



GREEN GLEN
MINERALS

Gautelis Project Site Visit Report

Initial Field Review

July 2022, Updated and Surrendered December 2022

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Refer to photo record attachment for Gautelis Photos

Contents

Introduction	3
Background	3
Geology	3
Lithologies	4
Porphyry Dyke.....	4
Structure	5
Mineralisation.....	5
Samples.....	7
Comparison to Varden and Regional Setting.....	7
Other Considerations - Reindeer and Ecology.....	7
Summary and Conclusions.....	8
References	9
Appendix	9

Table of Figures

Figure 1 Plagioclase porphyry dyke intruding mixed tuffs and sandy limestone with wallrock skarn alteration. Dyke sample assayed 44 ppb Au.....	5
Figure 2 Photo of drilled silica-sulphide vein structure with copper mineralisation and localised skarn alteration. Sample GAU014-GAU016. Refer to text for results. Note hole drilled near-parallel to the structure.....	7

Introduction

Three days were spent prospecting and mapping at Gautelis. Accommodation was at Narvik with a 1.5-hour drive to and from site followed by a 2-3km walk to the main area of interest. The prospect lies at 930-1100 m above sea level and weather was average to poor at times. Snow remains on the ground in hollows and some north facing slopes. The site was previously visited by David Hall and Aiden Lavelle in late September 2019 in order to ground truth the mineral occurrences and drill holes which was done with limited success due to heavy snow cover at the time. The site had not been visited since due to covid travel restrictions.

Background

Results from sampling on the previous trip confirmed the presence of gold with two styles of gold mineralisation or more accurately two distinct geochemical signatures depending on location taken:

1. Two samples from the Arsenic mine had high As with high Au-Bi-Sb-Te and moderate Ag-Se.
2. Other auriferous samples are from silicified and pyritic greywackes with quartz and/or pyrite stringers including a sample with 9.7g/t Au and a sample near the lakeside zone (Dam area) with 2.21g/t Au. These samples have variable geochemistry signature with elevated to anomalous Au-Ag-As-Cu-P. The sample near the lakeside is more elevated in As (5,420 ppm), Bi (6.53 ppm) and Cu (781 ppm) but the area has active works and an accommodation camp nearby for the dam renovation project. Access is currently restricted.

The aim of the trip was to conduct further sampling and fully assess the economic potential of the prospect.

Geology

The geology of the Rombak Tectonic Window and mineralisation at Gautelis and Varden/Haugfjallet has been described well by Angvik and Sandstad however the work is very much of academic interest and determining true economic potential from this literature is difficult.

Gautelis mountain, hosting the historic arsenic mine and drilled carbonates on the lower slopes is essentially a transgressive sequence of sediments surrounded by a large area of granite mapped as tonalite. The rocks are part of the Rombak Tectonic Window, a Paleoproterozoic outlier metamorphosed to upper-greenschist to amphibolite grade.

The sequence at Gautelis consists of a basal quartz pebble conglomerate, gritty to mixed sandy beds, sandy limestone and sandstone interbeds with an upper clean limestone (marble) and a thick package of greywackes with sandy and shaley interbeds in the upper parts of the hill interpreted as a turbidite sequence. There is a distinctive green mafic tuff in contact with the lower sandy limestone and this is either repeated by folding or a second mafic tuff bed is present further up in the sequence. The exact sequence is complicated by tight folding with the carbonates suffering much deformation. One felsic tuff bed was seen in outcrop close to the southern slope drill holes.

Papers and theses by Rommer and Angvik previously described the sequence as resting unconformably on the tonalite (dated to 1940 Ma, Romer et al. 1992) but several outcrops seen on this visit contradict that interpretation. However, what the conglomerate was deposited on is unknown and may be an older gneissic basement or the conglomerate could represent channel deposits.

We have observed the tonalite in direct contact, as an intrusion, into conglomerates and deformed carbonates and sediments with localised hornfels in greywacke while large xenoliths of conglomerate

and sediments are surrounded by the tonalite with strong chlorite alteration as a result of contact metamorphism seen. The contact zone resembles a large, stoped zone at the roof of an intrusive with both intrusive and country rock foliated. The bedding of some of the blocks around the contact zone appears variable due to stopping and doming caused by the intrusion.

