



# The Nivré Gold Deposit

## Dorlin Project

### French Guiana

South American Exploration Initiative

Paramaribo, February 19, 2019

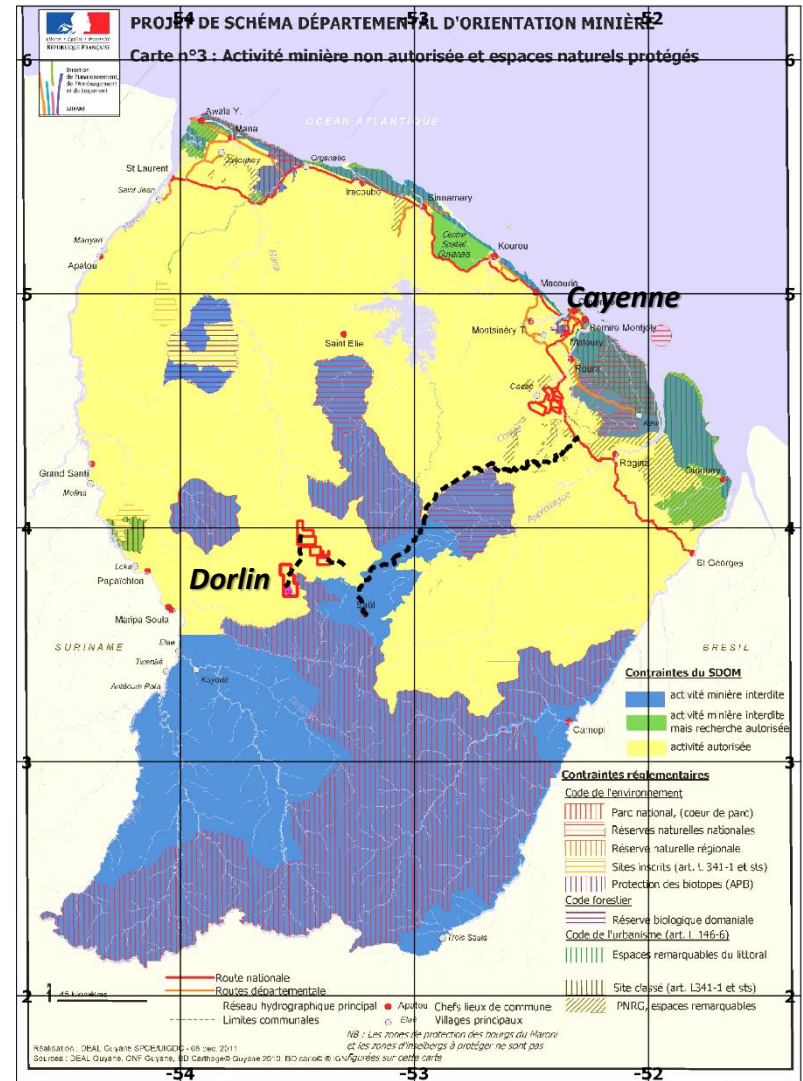
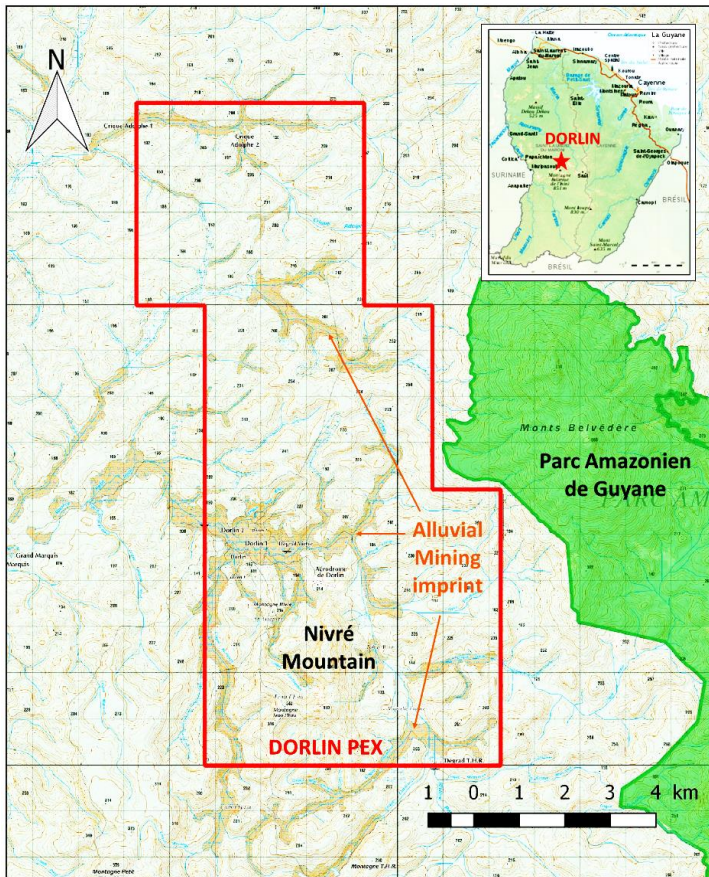
Carlos H. Bertoni

