

Amaroktalik Gold Project, Nunavut

Region	Size
Qikiqtaaluk	57,600 hectares
Metals	Target Style
Au	Orogenic gold system
Stage	Ownership
Early – Greenfield	100% Retriever

2025 Planned Program

Data compilation, hyperspectral study, complete 43-101 technical report, continue preparations for 2026 field program

OVERVIEW

The Amaroktalik gold property (**Figure 1**) was acquired by staking 576 km² located in central Baffin Island, Nunavut 700 km north of Iqaluit, the capital. It is 40 km northwest of the FOX-3/Dewar Lakes radar site with its 4000' airstrip. The property lies within the Longstaff Bluff Formation, a meta-turbidite unit of the Paleoproterozoic Piling Group within the Foxe Fold Belt which overlies the Archean Rae Craton. The property covers an outstanding gold exploration target represented by a prominent 45-km-long Au anomaly in lake-bottom sediments coupled with a strong arsenic footprint. The property occupies a strategic location relative to the Bravo Lake gold district some 50 km to the south.

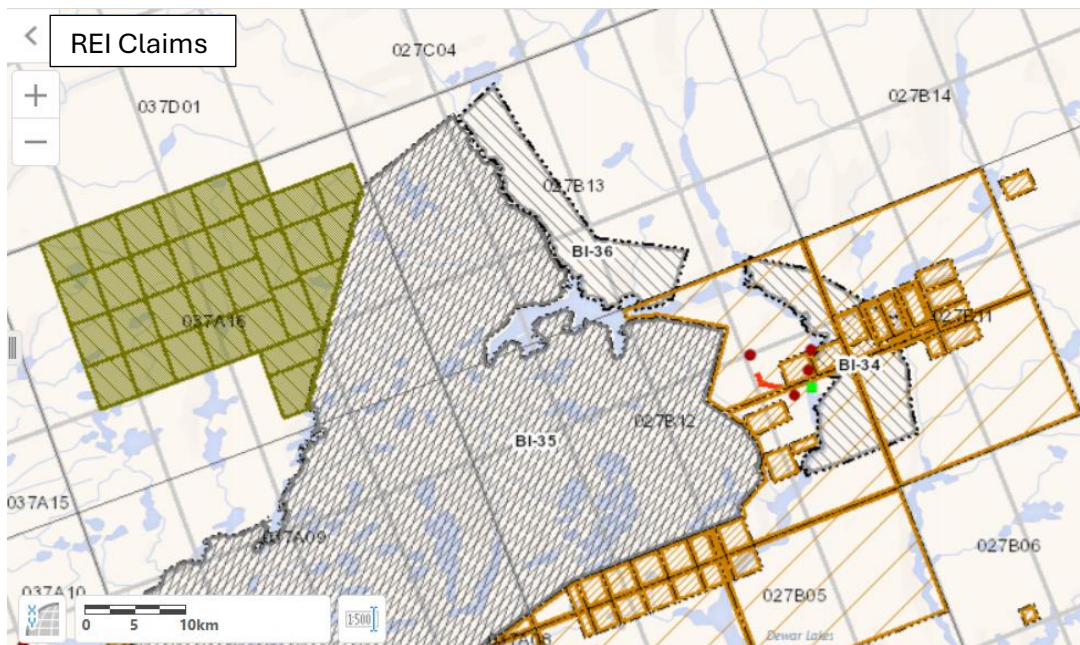


Figure 1. – Location of Retriever Exploration Inc (REI) Mineral Claims, Baffin Island, Nunavut

GEOLOGICAL SETTING

The supracrustal Piling Group overlies ca. 2.8 Ga plutonic rocks of the Rae Province (Wodicka et al 2002). From oldest to youngest, the Piling Group comprises the Dewar Lakes Formation (dominantly quartzite), the Flint Lake Formation (carbonate rocks), the Astarte River Formation (sulphidic schist and iron formation) and the Longstaff Bluff Formation (psammitic to pelitic metaturbidite). This last formation is the thickest unit in the Piling Group (**Figure 2 & 3**).