The drill logs in the west zone suggest that granite gneiss (tonalite) underlies the sediments at shallow depth 40-60m.

Looking across the valley to the SW from the drilled zone, the sediments can be seen sitting on top of the tonalite. Therefore, Gautelis mountain appears to be an outlier of the sedimentary formation surrounded by intrusives. Later granites referred to by Angvik and Sandstad to the north and east of Gautelis mountain were not visited.

Lithologies (Observations)

Images of the lithologies are included in a photo record to accompany this report.

The tonalite is a coarse grained foliated porphyritic rock with c. 30% plagioclase phenocrysts set in a finer matrix of feldspar and quartz.

The mafic tuffs have a strong green colour due to pervasive chloritisation but lighter coloured laminae are visible. They are folded in with the sandy limestone.

The thinly bedded sandy limestone is tightly to isoclinally folded with sandy interbeds augened along the limbs. The upper white marble with grey bands is a clean marble exhibiting flow texture and forms a recognisable plunging anticline with sink holes caused by water dissolution. Thin sandy interbeds near this area (on the mine trend) are copper mineralised but the augened clasts are now sitting as gossanous boulders on the marble. One float sample (GAU005) assayed 1.925 % Cu

Float of sandy cross bedded limestone was seen consistent with a shallow marine depositional setting.

The single bed c.1.5m thick of light grey felsic tuff is siliceous with very fine feldspar and chloritised hornblende crystals seen under hand lens and possible quartz eyes were also seen. The rock has 1-3% disseminated pyrite and is a possible candidate for the quartz-feldspar rock mentioned in the report as a gold host. The outcrop is 12m from a pad where two holes were drilled. The bed grades into sandy limestone on one side and a shaley siltstone/greywacke on the other side. Sample GAU019 from this lithology returned 10 ppb Au.

The greywackes in the upper Gautelis mountain, with pyritic and rusty shale interbeds, are silicified over a broad area and therefore the hill has resisted erosion. Minor quartz veinlets and silicified joints along with thin chloritic shears are common. There are many similarities to the greywackes and shales at Varden and given the distance is 45km along strike it appears to be the same formation of greywackes at both sites and both have suffered similar regional silicification due to shearing or granitic intrusions.

Porphyry Dyke

A single north-south trending two-metre-wide plagioclase porphyry dyke was found. The dyke with 30% plagioclase as 1-3mm euhedral-subhedral laths in a fine-grained grey to greenish-grey quartz-chlorite matrix. 0.5-1.0% blebs of euhedral pyrite were observed along with minor quartz stringers near joints. This lithology is considered of interest and had a thin zone of strong tremolite (+clinozoisite?) schist on the eastern margin. A chip sample across the sandy limestone and chloritic

mafic tuff on the western side of the dyke was taken (GAU010 – 11 ppb Au), a sample from the dyke (GAU011 – 44 ppb Au) was taken along with a selective wallrock grab sample of the tremolite schist on the west side (GAU012 – 20 ppb Au).

The dyke outcrop is located 300m NW of the mine and lies 130m east of a N-S trending 200m long oval-shaped magnetic anomaly.

Literature refers to a dolerite dyke at the arsenic mine which is ~15m long and 1.5m wide as a hornblende schist. This was not specifically identified however massive hornblende was seen and considered to be strong hornfels on this visit.



Figure 1 Plagioclase porphyry dyke intruding mixed tuffs and sandy limestone with wallrock skarn alteration. Dyke sample assayed 44 ppb Au.

Structure

The strike of the sedimentary package is generally NE-SW and is consistent high on the hill in the greywackes however around the marble and tonalite contact there is some variation due to intense folding and some faulting, likely related to the intrusion while some large blocks of country rock may have been rotated as roof pendants.

Shears were searched for and seen in the tonalite in the central part of the valley (south of the mine) where they were previously mapped, but these were minor with no evidence of being conduits for hot sulphide bearing hydrothermal fluids. The shears up to 20cm wide contain chlorite and quartz with no wallrock alteration. Generally, the literature refers to shears that are very thin with limited mineralisation and while academically interesting, are not economically very significant. The main mylonite zone east of the mountain was not visited and could be of more economic interest somewhere along its trend.

