

## Data Summary:

**Permit holder:** EMX Norwegian Services AS

**Project Name:** Skogsfjord 1-29

## Project Overview:

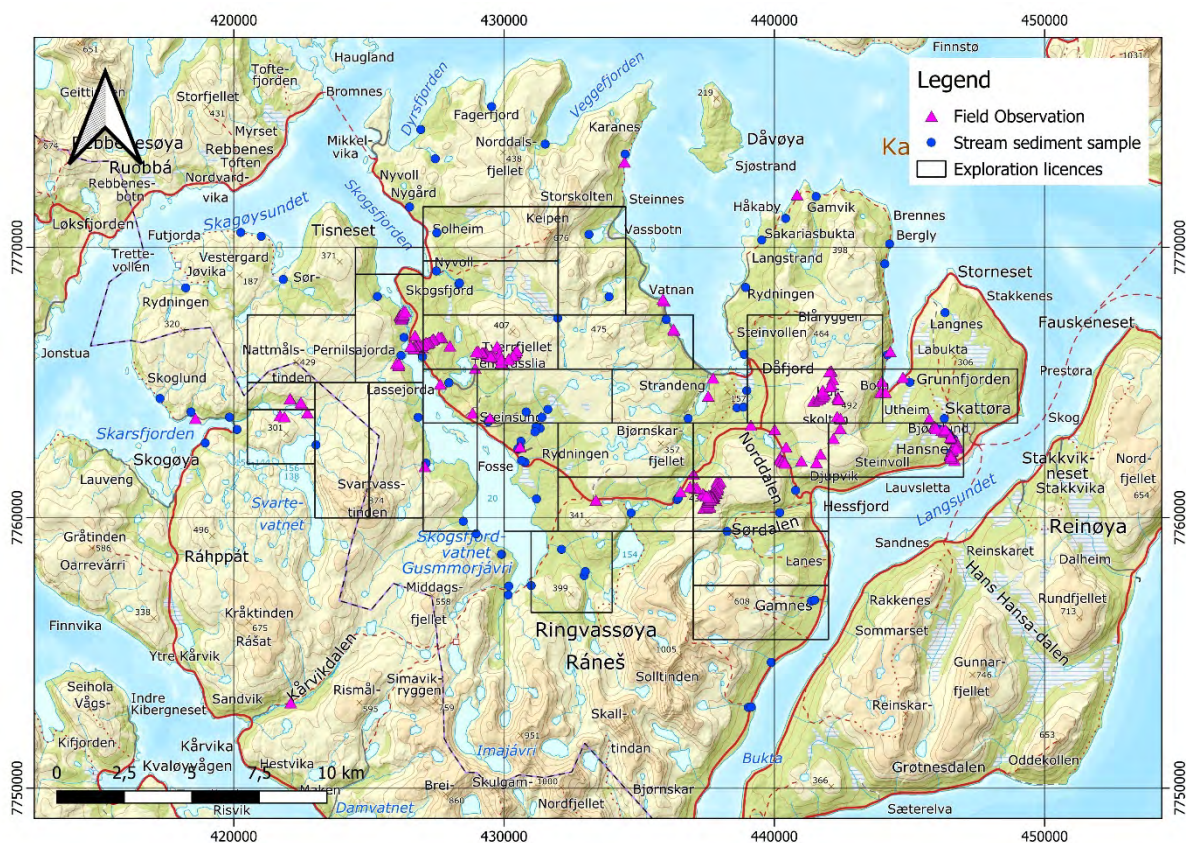


Figure 1. Overview of the Skogsfjord licenses with the location of field observations (purple triangles) and stream sediment samples (blue dots).



## Performed Work:

### Stream Sediment samples

A total of 101 stream sediment samples (fig. 1) have been collected in the Skogsfjord area and analysed as Bulk Leach Extractable Gold samples (BLEG). Samples were analysed by ALS laboratory in Ireland with method Au-CN44. Prior to that, the samples have been processed in the field to separate the fine fraction for analysis.