The Foxe Fold Belt (**Figure 4**) is characterized by imbricate thrust stacks, asymmetric tight to isoclinal folds, and a penetrative foliation (**Table 1**). Structural thickening within the fold belt is indicated by repeated structural duplication of the basement-cover contact by folding and along numerous, low-angle thrust faults. North to NNE vergence during crustal thickening is indicated by a strongly developed N-S trending lineation at shallow structural levels. Low-angle thrust faults cut shallowly up-section to the north and are characterized by E-W trending branch lines (Corrigan et al., 2001), implying top-to-the-north vergence. Although evidence for early S-verging kinematics is locally documented within Paleoproterozoic strata near the southern margin of the belt (Tippett, 1984; Henderson et al., 1989), these structures are minor and have been largely overprinted by N-verging structures. Strong ductile deformation of cover sequences in imbricate stacks of basement-cover thrust sheets implies thrust fault developed after significant ductile crustal thickening. Metamorphic grade increases to the south, culminating in a migmatite zone within the highly thickened hinterland of the fold belt.

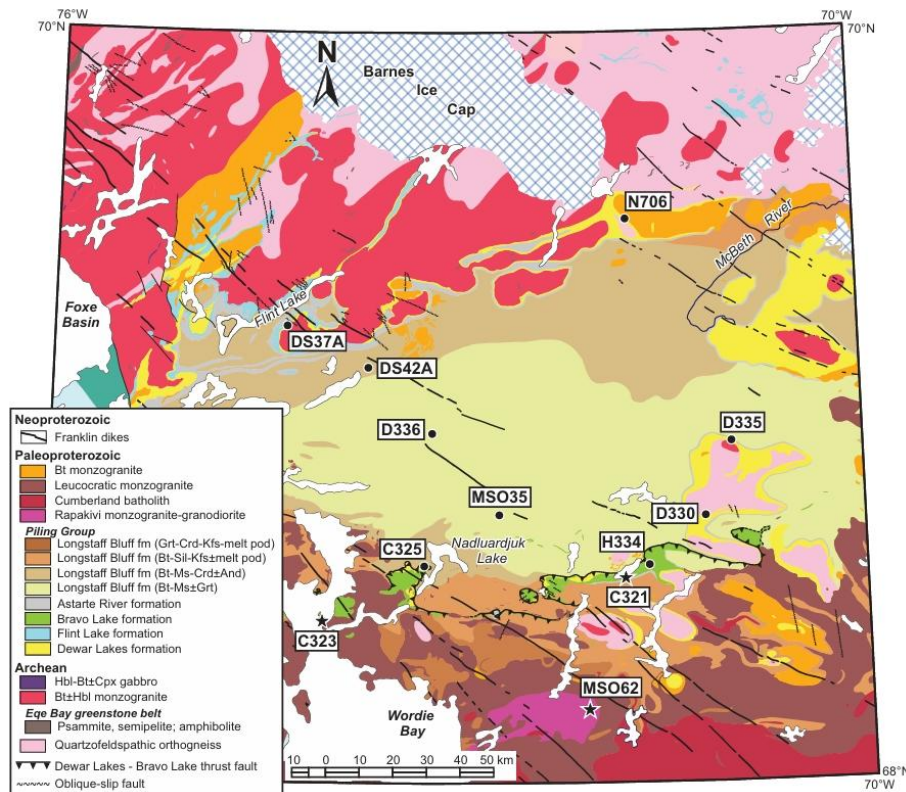
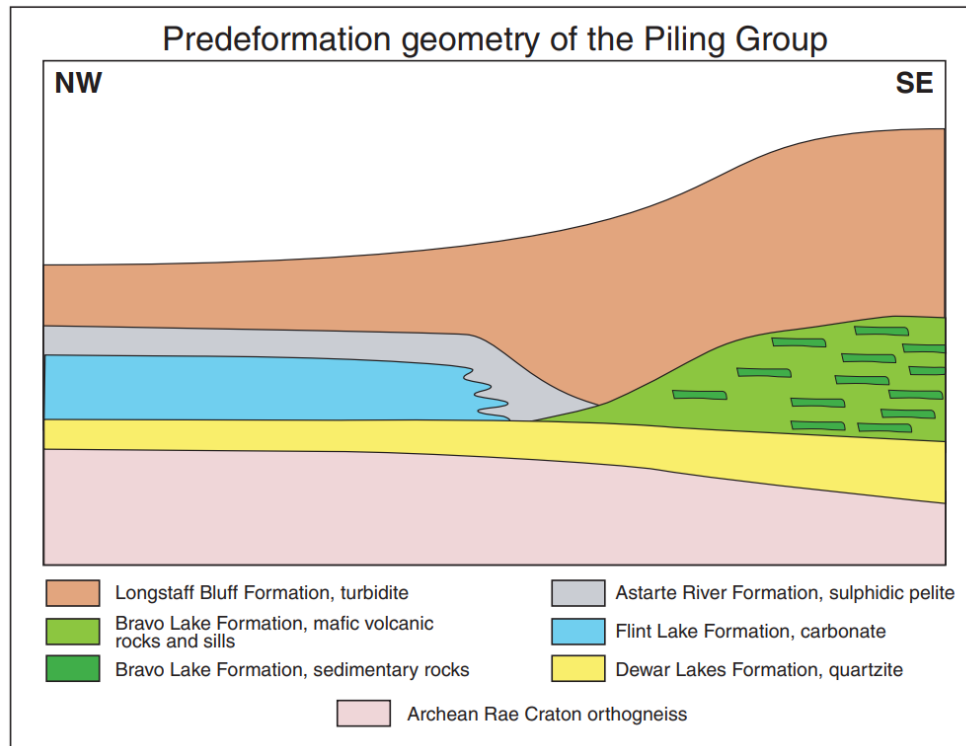