and

Dorlin Project team

# Introduction

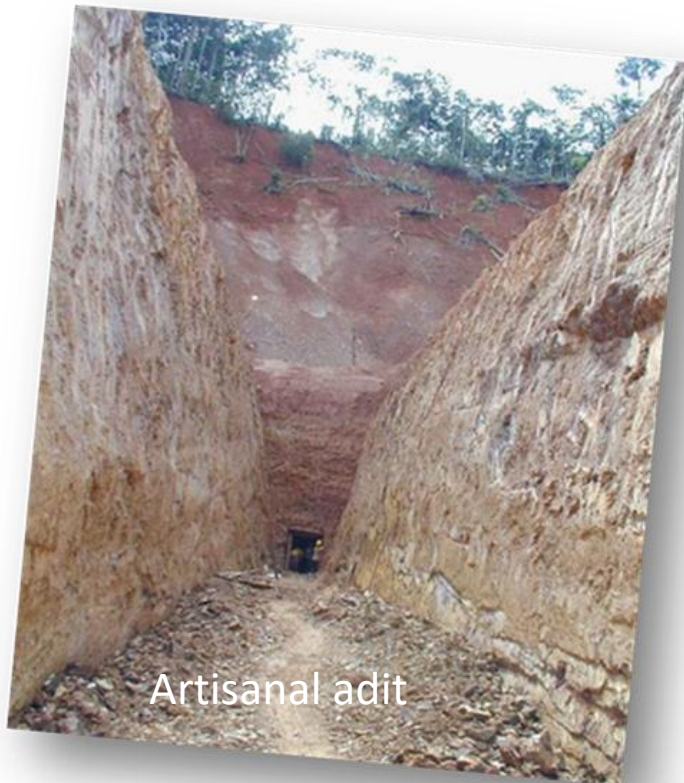
- Dorlin Project is located 190 km SW of Cayenne, accessible by air, bush trail and boat.
- In 2018, Reunion Gold entered option to acquire up to 80% interest of the PEX (85 km<sup>2</sup>).





# History

- Active artisanal mining from 1<sup>st</sup> half of 20<sup>th</sup> century and nineties.
- Project previously explored from seventies until 1998 by BRGM + BHP, Guyanor Resources + Cambior.



