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Sammendrag, innholdsfortegnelse eller innholdsbeskrivelse Tuven - Nordkjøsvatn: This survey has proven that extensive outcropping quartz veins in the Skogsfjord Group have been overlooked by previous campaigns, wich have mainly focused on the Skogsfjordvatn Group. A limited prospecting campaign along the less investigated Skogsfjord Group could lead to detections of auriferous quartz veins, Skilelva - Hårskoltan: The detailed mapping and sampling of bed-rock outcrops doesn't give any indication of primary gold mineralization.				

RINGVASSØY - PROJECT

- Troms-fylke, Norway -

Exploration Campaign 2005

Report of Field Work

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SUMMARY

The Tuven-/Nordkjosvatn- and the Skilelva-/Hårskoltan- areas, both located on Ringvassøy, Troms-fylke, NW-Norway, have been selected for the current follow-up exploration program, based on the results of the 2002 exploration-campaign.

The work which has been carried out by Rune WILBERG and Raimund KLEINE-HERING (the author of this report), consisted in detailed mapping and collecting of rock- and soil-samples in the Tuven-/Nordkjosvatn area, and supplementary „deep-soil-sampling“ by drilling techniques along two 1,6 km long, parallel profile-lines within the Skilelva-area. As a matter of fact, no „soil“ in the proper sense has been sampled, but ice-transported glacial sediments as till and moraines. The source of the anomalous gold-values detected by this sampling campaign remains unknown and can only be traced by a detailed study of the corresponding former ice-movements, which has not been part of this follow-up survey.

The detailed mapping reconfirmed the principal geological features established by ZWAAN, 1989. The alternative geological model, introduced by PALMER, 2002 could not be verified. The only surface evidence of hydrothermalism are tele-magmatic milky-quartz veins with saccharoidal texture, some of them weakly auriferous. The latter have been observed in the Tuven-area within the Upper Tectonostratigraphic Unit (which corresponds to the Skogsfjell-Group (Zwaan, 1989) and they are reported in the area around the Hårskoltan summit. This milky-quartz veins are generally developed parallel to the main foliation-planes, preferring longitudinal joint-systems for their emplacement. With the exception of the “TUVEN-VEIN-System” in the Tuven area (see “Wilberg-report”) all the other hitherto observed milky-quartz veins don't have economic significance due to their very restricted dimensions (cm- to dm thickness and only a few m extension along strike), their isolated occurrence and the very low gold-contents.

The airborne K-anomaly in the Tuven area is related to the widespread occurrence of potash-feldspar rich pegmatitic intrusions within the amphibolites of the Skogsfjell Group.

The road-side-cut exposure in the Dåfjord-/Skilelva area offers a continuous N-S cross section of the bed-rocks underlying the neighbored deep-soil-sampling profile P1. No relation could be found between this bed-rock sequence and the gold-anomalies within the overlying glacial sediments.

The context between the (reported) auriferous milky-quartz blocks, the adjacent block-moraine and (reported) outcropping auriferous milky-quartz veins in the area of the Hårskoltan summit has not yet been clarified due to the restricted time schedule.

Hidden and/or up to now not yet detected major auriferous quartz veins (or vein systems) remain the only potential (future) exploration target in both investigated areas. Any follow-up program should favour the extension of local and regional detail-mapping.

1. Introduction

Based on the 2002-exploration results a follow-up program has been carried out in two selected areas, the **Tuven-/Nordkjosvatn area** (aprox. 7 km²) adjacent to the Skarsfjord and the **Skilelva (Hårskoltan) area** (aprox. 6 km²) at the SE-end of the Dåfjord. Detailed mapping based on air-fotos (series H-9 to 13/6445; O-06/6435 and Q-06/6435, scale aprox. 1:16.000) and topographic maps 1:5.000 ("økonomisk kartverk"), using Garmin GPS 12 –units for UTM-orientation, has been conducted together with sampling (rock- and „soil“-samples) by **Rune WILBERG** and **Raimund KLEINE-HERING**.

The author of this report (KLEINE-HERING) spent 7 field-days/1 administration-day in the Tuven-area and 4 field-days/2 administration-days in the Skilelva-area. The efficiency has been hampered by adverse weather conditions during 3 days. The work (Kleine-Hering + Wilberg) started the 10.07.05 with the arrival at „Hansnes-Kro“ and finished (Kleine-Hering) the 23.07.05.

2. Regional Geology

The detailed fieldwork carried out in both areas has reconfirmed the general geological features described by various norwegian geologists who have mapped in the region (p.e. Bergh & Armitage, Fareth & Lindahl, Zwaan e.a.):

„The **Ringvassøy Greenstone Belt (RGB)** represents one of several Archean supracrustal belts within the **West Troms Basement Complex (WTBC)** which is structurally overlain by Caledonian nappes to the east. The WNW-ESE-trending RGB is surrounded by a complex of tonalitic intrusives and orthogneisses, the **Dåfjord Tonalite Complex (DTC)** which contains members of Archean age.

A thrust zone separates the RGB into two major tectonostratigraphic units. The **Skogsfjord Group** which represents the upper unit, comprises mainly garnitiferous quartzofeldspathic hornblende gneisses, whereas the lower unit, the **Skogsfjordvatn Group**, is composed of strongly deformed mafic metavolcanites with subordinate interlayers of felsic metavolcanic and metasedimentary rocks.”

The **quaternary deposits** on Ringvassøy consist mainly of a veneer of till and scree material along the hill sides together with side- and frontal-moraines indicating former glacial positions. The transportation direction for the ice during the Weichselian was mainly towards the NW. It became progressively more controlled by local valleys and fjords, trending N-S to NE-SW, as the deglaciation proceeded. **This features are important for the interpretation of element sources and distribution (anomaly) patterns!**

3. Results of Field Work

3.1. Tuven-/Nordkjosvatn Area

3.1.1. Geological Mapping

The Tuven-/Nordkjosvatn area is characterized by the intensive glacial modelling of the affected bed-rocks, which have been smoothed and subsequently covered with a thin veneer

of till and erratic blocks. The two Nordkjosvatn together with the adjacent side- and frontal(end-)-moraines are witnesses of passed outgoing glacial activity

3.1.1.1. Bed –Rock Geology

The bed-rock outcrops show two tectonostratigraphic units, separated by a larger thrust zone, which are composed of gneisses, gneissic schists and amphibolitic sequences and intersected by (milky)quartz-veins and pegmatitic intrusions. Both units have undergone intense tectonic deformation.

3.1.1.1.1. Lower Tectonostratigraphic Unit

The lower unit which shows different tectonic features compared with the upper one (see chap.3.1.1.1.4.) is composed by a lower gneiss sequence overlain by amphibolites and an upper meta-sedimentary sequence.

The lower gneiss sequence (named **Nordkjosvatn-Gneiss Sequence**) covers the SW-section of the investigated area from S of the two Nordkjosvatn to NW of the Reingjerdvatn. In the regional context corresponds she to the lower part of the **Hessfjord Formation** and doesn't belong to the Dafjord Tonalite Complex (DTC) which crops out more to the SE.

This monoton sequence is composed by (light)greyish feldspar-rich quartzitic gneisses which may represent psammitic (arkosic) metasediments at the basis of the Hessfjord Formation.

The Nordkjosvatn-Gneiss Sequence is structural overlain by a thick and monoton **amphibolite- sequence**, also running in SE-NW direction, which is cutted towards above by a regional thrust zone in the area NE of the Reingjerdvatn and is overlain by metasediments in the area N of the Øvre Nordkjosvatn.

Whereas the upper (hanging) boundary to the overlaying metasediments is of tectonic character, the boundary with the underlaying Nordkjosvatn-Gneiss Sequence shows a widespread interfingering of gneiss with amphibolite **which is not the result of some special folding**. Either the amphibolite represents a sill-like basic intrusion into the Nordkjosvatn-Gneiss Sequence or he may be the result of mafic volcanism followed by the deposition of clastic sediments. This origin is favoured by the occurence of minor intercalations of meta-keratophyre (generally characterized by strong sulfide impregnation with gossan-like weathering features). In the regional context this amphibolite sequence corresponds to the upper **Hessfjord Formation**.

The structural uppermost member of the lower unit consists of **interlayered metasediments with minor metavolcanic units** and is only exposed in the area N of the Øvre Nordkjosvatn, where it rests with tectonic contact upon the amphibolite sequence. Towards above this sequence is cutted by the same thrust zone which cuts the amphibolites in the area NW of the Reingjerdvatn. Typical are quartz-sericite schists with widespread sulfide impregnation, giving origin to the formation of gossan-like surface weathering. Locally also metamorphic superimposed sedimentary structures can be observed as well as isolated meta-gabbro bodies. In the regional context this sequence corresponds to the **Sætervik Formation**.

3.1.1.1.2. Upper Tectonostratigraphic Unit

The intense folded upper unit consists of interbedded sequences of gneisses and amphibolitic hornblende schists. The upper unit has been displaced along a regional thrust zone above the underlying lower unit.

The most important central gneiss sequence, named **Tuven-Gneiss-Sequence** (named after the N-S-running “Tuven mountain ridge”) is composed by greyish, feldspar-rich quartzite-layers within quartzofeldspathic, locally garnetiferous gneisses. The quartzitic „backbone“ of the sequence forms the most emerging mountain ridges (p.e. the „Tuven-ridge“ which hosts the only „mayor“ gold-quartz vein of the investigated area). This gneisses may eventually represent felsic meta-volcanics.

The Nattmålstinden and its western slope are also built up by a quartzofeldspathic gneiss-sequence, named **Nattmålstinden-Gneiss-Sequence**, with similar petrographic characteristics as the Tuven-Gneiss-Sequence.

The Tuven-Gneiss-Sequence is interbedded in and separated from the neighbouring Nattmålstinden-Gneiss-Sequence by **amphibolitic hornblende-gneiss sequences** which are intersected by numerous pegmatitic intrusions. Due to their less erosion-resistant („weak“) character they occupy morphologic depressions. The petrographic character of this mafic sequences varies between mainly amphibolitic and hornblende-gneissic. Locally intercalated **meta-gabbro** lenses have been observed. It is supposed that this rocks may represent mafic meta-volcanics.

In the regional geological context this Upper Tectonostratigraphic Unit corresponds to the **Skogsfjord-Group**.

3.1.1.1.3. Vein Rocks (with description of the „Tuven Vein-System)

Besides of the „classic“ **milky quartz veins** (coarse to fine grained with a saccharoidal texture), which are observed within all the described rock sequences, **pegmatitic (pegmatoid) veins and dikes** are widespread, with a preference to the mafic rock units as amphibolites and amphibolitic hornblende schists and –gneisses. They are generally rich in potash feldspar, which may be the reason for the (helicopter-born) K-anomaly in the Tuven-area, where a certain „accumulation“ of this pegmatitic intrusions can be observed. There is no other evidence in the field which could explain the mentioned anomaly.

(Remark: The foto on page 22, fig.1.17 in the „Palmer 2002-report“ doesn't show the „stratigraphy of the Sordalshogda area“, but boudinered pegmatoid dikes within the thrust zone which separates the both tectonostratigraphic units.)

The **(milky)quartz veins** (with the **Tuven-quartz vein** as outstanding example) have the tendency to be auriferous. All 3 samples (n° 099751, 099752 and 099754) taken by the author with 504, 655 and 157 ppb Au, as well as the sample n° 99906 taken by WILBERG (189 ppb) show very low but elevated gold-contents. With the exception of the main **Tuven-quartz vein** (mapped and sampled by WILBERG) all the other observed „auriferous“ quartz veins don't have exploration significance, due to their very restricted dimensions (cm-to decimeter in thickness and only a few meter along strike-extension) and their isolated occurrences (no cluster of veins has been observed).

Description of the Tuven vein-system by WILBERG

Quartz veins at Tuven, general remarks

The Tuven area has a distinct K-anomaly, and anomalous Au in stream sediments. In an aim to explain these, a reconnaissance in 2002 led to the discovery of a single, narrow quartz vein assaying 8.7 ppm Au (421274 / 7766475) (Palmer 2002). Also other Au-anomalous quartz veins were detected (585 ppb in a shear zone at 421515 / 7765214).

This years follow-up of the Au-mineralized vein showed that this vein is a part of an extensive vein system, more or less continuous along a strike length of 1.5 km.

The semiconcordante to concordante veins jump slightly up in the stratigraphy from south to north. The thickness varies from a few cm to 2 m, typically 20 - 50 cm, and often several neighbouring, parallel veins occur.

The vein assaying 8.7 ppm Au is approximately 35 m long, and occupies a level 12 - 15 m higher than the more extensive lower one. Both show the same characteristic features: laminated, sugargrained and sulphide impregnated, but the auriferous vein have a slightly higher sulphide content. None of the veins are accompanied by alteration. Except one anomalous sample (189 ppb Au), this years assays, both composite and channel samples, were low in Au.

The K-anomaly running along the NW side of Tuven (NW of the quartz veins), can not be explained by K-alteration. Pegmatites of up to 7 m thickness, with K-feldspar and muscovite do occur in the anomaly area (421020 / 7767091), as they (however) do elsewhere in the Tuven area.