Figure 2. – Generalized bedrock geology of central Baffin Island (modified from St-Onge et al., 2005). Mineral abbreviations: And—andalusite; Bt—biotite; Crd—Cordierite; Grt—Garnet; Kfs—K-feldspar; Ms—Muscovite; Sil—Sillimanite (Wodicka et al 2014).



(St-Onge et al., 2002)

Figure 3. – Schematic section of the Piling Group showing Archean Rae Craton basement

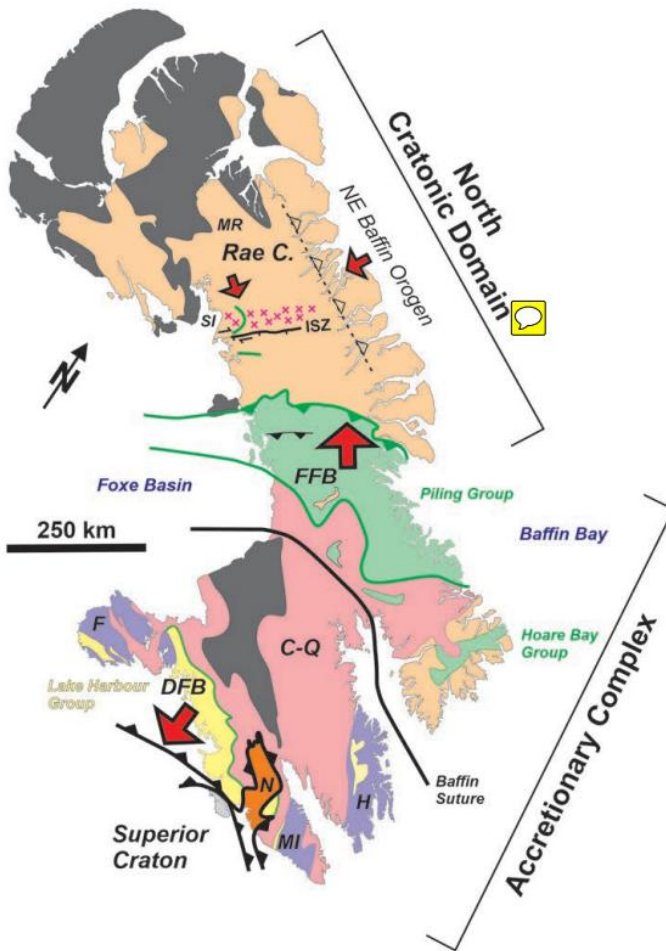
The uppermost thrust of the Foxe fold belt is interpreted as a suture referred to as the Baffin suture (St-Onge et al., 2009). Hence the fold belt, which is underlain by continental margin, siliciclastic-carbonate strata of the 2.16 - 1.90 Ga Piling Group (Partin et al., 2014; Wodicka et al., 2014) and its depositional Rae craton basement, forms the footwall to a south-dipping suture. Rocks of the Meta Incognita continental terrane, including its cratonic basement and the 1.91 - 1.90 Ga Lake Harbour Group sedimentary cover sequence, form the hanging wall to the Baffin suture. Granitoid rocks of the 1.87 - 1.84 Ga Cumberland batholith and the older 1.90 - 1.89 Ga Qikiatarjuaq plutonic suite outcrop across, obscure and post-date formation of the Baffin suture. Hence ocean closure and suture formation are tightly constrained to ~1.90 Ga as they must post-date Piling Group deposition (2.16 - 1.90 Ga) but predate Qikiatarjuaq plutonic suite magmatism (1.90 - 1.89 Ga).