Artisanal adit

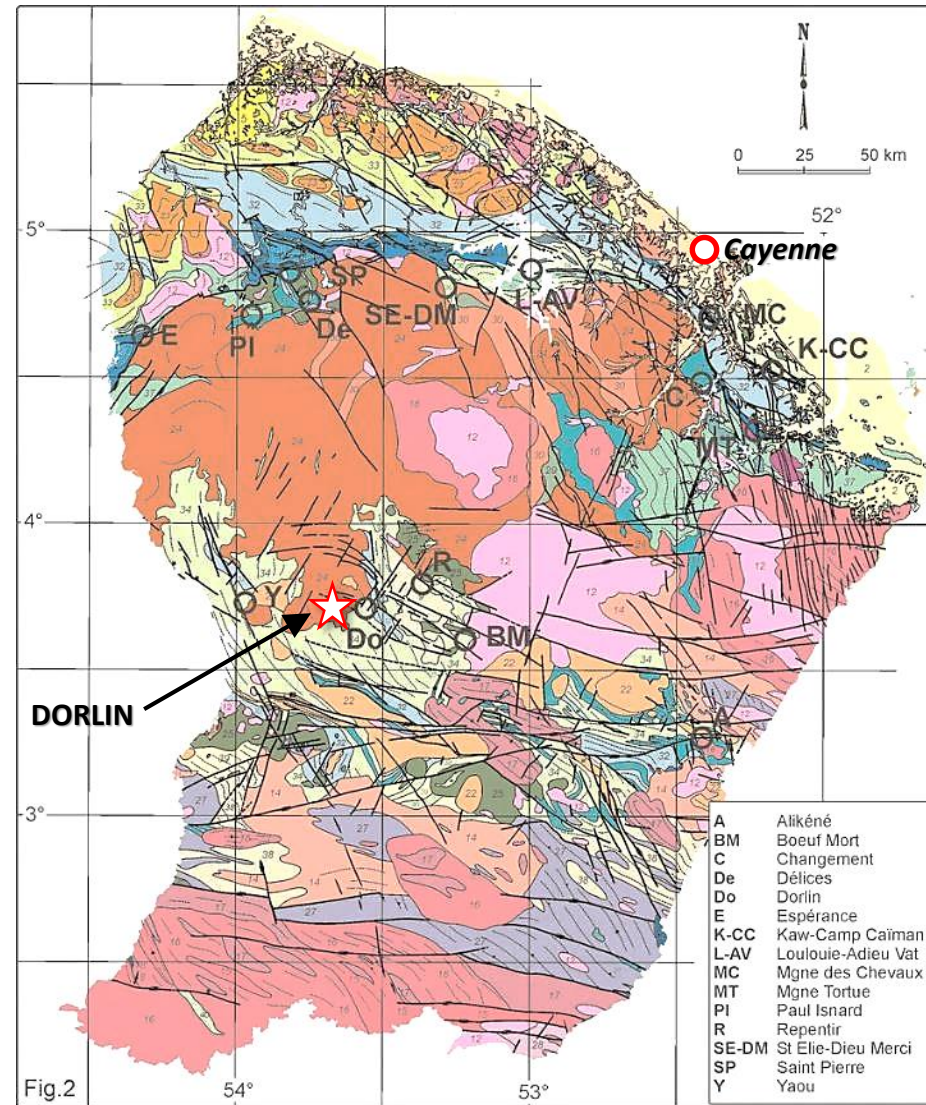


Fig.2

after Delor et al., 2001, 2003

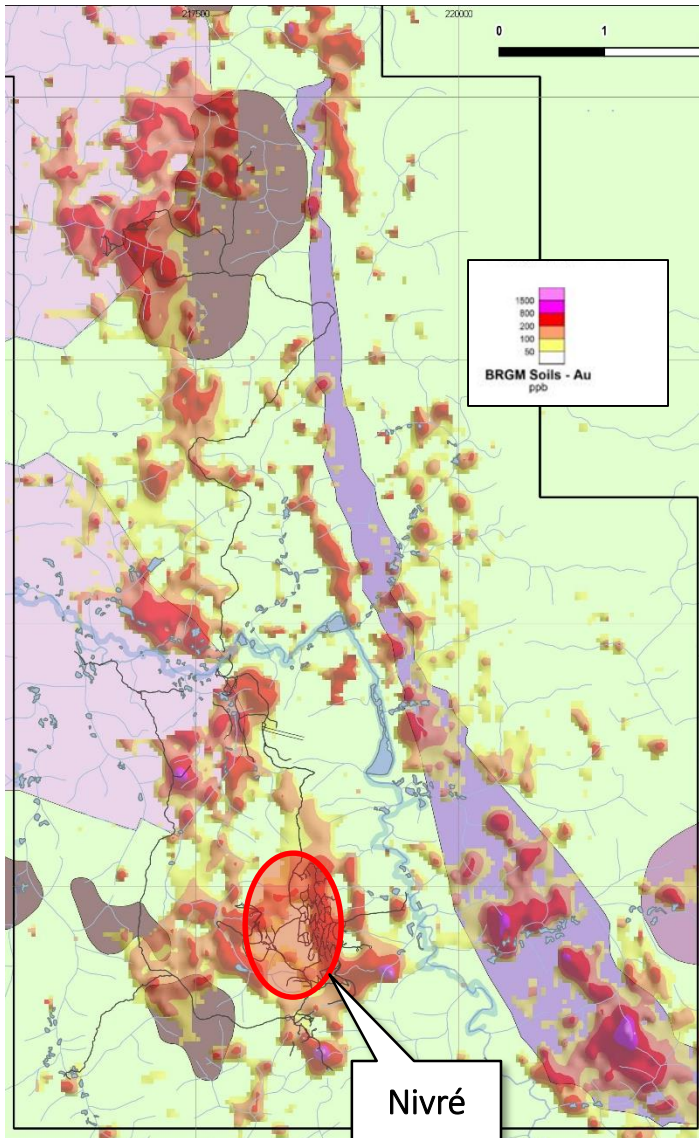


# Exploration work

- BRGM discovered sources of alluvial gold and did extensive soil geochem, mapping and preliminary drilling of Nivré deposit.
- Pre-Reunion Gold drilling: 18,427 m
- Reunion Gold 2018 drilling: 6,585 m (validation & resource expansion)
- Total drilling: 31,211 m (91% Nivré)
  
- Historical resources (non NI 43-101 compliant) by Guyanor-Cambior in 1998 for Nivré deposit (at US\$ 400/oz.):
  - ✓ M&I = 21.9 Mt @ 1.1 g/t = 779 k oz.
  - ✓ Inferred = 22 Mt @ 1.1 g/t = 793 k oz.