At 421120 / 7766600 a narrow (0.5 - 1 m thick) band of medium- to coarsegrained quartz-feldspar-muscovite schist with occasional garnet and traces of sulphides (99902) occur in the otherwise finegrained sediments. This horizon is however not expected to give rise to the 1.3 km long K-anomaly.

Description of the Tuven quartz veins (from south to north)

421298 / 7765395: 2 m thick milky qtz lense. No sulphides. Thins out towards NW and SE. 330/70.

421291 / 7765434: Slightly higher in the stratigraphy, 15 cm thick, rusty, sugargrained quartz vein (99934). The vein is spotwise exposed to:

421277 / 7765505: 4 m long outcrop of 80 cm thick quartz vein. No sulphides. 339/90.

421261 / 7765557: 20 cm thick semiconcordante, almost vertical quartz vein (99933). Can be followed 20 m, thins out. Photo 1.

421280 / 7765757: Up to 25 cm thick, few m long qtz lense.

421275 / 7765773: 15 cm thick concordante, sugargrained quartz lense, exposed 2 m length.

421281 / 7765818: 25 cm thick, at least 10 m long, concordante, weakly rusty, sugargrained quartz vein (99921). 353/52. Photo 2.

421269 / 7765826: 8 cm thick, concordante (354/57) quartz vein with weak po-diss (99920) can be followed over 5 m.

421332 / 7766041: Small outcrop of 40-50 cm thick sugargrained, weakly rusty quartz vein (99922) in fracture zone. More or less concordante, 355/40.

421348 / 7766063: Small outcrop of 40-50 cm thick sugargrained quartz lense.

421356 / 7766100: 6 cm thick, semiconcordante, sugargrained quartz vein. 340/40. Another narrow vein 5 m lower in stratigraphy.

421291 / 7766187: 25 cm thick, concordante (351/52) quartz vein (99909). 99923 is channel sample over 60 cm width of the 25 cm thick vein and wallrock (feldspathic quartzite with few-cm-thick amphibolite layers). 1 m of the footwall and a few dm of hangingwall are rusty (py). Same level as:

421288 / 7766219: 10 cm thick, concordante, laminated, rusty (po-diss) quartz vein (99908). Same level as:

421284 / 7766239: 10-30 cm thick, semiconcordante, sugargrained, rusty (po-diss) quartz vein (99907). Same level as:

421278 / 7766307: 50 cm thick, concordante, sugargrained, rusty (traces of sulphides) quartz vein (99906, 189 ppb Au). 99924 is channel sample over 100 cm width over the 50 cm thick vein (including 2 bands of 3 cm each of wallrock). 3 m to the W: 10 cm thick quartz vein. 11 m further W: 2 neighbouring veins, 5 cm thick each. Same level as:

421271 / 7766346: 10cm thick, concordante, rusty quartz vein (99905). 99910: immediate footwall to the vein: feldspathic quartzite with sulphide diss.

421271 / 7766354: 20 cm thick, boudinated quartz vein. 5 m higher in the stratigraphy: 10 cm thick quartz vein. Inbetween, 2 few-cm-thick veins.

421271 / 7766379: Here, the concordante vein cuts discordantly down in the wallrock.

421266 / 7766417: Up to 1.50 m thick, semiconcordante (346/70) quartz vein (99904, 99925). Can be followed 50 m more or less continuously to the N, jumping slightly up in the stratigraphy. Occasionally rusty. In places 3-4 parallel, few-dm-thick veins.

421268 / 7766421: Channel sample over 100 cm thick quartz vein (99926).

421274 / 7766475: The 10 cm thick quartz vein with 8.7 ppm Au (photo 3) occurs 12-15 m higher in the stratigraphy than the above mentioned vein. The Au-vein extends at least 35 m and splits up southwards to 7 parallel, laminated quartz veins over a thickness of 70 cm (max vein thickness: 20 cm). Channel sample 99927 at 421273 7766452 over 70 cm thickness includes the 7 veins (photo 4).

Another 20 cm thick quartz vein 20 m to the E, at the top of the ridge.

The lower vein (from 421266 7766417) extends to 421263 7766 491 (and further N): 7 cm thick quartz vein with weak sulphide diss (99911).

421263 / 7766544: 10 cm thick, laminated, sugargrained quartz vein with weak sulphide diss (99912). 10 m to the N, and 8 m below in stratigraphy: 40 cm thick quartz vein.

421258 / 7766578: 8 cm thick quartz vein. Turmaline pegmatite few m away.

421257 / 7766613: 30 cm thick quartz vein with traces of sulphides (99913).

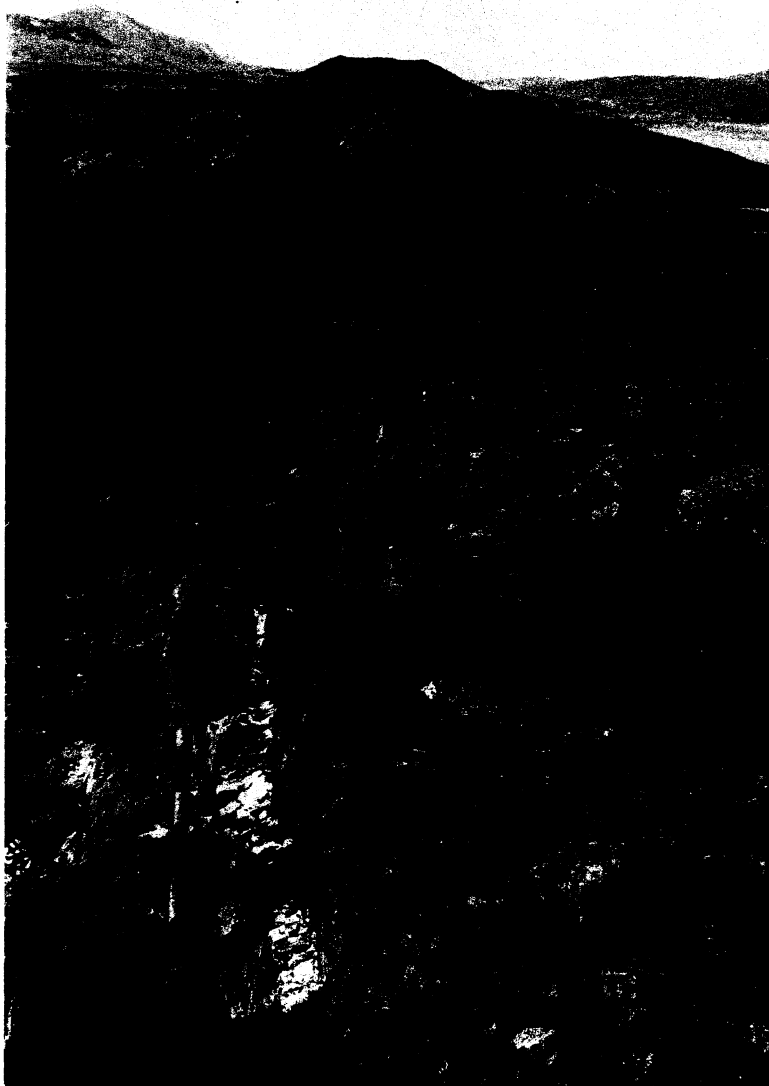


Photo 1: UTM 421261 7765557.
Quartz vein to the right of the
hammer. Seen northwards.
Tuven ridge in the background.

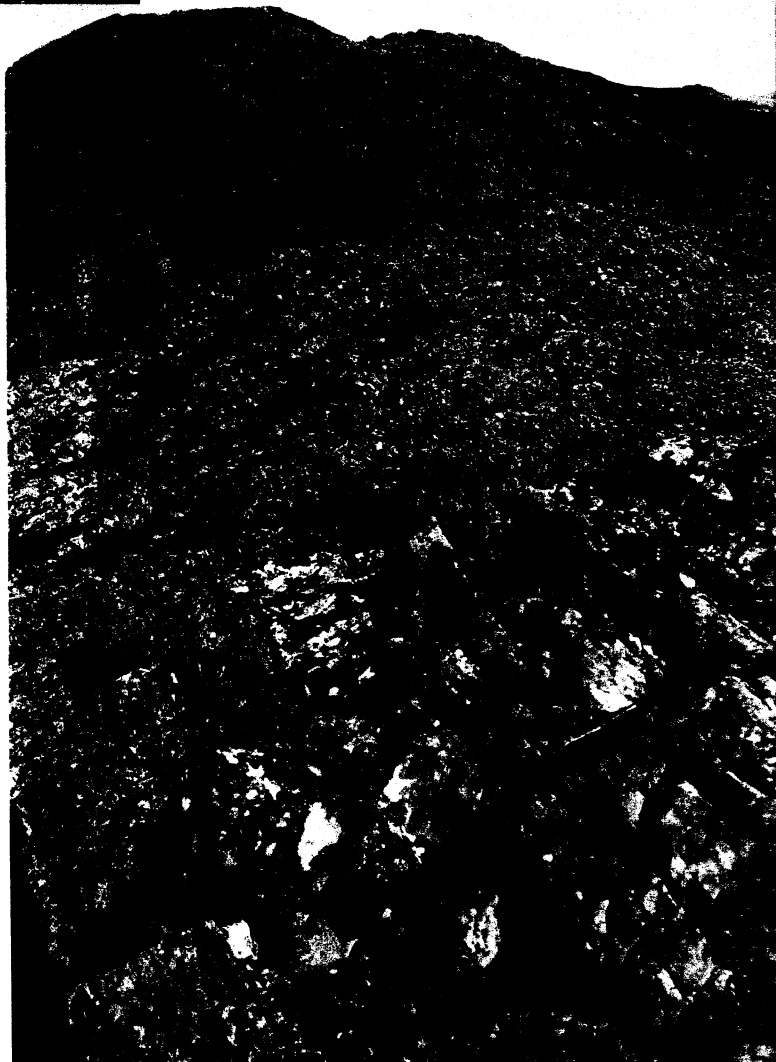


Photo 2: UTM 421281 7765818.
Quartz vein. Seen northwards.

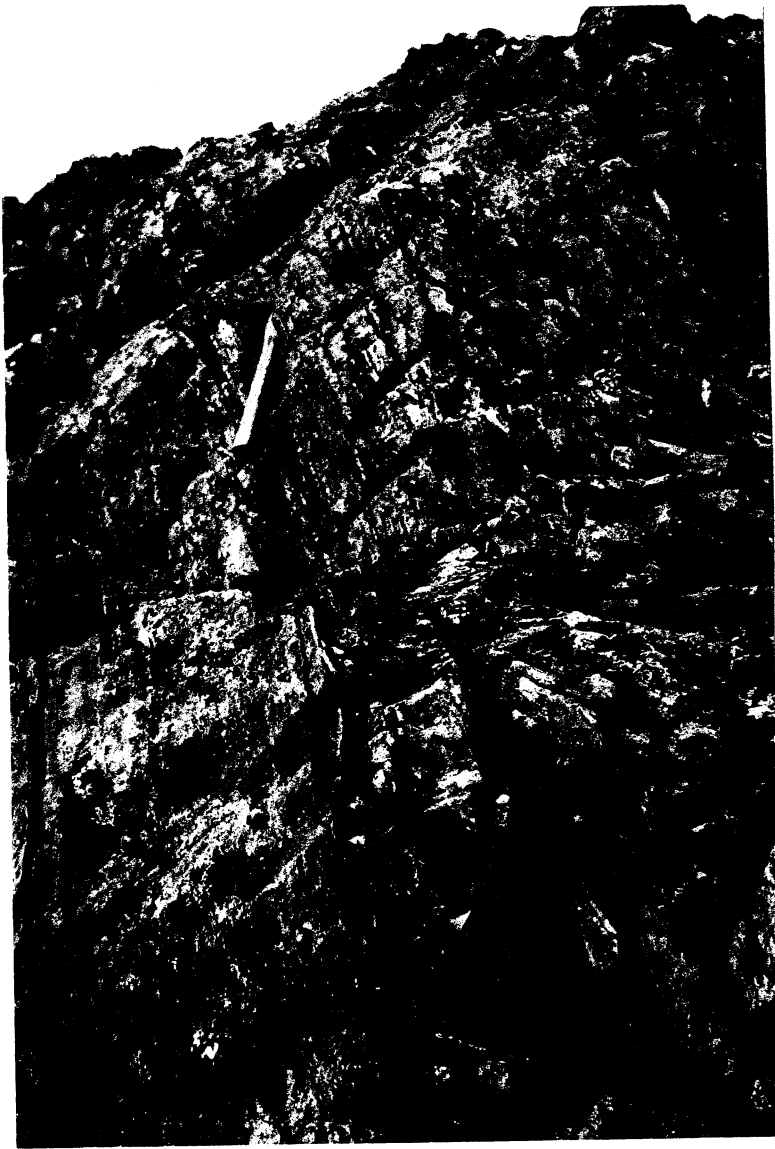


Photo 3: UTM 421274 7766475. Rusty quartz vein below hammer, with 8.7 ppm Au. Seen northwards.