The Foxe Fold Belt is interpreted to have developed during and provides a lower-plate record of south-dipping subduction of oceanic lithosphere beneath the north margin of the Meta Incognita continental terrane. Subduction is inferred to have led to closure of an oceanic domain that lay south of the Rae craton but north of the Meta Incognita continental terrane. Hence in this model, the Meta Incognita continental terrane lay within the Manikewan ocean and was subsequently accreted to the south margin of the Rae craton by south-dipping subduction of the intervening oceanic lithosphere beneath the continental terrane (St-Onge et al., 2009). The Foxe fold belt is inferred to provide a lower plate record of entry of the buoyant Rae craton into the Baffin trench and coeval overthrusting by the accreting upper plate Meta Incognita continental terrane.

Deformation Event	Basement Archean gneiss, granitoid	Cover (Piling Group)	Paleoproterozoic granitoid, southern and northern	General orientation
D _{1A} *	Unknown			SW-NE
D _{1P}	Unknown	Thrusting/transposition/folding		E-W
D _{2P}	Tight to isoclinal F ₂	Upright isoclinal F ₂ tightening of F ₁	Upright F ₂ , transposition	ENE-WSW
D _{3P}	Open F ₃	Open F ₃	Open F ₃	NW-SE
A = Archean, P = Paleoproterozoic				

(de Kemp et al 2001)

Table 1. – Structural History of the Piling Group, Nunavut



(Johnston et al., 2023)

Figure 4. – Summary of the main litho-structural elements of Baffin Island. Dominant vergence directions are indicated with red arrows. The Accretionary complex includes the Foxe Fold Belt (FFB) the Dorset Fold Belt (DFB) and accreted gneissic terranes (H: Hall; MI: Meta Incognita; F: Foxe) and arc terranes (N: Narsajuaq Arc). C-Q: Igneous rocks of the Cumberland Batholith and the Qikiqtarjuaq Plutonic Suite. Mesoproterozoic and younger sedimentary rocks are shown in grey. Localities discussed in the text: SI – Steensby Inlet, MR: Mary River, ISZ: Isortoq Shear Zone

PREVIOUS WORK

All previous exploration work focused on the northern and southern margins of the Longstaff Bluff Formation (LBF) while avoiding the central part (**Figure 5**). This exploration strategy is understandable as the major mining houses were not interested in gold. Commander Resources' gold focus on the banded iron formation (BIF) within the Bravo Lake Formation (i.e. greenstone belt) provided positive results but were discontinuous. The final exploration effort by ValOre confirmed what Commander discovered.

