



# REPORT ON WORK CARRIED OUT ON EXPLORATION PERMITS

## VISLETTEN 1 - 3

(NAMSSKOGAN AND RØYRVIK  
MUNICIPALITY)

## EXPIRATION 2020

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Erris Resources

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**ERRIS**  
RESOURCES

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## 1 INTRODUCTION

This report summarises the work conducted over a period of one year by Erris Resources (“Erris” or “the Company”) on the exploration permits Visletten 1, Visletten 2 and Visletten 3 in the Namsskogan and Røyrvik municipalities. The aim was to assess the ground for base metal mineralisation in metavolcanics along strike from the closed Skorovas Cu-Zn-Pb-Ag mine area. The Visletten base metal occurrence lies within the exploration permit Visletten 1. The description (English version) of the Visletten occurrence in the ore database is as follows:

*“The Visletten deposit comprises a massive ore zone with a thickness of up to 3 m consisting of pyrite with layers rich in sphalerite and subordinate galena, minor chalcopyrite and metachert. Reserves have been calculated at 0.8 Mt with 0.9 % Cu and 3.9 % Zn. Zinc-rich layers carry up to 1 % Pb and are significantly enriched in Ag and Au (up to 90 and 2 g/t, respectively). The massive sulphide ore is underlain by a sequence of basaltic lavas which are extensively chloritised and sulphide-veined below the massive ore level. The stratigraphic hanging wall comprises quartz-phyric felsic flows, overlain by pillow lavas. The distal part of the ore unit is associated with thin beds of magnetite-bearing chert.”*

The potential to acquire a permit covering a potential ‘historic resource’ of that magnitude, along with the potential to extend it, convinced Erris that permit applications covering the area was warranted. Erris Resources was granted the exploration permits on the 29<sup>th</sup> of April 2019; however, the Company has decided not to maintain the exploration permits, and instead surrender them due to a lack of market interest in zinc projects. Work completed during 2019 consisted of a desk review of reports available online.

