content (240P) of c. 1,400-1,900 ppm and surplus Ni accordingly 100-600 ppm.



Figure 1. Nortec / Kaukua Ni assays (510P) versus sulphidic Ni (240P) Points closer to intersecting 1:1 line have lesser amounts of silicate hosted nickel.

Figure 2 depicts the sulphidic nickel versus the total nickel within ultramafic and mafic host rocks. The 240P/720P trend line intersects zero sulphidic nickel at 500 ppm of total Ni for the gabbroic host and at 1,000 ppm for the ultramafic host. These values approximate the quantity of silicate nickel in the rock types mentioned, but do not provide the means to assess the recoverable amount of nickel in the Kaukua deposit since both 240P or 720P analytical methods are not available for all samples.





Figure 2. Kaukua / Sulphidic nickel content versus total nickel in gabbroic (red diamonds) and pyroxenitic (blue diamonds) hosts.

The mineralogical work, by SGS, indicated sulphide minerals to be almost exclusively composed of chalcopyrite, pentlandite, pyrrhotite and pyrite, approximately in the proportions shown in Table 1. The sulphur content of these minerals falls within a narrow range (33.5-37 wt% S), except for pyrite which is richer in sulphur. Based on the Nortec lithological logs, pyrite is only seen to occur in higher quantities in the basement rocks, which make up only a subordinate proportion of the entire ore. Changes in the relative amounts of other sulphide minerals have only marginal effect on the sulphur content of the sulphide fraction. The following calculations, using the formula stated below, are based on the assumption that the sulphide fraction contains 37 wt% S (Table 1):

 $M_{sf} = (37:S)*M_{s-wr}$, in which M_{sf} is concentration of metal in the sulphide fraction, M_{s-wr} is sulphidic amount of metal in the sample, and S is whole-rock sulphur content of the sample. (all concentrations in percent)

Table 1.	The sulphide mineralogy	of the Kaukua deposit	, sulphur o	contents of	f minerals,	and calcula	ated
sulphur content of the sulphide fraction.							

	Relative abundance of mineral [%]	Sulphur content of mineral [wt%]
chalcopyrite	35	35.0
pentlandite	17	33.5
pyrrhotite	38	37.0
pyrite	10	53.5
	100	S content of sulphide fraction 37.36

Natts, Griffis and McOuat

The nickel and copper concentrations of the sulphide fraction are plotted against whole-rock sulphur in Figures 3A and B. The calculated Ni sulphide fraction content varies between 4-6 wt% over the S content of 0.3-2 wt%. This nickel content is slightly less than recovered in the metallurgical tests, which indicated 7 wt% for Ni. The plot for Cu (Figure 3B) is more scattered probably due to susceptibility of copper to metamorphic mobility. The sample in the concentration tests carried 0.6 wt% S and the sulphide concentrate contained 14 wt% Cu. This value plots well within the scatter in Figure 3B.



Figure 3. Kaukua. Calculated nickel (A) and copper (B) concentrations in the sulphide fraction versus whole-rock sulphur. The stars show the results (7 wt% Ni and 14 wt% Cu) of the metallurgical test sample having 0.6 wt% S.



Another approach was made by analysing the relationship between recoverable nickel content and whole-rock sulphur as shown in Figure 4. A rather good correlation between these components is indicated.



Figure 4. Kaukua. Nickel, occurring as sulphides versus whole-rock sulphur content. The star shows the recovered nickel of the metallurgical test sample. The estimated nickel content based on the whole-rock sulphur content gives c. 900 ppm Ni at 0.6% S.

The star shows the recovered nickel of the metallurgical test sample. The estimated nickel content based on the whole-rock sulphur content gives c. 900 ppm Ni at 0.6% S.

Figure 5 compares partial 510P and sulphide specific 240P assay results for cobalt. The comparison indicates that the excess cobalt from silicate minerals is 0-50 ppm in a range of 0 to 150 ppm of cobalt in 510P assay results.



Figure 5. Kaukua. Nortec Co assays (510P) versus sulphidic Co (240P) The bar indicates 50 ppm surplus of silicate Co.



PRECIOUS METAL CONCENTRATIONS IN KAUKUA SULPHIDE FRACTION

Precious metal concentrations can also be calculated to 100% sulphides. The calculation is justified by their tendency to float together with base metals in sulphide flotation although the metals are not always present as sulphide minerals in Kaukua. The PGE+Au concentration versus the whole-rock sulphur comparison produced a very scattered image (Figure 6). The metallurgical tests indicated a precious metal content between 80-100 ppm for the sulphide concentrate, which plots in the middle of the scatter.



Figure 6. Kaukua. Precious metal (Pt+Pd+Au) concentration in the sulphide fraction versus whole-rock sulphur. The bar indicates the metallurgical test sample.

CONCLUSIONS ON KAUKUA SULPHIDE FRACTION COMPOSITION

The following conclusions can be drawn from the analysis of inter-element relationships of the base and precious metals and sulphur.

- The recoverable nickel almost linearly follows the whole-rock sulphur over the range 0.3-1.5 wt% S (Figure 4). The whole-rock sulphur content can also be used as an indicator for the recoverable nickel.
- The nickel occurring in silicate minerals ranges from 100-600 ppm in Labtium 510P / ALS Chemex ME-ICP41 assay results (Figure 1).
- The cobalt occurring in silicate minerals is 0-50 ppm for samples containing 0 to 150 ppm of cobalt in 510P assay results (Figure 5).
- The sulphide fraction of the sample processed in the metallurgical tests was representative of all three main components (Ni, Cu, and PGE+Au) for Kaukua ore with only minor difference in nickel content (Figures 3 to 6).
- Silicate nickel contents in gabbroic and pyroxenitic host rocks are c. 500 and c. 1,000 ppm, respectively (Figure 2).
- The sulphide fraction of the Kaukua deposit is lower in nickel, approximately equal in copper, and higher in precious metals when compared to the Haukiaho deposit, described below.

CONCLUSIONS ON HAUKIAHO SULPHIDE FRACTION COMPOSITION

A similar analysis made on the Kaukua deposit was also made on the composition of the Haukiaho sulphide fraction based on 41 samples from four drill holes. The sulphide mineralogy observed in Haukiaho (Kojonen and Iljina 2001) is similar to that of the Kaukua deposit and hence the sulphide fraction calculations were made on a similar basis. Results are depicted in Figures 7 to 9. Results of metallurgical test referred in these Figures refer to results reported by Lakefield Research (Lakefield Research 2001) to NAN.

The WGM study shows that the Haukiaho sulphide fraction is richer in nickel, about equal in copper, and lower in precious metals compared to that of Kaukua. The calculated nickel concentrations in the sulphide fraction (Figure 7) scatter in a wide range, but cluster between 8-10 wt% Ni in samples having c. 0.7-1.3 wt% S. On the same whole-rock sulphur range, the copper in the sulphide fraction fluctuates around 15 wt% (Figure 8). The precious metals (Pt+Pt+Au) show a rather narrow scatter close to 40 ppm over the whole-rock sulphur content 0.5-1.3 wt% S (Figure 9).



Figure 7. Haukiaho. Calculated nickel concentrations in sulphide the fraction versus whole-rock sulphur. The star shows the results (5 wt% Ni) of the metallurgical test sample having 1.0 w% S.





Figure 8. Haukiaho. Calculated copper concentrations in the sulphide fraction versus wholerock sulphur. The star shows the results (10 wt% Cu) of the metallurgical test sample having 1.0 w% S.



Figure 9. Haukiaho. Calculated PGE+Au concentrations in the sulphide fraction versus whole-rock sulphur.