Mineralisation

The strongest visible sulphide mineralisation at Gautelis is located along a narrow fault structure centred on the historic workings. The fault trending roughly north-south to 160° appeared to be localised along the contact of sandy limestone and a silicified greywacke although limestone pods are

sheared along the structure and one was sampled as it contained blebs and stringers of arsenopyrite (GAU004 – 0.374 g/t Au). Quartz vein material rich in arsenopyrite and massive arsenopyrite as replacement is present and much of the dump material is silicified dark grey, fine-grained greywacke with variable disseminated pyrite and/or arsenopyrite along the foliation. The distance between exposed workings is c.85m. Boulders of silicified greywacke can be traced to the north while the structure, albeit weak but with strong silicification, disseminated and stringer pyrite and arsenopyrite mineralisation and sheeted quartz veinlets, outcrops 25m to the south and was sampled (cover photo). A boulder of massive arsenopyrite 20x20cm was found in the stream a further 100m to the south of the mine suggesting that the structure could have a length of up to 250m if silicified greywacke float to the north and arsenopyrite boulders to the south are sourced from bedrock beneath.

The mine fault appears to be post deformation as it partly crosscuts the lithologies and is planar and relatively straight, i.e. a brittle structure younger than the tonalite gneiss basement. However, the structure could also be interpreted as an extensional Riedel shear within the regional shear zone.

Pyritic silicified joints and veinlets are present across the area and have been seen cutting the tonalite and sediments. These are also planar and brittle with orientations between N-S and NE-SW

Literature refers to a late Au-Cu event: “orogenic gold found within the shear zone is only found within the steep ductile oblique-slip shear zones and not in the fold-thrust belt (D1-D2). The brittle ductile fractures (D3-D4) cut these shear zones and represent the last event of gold formation”, (Angvik and Sandstad).

One such joint set is 620m to the north of the mine (bearing 010) where a selective grab sample (GAU013 – 8 ppb Au) of the quartz was taken from one small fault (180-190 strike) displaying offsets of 30cm of an aplite dyke. The sample GAU013 was taken to test for gold in these later brittle structures but the result was disappointing. The structure if striking 190 would strike towards the mine.

Copper mineralisation was sampled in a narrow <20cm silicified and gossanous sulphide vein parallel to and 4m in front of a drill hole in the south slope area (GAU014). The vein cuts across an outcrop with both chloritised tuff and sandy limestone and the mix of hydrothermal fluid and carbonates has produced some calc-silicate alteration including possible chrome-diopside which is cut by actinolite bands and sheeted 1mm chalcopyrite stringers. Clinzoisite, epidote and tremolite have also been seen in this and other outcrops. Sample GAU014 assayed 0.835 g/t Au, 16.65g/t Ag and 0.71% Cu.

The wallrock either side of the vein was also sampled (figure 2) with the east side being silicified green tuff containing some disseminated and stringer chalcopyrite (GAU016 – 30 ppb Au, 571 ppm Cu). The west side limestone and tuff appeared unaltered but had more gold (GAU015 – 0.68g/t Au, 151 ppm Cu). The hole may have skirted this mineralisation down dip giving a misleading picture of the mineralisation.