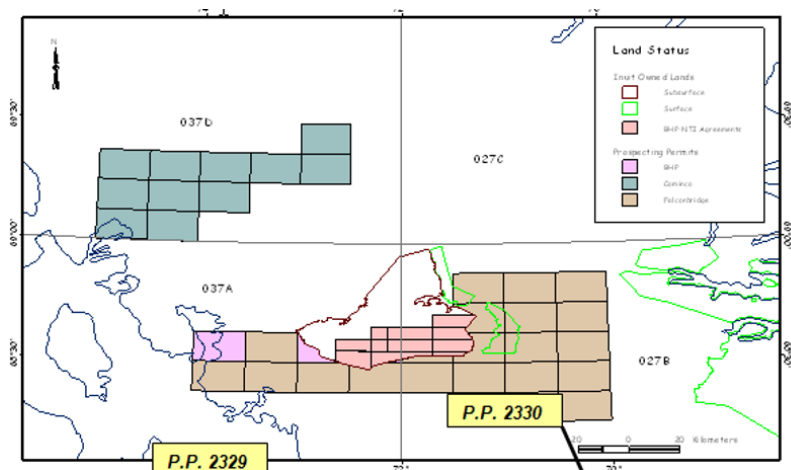


Figure 5. – Central Baffin Island Land Disposition 2001

- ▶ 1978 – GSC: Lake bottom sediment sampling – 11 elements without gold
- ▶ 1985 – Petro-Canada Resources: Lake sediment sampling & prospecting traverses
- ▶ 1999 – GSC: Re-analysis of 1,775 lake sediments from central Baffin Island using INAA & AAS adding 25 elements
- ▶ 2001 – BHP: 1:50K mapping & gossan prospecting; Nineteen stream sediment, 23 soil, 236 grab & 548 till samples were collected for Ni, Cu, Zn & Pb
- ▶ 2001 – Teck-Cominco: prospecting and reconnaissance mapping for Zn & Pb
- ▶ 2001 – Falconbridge: prospecting and reconnaissance mapping for Ni & Cu
- ▶ 2004 – GSC: Till geochemistry results, central Baffin Island, Nunavut (NTS 37A, D & 27B, C)
- ▶ 2005 – Commander Resources: focused exploration on Bravo Lake Formation with discovery of gold in banded iron formation
- ▶ 2006/2007 – BHP/Peregrine Diamonds: Reconnaissance till sampling for diamonds, base & precious metals
- ▶ 2018 – ValOre Metals: till sampling & aeromagnetic survey on Bravo Lake Formation for gold
- ▶ 2019 – GSC re-analysis of archival lake bottom sediments by aqua regia-ICP-MS and multivariate analysis

The reconnaissance level sediment sampling surveys provided widely spaced sample coverage but offered consistent sample materials and analytical methods. However, geochemical methods analyzed only the ultrafine fraction (i.e. <0.063 mm) and until the 2019 re-analyses, used partial leaches resulting in broad subtle gold anomalies (i.e. <10 ppb) within the Longstaff Bluff Formation suggesting background (**Figure 6**). Also, the eastern extent of the lake bottom sediment surveys was limited, leaving a large area without data.

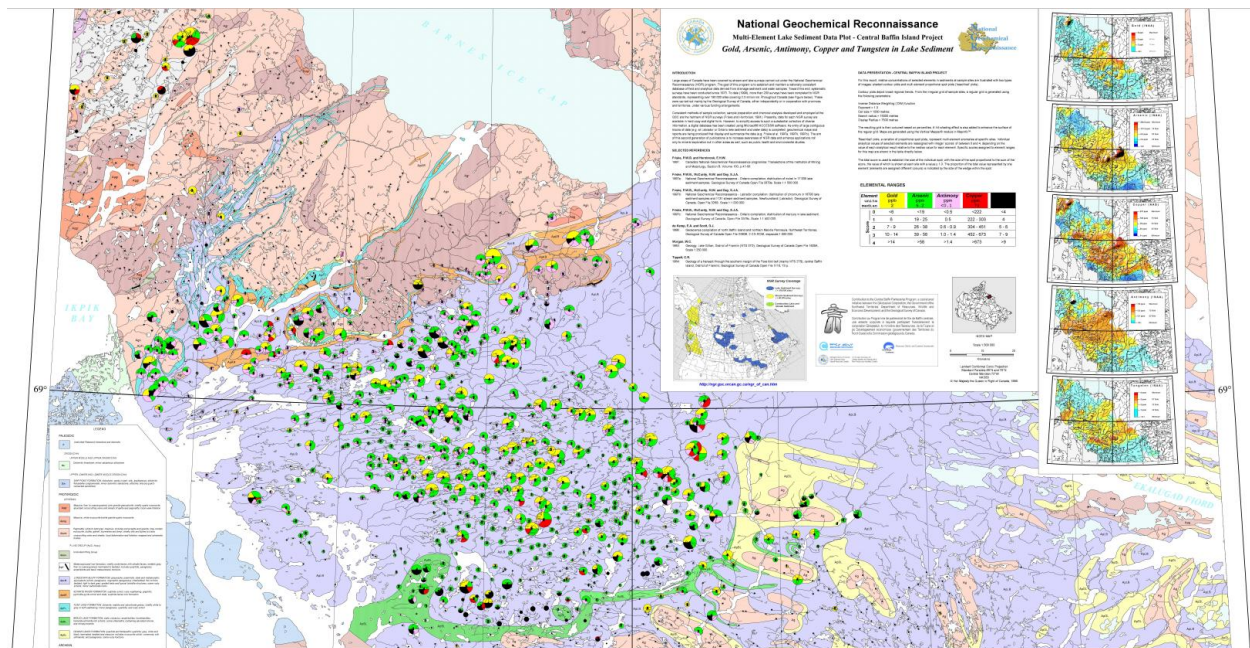


Figure 6. – Map showing gold, arsenic, copper and tungsten results for lake bottom sediments

The absence of a strong geochemical response within the lake bottom sediments to the gold-bearing Bravo Lake Formation (green linear unit) is important to note because farther to north is a broad well-defined gold-arsenic anomaly within the core of the Longstaff Bluff Formation. It is believed that the very competent banded iron formation would be more resistant to glacial erosion.