Photo 4: UTM 421273 7766452. Southern continuation of the 8.7 ppm Au vein.

421263 / 7766651: 30 cm thick, concordante (353/70), sugargrained quartz vein/lense with traces of sulphides (99914). Extends to:

421267 / 7766676: 2 sugargrained quartz veins (99928), 10 cm thick each and 30 cm apart. Extends further N to:

421269 / 7766700: 4 neighbouring sugargrained quartz veins, up to 15 cm thick each.

421274 / 7766712: 25 cm thick quartz vein.

421309 / 7766842: 20 cm thick, sugargrained, weakly rusty quartz vein/lense with traces of cpy (99929).

At the parallell ridge about 150 m to the west, the following quartz veins are encountered:

421126 / 7766708: 2 sugargrained quartz veins/lenses (99932, 99754) with traces of po, 15-20 cm thick each, 25 cm apart, few m long. Almost concordante: 340/35. Sporadic outcrops of quartz vein northwards to:

421179 / 7766921: 15 cm thick, concordante, sugargrained, rusty quartz vein (99931). This and 3 other parallell veins of few-cm-thickness occur within 60 cm width. The vein(s) thins out to the north, but show up again at:

421179 / 7766966: 90 cm thick, concordante (350/85) quartz vein with traces of sulphides (99903). Splits up in 3 veins to the south. Can be followed 30 m.

421206 / 7767159: 10 cm thick, concordante (349/75), sugargrained, weakly laminated quartz vein (99930). Exposed over 5 m length.

3.1.1.1.4. Tectonic Features

The investigated area is characterized by the superposition of two tectonostratigraphic units. The upper unit, identical with the Skogsfjord Group has been overthrust in SW-direction upon the underlying lower unit, consisting of the Skogsfjordvatn Group. The **thrust plane** strikes 80-90° E-W and is inclined 30-40° to the N.

The **thrust plane** is accompanied by a 5-10m thick fractured and mylonized **shear zone**, entirely composed by intense tectonized amphibolite, even in the SE-sector of the area, where the thrust zone doesn't affect amphibolitic rocks. That means that the mylonized amphibolite has been dragged along the thrust plane serving as „lubricant“.

Numerous irregular deformed minor quartz-lenses within the shear zone indicate that the thrusting has taken place under high p/t-conditions, accompanied by partial melting and reinjection of the silica-components. The **mylonite** is of „dry“ character, not affected by syntectonic hydrothermal activity and shows therefore neither any hydrothermal alteration nor consequently any sign of mineralization as the sampling results demonstrate (samples n° 099755, 099756, 099758, 099759 and 099760).

The **Upper Tectonostratigraphic Unit** has undergone west vergent isoclinal folding with generally N-S striking and steep to medium steep E-dipping foliation. Internal drag-folding results in local SW and NE dip-directions.

The **milky quartz veins** are generally emplaced along the main, N-S-orientated and

E-dipping foliation planes, whereas the **pegmatitic veins and dikes** show both, concordant and discordant orientation to the surrounding schistosity.

NW-SE running minor **diagonal and transversal faults** have been also observed.

The rock sequences within the working area of the **Lower Tectonostratigraphic Unit** lay on the W-flank of a mayor synclinal structure (**synclinorium**), with the uppermost meta-sediment sequence (belonging to the Sætervik Formation) in a position close to the keystone of the synclinal structure. The lower unit shows a more open, less W-vergent fold structure with the main foliation as well following the N-S trend observed in the upper unit, but with more variable dip-directions.

A system of NE-SW running **older diagonal faults** which only affect the lower unit has been observed in the area N of the Øvre Nordkjosvatn. This NE-SW direction has been reactivated by a **younger mayor fault** transversing the working area from SW to NE, dipping 50° NW and dislocating the thrust zone 300m to the N.

3.1.1.1.5. Mineralizations

Disseminated and stratabound non auriferous Fe-sulphide mineralizations are observed in the lower part of the upper meta-sediments within the Lower Tectonostratigraphic Unit. The outcrops are characterized by rusty colours and gossan-like weathering features. The 2 samples (n° 099753 and 099757) show very low gold contents (10 resp. 38 ppb), well below the anomalous gold-value for rock samples established by PALMER, 2002 with 100 ppb.

Disseminated to semimassiv sulphide mineralizations bounded to keratophyre-like lenses have been observed within the amphibolite sequence of the lower unit. They have been sampled and evaluated by WILBERG (2002 and 2005) and PALMER (2002).

The **GOLD-MINERALIZATIONS** are confined to single milky quartz veins or systems of veins composed of coarse- and fine-grained quartz with a saccharoidal texture. The native gold occurs commonly as microscopic grains intergrown with erratically distributed aggregates and veinlets of pyrite, pyrrhotite, chalcopyrite and accessory Sb-sulphosalts as well as in rare cases as visible grains. (IHLEN and FURUHAUG, 2000). The auriferous character of milky quartz veins sampled by the author in the investigated area has been confirmed by the analyses-results as described in Chap. 3.1.1.1.3..

3.1.1.2. Quarternary Deposits

The investigated area in general is covered by a thin **veneer of till** with erratic blocks dispersed allover the ground. Nevertheless the emerging mountain-ridges and numerous mamelons- and creek-exposures provide sufficient information for the bed rock study.

The exception is the southernmost area around the both Nordkjosvatn. Here **recent glaciers**, who have descended from the Svartvasstinden massif and the mountain ridge S of the two lakes have deposited thick end-, side- and block-moraines with the corresponding glacial material transport over large distances (eventually several km).

The Nedre and Øvre Nordkjosvatn represent glacial(marginal) lakes separated by till deposits and block debris. The N-shores are accompanied by thick and up to 300m wide **end- and side-**

moraines, which actually are eroded by transversing creeks entering into the lakes from the N. That means, that all the moraine-material accumulated north of the lakes (and consequently also the gold producing the anomalies within the moraine-covered area) has its origin in the area S and SE of the lakes. This is also valid for the stream-sample anomalies N of the Nedre Nordkjosvatn due to the fact, that the sampled sediments represent eroded and watertransported moraine-material. The gold, producing this anomalies has as well its bed rock source in the same area as the corresponding moraines.

3.1.2. Sampling

Only 10 rock samples have been collected by the author due to the lack of prospective targets. They have been sent to Canada, where they have been prepared and analysed by the FAA and ICP-methods. The sample-list containing the UTM-coordinates, a short-description and the gold-contents follows:

Tuven - / Nordkjosvatn - area , ROCK SAMPLES 2005
(sampled by KLEINE-HERING)

Sample N°	UTM - Coordinates (east) (north)		Rock Type	Gold-Content (ppb)
99751	419857	7764511	milky quartz vein	504
99752	421513	77649122	sulphidic quartz vein	655
99753	421838	7765005	gossan in meta-sediments	10
99754	421123	7766722	milky quartz vein	157
99755	420847	7765558	mylonitic quartz segregation	8
99756	420975	7765440	mylonitic quartz segregation	<5
99757	422251	7764717	gossan in meta-sediments	38
99758	422383	7765065	mylonitic quartz segregation	7
99759	422142	7765142	gossan in gneiss	6
99760	421565	7765179	pegmatitic quartz vein	<5

Only 3 samples (n° 99751, 99752 and 99754) show anomalous gold values, all of them representing quartz veins.

3.1.3. Remarks

- The fieldwork has re-confirmed the geological model of the RGB as described by ZWAAN,1989.
- The re-interpretation of the RGB-geology based on helicopterborne geophysics by PALMER,2002 could not be verified in the field.
- No evidence could be found for widespread hydrothermal activity besides of the mineralized quartz veins themselves (which not even show associated alteration halos).
- The meta-sediments rich in sericite and impregnated by sulphides (pyrite) are not sericitized or pyritized as the consequence of hydrothermal alteration but show primary patterns superimposed by the subsequent regional metamorphism.

- The airborne K-anomaly observed in the Tuven-area seems to be related to the widespread occurrences of pegmatitic veins and dikes rich in potash-feldspar.
- There exists no geological or geochemical relation between the existence of the interformational thrust(shear) zone and the elevated sericite/pyrite content of the neighboured quartz-sericite schists.
- Hidden and/or up to now not yet encountered mayor auriferous quartz veins (or vein systems) remain the only potential (future) exploration target in this area.
- The favourable expose conditions together with the excellent quality of the available air- fotos recommends the continuation of generalized detailed mapping as the less expensive follow-up work.
- The sources of the encountered geochemical „soil“-anomalies, all related to glacial deposits, can only be traced by a detailed study of the correspondent ice-movements.
- This survey has proven that extensive, outcropping quartz veins with Au potential in the Skogsfjord Group have been overlooked by previous campaigns, which have mainly focused on the Skogsfjordvatn Group.
A limited prospecting campaign along the less investigated Skogsfjord Group could lead to detections of auriferous quartz veins.

3.2. Skilelva / Hårskoltan - Area

This area has been pre-selected as a result of the 2002 survey, because of the detection of gold anomalies within glacial deposits (till and side-moraine scree) and the reported existence of gold-bearing erratic milky-quartz blocks together with outcropping auriferous quartz veins in the surroundings of the Hårskoltan summit.

3.2.1. Geological Mapping

The target of the geological mapping has been the collection of bed-rock information to support the interpretation of the geochemical data obtained by the „soil“-sampling along two parallel, 1.6000 m long, N-S running profiles. Due to the very reduced time-table (only 4 days have been available) and the considerable thick cover by glacial sediments, the detailed mapping has been restricted to the road-side cut and to the cañon-like creek-bed of the Skilelva itself.

The uphill area E of profil 2, the surroundings of the headwaters of the Skilelva and the adjacent W-flank of the neighboured Hårskoltan summit (492m a.s.l.) have only been covered by a generalized reconnaissance survey based on air-fotos and GPS-application. A detailed mapping of the entire area surrounding the Hårskoltan summit remains pending.

3.2.1.1. Bed-Rock Geology

3.2.1.1.1. Geology of the Road-Side- and Skilelva-Cañon-Exposure

The road-side cut, located between 150 and 350m W of deep-soil-sampling profile P1 offers together with the Skilelva outcrop an almost complete, 2 km long N-S section of the underlaying bed-rock sequence.

A mayor, W-E running fault (not exposed in the road-cut, but marking the direction of the accompanying creek) divides the bed-rock sequence into a northern formation consisting in amphibolites with intercalated meta-gabbro lenses and a southern formation, composed by meta-sediments and meta-volcanics. The cañon-like outcrop of the Skilelva is caused by the erosion of a W-E running fault which strikes parallel to the fault which separates the two formations.

The northern **amphibolite formation** is characterized by amphibolite rich in carbonates, (manifested in the widespread occurrence of small (cm) lenticular dolomitic segregations) and the local intercalation of meta-gabbro lenses. This formation represents mafic volcanism and could in the regional context correspond to the **Hessfjord Formation** (Zwaan, 1989).

The **meta-sediment formation** towards the S is composed by „weak“ to quartzitic **mica-schists and gneisses** with interbedded **quartzites**, representing a pelitic to psammitic sedimentation environment. The **chloritic (green) schists** in the extreme S together with the individual intercalations of **meta-keratophyre-** layers are the result of periodical, more acid to intermediate volcanism.

3.2.1.1.2. Geology of the Skilelva Headwater Area

This area, topographical formed by a shallow former glacier-circus (kar) is covered by a thin but continuous layer of till and in the SE by a mayor block-moraine. The few isolated outcrops within the kar-area itself and the semi-circular edge of the circus show only **meta-gabbro** with adjoining **amphibolites** (and those for their part **quartzitic gneisses**) in the Skilelva-exposure in the NW and **chloritic/amphibolitic greenschists** towards the SE, the Hårskoltan summit.

With regard to the extense “gneissic” block-moraine, containing erratic (reported) auriferous milky-quartz blocks, there is no evidence of the corresponding bed-rock source:
All surrounding outcrops show only amphibolitic meta-gabbros.

3.2.1.1.3. Vein Rocks

Only 3 minor milky-quartz veins have been observed and sampled along the road-side-cut (samples n° 099763, 099765 and 099768), all of them without anomalous gold contents.

The reported outcrops of auriferous milky-quartz veins in the Hårskoltan summit area could not been verified by the author due to the restricted time-schedule. Some minor milky-quartz veins outcropping about 1km N of the summit within a mafic, meta-volcanic sequence have been **sampled and described by WILBERG** under the current campaign,- none of them shows anomalous gold-values:

An Au-occurrence relevant to the Skilelva target, is Brennfjell, registered in "Bergarkivet", NGU. It is not verified (not found) in the recent up-date of the "Ore data base" at NGU, but is supposed to be located at approximately 442100 / 7765600.

An attempt to localize this occurrence in this yars campaign did not succeed, but 5 quartz veins from this area were sampled, all with low Au values.

442177 / 7765083: 10 cm thick quartz vein (99916), 33/90, exposed over 3 m in amphibolite.

442196 / 7765233: 30 cm thick, 6 m long sugargrained, rusty quartz vein/lense (99915), concordante (244/50) in greenschist.