### Field Observations

A total of 245 field observations were made and 88 rock chip samples (fig 1.) were collected and sent off for analysis. Samples were analysed by ALS laboratory in Ireland for a range of precious and trace elements with methods ME-MS41, ME-MS61 and PGM-ICP23.

### Soil sampling – Ionic Leach

Soil sampling campaigns (fig. 2) were also completed, comprising of 400 Ionic Leach (IL) samples that were collected and analysed by ALS laboratory in Ireland with method ME-MS23 and pH-MS23.

### Soil sampling – MEFFA

Soil samples comprising of 746 Multi-Element Fine Fraction Analysis (MEFFA) samples were collected (fig. 2) and scanned in-house by a pXRF.

A detailed description of the various sampling methods is given below.

All samples were discarded after analysis.



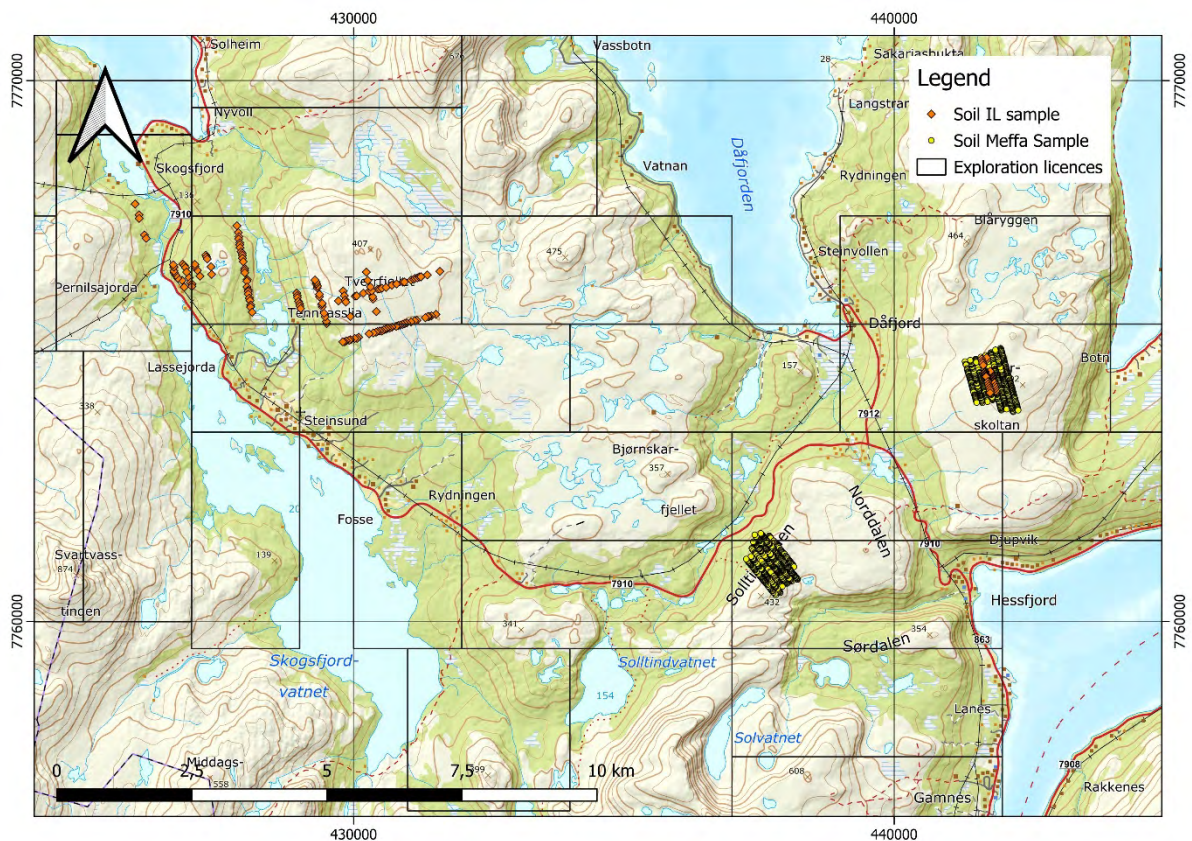


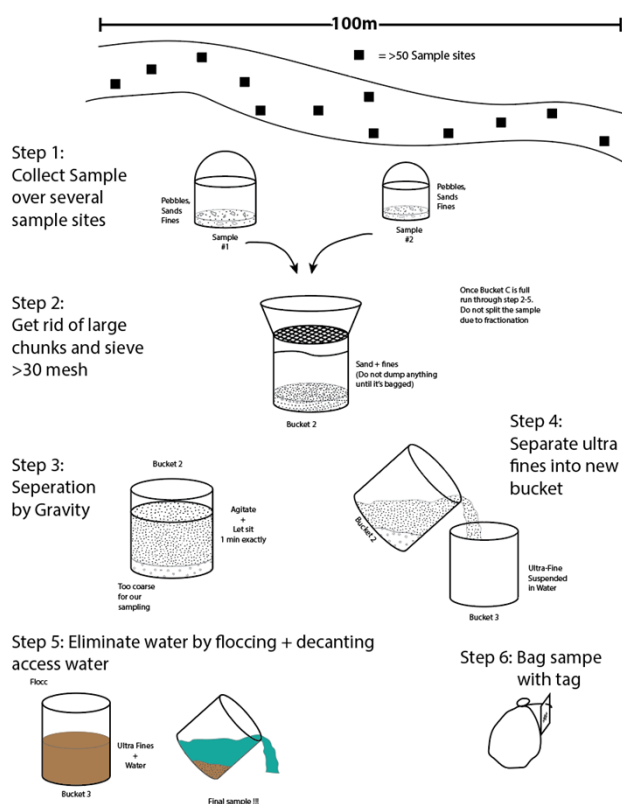
Fig 2. Location of the soil sampling campaigns.

## Method Overview

### BLEG Sampling Protocol:

1. After arriving at the designated sampling site, all equipment is washed downstream of sampling site
2. Sample material is collected over a wide range of points to increase sample homogeneity. >50 spots. (Step 1 in Figure)
3. Sampling is done with U-dig-it stainless steel trowels to avoid contamination from paint.
4. After enough material is collected coarse and organic debris is removed by sieving through a 30mesh (<0.6mm) sieve into a new clean bucket. (Step 2 in Figure)
5. The material in the bucket is agitated vigorously and decanted into a new bucket. This step is repeated until agitated water stays clear and only coarse grains remain. This can be difficult in organic rich environments.