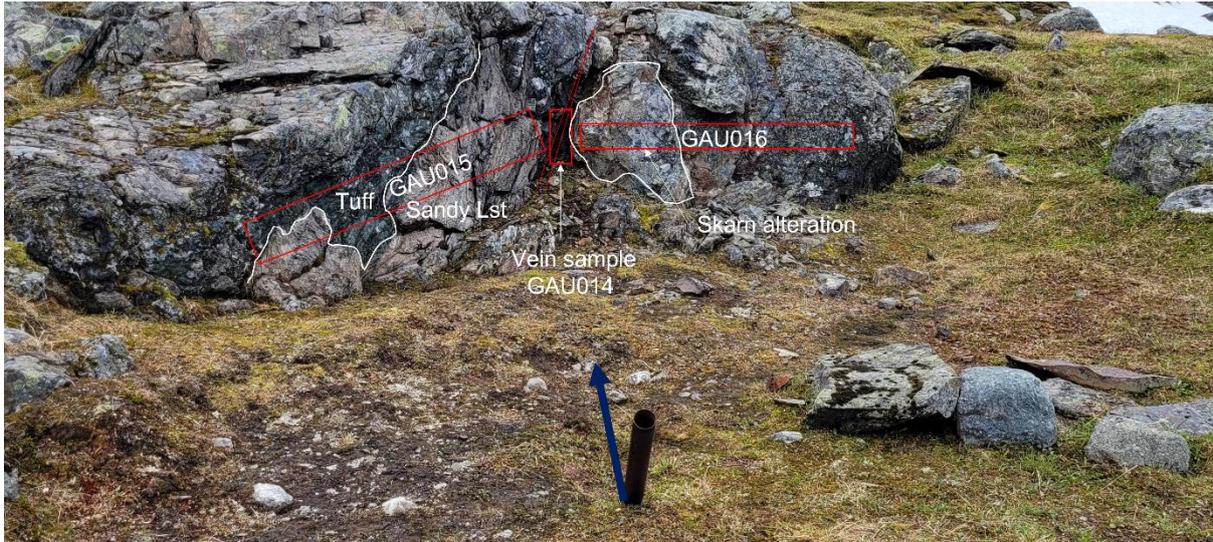


Figure 2 Photo of drilled silica-sulphide vein structure with copper mineralisation and localised skarn alteration. Sample GAU014-GAU016. Refer to text for results. Note hole drilled near-parallel to the structure.

Samples

A total of 18 samples were taken from a variety of locations to test the different styles of alteration, mineralisation and wallrock for gold in the limestones. The best in-situ visible mineralisation outside of the mine area was in cross cutting silica-sulphide veins with wall rock silicification and skarn alteration shown in figure 2.

Comparison to Varden and Regional Setting

The sedimentary package seen at Gautelis is very similar to that seen at Varden which lies 45km along strike to the north, i.e.

- interbedded greywackes and pyritic shales with abundant minor internal shears, often chloritic shears. A basal basin sequence is present at Gautelis.
- Silicification of greywackes over broad areas with little or no associated sulphide is present at both areas.
- Syn-orogenic, foliated, 'dry' granites with visible contacts intruding the sediments are present at both areas.
- The most interesting mineralisation occurs as cross-cutting silica-sulphide veinlets or stringers formed from brittle deformation/faulting and are thus planar and must postdate the peak-metamorphism (ductile) by a significant duration.

Angvik and Sandstad make similar comparisons.

Other Considerations - Reindeer and Ecology

Outcropping carbonates at Gautelis, as in all of Scandinavia, are rare and can lead to unique flora. A variety of flowers and plants were observed over and around the marble that were not observed elsewhere in the area and generally the slopes here are greener than elsewhere at this altitude.

Ecologists may classify this area as high value or unique habitat for certain plant species in the event of a discovery and EIA.

The same green slope between the arsenic mine and south slope drill zone lies on a reindeer migration path with an obvious well-worn trail visible and a herd of over 100 reindeer was seen passing. We encountered two reindeer herders sitting in a rental car on the road on two days. They were observing the construction activities at the dam and waiting the arrival of the reindeer and generally making their presence felt as interested stakeholders in the area, particularly with construction and blasting occurring at the dam area.