442164 / 7765328: 80 cm thick, weakly rusty quartz vein (99917), 50/50, in greenstone. Exposed over 2 m length in the talus. Quartz floats along strike extension.

442006 / 7765543: Local upweathered floats of approximately 15 cm thick sugargrained quartz vein (99918). Discordante in greenschist; vein direction approximately 100°.

442097 / 7765537: 10 cm thick sugargrained, laminated quartz vein with sulphide traces (99919). Exposed over 5 m in greenschist. Concordante, 237/32.

The above mentioned block-moraine W of the Hårskoltan summit contains erratic milky-quartz blocks and gneiss-boulders with milky-quartz veins of unknown origin.

3.2.1.1.4. Tectonic Features

The foliation of the **northern amphibolitic formation** (see chap.3.2.1.1.) shows a N-S strike tendency with a medium-steep inclination of the schistosity planes to the W. In the regional context this amphibolitic formation may correspond to the **Hessfjord Formation**.

The **southern meta-sedimentary formation**, tectonically separated by the former one by a regional fault, strikes NE-SW with varying dip-directions to the NW as well as to the SE. Due to the isolated nature of the road-side-cut exposure and the lack of detailed local and regional mapping, the tectonostratigraphic position of the meta-sediments in the regional context cannot be established.

The bed-rock sequence of the road-side-cut exposure is intersected by numerous local and two regional faults.

The **local faults** trend NE-SW and NW-SE with varying medium-steep inclinations to the NW and to the SW.

The two **regional faults**, the „**northern fault**“ which separates the two rock formations and the **Skilelva-fault** which seems to be interformatial, run E-W with the Skilelva-fault dipping with 40-45° to the N. They have upthrust-character and show similar tectonic patterns as the thrust zone observed in the Tuven-/Nordkjosvatn-area. The „Dåfjord-Fault“ (Palmer, 2002) could be the „missing link“ between the two areas.

3.2.1.1.5. Mineralizations

The only mineralizations observed are **sulphide (mainly pyrite and pyrrhotite) impregnations** within quartzites and meta-keratophyre intercalations (samples n° 099761, 099762, 099764 and 099766) and local (m-scale) **semi-massiv sulphide concentrations** (mainly pyrrhotite) associated with meta-keratophyre (sample n° 099767), showing typical gossan-like weathering-features. All the collected samples don't contain anomalous gold contents.

3.2.1.2. Quarternary Deposits

The investigated area is located at the E-side of a former glacier-valley with its glacier-shoulder and the adjoining glacier-shaped highland around the Hårskoltan summit.

Whereas the valley-slope itself is buried by m-thick **side-moraines and scree deposits**, the former glacier-shoulder and the neighboured highland with the glacier-kar are covered by a thin but continuous **veneer of till**.

At the SE-edge of the kar an extensive (1.000m long and up to 300m wide) **block-moraine** has been deposited containing erratic, (reported) auriferous milky-quartz blocks.

In all this glacial deposits sparsed gold-traces (anomalies) have been detected: Anomalous till-samples (n° RVO DS 033, 035 and 072 with 144, 1.640 and 212 ppb resp.) and (reported)

auriferous erratic milky-quartz blocks. The corresponding bed-rock sources remain unknown unless a detailed study of the regional and local ice-movements will have been carried out and the area between the northern Riskjeppa summit and the southern Hårskoltan summit has been mapped in detail.

3.2.2. Sampling

8 rock samples along the road-cut have been collected by the author, considering any rock- and mineralization type which theoretically could be auriferous. The following sample list contains the corresponding UTM-coordinates, a short description and the gold-contents:

Skilelva-/Hårskoltan - area , ROCK SAMPLES 2005

(sampled by KLEINE-HERING)

Sample N°	UTM - Coordinates		Rock Type	Gold-Content (ppb)
	(east)	(north)		
99761	439701	7764912	rusty sericite quartzite	14
99762	439723	7764889	meta-keratopyre	11
99763	439723	7764889	milky quartz vein	<5
99764	439715	7764743	quartz feldspar pegmatoide	23
99765	439671	7764194	milky quartz lense	<5
99766	439621	7764005	sulphide impregnation in quartzite	11
99767	439612	7763991	massiv sulphydes	<5
99768	439463	7765513	milky quartz vein	?

None of the bed-rock samples shows anomalous gold-values.

Additionally two N-S orientated **deep-„soil“ (= till/moraine) sampling profiles** have been drilled, each 1.600m long and spaced 800m, with a total amount of 101 samples. The applied sampling technique permits the collection of sediments immediatly overlaying the bed-rock. In the following the UTM-positions and the sampling-grid of the two lines:

Profile P1: 439800 E / 7763600 – 7765200 N, 63600-64000 N: 50m sample-distance
64000-65000 N: 25m sample-distance
65000-65200 N: 50m sample-distance

Profile P2: 440600 E / 7763600 – 7765200 N, 63600-64000 N: 50m sample-distance
64000-65000 N: 25m sample-distance
65000-65200 N: 50m sample-distance

Of all the 101 collected samples only 3 samples show anomalous gold-values:

- **profile 1** samples n° RVO DS 033 (144 ppb) and n° RVO DS 035 (1.640 ppb)
- **profile 2** sample n° RVO DS 072 (212 ppb)

The source of this gold-anomalies remains unknown. **They are in any case not related to the underlaying bed-rock sequence.**

3.2.3. Remarks

- The detailed mapping and sampling of bed-rock outcrops doesn't give any indication of primary gold mineralization .
- The isolated locations of the 3 anomalous gold-values don't coincide with the anomalous sample-sides of the 2002-survey.
- The bed-rock source of the sampled glacier-transported sediments (till and glacial scree) remains unknown and as consequence the sparsely distributed gold-anomalies cannot be traced.
- Due to their character as ice-transported sediments no relation to the underlaying bed-rocks can be expected.
- The detailed mapping of the area between the Riskjeppa in the N and the Hårskoltan summit in the S is pending.

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- | | | |
|--------------------------------|------|--|
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Table 1

Sample no	Coord	Description
99901	421114 7766554	20cm thick discordante qtz vein. Traces py, po, sl
99902	421120 7766600	Med- to coarsegr qtz-fldsp-musc schist. Traces sulfides
99903	421179 7766966	90 cm thick conc qtz vein, partly rusty, traces sulf
99904	421268 7766427	Up to 1.5m thick semiconc qtz vein, rusty in places
99905	421271 7766346	10 cm thick conc, rusty qtz vein
99906	421278 7766307	40cm thick rusty, sugargr qtz vein, traces sulf
99907	421284 7766239	10-30cm thick sugargr, rusty (po) qtz vein
99908	421288 7766219	10cm thick laminated, conc, rusty (po-diss) qtz vein
99909	421291 7766187	30cm thick conc qtz vein, py-diss
99910	421271 7766346	Immediate footwall to qtz vein: rusty feldspathic quartzite with sulf-diss
99911	421263 7766491	7cm thick qtz vein, weak sulf-diss
99912	421263 7766544	10cm thick sugargr, laminated qtz vein with weak sulf diss
99913	421257 7766613	30cm thick sugargr qtz vein, traces sulf
99914	421263 7766651	30cm thick conc, sugargr qtz vein/lense, traces sulf
99915	442196 7765233	30cm thick sugargr, rusty qtz vein, 244/50, conc in greensch
99916	442177 7765083	10cm thick qtz vein, 33/90, in amphibolite
99917	442164 7765328	80cm thick weakly rusty qtz vein, 50/50, in greenstone
99918	442006 7765543	15cm thick sugary qtz vein, disc in greenstone
99919	442097 7765537	10cm thick laminated, sugargr qtz vein with weak sulf-diss, 237/32, conc in greensch
99920	421269 7765826	8cm thick conc qtz vein with weak po-diss, 354/57
99921	421281 7765818	25cm thick conc, sugargr, weakly rusty qtz vein, 353/52
99922	421332 7766041	40-50cm thick conc, weakly rusty sugargr qtz vein, 355/40
99923	421291 7766187	Channel spl over 60cm width, 25cm thick qtz vein with wall rock
99924	421278 7766307	Channel spl over 100cm width, 50cm thick qtz vein and wall rock
99925	421266 7766417	Channel spl over 1.5m of 1.5m thick qtz vein
99926	421268 7766421	Channel spl over 1.0m of 1.0m thick qtz vein
99927	421273 7766452	Channel spl over 70cm. Includes 7 qtz veins and wall rock
99928	421267 7766676	Taken from 2 qtz veins, 10cm thick each, 30cm apart
99929	421309 7766842	20cm thick sugargr qtz vein with weak cpy-diss
99930	421206 7767159	10cm thick conc, sugargr, qtz vein with weak lamination, 249/75
99931	421179 7766921	15cm thick conc, sugargr, rusty qtz vein
99932	421126 7766708	Spl from 2 sugarqtzveins (rusty, traces po) of 15-20cm thickness each, sep by 30cm wallrock,
99933	421261 7765557	20cm thick qtz vein
99934	421291 7765434	15cm thick rusty, sugargr qtz vein