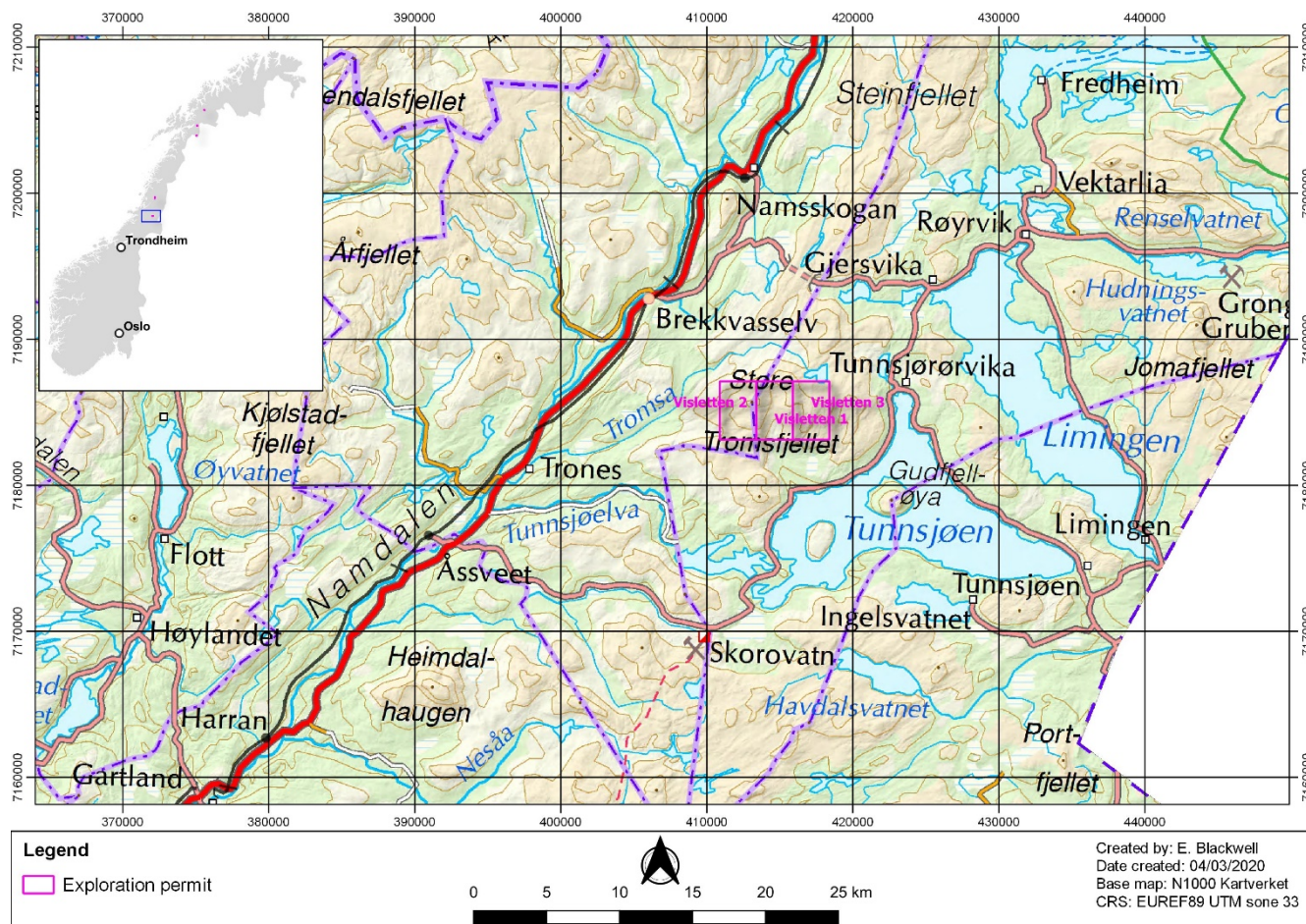


Figure 1 Location of the Visletten exploration permits.

## 2 LOCATION AND GENERAL INFORMATION

Visletten is located in central Norway, in the Namsskogan and Røyrvik municipalities within the Nord-Trøndelag county. The village of Brekkvasselv lies approximately 10 km to the northeast. It has a population of 141 (2012). The European route E6 runs through Brekkvasselv. There is nearby road access along the Tunnsjøen lake, from which a track runs up the valley to within 4 km of the prospect. The Trondheim international airport is located approximately 240 km to the southeast of the exploration permits.

The exploration permits primarily cover exposed rocky plateau. There are some scattered houses nearby, most along the lakeside. No houses appear to be within the permit area.

The climate is subarctic with cold winters and mild summers. Temperatures are moderated throughout the year by the Norwegian Current, and extension of the North Atlantic Current. The annual mean temperature is  $\sim 5^{\circ}\text{C}$  and there is snowfall generally between November and March. Annual precipitation is  $\sim 840\text{mm}$ . Fieldwork is typically confined to the summer months due to snow cover and seasonal variations in daylight.

## 3 GEOLOGICAL SETTING

### 3.1 REGIONAL GEOLOGY

The Grong District is located in the Caledonides in central Norway. The district covers approximately 3,000 km<sup>2</sup> and is bordered by the Grong-Olden window, comprised of Precambrian intrusives to the south, the Namsen River to the west, Sweden in the east and Lake Namsvatnet and Borgefjell National Park in the north. The Grong District is composed of thrust sheets from the Køli Nappe in the Upper Allochthon. The thrust sheets are divided into The Gjersvik Group and the Limingen Group. The Gjersvik and Limingen Group are comprised of metavolcanics, metasediments and Mid-Ordovician intrusives. The rocks are often strongly folded and deformed. Banded iron formations occur in places giving good marker horizons in large parts of the Grong District. Faulting is abundant in the area. Larger thrust faults strike roughly SW-NE while smaller faults occur in two principal strike directions, ~N-S and ~E-W.

The Grong District has hosted several VMS mines throughout the years. The last to close were the Joma Mine and the Gjersvik mine, both owned by Grong Gruber AS. Production stopped in 1998 at both mines and up to that date a total of 11.3 Mt and 0.45 Mt respectively of poly-metallic ore had been mined.

Visletten lies approximately 18 km northeast of the Skorovas historic mine (5.6Mt @ 1.0% Cu, 1.3% Zn, +Pb & Ag). It operated between 1952 and 1984, and is now held by Skorovas Gruber AS.