# Geology and gold soil geochem

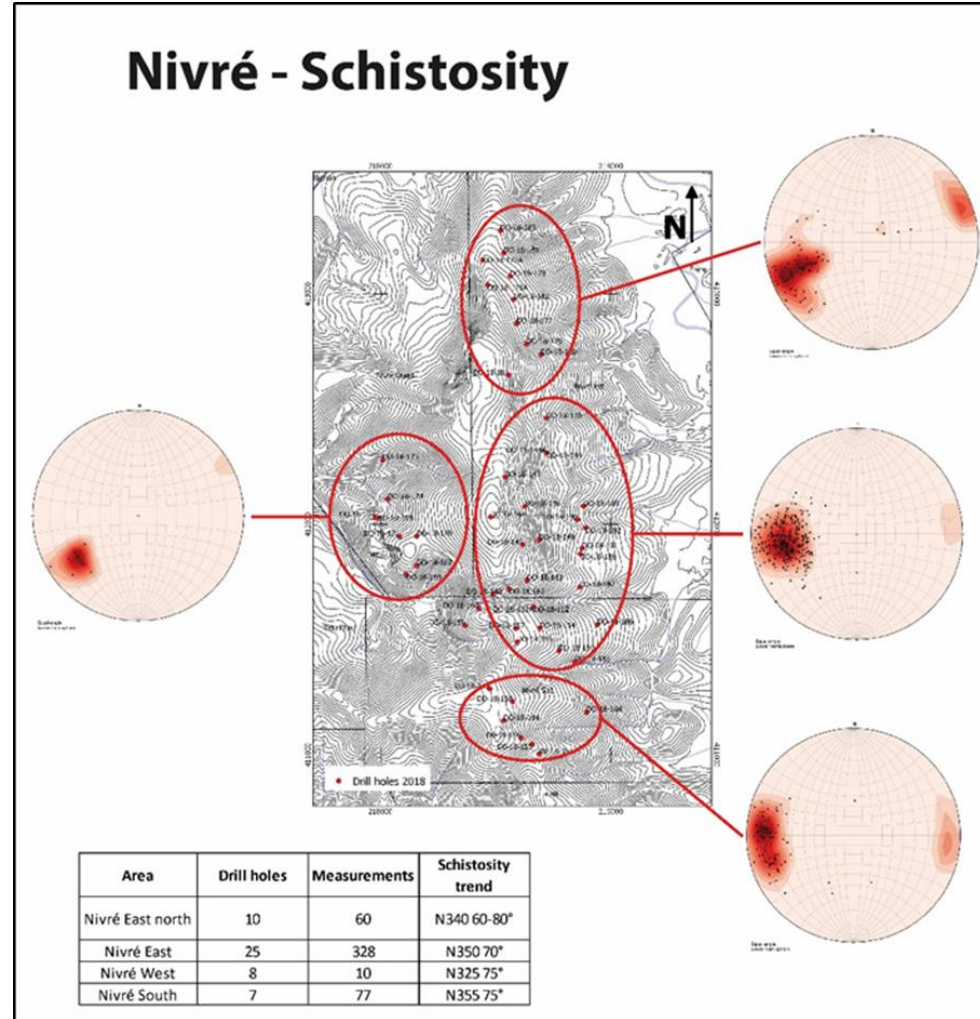


- Proterozoic volcanic sequence (Paramaca Group) of dacitic to basaltic composition: mostly volcanoclastics
- Ultramafic “lineament” from Cr+Co+Ni anomaly on BRGM soil data
- Granitic / granodioritic plutons on the western edge of the *PEX*
- Diorite & gabbro intrusives.
- Gold soil anomalies associated with more than one geological environment.