Table 2

Ringvassøy rock samples 2005

ANALYTE		Au		Be		Na		Mg		Al		P		K		Ca		Sc		Ti		V		Cr		Mn		Fe	
METHOD		FAA313	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B
DETECTION																													
UNITS																													
		5	0.5	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
		8	<0.5	0.01	0.03	<0.01	0.03	<0.01	0.03	<0.01	0.03	<0.01	0.03	<0.01	0.03	<0.01	0.03	<0.01	0.03	<0.01	0.03	<0.01	0.03	<0.01	0.03	<0.01	0.03	<0.01	0.03
		<5	<0.5	0.03	<0.01	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
		10	<0.5	<0.01	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
		13	<0.5	<0.01	0.05	<0.01	0.05	<0.01	0.05	<0.01	0.05	<0.01	0.05	<0.01	0.05	<0.01	0.05	<0.01	0.05	<0.01	0.05	<0.01	0.05	<0.01	0.05	<0.01	0.05	<0.01	0.05
		13	<0.5	<0.01	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
		189	<0.5	0.02	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
		17	<0.5	<0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
		11	<0.5	0.01	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35
		21	<0.5	0.03	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
		15	<0.5	0.11	0.7	1.28	0.11	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
		12	<0.5	0.01	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
		14	<0.5	<0.01	0.41	0.58	0.04	0.58	0.04	0.58	0.04	0.58	0.04	0.58	0.04	0.58	0.04	0.58	0.04	0.58	0.04	0.58	0.04	0.58	0.04	0.58	0.04	0.58	0.04
		10	<0.5	<0.01	0.03	0.04	<0.01	0.03	0.04	<0.01	0.03	0.04	<0.01	0.03	0.04	<0.01	0.03	0.04	<0.01	0.03	0.04	<0.01	0.03	0.04	<0.01	0.03	0.04	<0.01	0.03
		20	<0.5	<0.01	0.05	0.06	<0.01	0.05	0.06	<0.01	0.05	0.06	<0.01	0.05	0.06	<0.01	0.05	0.06	<0.01	0.05	0.06	<0.01	0.05	0.06	<0.01	0.05	0.06	<0.01	0.05
		<5	<0.5	<0.01	0.05	0.07	<0.01	0.05	0.07	<0.01	0.05	0.07	<0.01	0.05	0.07	<0.01	0.05	0.07	<0.01	0.05	0.07	<0.01	0.05	0.07	<0.01	0.05	0.07	<0.01	0.05
		22	<0.5	0.01	0.14	0.15	<0.01	0.14	0.15	<0.01	0.14	0.15	<0.01	0.14	0.15	<0.01	0.14	0.15	<0.01	0.14	0.15	<0.01	0.14	0.15	<0.01	0.14	0.15	<0.01	0.14
		<5	<0.5	0.01	0.04	0.06	<0.01	0.04	0.06	<0.01	0.04	0.06	<0.01	0.04	0.06	<0.01	0.04	0.06	<0.01	0.04	0.06	<0.01	0.04	0.06	<0.01	0.04	0.06	<0.01	0.04
		<5	<0.5	<0.01	0.01	0.02	<0.01	0.01	0.02	<0.01	0.01	0.02	<0.01	0.01	0.02	<0.01	0.01	0.02	<0.01	0.01	0.02	<0.01	0.01	0.02	<0.01	0.01	0.02	<0.01	0.01
		<5	<0.5	<0.01	0.05	0.06	<0.01	0.05	0.06	<0.01	0.05	0.06	<0.01	0.05	0.06	<0.01	0.05	0.06	<0.01	0.05	0.06	<0.01	0.05	0.06	<0.01	0.05	0.06	<0.01	0.05
		<5	<0.5	0.01	0.05	0.07	<0.01	0.05	0.07	<0.01	0.05	0.07	<0.01	0.05	0.07	<0.01	0.05	0.07	<0.01	0.05	0.07	<0.01	0.05	0.07	<0.01	0.05	0.07	<0.01	0.05
		28	<0.5	0.08	0.84	1.23	0.03	0.52	0.28	1.23	0.03	0.52	0.28	1.23	0.03	0.52	0.28	1.23	0.03	0.52	0.28	1.23	0.03	0.52	0.28	1.23	0.03	0.52	0.28
		9	<0.5	<0.01	0.01	0.02	<0.01	0.01	0.02	<0.01	0.01	0.02	<0.01	0.01	0.02	<0.01	0.01	0.02	<0.01	0.01	0.02	<0.01	0.01	0.02	<0.01	0.01	0.02	<0.01	0.01
		<5	<0.5	0.02	0.1	0.13	<0.01	0.02	0.1	0.13	<0.01	0.02	0.1	0.13	<0.01	0.02	0.1	0.13	<0.01	0.02	0.1	0.13	<0.01	0.02	0.1	0.13	<0.01	0.02	0.1
		50	<0.5	0.05	0.64	0.93	0.03	0.21	0.28	0.93	0.03	0.21	0.28	0.93	0.03	0.21	0.28	0.93	0.03	0.21	0.28	0.93	0.03	0.21	0.28	0.93	0.03	0.21	0.28
		11	<0.5	0.01	0.1	0.12	<0.01	0.01	0.1	0.12	<0.01	0.01	0.1	0.12	<0.01	0.01	0.1	0.12	<0.01	0.01	0.1	0.12	<0.01	0.01	0.1	0.12	<0.01	0.01	0.1
		7	<0.5	0.01	0.18	0.25	0.02	0.02	0.1	0.25	0.02	0.02	0.1	0.25	0.02	0.02	0.1	0.25	0.02	0.02	0.1	0.25	0.02	0.02	0.1	0.25	0.02	0.02	0.1
		22	<0.5	<0.01	0.07	0.06	0.02	<0.01	0.1	0.06	0.02	<0.01	0.1	0.06	0.02	<0.01	0.1	0.06	0.02	<0.01	0.1	0.06	0.02	<0.01	0.1	0.06	0.02	<0.01	0.1
		9	<0.5	0.01	0.02	0.03	<0.01	0.01	0.02	0.03	<0.01	0.01	0.02	0.03	<0.01	0.01	0.02	0.03	<0.01	0.01	0.02	0.03	<0.01	0.01	0.02	0.03	<0.01	0.01	0.02
		11	<0.5	<0.01	0.02	0.03	<0.01	0.01	0.02	0.03	<0.01	0.01	0.02	0.03	<0.01	0.01	0.02	0.03	<0.01	0.01	0.02	0.03	<0.01	0.01	0.02	0.03	<0.01	0.01	0.02
		<5	<0.5	<0.01	0.11	0.17	0.01	0.11	0.17	0.01	0.11	0.17	0.01	0.11	0.17	0.01	0.11	0.17	0.01	0.11	0.17	0.01	0.11	0.17	0.01	0.11	0.17	0.01	0.11
		8	<0.5	<0.01	0.22	0.27	0.02	0.01	0.12	0.27	0.02	0.01	0.12	0.27	0.02	0.01	0.12	0.27	0.02	0.01	0.12	0.27	0.02	0.01	0.12	0.27	0.02	0.01	0.12
		504	<0.5	0.01	0.01	0.03	<0.01	0.01	0.04	0.03	<0.01	0.01	0.04	0.03	<0.01	0.01	0.04	0.03	<0.01	0.01	0.04	0.03	<0.01	0.01	0.04	0.03	<0.01	0.01	0.04
		655	<0.5	<0.01	0.04	0.29	0.04	0.1	0.04	0.29	0.04	0.1	0.04	0.29	0.04	0.1	0.04	0.29	0.04	0.1	0.04	0.29	0.04	0.1	0.04	0.29	0.04	0.1	0.04
		10	<0.5	0.01	0.04	0.05	<0.01	0.01	0.04	0.05	<0.01	0.01	0.04	0.05	<0.01	0.01	0.04	0.05	<0.01	0.01	0.04	0.05	<0.01	0.01	0.04	0.05	<0.01	0.01	0.04
		157	<0.5	0.05	0.46	0.93	<0.01	0.15	0.17	0.93	<0.01	0.15	0.17	0.93	<0.01	0.15	0.17	0.93	<0.01	0.15	0.17	0.93	<0.01	0.15	0.17	0.93	<0.01	0.15	0.17
		8	<0.5	0.05	<0.01	0.19	<0.01	0.26	0.01	0.19	<0.01	0.26	0.01	0.19	<0.01	0.26	0.01	0.19	<0.01	0.26	0.01	0.19	<0.01	0.26	0.01	0.19	<0.01	0.26	0.01

Ringvassøy rock samples 2005

99756				<5	<0.5	0.08	0.13	0.53	<0.01	0.2	0.15	1.4	<0.01	6	61	205	0.51
99757				38	<0.5	<0.01	0.11	0.43	0.03	0.39	0.02	<0.5	0.08	30	74	71	>15
99758				7	<0.5	<0.01	0.13	0.22	<0.01	0.02	0.09	<0.5	0.03	9	206	150	1.82
99759				6	0.9	<0.01	0.01	0.06	<0.01	0.01	0.01	0.7	<0.01	9	241	37	3.64
99760				<5	<0.5	0.09	0.25	0.38	<0.01	0.02	0.39	2	0.01	12	156	125	0.69
99761				14	<0.5	0.04	0.63	0.8	0.03	0.11	0.29	0.9	0.09	19	137	151	5.9
99762				11	<0.5	0.04	1.22	1.22	0.03	0.08	0.02	0.8	0.07	18	115	159	2.77
99763				<5	<0.5	0.02	0.05	0.08	<0.01	0.02	0.07	<0.5	0.01	4	248	199	0.63
99764				23	<0.5	0.02	1.1	1.12	0.02	0.13	0.12	2.6	0.05	22	93	415	9.96
99765				<5	<0.5	0.01	<0.01	<0.01	<0.01	<0.01	0.19	<0.5	<0.01	<2	291	65	0.33
99766				11	<0.5	0.03	0.38	0.58	0.04	0.19	0.13	0.9	0.03	9	72	114	4.92
99767				21	<0.5	0.02	0.09	0.16	<0.01	0.04	0.05	<0.5	<0.01	3	127	85	>15
DUP-99901				6	<0.5	0.02	0.02	0.03	<0.01	<0.01	0.02	<0.5	<0.01	<2	377	34	0.62
DUP-99913				11	<0.5	<0.01	0.03	0.04	<0.01	<0.01	0.02	<0.5	<0.01	2	253	28	0.38
DUP-99925				6	<0.5	<0.01	0.01	0.02	<0.01	<0.01	0.01	<0.5	<0.01	<2	266	24	0.29
DUP-099753				8	<0.5	0.02	0.03	0.05	<0.01	0.02	0.01	<0.5	<0.01	<2	275	35	0.68
DUP-099765				8	<0.5	<0.01	<0.01	<0.01	<0.01	<0.01	0.19	<0.5	<0.01	<2	283	65	0.32

Ringvassøy rock samples 2005

Co	Ni	Cu	Zn	As	Sr	Y	Zr	Mo	Ag	Cd	Sn	Sb	Ba	La	W	Pb	Bi	Li
ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B
1	1	0,5	0,5	3	0,5	0,5	0,5	1	2	1	10	5	1	0,5	10	2	5	1
PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM
1	15	21,6	5,4	4	1,2	<0,5	2,3	2	<2	<1	<10	<5	2	<0,5	<10	3	<5	1
<1	6	4,3	1,9	3	4	2,6	21,5	1	<2	<1	<10	<5	13	<0,5	<10	6	<5	2
1	10	27,4	5,5	<3	1,5	<0,5	2	2	<2	<1	<10	<5	6	0,8	<10	<2	<5	3
5	11	16,5	4,7	7	0,8	<0,5	1,6	1	<2	<1	<10	<5	<1	<0,5	<10	3	<5	2
1	6	8,8	9	6	4,5	<0,5	1,2	<1	<2	<1	<10	<5	6	0,6	<10	<2	<5	5
2	8	21	12	7	4,8	<0,5	2	6	<2	<1	<10	<5	7	1,4	<10	<2	<5	3
4	9	20,8	5,8	<3	1,7	<0,5	1,4	2	<2	<1	<10	<5	1	<0,5	<10	<2	<5	2
5	12	14,7	35,8	<3	4,8	0,8	2,1	3	<2	<1	<10	<5	26	1,3	<10	<2	<5	6
5	13	56,6	26,7	3	2,6	<0,5	1,4	1	<2	<1	<10	<5	8	0,9	<10	<2	<5	5
4	10	31,2	15,7	<3	20,1	3,9	2	<1	<2	<1	<10	<5	90	14,3	<10	2	<5	25
3	7	10,8	2,4	<3	0,7	<0,5	1,4	2	<2	<1	<10	<5	<1	<0,5	<10	<2	<5	2
6	30	67,5	18,6	<3	5	1,4	1,3	1	<2	<1	<10	<5	9	1,1	<10	<2	<5	5
1	8	8,8	3,4	<3	0,7	<0,5	1,2	2	<2	<1	<10	<5	2	<0,5	<10	<2	<5	1
1	8	8,5	1,2	<3	<0,5	<0,5	1,6	<1	<2	<1	<10	<5	<1	<0,5	<10	<2	<5	2
2	9	18,7	2,7	<3	2,2	<0,5	1,1	2	<2	<1	<10	<5	1	<0,5	<10	<2	<5	2
6	16	204	9,1	6	1,9	<0,5	1,5	2	<2	<1	<10	<5	4	<0,5	<10	12	<5	2
2	8	14,4	4,7	<3	1,9	<0,5	1,5	2	<2	<1	<10	<5	2	<0,5	<10	2	<5	2
<1	7	7	1	4	1	<0,5	1,5	1	<2	<1	<10	<5	2	<0,5	<10	<2	<5	2
11	27	28,2	7,5	<3	1,2	<0,5	1,3	1	<2	<1	<10	<5	1	<0,5	<10	<2	<5	2
2	19	40,1	3,2	5	1,7	<0,5	1,6	1	<2	<1	<10	<5	2	<0,5	<10	<2	<5	2
<1	7	5,1	19,3	<3	3,1	<0,5	1,3	1	<2	<1	<10	<5	4	0,5	<10	<2	<5	3
<1	6	11,8	1,4	4	1	<0,5	1,4	1	<2	<1	<10	<5	1	<0,5	<10	<2	<5	2
4	20	31,4	108	<3	12	1,4	2	1	<2	<1	<10	<5	107	5	<10	<2	<5	23
4	14	27,2	77,1	4	15	0,8	2,5	1	<2	<1	<10	<5	148	2,9	<10	4	<5	21
<1	6	4,3	1,2	<3	0,6	<0,5	1,5	1	<2	<1	<10	<5	<1	<0,5	<10	<2	<5	2
2	8	10,2	5,1	<3	1,9	<0,5	1,5	2	<2	<1	<10	<5	4	0,6	<10	<2	<5	3
4	15	23,9	69,7	<3	13,6	0,8	2,3	2	<2	<1	<10	<5	80	4	<10	5	<5	16
<1	8	8,9	4,7	<3	2,3	<0,5	1,5	3	<2	<1	<10	<5	5	1,3	<10	3	<5	3
8	34	75	9	<3	1,1	0,6	1,6	1	<2	<1	<10	<5	7	<0,5	<10	3	<5	4
2	9	52,4	5,6	4	0,8	<0,5	1,2	2	<2	<1	<10	<5	1	<0,5	<10	<2	<5	2
1	10	18	3,1	<3	0,5	<0,5	1,7	1	<2	<1	<10	<5	1	<0,5	<10	2	<5	1
2	7	5,8	2,5	4	<0,5	<0,5	1,3	1	<2	<1	<10	<5	<1	<0,5	<10	<2	<5	3
2	12	9,9	4,5	3	1,5	<0,5	1,2	4	<2	<1	<10	<5	2	0,6	<10	<2	<5	3
5	14	16,6	8,5	<3	3,5	<0,5	1,8	2	<2	<1	<10	<5	3	1,4	150	<2	<5	5
<1	6	62,5	448	<3	<0,5	<0,5	1,4	1	<2	2	<10	<5	4	<0,5	<10	<2	<5	<1
2	16	197	7,3	7	1	3	18	<1	<2	<1	10	<5	103	4,1	<10	16	62	2
<1	7	7,6	3,1	<3	0,6	<0,5	1,5	2	<2	<1	<10	<5	5	<0,5	<10	5	<5	2
8	17	4,7	25,1	<3	4,5	10,9	9,5	<1	<2	<1	<10	<5	41	0,7	<10	5	<5	9
<1	3	2,8	<0,5	<3	4,8	<0,5	0,5	<1	<2	<1	<10	<5	26	<0,5	<10	6	<5	<1