Summary and Conclusions

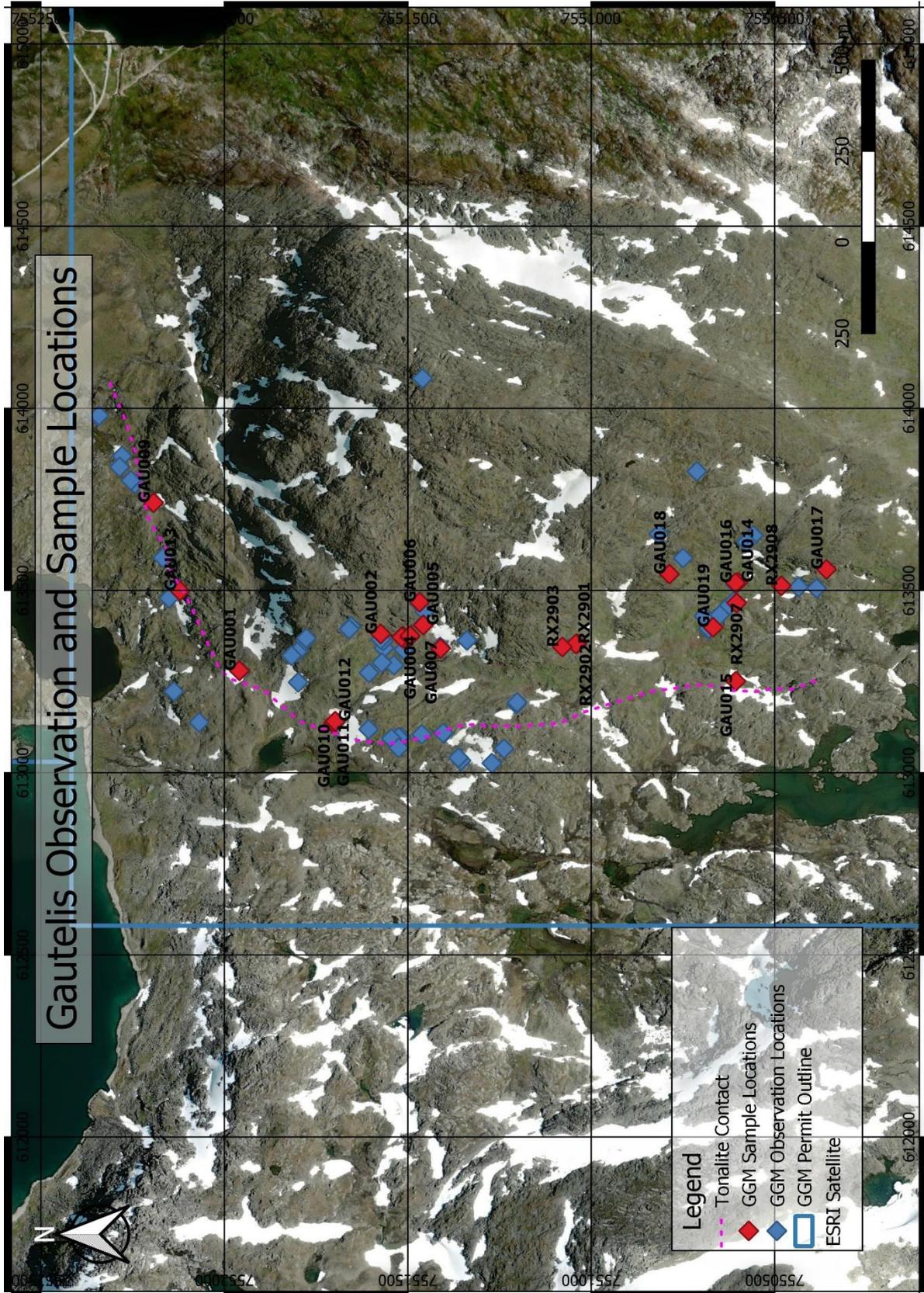
- Mineralisation at Gautelis appears to be structurally controlled along brittle minor faults with silicification and/or quartz veinlets, sulphide stringers and disseminated sulphides (Py, Aspy, Cpy).
- Pyrite mineralised joints cut both intrusive and sediments. These are interpreted to relate to long-lived regional shears which cut through the area with a general NNE-SSW trend, the Rombaken-Skjomen shear zone.
- Greywackes appear to be the best host. The dolerite dyke supposedly in the mine portal was not observed but not specifically sought at the time while silicified greywacke was observed there and along strike. The localised high arsenic values here are a negative aspect of the mine structure but a sample from the structure along strike had much less arsenopyrite. Angvik and Sandstad have identified a syntectonic metasomatic As-Au-Fe event (D3-D4) separate to a later orogenic gold event. Copper mineralisation in interesting amounts was located on this visit.
- The mine structure can be inferred for 250m and is likely <2m wide, and probably no more than 60m to the top of the tonalite intrusive. It may have formed as an extensional riedel structure within the regional shear zone. The tonnage of this structure if not mineralised in the tonalite is limited to c.80,000t (250m x 60m x 2m x 2.65) however the nature of the structure in the tonalite is unknown and a deep plunging shoot could be present.
- How far gold mineralisation extends into the wallrock of the structure is unknown. Assays suggest gold anomalism is widespread, associated with (1) silicified greywackes and Aspy along fault structures, (2) copper mineralised siliceous bands in carbonates (e.g. GAU005 – 1.19 g/t Au, 1.92% Cu) and (3) minor and more significant fractures such as GAU014 – 0.835 g/t Au.
- The carbonates seen do not exhibit any signs of dissolution and they lack breccias or large-scale alteration close to the structures. A large hydrothermal system would likely have caused more visible effects which would be observable given the amount of outcrop in the area.
- The mineralisation may be related to the post-metamorphic dyke of plagioclase porphyry, (with 44 ppb Au) or the parent intrusive to this dyke with later brittle faulting, fractures and joints allowing fluid ascent into the sedimentary outlier. The geochemical associations may point to an intrusion link (As, Cu, Bi, Sb, Te). Pyrite or other iron bearing minerals in favourable host rocks (greywackes or mafics) could be causing gold deposition with sulphide formation.
- If widespread gold anomalism is demonstrated, there may be regional potential for a gold deposit where brittle structures and mafic lithologies occur in close proximity.
- The prospect is limited in size and unlikely to contain an economic deposit to warrant further expenditure by the Company. The Company will focus on other better gold projects.