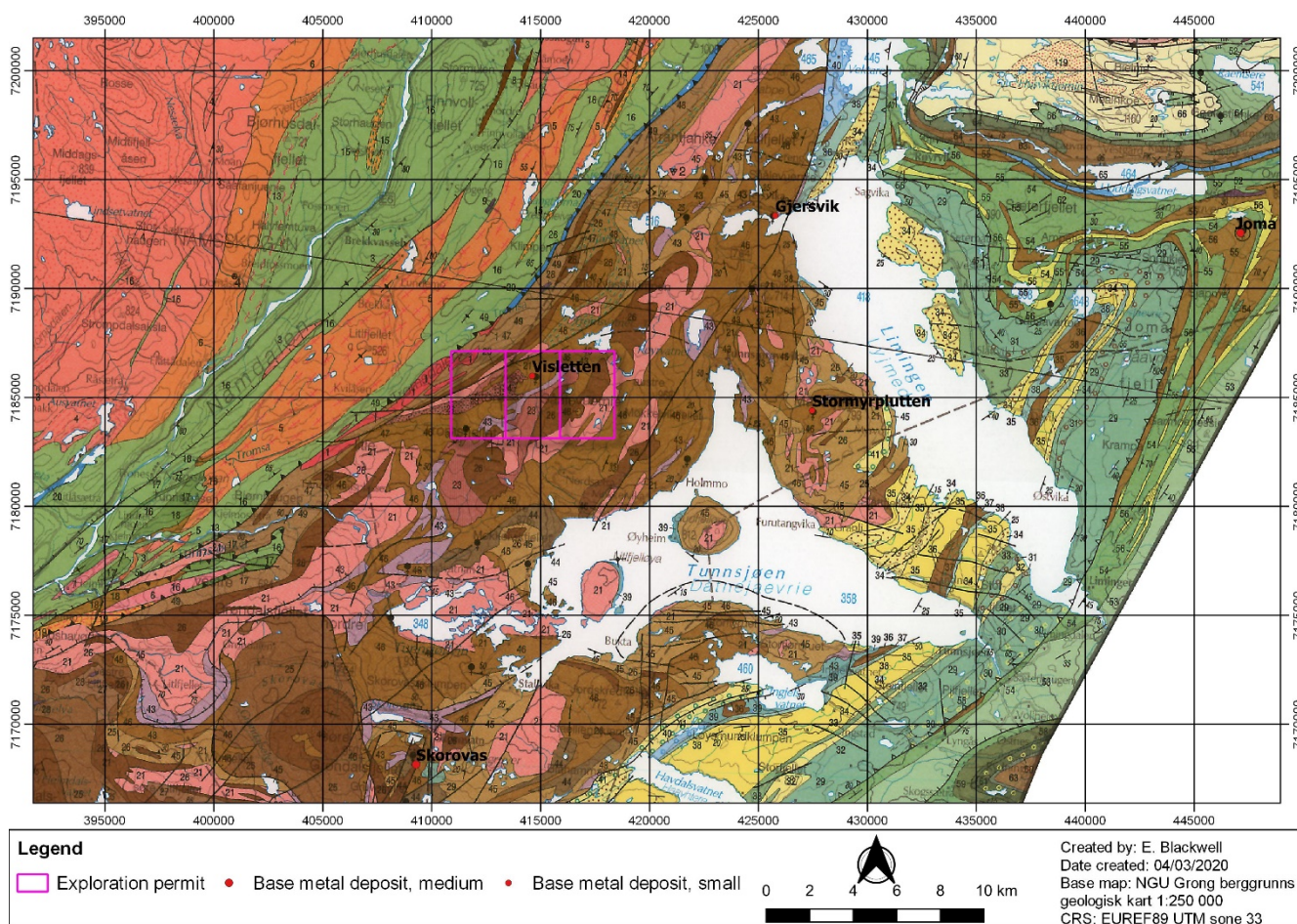


Figure 2 1:250k NGU bedrock geology mapping. The rock types corresponding to the numbers on the map can be found in Appendix 1.

### 3.2 LOCAL GEOLOGY

A significant mass of gabbro lies in the NW part of the area of interest (Grong Gruber AS, 1978). It has a sheet-like form that has been modified by folding, and it outcrops over a length of 100m. The principal greenstone lithology in the area, forming the higher ground, is basaltic lava. Pillow structures are preserved and there is an abundance of epidote knots 5 – 20 cm in size, now flattened parallel to the prevailing schistosity. The lavas are cut by sills of quartz-feldspar porphyry, which are assumed to be related to the larger intrusive bodies lying further to the west. Other lithologies identified include coarse grained granodiorite and quartz-keratophyre (with some pyrite).

There are homogeneous greenstones in the south, followed northwards by banded greenstones and tuffs. Two mineralized zones can be found in the tuffs. In the tuffs there are also keratophyre layers. They lie, like lenses, the otherwise fine-banded, tuffs, and partly have discordant relationships with these bands (Grong Gruber AS, 1977).

The main structure is an antiform with an east-west axis. This includes parasitic syn- and anticlinal folding. The mineralization is linked to the antiform's southern leg. F1 has been defined by dense isoclinal N-S orientated folds. The mineralisation is affected by this. This system was later folded WNW-ESE by the more open F2 phase which has formed antiforms.

### 3.3 MINERALISATION

The mineralisation has a zoned sequence moving outwards from (1) massive sulphide (dominantly pyrite and sphalerite) up to 3m in thickness, (2) thinner sulphide 0.5 – 1.5m in thickness with interbedded cherts, (3) thin pyrite, chert exhalate horizons of 1 – 5 cm thickness, and (4) 0.5 – 30 cm banded magnetite chert exhalites (Mellin, 1979).