Ringvassøy rock samples 2005

1	5	5,5	8,5	<3	13,2	7,9	2,6	4	<2	<1	<10	<5	85	1,3	<10	6	<5	3
<1	11	236	12,5	63	2,6	<0,5	12	<1	<2	<1	<10	<5	72	0,9	<10	13	25	1
1	8	27,6	22,3	<3	2,9	0,5	1,3	<1	<2	<1	<10	<5	4	<0,5	<10	5	<5	<1
<1	6	35,3	4,6	<3	1,6	1,4	3,7	<1	<2	<1	<10	<5	2	0,6	<10	3	<5	<1
3	9	8,9	8,7	3	15	6,5	1,7	<1	<2	<1	<10	<5	6	3,5	<10	7	<5	2
88	164	479	42,7	<3	18,9	4,1	5,5	1	<2	<1	<10	<5	46	4,9	<10	10	<5	7
25	44	688	32,1	<3	7,9	2,2	3,4	<1	<2	<1	<10	<5	52	2,9	<10	3	<5	7
11	12	24,6	5	<3	2,2	0,6	1	<1	<2	<1	<10	<5	5	<0,5	<10	3	<5	<1
31	108	712	43	<3	1,6	3	8,9	3	<2	<1	<10	<5	52	3	<10	6	10	8
<1	7	14	2,2	<3	2,2	<0,5	1	<1	<2	<1	<10	<5	1	<0,5	<10	3	<5	<1
16	40	175	20,7	5	10,6	3	6	<1	<2	<1	<10	<5	57	4,6	<10	8	<5	4
25	281	1460	25,2	<3	3,8	<0,5	12,9	<1	<2	<1	<10	<5	20	<0,5	<10	15	26	<1
<1	15	21,4	5,2	3	1,3	<0,5	1,8	<1	<2	<1	<10	<5	1	<0,5	<10	4	<5	1
<1	7	9,2	3,3	<3	0,8	<0,5	1	<1	<2	<1	<10	<5	1	<0,5	<10	4	<5	1
<1	6	4,9	1,9	<3	0,7	<0,5	0,8	1	<2	<1	<10	<5	<1	<0,5	<10	2	<5	1
<1	7	7,1	2,9	<3	0,6	<0,5	1,2	<1	<2	<1	<10	<5	3	<0,5	<10	3	<5	2
<1	7	15,4	2,5	<3	2,2	<0,5	1,4	<1	<2	<1	<10	<5	2	<0,5	<10	5	<5	<1

Table 3

Skilelva-Hårskoltan, Deep-Soil-Sampling List (2005)

Sample n°	Coordinates	Depth (m)	Description
RVODS001	439801 7765198	0,70	browngreen silt w fragm and plug of lightgreen hbl-qtz-fldsp sch
RVODS002	439800 7765150	1,00	green silt w fragm + plug greenstone (outcrop greenstone nearby)
RVODS003	439801 7765100	1,40	browngreen silt w greenstone plug
RVODS004	439799 7765049	0,90	brown silty soil w plug of greygreen sch
RVODS005	439801 7765002	4,10	greygreen silt, frag+plug greensch
RVODS006	439800 7764975	4,70	browngreen silt, frag+plug greensch
RVODS007	439800 7764950	2,80	greybrown silt, plug sericite-quartzite
RVODS008	439802 7764925	4,40	brown silt/soil, frag greenstone, plug fldsp-qtz sch
RVODS009	439800 7764900	4,00	greybrown silt, plug lightgreen amph-chl-carb-fldsp sch
RVODS010	439799 7764860	4,10	greybrown silt
RVODS011	439800 7764825	2,30	greybrown silt, plug greensch (w carb?)
RVODS012	439801 7764797	5,20	brown silt/soil, plug greensch
RVODS013	439800 7764775	6,30	brown silt/gravel, frag greensch/-stone
RVODS014	439804 7764742	2,40	lightgrey silty matr
RVODS015	439800 7764625	2,80	finegr greygreen matr, frag+plug greenstone
RVODS016	439809 7764603	1,30	finegr greygreen matr, frag+plug greenstone
RVODS017	439799 7764574	1,50	browngreen moraine matr, frag+plug greenst
RVODS018	439800 7764549	3,10	silty matr, frag+plug chl sch
RVODS019	439800 7764525	0,70	browngreen matr, frag greensch
RVODS020	439800 7764501	2,30	lightgrey matr of var grainsize
RVODS021	439800 7764475	1,00	finegr lightgrey matr, frag+plug lightgreen sch
RVODS022	439800 7764450	0,70	brown soil, frag+plug lightgreen sch
RVODS023	439800 7764426	0,90	browngreen moraine matr, frag greensch
RVODS024	439800 7764400	0,90	browngreen moraine matr, frag greensch
RVODS025	439800 7764374	1,30	browngrey moraine matr and lightgrey silt
RVODS026	439800 7764350	1,50	grey gravel
RVODS027	439800 7764325	0,60	brown soil, frag+plug greenst
RVODS028	439798 7764298	2,70	green amph-rich matr, plug greenst
RVODS029	439796 7764275	1,90	green matr derived from greenst
RVODS030	439800 7764250	2,40	green matr derived from greenst
RVODS031	439800 7764225	1,20	green matr derived from greenst

RVODS032	439800 7764200	1,00	green matr derived from greenst
RVODS033	439800 7764175	1,80	matr+plug chl sch
RVODS034	439797 7764149	0,90	brown soil and matr of greensch
RVODS035	439796 7764126	2,70	greybrown moraine matr, frag+plug greenst
RVODS036	439800 7764100	0,90	greybrown moraine matr, frag+plug greenst
RVODS037	439799 7764071	1,40	matr+frag+plug lightgrey fldsp-chl sch
RVODS038	439802 7764050	2,30	matr+frag+plug lightgrey fldsp-chl sch
RVODS039	439800 7764025	1,00	matr+frag+plug green chloritic greensch
RVODS040	439800 7764000	1,50	matr+frag+plug green chloritic greensch
RVODS041	439800 7763950	1,90	matr+frag+plug green chloritic greensch
RVODS042	439800 7763900	1,70	matr+frag+plug rustybrown chl-ser sch
RVODS043	439800 7763850	1,40	matr+frag lightcol greensch
RVODS044	439800 7763800	0,60	matr+plug greenst
RVODS045	439800 7763750	1,50	brown chl-ser matr
RVODS046	439800 7763701	1,10	matr+plug chloritic greensch
RVODS047	439800 7763650	1,80	greenbrown matr+plug chloritic greensch
RVODS048	439800 7763600	1,70	greenbrown sand, plug chloritic greensch
RVODS049	440600 7763600	1,70	matr+plug greensch
RVODS050	440600 7763650	3,60	matr+plug greensch
RVODS051	440601 7763703	2,50	brown silt, matr+plug greensch
RVODS052	440600 7763750	2,00	green silty matr derived from greenst, plug of greenst
RVODS053	440600 7763801	1,80	green silty matr derived from greenst, plug of greenst
RVODS054	440598 7763850	2,10	green matr and plug chloritic greensch
RVODS055	440600 7763900	2,30	green matr and plug chloritic greensch
RVODS056	440600 7763950	3,40	brown-ochreous, silty-sandy matr., plug of greenstone
RVODS057	440600 7764000	2,20	brown-ochreous-greenish matr., plug of amph.greenstone
RVODS058	440600 7764025	0,90	brown-greenish, silty matr., plug of greenstone
RVODS059	440600 7764050	1,40	grey-greenish matr., plug of greenstone
RVODS060	440600 7764075	1,00	grey-greenish, silty matr., plug of amph.greenstone
RVODS061	440600 7764100	0,60	block-layer, no matr., plug of amph.greenstone
RVODS062	440600 7764125	1,00	white-greyish, silty matr., plug of greyish gneiss
RVODS063	440600 7764150	0,80	(brown)-greenish matr., plug of greenstone
RVODS064	440600 7764175	0,40	block under vegetation cover,no matr,plug of greenish rock-powder
RVODS065	440600 7764200	1,30	(grey)greenish matr., plug of amph.greenstone
RVODS066	440600 7764225	1,20	greenish matr., plug of amph.greenstone
RVODS067	440600 7764250	0,60	greenish,silty rock-powder, plug of greenstone

RVODS068	440600 7764275	0,60	brow-greenish, silty matr., plug of greenstone
RVODS069	440600 7764300	0,50	grey-greenish-brown matr., plug of white rock (?gneiss or quartz?)
RVODS070	440600 7764325	0,50	brown, clayey matr., plug of white rock (as 069)
RVODS071	440600 7764350	0,60	brown sandy soil, plug white ser-fldsp sch
RVODS072	440600 7764375	0,80	greybrown sand
RVODS073	440600 7764400	1,40	greybrown sand
RVODS074	440600 7764425	1,80	grey sand and gravel
RVODS075	440600 7764450	2,40	greybrown sand
RVODS076	440601 7764475	2,50	greengreen sandy matr, frag+plug greensch
RVODS077	440600 7764501	1,80	light grey sand
RVODS078	440600 7764525	1,30	greengreen sandy matr
RVODS079	440600 7764550	0,80	greengreen sandy matr, frag+plug greensch
RVODS080	440600 7764575	0,70	matr+frag+plug greensch, frag hydrot qtz
RVODS081	440600 7764599	0,80	brown sandy soil, plug greenstone
RVODS082	440600 7764625	1,40	brown sandy soil, plug greensch
RVODS083	440601 7764650	0,60	brown sandy soil, plug greensch
RVODS084	440600 7764675	1,30	browngreen sandy soil, plug greensch
RVODS085	440600 7764700	1,30	browngreen matr derived from greensch, frag+plug greensch
RVODS086	440600 7764725	1,10	green sandy matr, frag greensch
RVODS087	440604 7764750	1,10	green sandy matr, frag+plug greensch
RVODS088	440597 7764775	0,90	green sandy matr, frag+plug greensch
RVODS089	440600 7764800	1,10	browngreen matr der from greensch, frag+plug greensch
RVODS090	440600 7764825	1,70	browngreen matr der from greensch, frag+plug greensch
RVODS091	440600 7764850	0,70	browngreen matr der from greensch, frag+plug greensch
RVODS092	440600 7764875	0,70	browngreen matr der from greensch, frag+plug greensch
RVODS093	440600 7764900	1,40	green matr der from greenstone, plug greenstone
RVODS094	440600 7764925	0,00	bed-rock outcrop, not sampled
RVODS095	440600 7764950	2,70	grey-brown-greenish, multicoloured, clayey-silty till matr., no plug
RVODS096	440600 7764975	2,20	dark-green, clayey till matr., plug of greenstone powder
RVODS097	440600 7765000	1,40	yellow-brownish clayey till matr., plug of greenstone
RVODS098	440600 7765050	1,20	light-yellow clayey till matr., plug of white rock fragm. (?milky-quartz?)
RVODS099	440600 7765100	1,30	dark-green rock-powder (?amph.? or ?metagabbro?)
RVODS100	440600 7765150	0,80	brown-greenish clayey till matr., plug of greyish gneiss
RVODS101	440600 7765200	0,80	brown-greenish clayey till matr., plug of gneiss-powder

Table 4

ANALYTE METHOD DETECTION UNITS	UTM E		UTM N		Comments
	Au	Be	Na	Mg	
FAA312B	ICP12B	ICP12B	ICP12B	ICP12B	
5	0.5	0.01	0.01	0.01	
PBB					
RVODS001	8	<0.5	0.01	1.67	2.25
RVODS002	12	<0.5	0.02	1.72	2.28
RVODS003	48	<0.5	0.03	1.87	2.66
RVODS004	<5	<0.5	0.02	1.22	1.97
RVODS005	13	<0.5	0.02	1.62	2.13
RVODS006	12	<0.5	0.02	1.76	2.3
RVODS007	6	<0.5	0.03	1.34	1.88
RVODS008	14	<0.5	0.01	1.63	2.6
RVODS009	12	<0.5	0.01	1.73	2.62
RVODS010	8	<0.5	0.02	1.42	1.94
RVODS011	15	<0.5	0.02	1.32	1.95
RVODS012	10	<0.5	<0.01	1.69	2.47
RVODS013	28	<0.5	0.01	1.35	2.19
RVODS014	21	<0.5	0.04	1.16	1.54
RVODS015	25	<0.5	0.02	1.71	2.38
RVODS016	6	<0.5	0.04	1.25	1.7
RVODS017	8	<0.5	0.02	1.52	2.45
RVODS018	8	<0.5	0.01	1.85	2.19
RVODS019	8	<0.5	0.03	1.09	2.2
RVODS020	11	<0.5	0.02	0.55	0.85
RVODS021	<5	<0.5	0.03	0.54	0.75
RVODS022	6	0.6	0.02	1.93	2.52
RVODS023	12	<0.5	0.02	1.34	2.05
RVODS024	19	<0.5	0.02	1.03	1.68
RVODS025	31	<0.5	0.03	1.06	1.75
RVODS026	12	<0.5	0.02	1	1.42
RVODS027	6	<0.5	0.01	1.33	2.44
RVODS028	10	<0.5	0.03	1.67	1.86
RVODS029	<5	<0.5	0.04	0.95	1.35
RVODS030	<5	<0.5	0.05	0.91	1.42
RVODS031	<5	<0.5	0.03	1.67	2.41
RVODS032	<5	<0.5	0.05	1.08	1.61
RVODS033	144	<0.5	<0.01	1.72	1.86
RVODS034	<5	<0.5	0.04	1.56	2.25
RVODS035	1640	<0.5	0.02	1.59	2.09
RVODS036	13	<0.5	0.04	1.21	1.94
RVODS037	6	<0.5	0.01	2.32	3.14
RVODS038	<5	<0.5	0.02	0.38	0.74
RVODS039	6	<0.5	0.04	0.99	1.42
RVODS040	<5	<0.5	0.04	1.83	2.32
RVODS041	6	<0.5	0.02	2.06	2.76
RVODS042	8	<0.5	<0.01	1.63	2.87
RVODS043	<5	<0.5	<0.01	2.31	2.94
RVODS044	<5	<0.5	0.05	1.65	2.24
RVODS045	10	<0.5	<0.01	0.27	0.72
RVODS046	<5	<0.5	0.01	2.09	2.58
RVODS047	8	<0.5	<0.01	1.24	2.28
RVODS048	<5	<0.5	<0.01	1.87	2.97
RVODS049	<5	<0.5	0.01	1.28	2.82
RVODS050	<5	0.7	<0.01	3.17	4.3
RVODS051	<5	<0.5	<0.01	2.36	4.11
RVODS052	<5	<0.5	<0.01	1.95	3.22
RVODS053	8	<0.5	<0.01	1.62	3.27