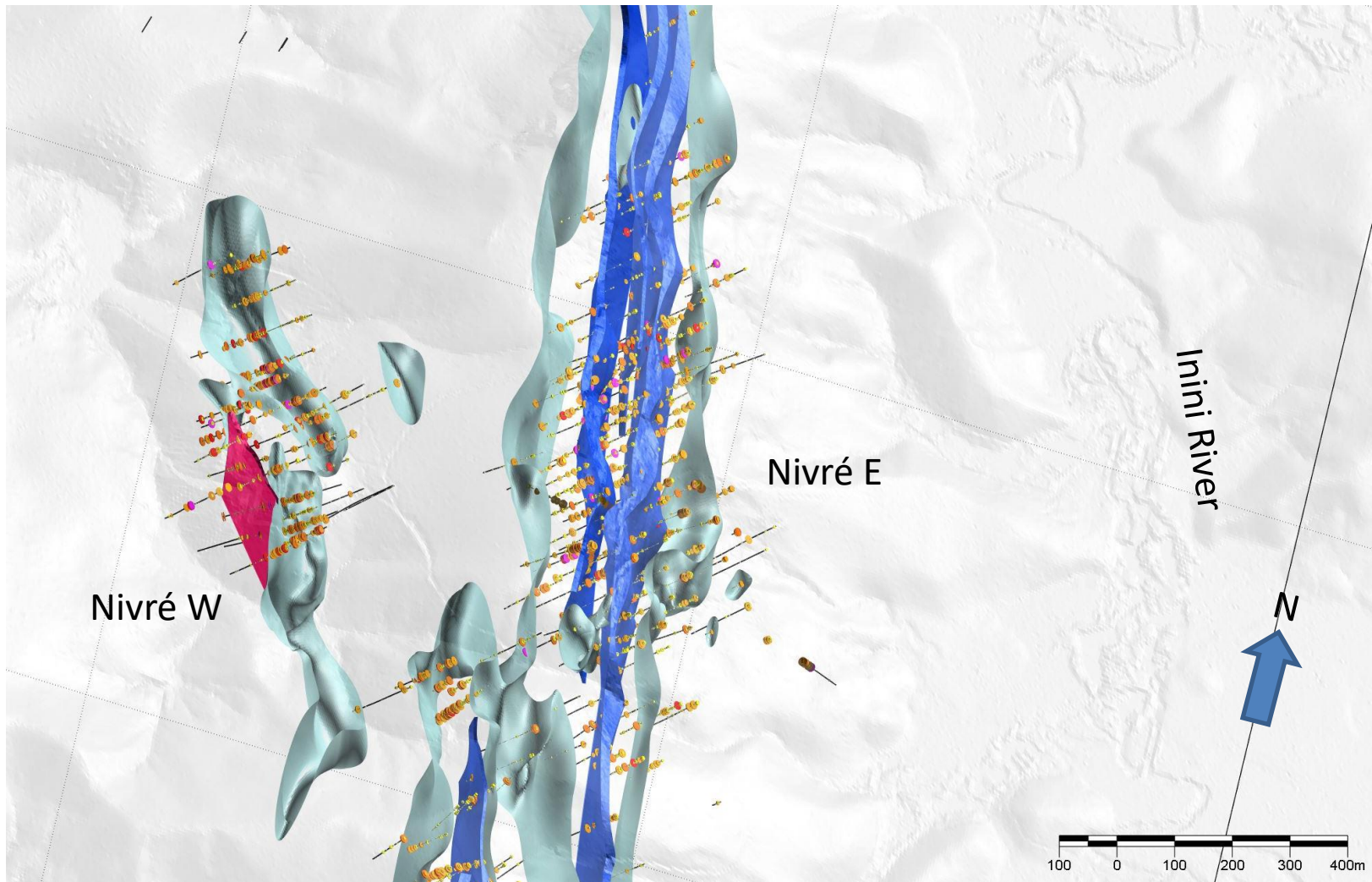


# Alteration & Structure

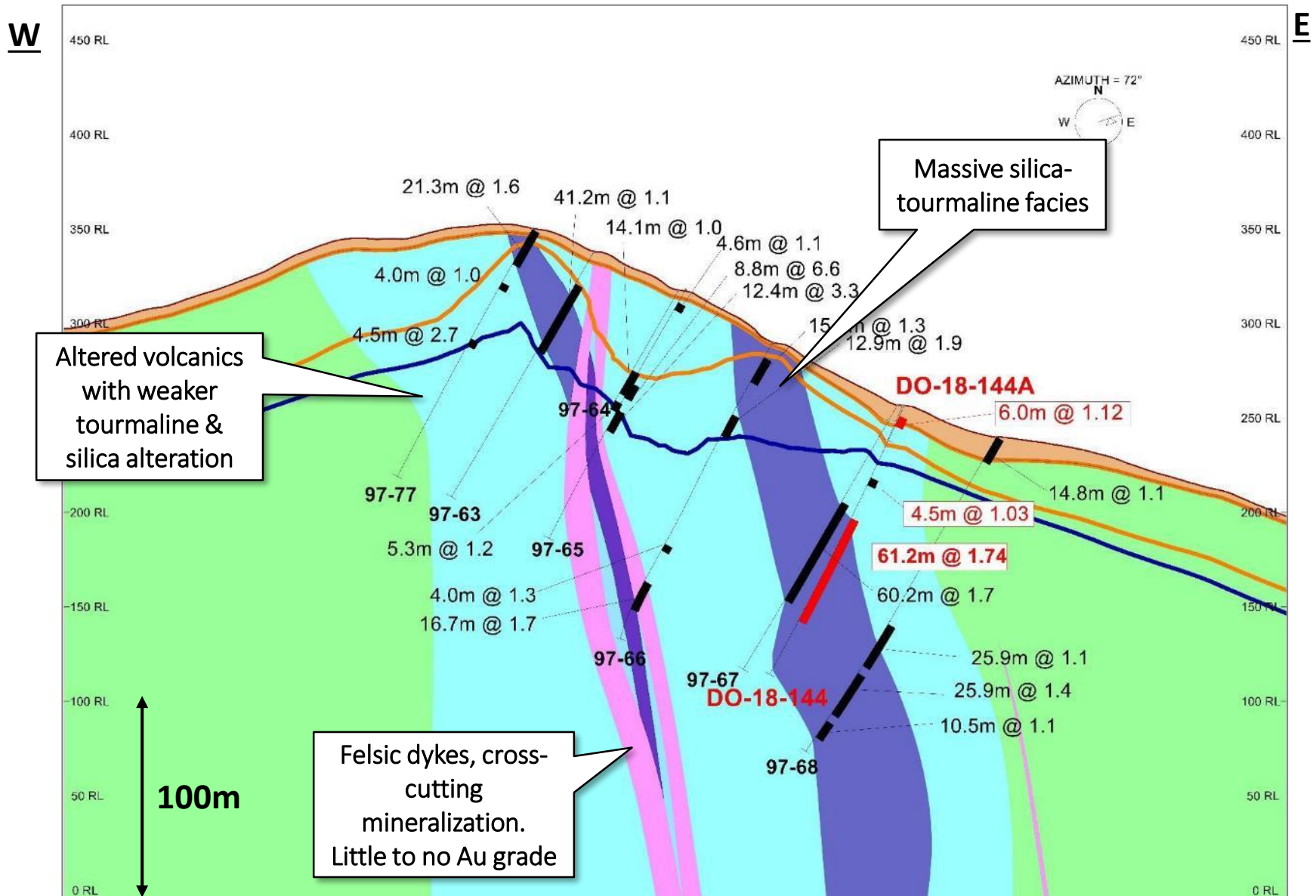
- Early and intense pervasive boron-silica alteration along NS “corridor” in volcanic sequence, forming tourmaline-silica bodies within a regional N-NW shear zone, locally deflected to a NS orientation due to the western granitic plutons.
- Wider halo of chlorite-clay alteration enveloping the massive silica-tourmaline.
- Numerous veining events, including a late quartz-ankerite phase that crosscuts mineralization.
- Strong pervasive S1 fabric, generally subvertical and striking NS, parallel to mineralization.