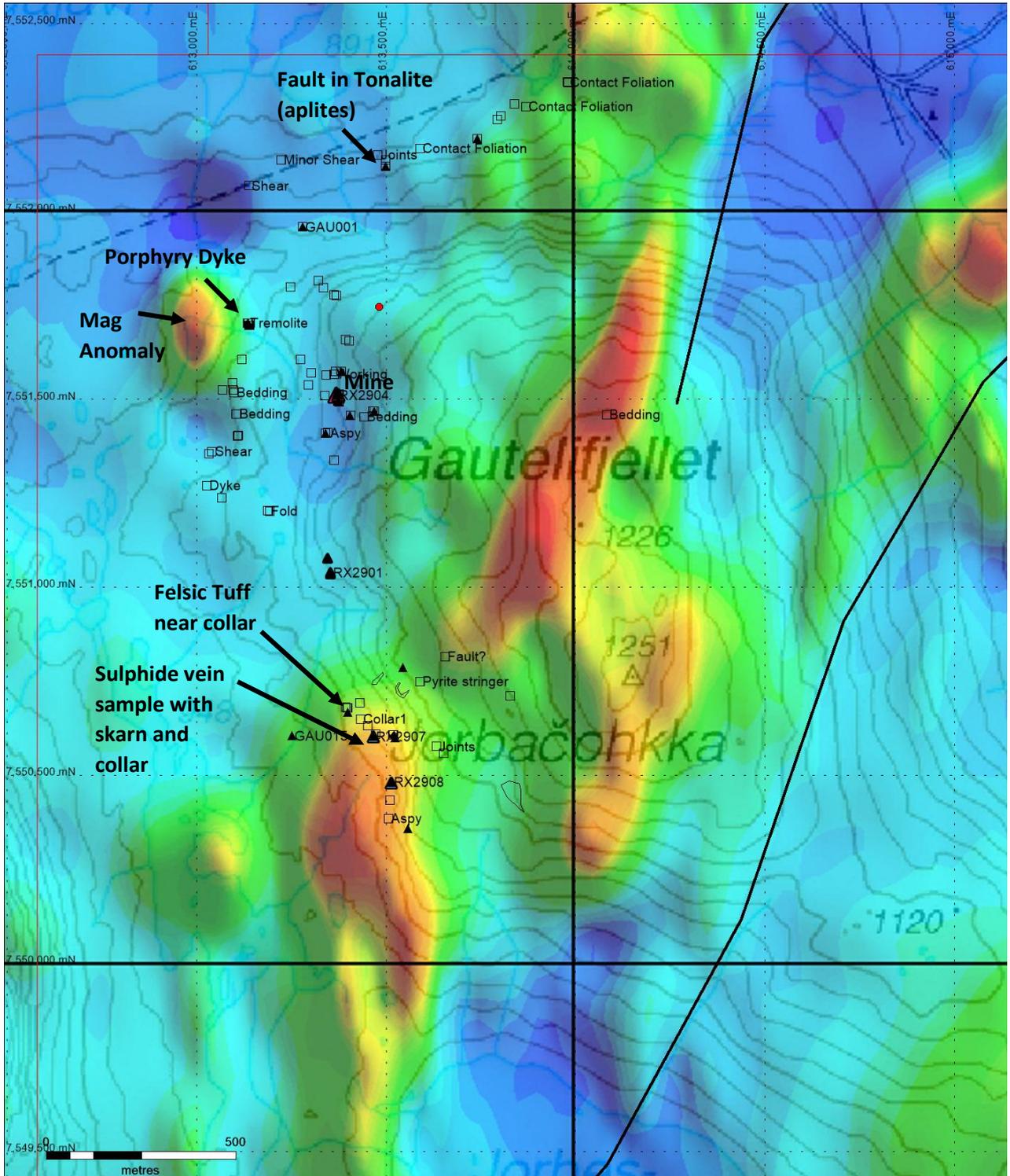
References

Angvik, T.L. and Sandstad, J.S. The timing of sulphide mineralisation in the Rombaken Tectonic Window and their spatial relation to the Rombaken-Skjomen Shear Zone, northern Norway

Appendix

Maps and Sample Notes





Regional aeromagnetic map showing samples, observations and key features with 500m grid. Note almost all data collected was in the Gautelis 1 permit.

Gautelis Project, Site Visit Report, December 2022

Prospect	Sample Number	UTM 33W X	UTM 33W Y	RL	Date	Sampler	Type	Description	Alteration	Mineralisation	Structure
Gautelis South	GAU001	613280	7551959	990	18/07/2022	KD AL	Float	Chip sample of silicified matrix supported conglomerate boulders, largest is 90x80x50cm and has slicken surface. Clasts are grey, probably quartzite, rounded and up to 4cm in diameter. The boulders have white to dark grey silica matrix which is zoned in places. Minor blebs of galena 0.5x1cm. Trend of the boulders is 165 downslope.	Sil	1% Galena	
Arsenic Mine	GAU002	613381	7551574	1031	18/07/2022	AL	Dump	Linear N-S cut surrounded by dump, coord at north end. Sample GAU002, chips of chloritic schist around dump.	Chlorite	1-2% Py, 1% Aspy	
Arsenic Mine	GAU003	613373	7551495	1031	18/07/2022	KD AL	Outcrop	10cm wide massive arsenopyrite vein parallel to bedding, 4.5m east is an irregular pod of pyrite and arsenopyrite in a silicified sandy carbonate. In between the two veins is a silicified black shale with many bedding, which is also close to foliation, parallel stringer veins of pyrite and arsenopyrite. The unit is extremely hard and GAU003 is a chip sample across this unit.	Sil	5% combined Arsenopyrite and Pyrite	
Arsenic Mine	GAU004	613376	7551494	1033	18/07/2022	KD AL	Outcrop	Sample of dark grey very fine grained sandy limestone next to the silicified black shale of GAU003. Stringers and pods of arsenopyrite in silica pods and veins Black rounded "clasts" of silica. The carbonate sandstone is sheared	Sil	1% arsenopyrite	
Arsenic Mine	GAU005	613405	7551458	1041	18/07/2022	KD AL	Float	Orange brown gossans with malachite and chalcopyrite. Around 10% quartz grit remains. These were subsequently observed in outcrop further uphill as bedding parallel 2-7cm wide discontinuous gossans in a sandy limestone.		1% chalcopyrite 1% malachite	
Arsenic Mine	GAU006	613468	7551468	1076	18/07/2022	KD AL	Outcrop	Dark fine grained greywacke with abundant disseminated pyrite stringers of quartz. On the contact between sandy limestone below to the west in the fold hinge estimated dip of 75→088			Fold Hinge 75→088