RV04

RV04

RV04

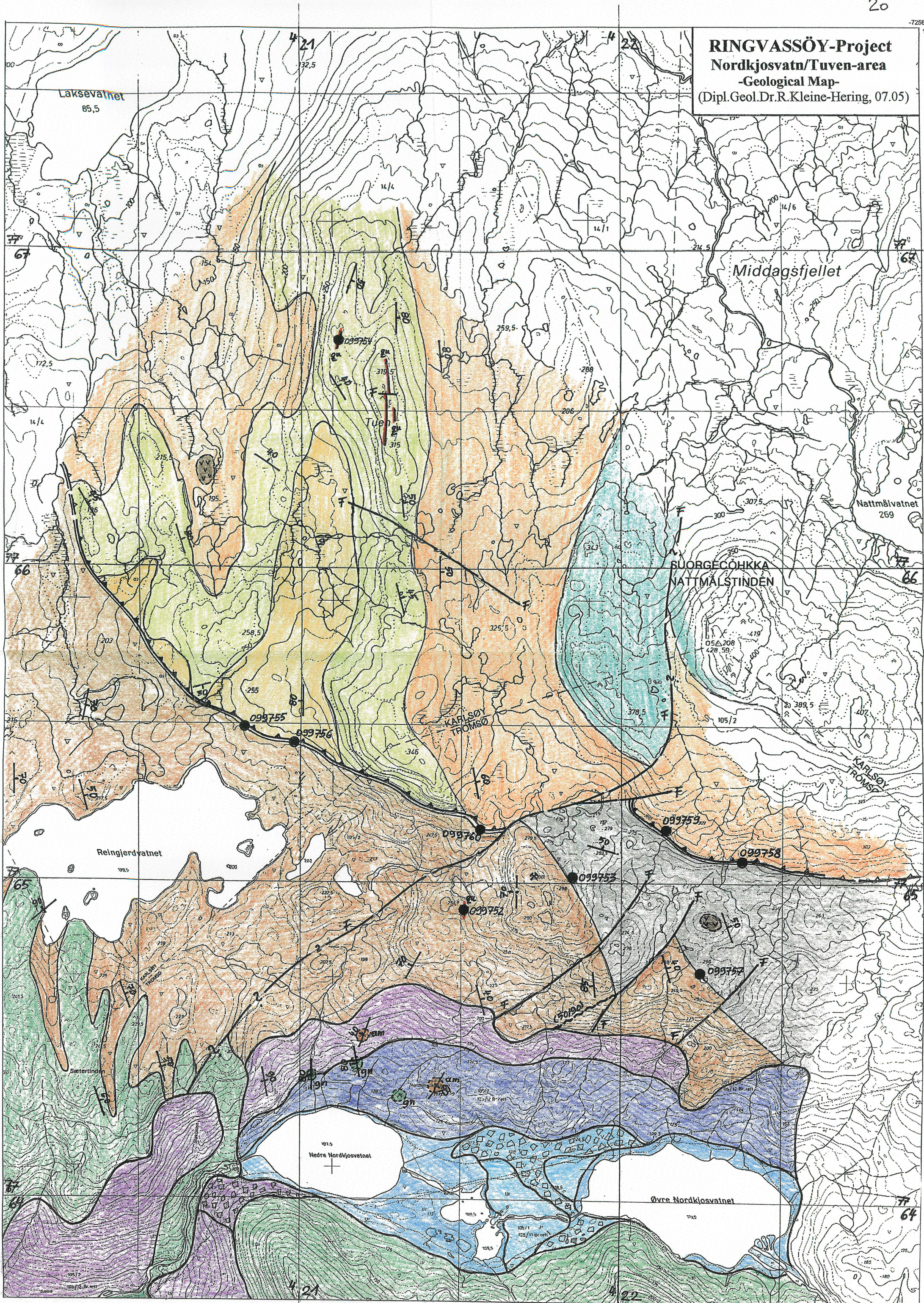
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RVODS054	10	<0.5	<0.01	2.69	3.23	0.11	0.02	0.27	12.8	0.02	199	51	1380	5.9	18	45	186	130	8
RVODS055	12	<0.5	0.04	0.83	1.53	0.08	0.4	0.35	4.5	0.11	90	3	309	3.13	33	26	297	66.7	13
RVODS056	<5	<0.5	<0.01	0.69	1.61	0.06	0.05	0.2	9.9	<0.01	78	9	3780	8.23	49	30	71	62.7	108
RVODS057	<5	<0.5	0.04	0.86	2.02	0.07	0.96	0.48	3.5	0.2	98	5	676	4.75	39	24	118	154	36
RVODS058	<5	<0.5	0.02	1.68	2.85	0.06	0.13	0.28	12.3	0.06	144	75	1750	6.24	48	67	202	101	73
RVODS059	8	<0.5	<0.01	2.33	4.25	0.09	0.02	0.29	31.1	0.02	265	51	3530	9.78	33	49	531	115	89
RVODS060	8	<0.5	0.03	1.54	2.6	0.08	0.14	0.36	10.2	0.1	122	63	1250	5.44	53	66	388	90.4	69
RVODS061	<5	<0.5	0.03	1.58	2.11	0.04	0.04	0.28	6.2	0.05	83	52	995	4.49	41	78	191	69	19
RVODS062	13	<0.5	0.01	0.72	1.28	0.07	0.11	0.21	2.9	0.03	32	32	650	2.35	16	37	47.3	35.1	14
RVODS063	10	<0.5	<0.01	2.37	2.95	0.03	0.14	0.19	5.5	0.1	107	110	1100	4.77	39	90	142	74.9	26
RVODS064	6	<0.5	0.05	0.99	1.69	0.08	0.04	0.43	4.7	0.1	63	44	1680	3.67	42	72	172	46.9	25
RVODS065	<5	<0.5	0.02	1.79	2.74	0.03	0.32	0.35	4.5	0.06	123	42	745	5.75	41	74	145	99.1	16
RVODS066	<5	<0.5	0.02	1.32	1.95	0.12	0.35	0.41	2.3	0.11	67	44	452	3.59	30	60	163	77.3	4
RVODS067	8	<0.5	0.03	1.31	1.84	0.05	0.16	0.33	3.6	0.09	66	28	659	3.21	33	57	419	55.6	9
RVODS068	14	<0.5	0.03	0.7	0.78	0.04	0.15	0.34	1.8	0.09	52	12	243	2.31	22	30	318	31.1	6
RVODS069	12	<0.5	0.02	1.02	1.68	0.05	0.09	0.21	4.1	0.05	67	35	663	3.24	23	37	100	54.9	15
RVODS070	6	<0.5	0.02	0.85	1.42	0.06	0.07	0.23	3.7	0.03	57	33	866	2.83	22	25	74.7	48.5	14
RVODS071	12	<0.5	0.01	1	1.86	0.07	0.04	0.22	7.8	0.03	76	45	735	3.59	21	37	83.7	66.4	20
RVODS072	212	<0.5	0.02	0.71	1.11	0.06	0.06	0.17	2.8	0.01	32	21	500	1.96	12	24	51.8	41.3	9
RVODS073	28	<0.5	<0.01	0.92	1.37	0.07	0.14	0.24	4	0.03	50	31	673	2.55	19	34	57.5	60.9	17
RVODS074	12	<0.5	0.02	0.66	1	0.06	0.08	0.2	1.9	0.03	24	17	376	1.55	12	22	42.2	38.7	5
RVODS075	12	<0.5	0.01	0.8	1.27	0.05	0.11	0.17	2.6	0.03	31	25	726	1.95	14	31	86.1	54.6	6
RVODS076	31	<0.5	<0.01	1.47	1.51	0.05	0.16	0.23	4.5	0.08	90	12	801	3.37	33	50	221	91.3	4
RVODS077	<5	<0.5	0.02	0.33	0.56	0.05	0.05	0.15	1.3	0.01	16	11	295	0.95	7	13	28.7	19.5	4
RVODS078	8	<0.5	0.02	1.38	1.96	0.04	0.26	0.29	3.5	0.11	59	91	826	3.19	35	70	168	93.7	8
RVODS079	8	<0.5	0.04	1.33	1.91	0.03	0.1	0.37	5.7	0.09	60	87	1150	3.23	47	84	281	51.9	13
RVODS080	12	<0.5	0.02	1.81	2.67	0.04	0.15	0.25	6.3	0.09	104	85	1020	4.9	36	72	112	128	21
RVODS081	<5	<0.5	0.03	0.97	1.88	0.08	0.33	0.36	6.3	0.14	104	26	538	4.13	32	39	296	65.3	13
RVODS082	31	<0.5	0.02	1.45	2.31	0.04	0.57	0.16	5.8	0.16	102	85	934	4.43	45	101	200	74	8
RVODS083	I.S.	<0.5	0.03	1.46	2.27	0.05	0.1	0.24	5.6	0.06	89	125	1140	4.04	37	90	98.2	65.6	30
RVODS084	17	<0.5	0.06	0.87	1.52	0.05	0.09	0.49	6.5	0.04	74	54	1760	3.79	38	74	275	45.7	11
RVODS085	6	<0.5	<0.01	2.5	2.69	0.05	0.08	0.19	7.7	0.06	105	352	1750	4.33	40	179	129	68.2	5
RVODS086	20	<0.5	0.03	1.32	1.92	0.05	0.07	0.39	4.6	0.07	63	69	720	3.23	30	75	166	56.7	9
RVODS087	<5	<0.5	0.03	1.15	1.69	0.04	0.05	0.37	5.2	0.07	62	57	748	3.2	28	69	130	49.2	15
RVODS088	9	<0.5	0.03	1.53	2.06	0.05	0.07	0.35	4.9	0.06	73	63	771	3.74	29	60	121	73.5	14
RVODS089	12	<0.5	0.03	1.11	1.72	0.05	0.05	0.36	5.1	0.04	64	62	1210	3.26	33	81	147	47.9	8
RVODS090	29	<0.5	0.05	1.12	1.53	0.04	0.05	0.45	5	0.07	59	66	620	2.97	36	101	203	38.7	7
RVODS091	<5	<0.5	0.03	1.18	1.76	0.03	0.05	0.34	4.7	0.08	59	66	829	3.2	35	92	151	44	9
RVODS092	<5	<0.5	0.04	1	1.54	0.03	0.03	0.42	4.8	0.08	53	58	689	2.6	29	91	164	36.6	6
RVODS093	6	<0.5	0.03	0.67	1.06	0.05	0.04	0.3	3.5	0.05	42	40	452	2.28	37	86	230	32.7	8
RVODS094	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
RVODS095	6	<0.5	0.03	1.13	1.62	0.05	0.05	0.33	4.8	0.07	65	63	338	3.25	33	100	260	52.5	8
RVODS096	6	<0.5	0.03	0.83	1.33	0.05	0.29	0.38	4.6	0.11	125	11	330	3.17	37	70	304	44.9	3
RVODS097	10	<0.5	0.03	1.34	1.87	0.04	0.12	0.37	5.4	0.08	62	71	1230	3.34	78	216	338	85.1	10
RVODS098	6	<0.5	0.03	0.88	1.31	0.03	0.06	0.12	3.3	0.04	41	36	406	2.33	23	67	105	72.7	22
RVODS099	27	<0.5	0.06	0.32	0.49	0.05	0.03	0.46	2.5	0.07	32	14	234	1.4	26	20	121	19.7	19
RVODS100	<5	<0.5	0.01	1.3	2.11	0.06	0.22	0.23	5.1	0.08	78	58	273	3.77	24	55	111	75.5	15
RVODS101	<5	0.5	0.01	2.04	2.75	0.1	0.93	0.4	1.6	0.19	60	24	681	4.67	28	50	87.1	120	7
DUP-RVODS001	6	<0.5	0.01	1.64	2.18	0.11	0.2	0.43	2	0.09	52	33	699	4.07	26	62	115	102	10
DUP-RVODS013	23	<0.5	<0.01	1.33	2.13	0.06	0.09	0.24	10	0.04	105	70	1680	5.16	36	77	201	85	15
DUP-RVODS025	31	<0.5	0.03	1.03	1.68	0.07	0.09	0.22	7	0.03	76	49	1130	3.61	27	45	114	64.7	20
DUP-RVODS037	8	<0.5	<0.01	2.12	2.86	0.03	0.01	0.15	5.3	0.05	91	133	920	4.82	34	87	26.2	105	33
DUP-RVODS049	NVL	<0.5	<0.01	1.17	2.57	0.05	<0.01	0.23	7.9	0.01	113	111	1220	5.69	28	64	165	89.9	<3
DUP-RVODS061	I.S.	<0.5	0.03	1.4	2.05	0.05	0.03	0.28	5.7	0.05	74	48	920	4.09	38	73	189	64.1	16
DUP-RVODS073	37	<0.5	0.01	0.96	1.41	0.07	0.14	0.24	4	0.03	51	31	721	2.65	20	35	62.6	63.4	18
DUP-RVODS085	I.S.	<0.5	<0.01	2.49	2.62	0.05	0.07	0.17	7.4	0.05	94	350	1700	4.22	36	166	130	68.7	5
DUP-RVODS097	I.S.	<0.5	0.03	1.29	1.8	0.04	0.12	0.35	5.4	0.08	62	71	1210	3.35	79	218	333	87	11