The main mineralised material consists of a thin band of sphalerite-pyrite-chalcopryrite in tight folds, later modified by schistose deformation (Grong Gruber AS, 1978). The general level of the mineralisation is marked by conspicuous amounts of hydrothermal silica, which has formed a distinctive horizon of banded grey-buff coloured cherts with abundant disseminated pyrite. It is believed to be related to one of the contacts of the quartz-keratophyre. The mineralisation lies on the southern limb of a major fold. The stream itself appears to be a shear zone.

There is also a variable unit composed of silicified basalt and tuffs with thin bands keratophyre and a significant amount of interbanded hydrothermal chert. This unit is also cut by numerous quartz veins, which are deformed. This unit is locally heavily impregnated by pyrite. The development of minor fold structures is quite prominent (Grong Gruber AS, 1978).

## 4 SUMMARY OF WORK BY PREVIOUS OPERATORS

The bulk of previous work was undertaken by Grong Gruber over a number of years between 1973 and 1981. This work consisted of geological mapping, geophysics and diamond core drilling. The NGU also conducted some work in the area.

A summary of the main works conducted by previous permit holders is provided in Table 1 below.

**Table 1 Timeline of activity on the Visletten prospect. Source: NGU Ore Database.**

| From - To          | Activity      | Company/Institution |
|--------------------|---------------|---------------------|
| <b>1971 - 1971</b> | Geophysics    | NGU                 |
| <b>1974 - 1975</b> | Geology       | Grong Gruber        |
| <b>1975 - 1977</b> | Core drilling | Grong Gruber        |
| <b>1975 - 1979</b> | Geophysics    | Grong Gruber        |

|                    |               |              |
|--------------------|---------------|--------------|
| <b>1978 - 1979</b> | Geology       | Grong Gruber |
| <b>1980 - 1980</b> | Core drilling | Grong Gruber |
| <b>1994 - 1994</b> | Geology       | NGU          |

Table 2 Timeline of activity on the Lille Tromselv prospect. Source: NGU Ore Database.

| From - To          | Activity      | Company/Institution |
|--------------------|---------------|---------------------|
| <b>1958 - 1958</b> | Sampling      | NGU                 |
| <b>1971 - 1971</b> | Geophysics    | NGU                 |
| <b>1971 - 1971</b> | Geology       | NGU                 |
| <b>1971 - 1971</b> | Geochemistry  | NGU                 |
| <b>1973 - 1973</b> | Sampling      | Grong Gruber        |
| <b>1974 - 1974</b> | Geology       | Grong Gruber        |
| <b>1980 - 1980</b> | Core drilling | Grong Gruber        |
| <b>1980 - 1981</b> | Geophysics    | Grong Gruber        |
| <b>1981 - 1981</b> | Geology       | Grong Gruber        |
| <b>1995 - 1995</b> | Sampling      | NGU                 |