Arsenic Mine	GAU007	613341	7551411	1070	18/07/2022	KD AL	Float	White and very dark grey to black banded limestone. Limestone is equigranular and partially rounded, there is no sand in the majority. Some small faults and off-set between the bedding and some beds have cross-cutting carbonate, possibly veins. One piece had cross bedded medium brown sand in thin beds. AL; Marble sample from stream boulders. Some augens of thin sandstone, two pieces are cut by minor 5mm shear. Traces of oxidised pyrite, chips form various pieces of float to check for gold. Cross-bedded sandy limestone float seen here.			
Gautelis	GAU008				21/07/2022	KD	STD G312-9	STD G312-9, 5.84 ppm Au by Fire Assay			
Gautelis	GAU009	613741	7552193	930	21/07/2022	AL KD	Outcrop	Augen or pod of broken silicified greywacke on edge of tonalite intrusive, truncated against dark grey well bedded and folded dark bluish grey sandy limestone. The greywacke weathers rust orange red on surface and is fractured and rubbly. Pervasive chloritic and silica alteration.			
Gautelis	GAU010	613134	7551703	930	22/07/2022	AL KD	Outcrop	Interbedded fine sandstone and sandy limestone with tremolite alteration and black oxidised coarse euhedral pyrite in the sandstone. Greywacke and or possible mafic tuffs is chlorite altered. Tan sandy limestone is relatively unaltered. Chip of outcrop			
Gautelis	GAU011	613137	7551702	963	21/07/2022	AL,KD	Outcrop	2m N-S dyke of plag porphyry, not foliated, 30% plag 1-3mm euhedral-subhedria in a grey to greenish-grey matrix quartz-chlorite matrix, fine-grained, 0.5-1.0% blebs of euhedral pyrite. Minor quartz stringers near joints.			
Gautelis	GAU012	613141	7551698	968	21/07/2022	AL,KD	Outcrop	Selective grab of tremolite (?) skarn schist on east contact of plag porphyry dyke. Rock is a sandy limestone altered to tremolite? Clinzoisite? With trace pyrite.			
Gautelis	GAU013	613499	7552121	884	22/07/2022	AL,KD	Outcrop	Joint set and minor fault with sinistral offsets in massive tonalite, foliated, visible pyrite + FeOx in two of the fractures, offsets of aplite of c.30cm visible. Trend is 180-190 variable. Sample GAU013 is selective grab of qtz vein with 1-2% subhedral pyrite crystals.	Silica		180
Gautelis	GAU014	613523	7550600	1035	22/07/2022	AL,KD	Outcrop	Selective grab sample of gossanous vein in dipping fault plane structure in front and parallel to drill collar. Contains chloritic tuff wallrock with 3% Cpy + trace malachite.	Silica	3% Chalcopyrite	044/69/E
Gautelis	GAU015	613251	7550606	1022	22/07/2022	AL,KD	Outcrop	Wallrock to gossan sample GAU014, 2m of chips across folded sandy limestone + green chloritic tuff in HW. Immediate wallrock not sampled as testing carbonates but chloritic tuff contains a stringer of Cpy.		0.5% Cpy	