Sr	Y	Zr	Mo	Ag	Cd	Sn	Sb	Ba	La	W	Pb	Bi	Li
ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B	ICP12B
0.5	0.5	0.5	1	2	1	10	5	1	0.5	10	2	5	1
PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM
18.4	2.7	0.7	1	<2	<1	<10	<5	46	2.7	<10	3	<5	29
14.5	3.6	1.5	2	<2	<1	<10	<5	19	2.2	<10	3	<5	22
6.7	7	1.5	1	<2	<1	<10	<5	23	2.8	<10	7	<5	35
7.1	2.8	1	1	<2	<1	<10	<5	24	3.4	<10	3	<5	15
5.9	3	1.1	1	<2	<1	<10	<5	34	2.2	<10	3	<5	18
6	4.4	1.2	<1	<2	<1	<10	<5	31	2.1	<10	3	<5	17
7.1	3.6	1.5	1	<2	<1	<10	<5	27	2.7	<10	29	<5	14
5.6	5.4	1.7	2	<2	<1	<10	<5	37	2.6	<10	4	<5	15
6.4	5.5	1.9	1	<2	<1	<10	<5	48	2.4	<10	3	<5	15
9.6	1.9	1.7	2	<2	<1	<10	<5	258	2.3	<10	3	<5	20
4.5	4.7	1.4	1	<2	<1	<10	<5	35	2.4	<10	3	<5	14
5.3	6.6	1.7	1	<2	<1	<10	<5	56	4.4	<10	3	<5	14
4.2	7.8	1.1	3	<2	<1	<10	<5	56	2.1	<10	4	<5	17
4.6	2.5	0.7	1	<2	<1	<10	<5	7	1	<10	<2	<5	13
6.8	2.8	1.2	3	<2	<1	<10	<5	37	2	<10	6	<5	18
4.4	2.5	0.7	2	<2	<1	<10	<5	14	1.4	<10	2	<5	12
5	9.1	1.7	2	<2	<1	<10	<5	37	3.8	<10	7	<5	14
8.4	1	<0.5	2	<2	<1	<10	<5	116	0.7	<10	<2	<5	13
11	6.5	0.7	<1	<2	<1	<10	<5	37	10.7	<10	3	<5	22
20.6	2.9	<0.5	1	<2	<1	<10	<5	37	6.3	<10	4	<5	12
19	1.5	<0.5	<1	<2	<1	<10	<5	19	5.8	<10	<2	<5	13
25.3	3.7	1.1	<1	<2	<1	<10	<5	73	14.9	<10	3	<5	34
11.6	5.5	0.8	2	<2	<1	<10	<5	29	10.1	<10	3	<5	22
9.6	4.1	1.4	2	<2	<1	<10	<5	29	5.2	<10	<2	<5	12
9.5	6	1.6	2	<2	<1	<10	<5	40	4.1	<10	3	<5	11
12	3	2.7	1	<2	<1	<10	<5	38	4.2	<10	<2	<5	11
4.5	4.3	1.2	<1	<2	<1	<10	<5	25	2.2	<10	4	<5	17
10.7	2.4	0.6	2	<2	<1	<10	<5	20	0.6	<10	3	<5	15
19.9	3.5	1.6	1	<2	<1	<10	<5	117	5.6	<10	2	<5	10
7	4.6	1.3	<1	<2	<1	<10	<5	88	3.2	<10	2	<5	9
5.5	3.5	1.2	<1	<2	<1	<10	<5	16	1.5	<10	3	<5	15
3	2.8	<0.5	<1	<2	<1	<10	<5	64	0.9	<10	2	<5	10
1.8	1.7	<0.5	<1	<2	<1	<10	<5	19	2.3	<10	<2	<5	11
11.4	3.7	1	2	<2	<1	<10	<5	18	2.5	<10	3	<5	16
5.3	9.2	0.9	1	<2	<1	<10	<5	25	2.6	<10	4	<5	14
9.8	8	3.3	<1	<2	<1	<10	<5	129	5.5	<10	3	<5	13
4.6	2.3	0.9	<1	<2	<1	<10	<5	8	1.6	<10	<2	<5	15
8.5	3.1	4.2	1	<2	<1	<10	<5	23	12.7	<10	<2	<5	6
5	2.3	1	<1	<2	<1	<10	<5	12	1.4	<10	<2	<5	10
5	2.5	0.9	<1	<2	<1	<10	<5	14	0.8	<10	3	<5	14
5.1	6.9	0.8	2	<2	<1	<10	<5	13	1.3	<10	4	<5	15
5.1	8.8	1.1	1	<2	<1	<10	<5	15	2.1	<10	3	<5	18
0.8	4.8	1.2	<1	<2	<1	<10	<5	6	2.4	<10	3	<5	21
3.8	4.8	1.1	1	<2	<1	<10	<5	32	1.2	<10	4	<5	13
9.6	38.3	6.4	1	<2	<1	<10	<5	96	20.9	<10	10	<5	9
5.4	3.3	1.6	<1	<2	<1	<10	<5	112	0.6	<10	3	<5	26
4.2	8.6	3.8	1	<2	<1	<10	<5	24	3.1	<10	3	<5	12
6.2	8.2	3.1	<1	<2	<1	<10	<5	46	2.3	<10	4	<5	29
3.4	5.3	0.8	1	<2	<1	<10	<5	3	1.2	<10	2	<5	11
9.3	9.7	4.6	2	<2	<1	<10	<5	81	10.5	<10	2	<5	25
3.9	6.2	1.5	<1	<2	<1	<10	<5	14	1.2	<10	3	<5	12
2.8	4.1	0.8	1	<2	<1	<10	<5	5	0.8	<10	2	<5	17
4.4	16.7	2.3	1	<2	<1	<10	<5	6	4.5	<10	2	<5	28

9.9	13.9	2.3	<1	<2	<1	<10	<5	16	2.6	<10	3	<5	41
7.4	3.7	6.4	<1	<2	<1	<10	<5	116	3.8	<10	<2	<5	17
4.8	8	1.3	<1	<2	<1	<10	<5	45	2.8	<10	3	<5	7
10.5	1.7	1.2	1	<2	<1	<10	<5	300	0.9	<10	<2	<5	32
5.8	7.2	2.5	<1	<2	<1	<10	<5	43	3.9	<10	3	<5	18
6	20.6	2.3	1	<2	<1	<10	<5	117	9.2	<10	6	<5	25
7.7	7.8	3.5	2	<2	<1	<10	<5	48	4.2	<10	3	<5	19
4.6	4	1	<1	<2	<1	<10	<5	13	1.4	<10	2	<5	14
10.5	2.6	2.6	<1	<2	<1	<10	<5	31	5.4	<10	<2	<5	12
7.9	3	0.5	<1	<2	<1	<10	<5	22	0.6	<10	3	<5	17
4.3	3.6	1.1	<1	<2	<1	<10	<5	13	0.9	<10	<2	<5	8
8.1	3.1	1.2	<1	<2	<1	<10	<5	96	0.6	<10	5	<5	16
7.9	4.2	1.5	<1	<2	<1	<10	<5	128	4.3	<10	<2	<5	13
7	2.4	1.2	2	<2	<1	<10	<5	43	1.3	<10	<2	<5	15
10.1	1.5	0.8	<1	<2	<1	<10	<5	27	<0.5	<10	2	<5	7
9.1	2.9	2.1	4	<2	<1	<10	<5	27	3.1	<10	2	<5	13
7.8	3.8	1.2	2	<2	<1	<10	<5	37	4	<10	<2	<5	11
12.6	12.3	0.9	2	<2	<1	<10	<5	20	10.8	<10	3	<5	13
9.7	2.6	2.2	<1	<2	<1	<10	<5	19	4	<10	<2	<5	12
11.1	3.3	2.2	<1	<2	<1	<10	<5	30	6	<10	<2	<5	11
16.7	1.6	2.1	<1	<2	<1	<10	<5	26	3.4	<10	<2	<5	11
14.1	2.8	3	<1	<2	<1	<10	<5	64	4.5	<10	2	<5	17
8.5	2.1	0.6	<1	<2	<1	<10	<5	59	1.7	<10	2	<5	15
12	1.6	6.4	<1	<2	<1	<10	<5	36	5	<10	<2	<5	6
9.7	1.5	1.3	1	<2	<1	<10	<5	73	2.2	<10	3	<5	20
7.7	2.6	1.1	1	<2	<1	<10	<5	41	2.1	<10	3	<5	14
5.3	3	1.1	1	<2	<1	<10	<5	36	2	<10	9	<5	21
10.1	15.3	7.9	1	<2	<1	<10	<5	176	12.3	<10	4	<5	12
5.5	3.9	1.4	1	<2	<1	<10	<5	161	1.7	<10	5	<5	14
11	3.1	1.3	2	<2	<1	<10	<5	62	2.4	<10	4	<5	12
6.6	4.8	1.6	3	<2	<1	<10	<5	55	1.9	<10	3	<5	11
3.5	4.5	1	1	<2	<1	<10	<5	49	2.2	<10	5	<5	15
8.1	3.4	1.1	1	<2	<1	<10	<5	33	2	<10	4	<5	13
7.1	3.6	1.3	1	<2	<1	<10	<5	23	2	<10	6	<5	10
7.7	2.9	1.4	1	<2	<1	<10	<5	25	1.6	<10	3	<5	12
7.6	3.1	1.3	1	<2	<1	<10	<5	25	1.8	<10	2	<5	9
6.5	2.5	0.9	<1	<2	<1	<10	<5	15	1.7	<10	2	<5	11
5.5	2.4	0.8	1	<2	<1	<10	<5	25	1.5	<10	3	<5	13
8.4	2.6	0.5	<1	<2	<1	<10	<5	17	1.9	<10	<2	<5	10
4.1	1.9	0.8	2	<2	<1	<10	<5	17	1.3	<10	2	<5	7
I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
5.6	2.4	0.9	1	<2	<1	<10	<5	25	1.2	<10	<2	<5	14
3.1	2.6	0.9	<1	<2	<1	<10	<5	113	1.3	<10	<2	<5	17
6.6	2.7	0.9	2	<2	<1	<10	<5	52	2.2	<10	2	<5	23
3.5	2.3	1.3	2	<2	<1	<10	<5	21	2.6	<10	2	<5	15
3.9	1.7	0.5	<1	<2	<1	<10	<5	7	0.6	<10	<2	<5	7
7.1	3.6	1.8	2	<2	<1	<10	<5	79	6.8	<10	3	<5	21
17.1	1.5	1.4	<1	<2	<1	<10	<5	130	7	<10	3	<5	39
18.6	2.6	0.6	2	<2	<1	<10	<5	46	2.4	<10	3	<5	27
3.9	7.4	1.9	4	<2	<1	<10	<5	53	2.1	<10	3	<5	16
8.9	6.1	1.3	3	<2	<1	<10	<5	41	4.2	<10	2	<5	10
4.7	2	0.6	<1	<2	<1	<10	<5	7	1.5	<10	2	<5	15
2.9	5.1	0.9	1	<2	<1	<10	<5	2	1.2	<10	3	<5	10
3.8	3.5	1.3	<1	<2	<1	<10	<5	12	1.4	<10	3	<5	13
10.2	3.2	2.1	<1	<2	<1	<10	<5	31	6.3	<10	2	<5	12
3.1	4.2	0.8	1	<2	<1	<10	<5	49	2.1	<10	5	<5	15
6	2.7	0.9	2	<2	<1	<10	<5	52	2.2	<10	3	<5	22

RINGVASSÖY-Project
Nordkjosvatn/Tuven-area
-Geological Map-
(Dipl.Geol.Dr.R.Kleine-Hering, 07.05)



Tuven

1 : 5000

-  Quartz vein
-  Strike/dip quartz vein
-  2002 sample point
-  Fault
-  Thrust zone