# Nivré deposit E and W zones (looking N-NW)



# Section across Nivré East





# Mineralization (1)

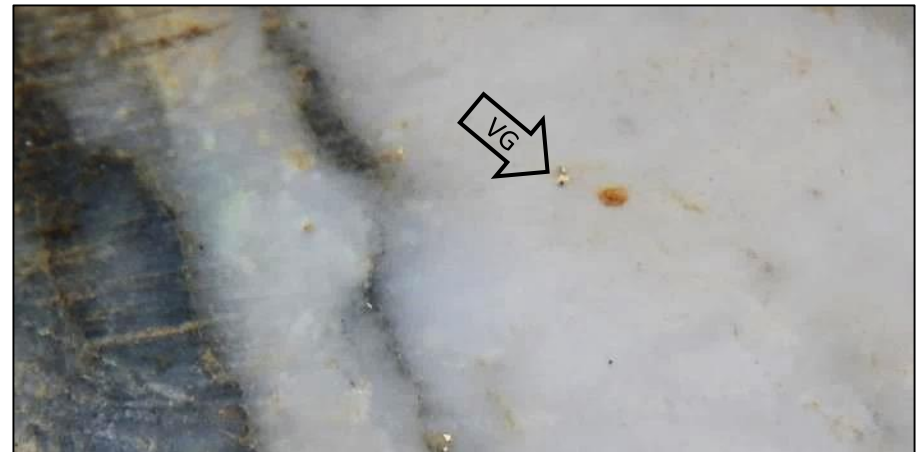
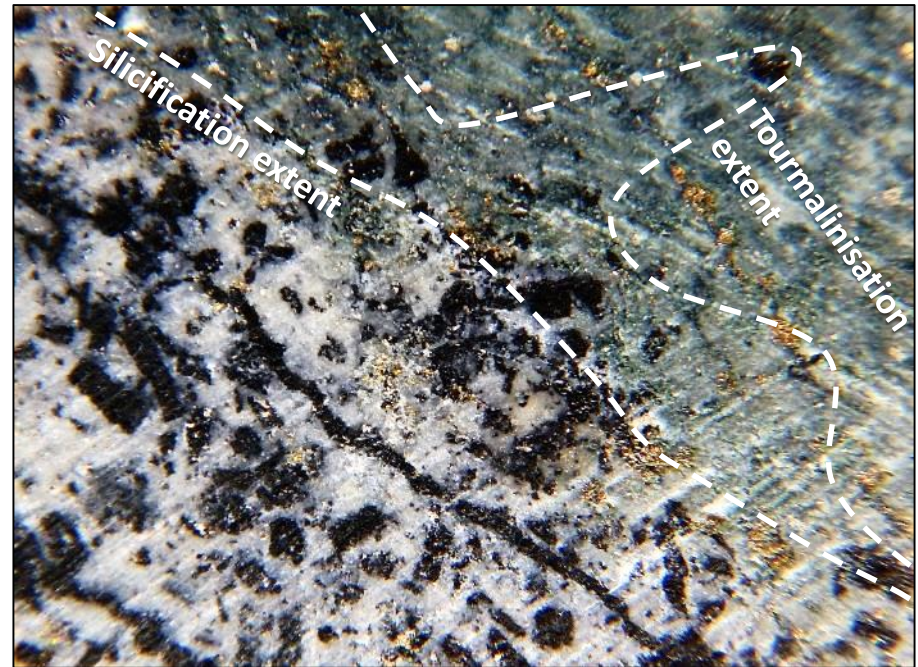
- Gold mineralization best known at Nivré mountain and prospects.
- Spatial association with tourmaline-silica-pyrite facies (both syn- and post-tourmalinisation)
- Tourmaline alteration a function of protolith:
  - Gradual clast replacement within lapilli tuff
  - Crystalline tourmaline growth within tuff units