Gautelis Project, Site Visit Report, December 2022

Gautelis	GAU016	613521	7550607	1021	22/07/2022	AL,KD	Outcrop	chips across 2m of chloritic to amphibole mafic tuff with some localised silicification near vein, FW sample. Disseminated Cpy + Cpy stringers and hornblende veins cutting light green mineral possible diopside or chrome diopside with piano key like texture. Malachite and fibrous hnbl seen. Mixing of Fe+Ca near vein to produce calc silicate minerals.			
Gautelis	GAU017	613558	7550359	1025	22/07/2022	AL,KD	Outcrop	Fine-grained dark grey thin bedded shaley greywacke/phyllite with 1-3% disseminated pyrite in cliff.	3% Py	S0 174/65 W	
Gautelis	GAU018	613545	7550787	1093	22/07/2022	AL,KD	Outcrop	Localised joint set shear of 020 80 W with trace pyrite and 1-2% chalcopyrite on joint.	1-2% chalcopyrite		
Gautelis	GAU019	613399	7550668	999	22/07/2022	AL,KD	Outcrop	1.5m bed of siliceous fine-grained light grey rock with possibly very fine crystals of feldspar and hornblende and a possible quartz eye. Gradational top like soft ash into sandy limestone + seds. Possibly a felsic tuff. Has 1-3% dis. blebs of pyrite and some euhedral tarnished pyrite. May be host for gold (qtz-fsp rock as per report). <12m from collar. Dip 69 towards 307 approx	Silica	1-3% Py	