In 2019, a GSC/Canada-Nunavut Geoscience Office program re-analyzed the lake bottom sediments samples from Baffin Island using aqua regia/ICP-MS and interpreted the results using multivariate analysis to better evaluate the prospectivity for orogenic Au and other commodities (**Figure 7**).

A significant difference between the reanalysis of lake bottom sediments in 1999 and 2019, is that the sample material in 2019 was even finer at -18 microns resulting in low gold contents.

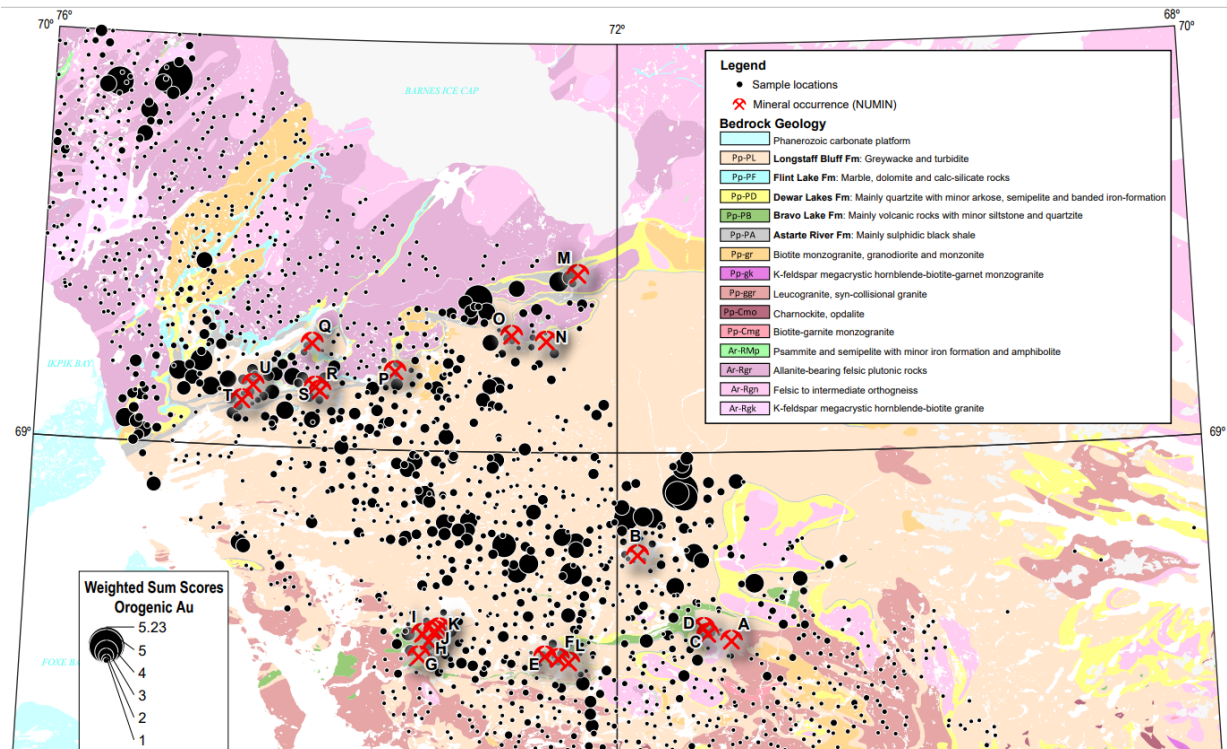


Figure 7. – GSC re-analysis of lake bottom sediment samples – Central Baffin Island (2019): Proportional dot map of weighted sum scores for the orogenic Au deposit model

Interestingly, the regional gold anomaly observed in the 1999 analytical results now defines a WSW-ENE (dominant ice transport direction) trending series of positive samples and other discrete anomalies within the Longstaff Bluff Formation. However, most of the samples are anomalous for gold within the Longstaff Bluff Formation. Since the anomalies are confined to the southern part of the thick LBF, the gold would probably be structurally controlled within shear zones and folds noted within the unit.