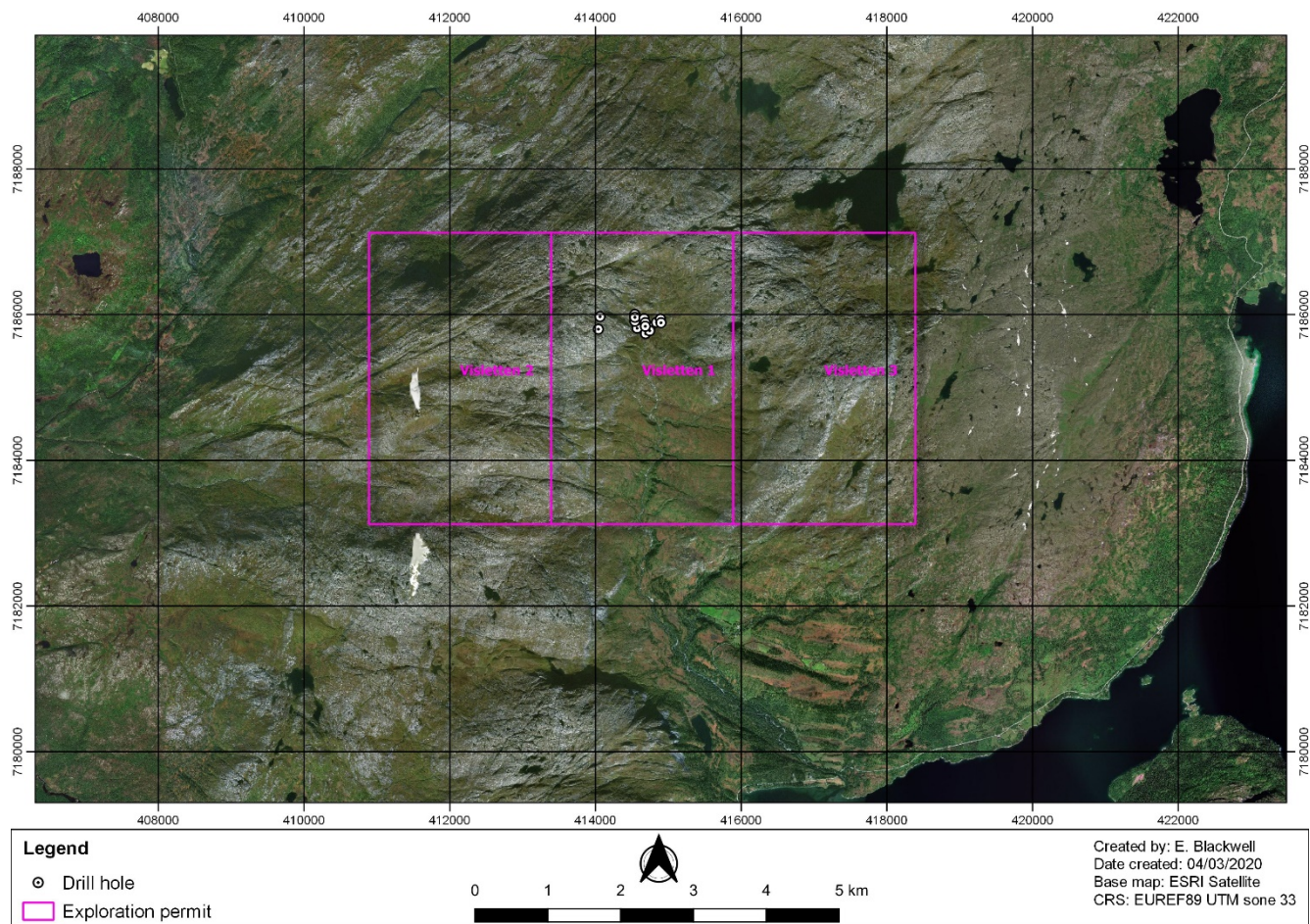


Figure 3 Location of drill holes within the Visletten permits.

## 5 WORK CARRIED OUT DURING THE REPORTING PHASE 2019 - 2020

Work conducted by Erris since the granting of exploration permits Visletten 1 to 3 comprises of a data review. Work reports relating to the exploration permits were downloaded from the DMF web viewer. These reports were reviewed, and any suitable maps and/or sample data were digitised.

### 5.1 VISLETTEN

The average of 27 rock samples from 1973 is 0.77 % Cu, 3.05 % Zn, 207 ppm Pb, 26.6 ppm Ag and 23 ppm Ni. The maximum values returned were 3.8 % Cu, 17 % Zn, 790 ppm Pb, 89 ppm Ag and 35 ppm Ni.

The first hole was drilled in 1975 was believed to cut the hinge of a fold and intersected massive copper rich mineralisation. In 1976, eight holes were drilled but 3 of these had to be abandoned because the cover was more than 15 m. Holes 4, 5 and 10 were drilled on the eastern side of the marsh.

The drill holes intersected a silicified basalt zone, typically 3 – 4m thick, with strong pyrite mineralisation. The zone is highly irregular, locally occurring as quartz-pyrite veinlets or silica-pyrite basalt breccia. It was believed to be a stockwork zone lying stratigraphically beneath the exhalative mineralisation (Mellin, 1979).

Holes 4 and 5 had trace pyrite throughout and some chalcopyrite also occurred within keratophyre bands. The copper content was very irregular but reached up to 0.5 % Cu over a meter. Hole 7 intersected some blue quartz veins within homogeneous greenstones. Intersections included 4.59 m with 1.01% Cu and 1.68% Zn within a broader 6.80 m with 0.75% Cu and 1.28% Zn.