6. The fine material in the third bucket is agitated again until all material is in suspension. The material has to settle for 1min (accurate time measure is important for consistency through out the sampling campaign) (Step 3 in Figure)
7. After 1min settling time the remaining material in suspension is carefully decanted into a 4<sup>th</sup> bucket in one gentle continuous go in order to not stir up fine fraction at the bottom. (Step 4 in Figure)

8. The 4<sup>th</sup> bucket is stirred again, and a flocculant is added. The flocculant lets the ultra-fine fraction settle quickly at the bottom and after 10min the remaining water can be carefully decanted and discarded. (Step 5 in Figure).
9. During the 10min the sample description is filled in the ipad.
10. The ultra-fine fraction is then collected in a micropore bag. (Step 6 in Figure)
11. A sample tag is added in a ziplock bag to the micropore bag. The sample is carefully stored for transportation so no fines can leak out at the seams (bag needs to hang freely).
12. All equipment is cleaned again.
13. Around every 20<sup>th</sup> sample needs to be a field duplicate. Where the process above is repeated. It is not acceptable to split the material in step 5 since that is a prep duplicate. The field duplicate can be collected where more fine sediments are present.
14. At the temporary field camp the sample have to be safely stored and regularly massaged to break up the drying lumps.
15. Samples are safely stored for final transportation to prep-lab at EMX in Mala.
16. The Samples then are analysed at ALS in Ireland using the Au-CN44a method. The method differs from the regular Au-CN44 method that the sample is not agitated (active leach) but only gently stirred every 6h (static leach) to minimize the leaching of larger whole gold grains to avoid nugget effects.