It is also important to note that the sample medium, lake bottom sediments are normally derived from glacial till but have been reworked to varying degrees winnowing away light minerals. Most modification of the mineral assemblage within the till would be within the finest size fractions which are used for the geochemistry.

The available airborne geophysical coverage consists of a 1973 fixed-wing aeromagnetic survey flown for the Geological Survey of Canada (**Figure 8**). Given the flight specifications for the survey, it is not surprising that the Longstaff Bluff Formation appears to have little magnetic variation other than some mafic dykes.

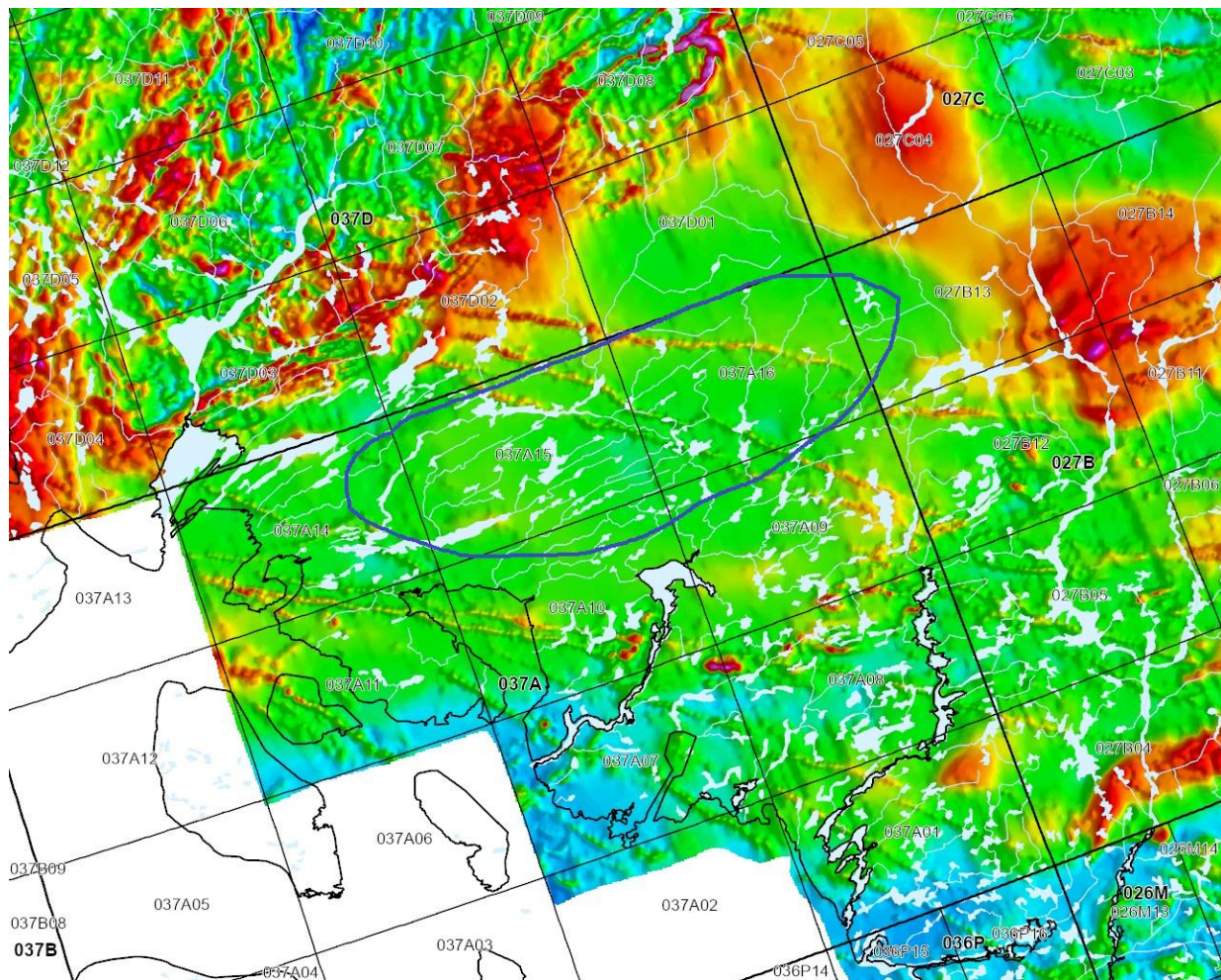


Figure 8. – GSC Aeromagnetic (TMI) Coverage of Central Baffin Island (1973)

However, isolated structural studies (**Figure 9**) have shown that the meta-turbidite has been deformed with evidence of folding (De Kemp et al 2001).