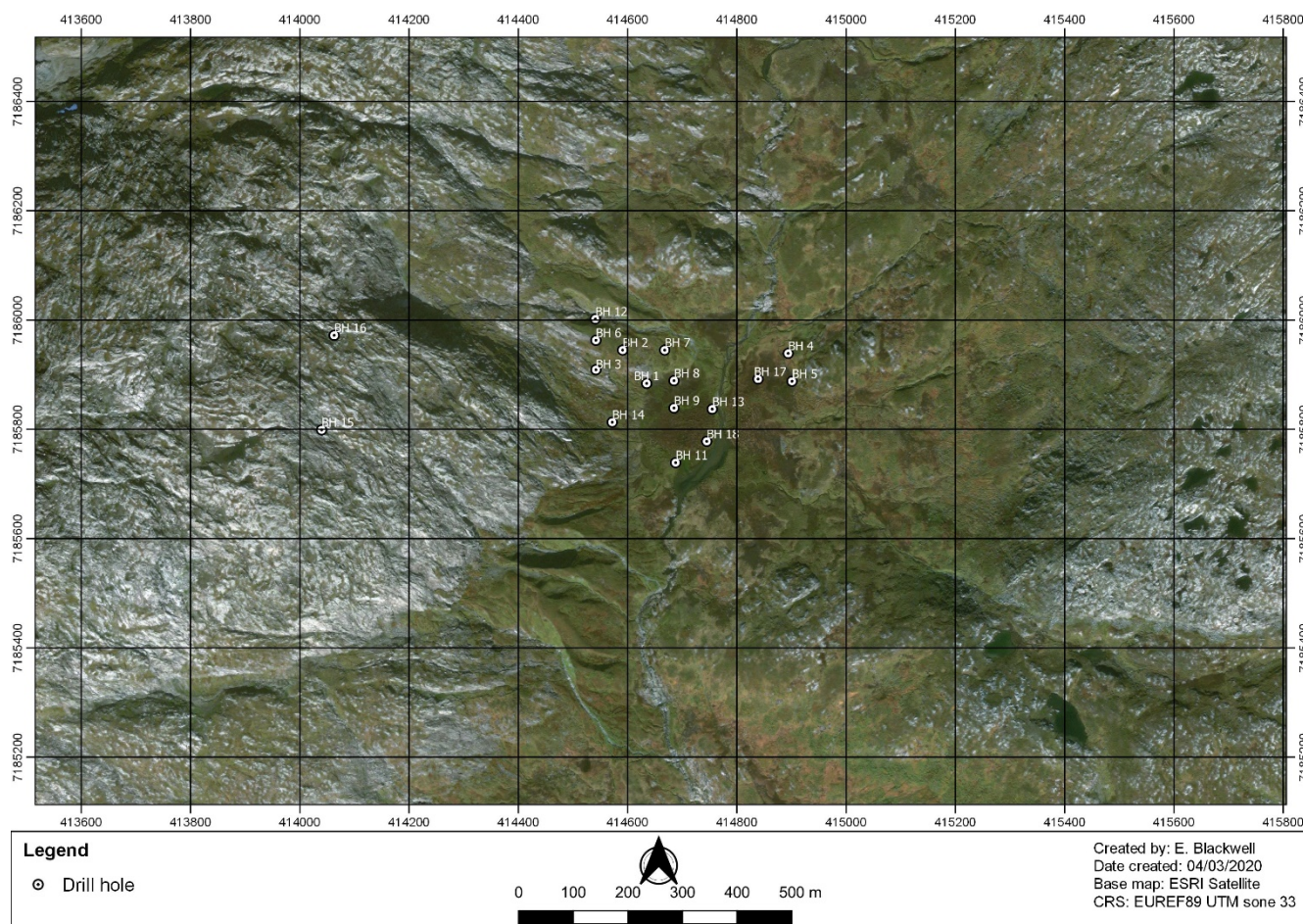


Figure 4 Location of the drill holes at the Visletten base metal occurrence.

In 1980, two drill holes were drilled totalling 429m (Grong Gruber AS, 1981). The two holes were drilled high up in Tromsfjellet, approx. 500 m west of the occurrence and in an area where there was believed to be a fold axis. Both holes intersected greenstone, as andesite and dacite. Only trace mineralisation was encountered.

The conclusions of a thesis submitted in partial fulfilment of the requirements for the degree of B.Sc. (Mining Geology) at the University of London and the Associateship of the Royal School of Mines from 1980 by J.S. Hinde is available from the NGU (Hinde, 1980). A total tonnage of almost 0.8 Mt was calculated with an overall grade of 0.92 % Cu and 3.86 % Zn (as supplied by Grong Gruber to the student). No cut-off grade was applied. This figure is that included in the description of the Visletten base metal occurrence.

Unfortunately, only several pages of the thesis are available online. From the available section, it appears that only seven drill holes were used to calculate the “reserve”. Additionally, the body of the mineralisation was interpreted from VLF anomalies that were not confirmed on the ground.