#### *Rock chip Sampling Protocol:*

1. Before sampling, ensure that everybody has taken safety precautions and required PPE is worn.
2. With a hammer (and chisel), fresh chips of rock are extracted from the bedrock or boulder.
3. The sample should be representative for the main rock type observed, including economic mineral and alteration content.
4. In case of dump sampling, good care should be taken to avoid inclusion of any foreign objects like wood, iron pieces, nails, and plastics.
5. At least 200g of material needs to be collected and separate rock chips should not be larger than 10cm across in any dimension.
6. The rock chips must be stored in a calico bag, together with a sample tag with a unique sample ID. This sample ID should match the ID that is written down in the field observation.
7. Location coordinates must be saved on a GPS to be extracted afterwards.
8. After every 10<sup>th</sup> sample a standard (CRM) should be inserted.
9. All samples must be safely stored in a plastic box for transportation out of the field or to the lab.

#### *IL Sampling Protocol:*

1. The material to sample needs to be collected at a constant depth relative to the organic-soil interface. The sample should be taken from the B horizon. If no B horizon sample 15cm down from the base organics, but avoid the leached (grey to white) A-horizon.
2. Once the hole is dug, the sides of the hole need to be scraped with a plastic shovel to avoid any potential contamination from the steel shovels.
3. 100-200g of material need to be collected with a plastic scoop and stored in an air tight zip lock bag. A second bag is used for additional protection against spilling. Between bag 1 and two a sample tag with a unique sample ID is inserted.
4. Every 20th sample is a field duplicate collected within 1-2m of the first sample site following the same procedures.

#### Things to note:

- No suncream or bug spray
- Not on/near roads (15m)
- Remove jewellery from/around hands

#### *MEFFA Sampling Protocol:*

1. The samples are taken using an auger (photo 1). It is jammed vertically into the ground, twisted at least 360 degrees and pulled up again.
2. Samples are taken along the lines indicated on the GPS at roughly even sample spacing.
3. The material to sample needs to be collected from the B-horizon. Depending on the soils, the depth of this horizon can differ. The B-horizon can be recognised by its red-orange to brown colouring (photo 2).
4. The soils of the B-horizon are collected in small sample bags with pre-printed sample-IDs. At least 10 grams of sample is needed.



Things to note:

- No organics
- Take out pebbles/rocks
- Not on/near roads (15m)
- Remove jewellery from/around hands



Photo 1: auger used for MEFFA sampling

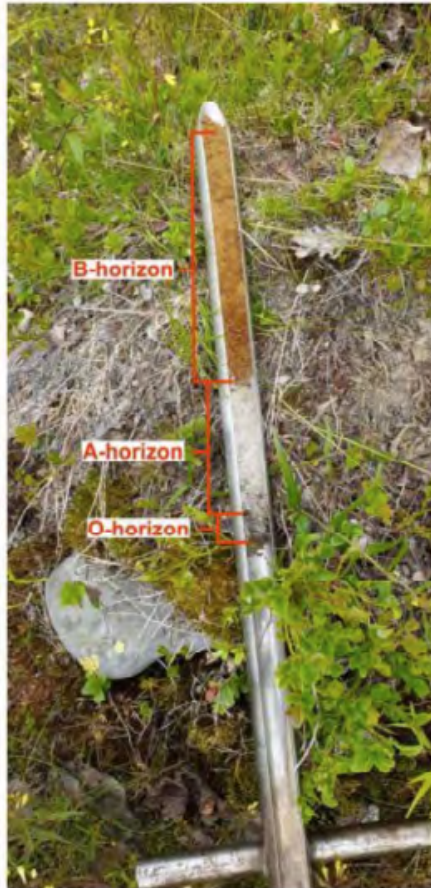


Photo 2: different horizons indicated. Sample should consist of solely B-horizon sediments