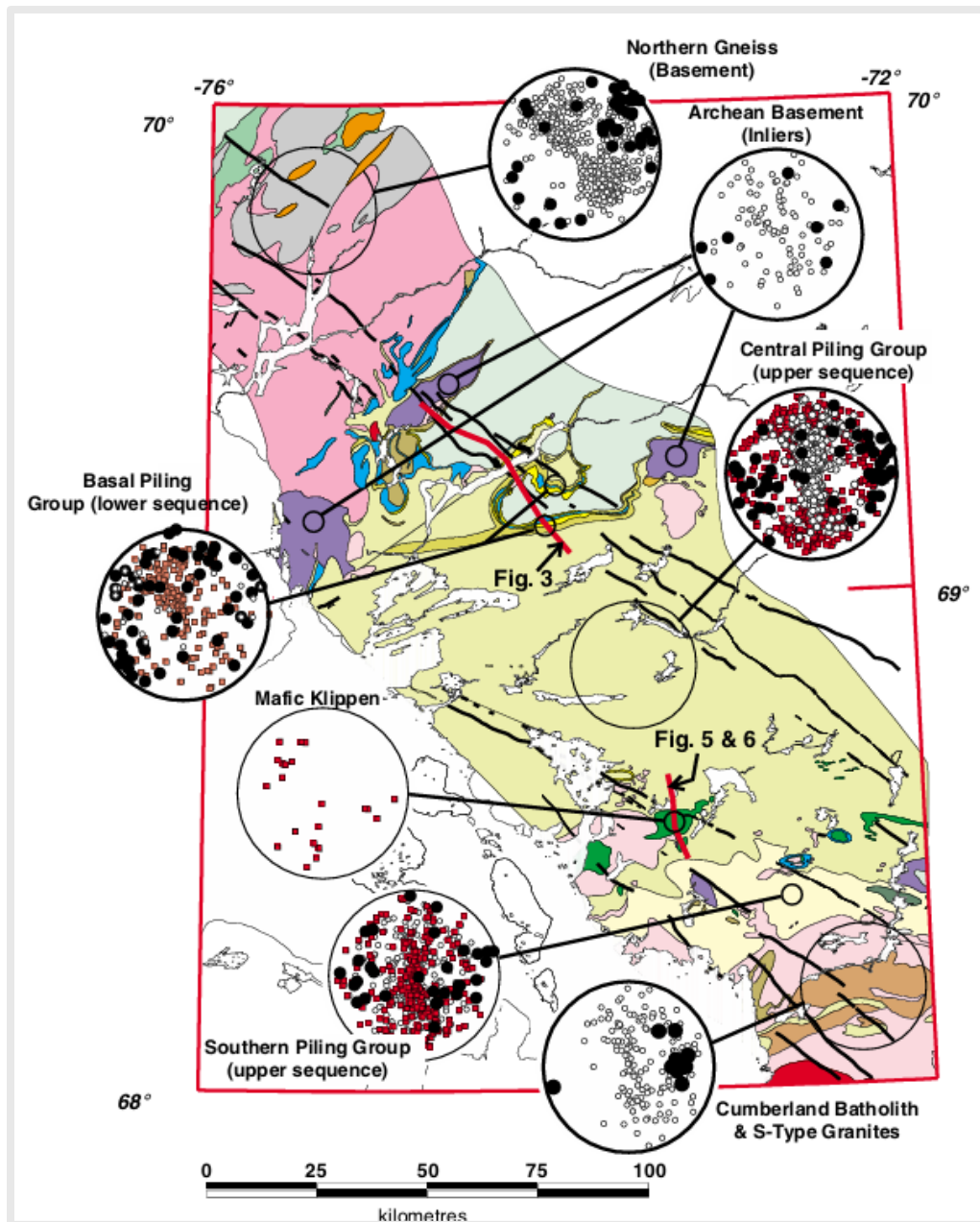


Figure 9. – Equal-angle structural plots of bedrock structural-fabric elements in the western portion of the Foxe Fold Belt, in central Baffin Island. Squares represent dip directions of bedding, open circles represent dip directions (on plane – 3D dip vectors) of cleavage, foliation or gneissosity. Black-filled circles represent major fold-hinge lines (De Kemp et al 2001).

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