## 5.2 LILLE TROMSELV

The Lille Tromselv prospect lies approximately 3.4 km southwest of the Visletten prospect. The rocks in the area consist of greenstones and a sericite quartzite. A widespread silica impregnation and rust appears associated with the sericite

quartzite. An average of 31 samples gave 0.21 % Cu, 3.54 % Zn, 6,900 ppm Pb, 56 ppm Ag, 50 ppm Ni, 88 ppm Cd, 0.02 % Mn, 18.2% Fe (NGU, 1971). The highest values were 0.8 % Cu, 23% Zn, 4.6% Pb, 260 ppm Ag, 181 ppm Ni, 0.05% Cd, 0.08% Mn, 53% Fe.

Four holes were drilled, totalling 352m. Hole 1 intersected a banded andesitic greenstone, followed by a keratophyre unit, and a quartzite. The keratophyre unit is mineralised throughout including a 1.36 m of massive pyrite band (Grong Gruber AS, 1980). Further down, the pyrite mineralisation becomes more uniform and medium in amount. It can in some instances there are thin ribbons and specks with sphalerite. Some trace chalcopyrite was observed. These drill holes are not in the NGU core archive.

## 6 SUMMARY AND CONCLUSION

Following a review of all the known data relating to exploration in the exploration permits, no priority targets were identified for further work. A summary map can be seen in Appendix 2.

No gold assays are available, but it is likely that there is at least some low-grade gold present as in other Norwegian VMS deposits e.g. Skiftsmyr and Godejord, which are also in the Grong District.

The tonnage calculation included in the ore database is based on too little drilling to be considered reliable by modern standards. Also, intersections of relatively good grade were only encountered in a few drill holes and continuity between these holes is not apparent. The area is remote for drilling which would increase the cost of drilling significantly.

The Company is focussing its exploration efforts on the Rombak Tectonic Window, in the north of the country, on its Gautelis and Varden projects, where gold and base metal mineralisation has been confirmed in drill holes.

Erris Resources hereby surrenders the exploration permits Visletten 1 to 3.



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## 7 REFERENCES

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Grong Gruber AS, 1977, Visletten-feltet, Bergvesenet rapport nr 6850.

Grong Gruber AS, 1980, Visletten, Bergvesenet rapport nr 6850.

Grong Gruber AS, 1981, Rapport Vedrørende Statsstøttet Prospektering, Bergvesenet rapport nr 3543.

Mellin, A.C., 1979, Preliminary Geological Field Report Visletten, Bergvesenet rapport nr 6850.

Hinde, J.S., 1980, Mapping and Evaluation of a Stratiform Massive Sulphide Body in Central Norway, Bergvesenet rapport nr 6850.

NGU, 1971, NGU rapport nr. 1065 Lille Tromselv Skjerp Provetaking Georek 1971, Bergvesenet rapport nr 6850.

## APPENDIX 1

Lithologies shown in Figure 2.

| <b>DEKKEBERGARTER FRAMSKJØVET UNDER DEN KALEDONSKE FJELLKJEDEDANNELSEN</b>  |   |
|---|---|
| <b>HELGELANDSDEKKEKOMPLEKSET; OMDANNEDE BERGARTER FRA PROTEROZOISK TIL ANTATT SILURISK TID (ØVERSTE DEKKESERIE)</b> |   |
| <b>Omdannede dypbergarter, vesentlig kambrosilurisk alder</b>   |   |
| <b>2</b>  | Porfyrisk granitt; oppknust (porfyrroklastisk) i nærheten av skyvesoner   |
| <b>3 &amp; 4</b>  | Granitt og granodioritt, middelskornt / Granitt og granodioritt, sterkt foliert, til dels øyegranitt                                      |
| <b>5</b>  | Granittisk til granodiorittisk gneis, gråhvit   |
| <b>6</b>  | Hornblendedoritt, kvartsdioritt, trondjemitt, tonalitt  |
| <b>Omdannede sedimentære og vulkanske bergarter</b>   |   |
| <b>15</b>   | Gneis med lag av amfibolitt   |
| <b>16</b>   | Granatglimmerskifer og glimmergneis, kyanittførende og med pegmatittårer i nord   |
| <b>17</b>   | Granat-kyanitt-sillimanittglimmerskifer   |
| <b>18</b>   | Epidotamfibolitt, mørk, massiv til foliert, til dels med lag av felsisk metatuff  |
| <b>19</b>   | Biotittgneis og biotittførende diorittisk gneis, stedvis, stedvis gjennomsett av granittganger  |
| <b>20</b>   | Kalkspatmarmor, stålgrå til brungrå, fin- til middelskornt, med tremolitt og flogopitt  |
| <b>GIERSVIKDEKKET; OMDANNEDE BERGARTER FRA ANTATT ORDOVICISK TID (TILHØRER KÖLIDÉKKENE, ØVRE DEKKESERIE)</b>        |   |
| <b>Omdannede dypbergarter</b>   |   |
| <b>21</b>   | Granodioritt, kvartsdioritt, tonalitt, trondjemitt, middels- til grovkornt  |
| <b>23 &amp; 24</b>  | Granodioritt, biotittførende, og dioritt til gabbro i blanding (bimodalt komplekso) / Granitoide og dolerittiske ganger og småintrusjoner |

|  |  |
|--|--|
| 25   | Hornblendedioritt, til dels omdannet, med ganger av tonalitt   |
| 26   | Gabbro, metagabbro, hornblendegabbro, til dels overgang til dioritt  |
| 28   | Pyroksenitt, hornblenditt og andre ultramafitter, til dels serpentinisert  |
| <b>Omdannede sedimentære og vulkanske bergarter</b>  |  |
| 29   | Metasandstein og fyllitt, kalkspatrik  |
| 31   | Konglomerat med boller av grønnstein og keratofyr  |
| 32   | Sandstein, gråbrun   |
| 33   | Kalkfyllitt og båndet, gråbrun metasandstein og metasiltstein  |
| 34   | Arkosisk metasandstein, kalkspatrik, gråbrun, konglomeratisk i store partier   |
| 35   | Meta-arkose eller arkosisk metasandstein, i tykke lag, stedvis utviklet som konglomerat  |
| 36   | Grønnstein, mørk, jernklorittførende (Devikgrønnsteinen)   |
| 38   | Fyllitt, kalkspatførende metasiltstein og -sandstein   |
| 39   | Båndet metagråvakke, kalkspatførende metagråvakke og fyllitt, stedvis konglomeratisk   |
| 40   | Konglomerat eller breksje med boller og bruddstykker hovedsakelig av kalkstein og dolomitt   |
| 41   | Basalkonglomerat med boller hovedsakelig av grønnstein, tonalitt og gabbro   |
| 43   | Vekslende felsisk-mafisk tuffitt, tynnlaminert felsisk tuff, metaryodacitt, stedvis utviklet som pyroklastisk breksje, agglomerat eller tuffittisk breksje |
| 44   | Meta-andesitt, lys grågrønn, til dels magnetittførende   |
| 45   | Lys grønnstein, til dels epidot- og aktinolitførende   |
| 46   | Mørk grønnstein, til dels amfibolitisk, stedvis med stilpnomelan   |
| 47   | Epidot-aktinolitiskifer, båndet og mylonittisk   |
| 48   | Amfibolitisk grønnstein, amfibolit   |
| 49   | Båndet amfibolit, metadioritt og hornblendegabbro, stedvis med ganger av pegmatittisk lys gabbro   |
| <b>ORKLUMP- OG BJÖRKVATTNDEKKET; OMDANNED E BERGARTER FRA ANTATT KAMBROSILURISK TID (TILHØRER KÖLID EKKENE, ØVRE DEKKESERIE)</b> |  |
| <b>Omdannede dypbergarter</b>  |  |
| 52   | Serpentinisert ultramafitt   |
| <b>Omdannede sedimentære og vulkanske bergarter</b>  |  |
| 53   | Fyllitt, kalkspatholdig, og kvartssandstein  |
| 54   | Grå fyllitt og kvartsfyllitt, stedvis med tynne bånd av metasandstein  |
| 55   | Grønnstein, grønniskifer   |
| 56   | Kvartsitt, omdannet båndet kiselstein med tynne lag av grafittfyllitt  |
| 57   | Fyllitt, grå, til dels grafittførende, stedvis med lag av kvartsfyllitt  |
| 59   | Grafittfyllitt   |
| 61   | Kvartsittkonglomerat med grunnmasse av grafittfyllitt  |
| 62   | Metakalkstein, marmor  |
| 63   | Båndet grønniskifer, grønnstein, lagdelt metatuff, metaryodacitt og noe fyllitt  |
| 64   | Fyllitt, kvartsrik, karbonatførende, til dels grafittførende   |
| 65   | Kvartsitt, kvartsfyllitt, stedvis med lag av kvartsittkonglomerat  |
| 66   | Fyllitt, kalkspat- og kvartsrik, båndet eller homogen, stedvis med tynne lag av kalk-sandstein   |
| 74   | Amfibolit, karbonatholdig og med noen lag av kvartskeratofyr, skifrig  |
| <b>Offerdals- Og Dearkadekket; Omdannede Sedimentære Bergarter Fra Senproterozoisk Tid (Midtre Dekkeserie)</b>                   |  |
| 118  | Metasandstein, kvartsitt, stedvis med glimmerskiferlag   |
| 119  | Kvartsskifer, kvartsitt, fyllonitt   |