# Mineralization (2)

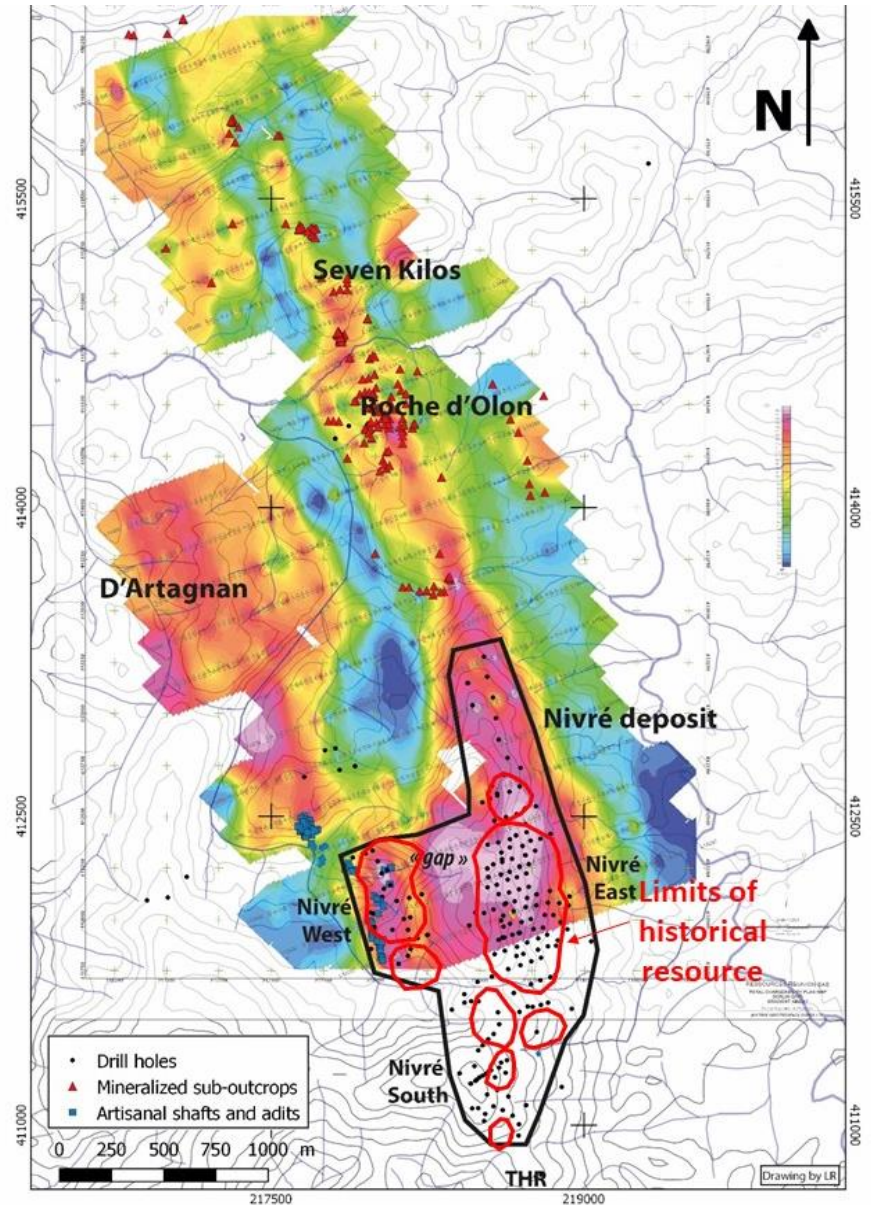
- At least two stages of gold mineralization.
  - Early hydrothermal/metasomatic tourmaline-silica alteration with syn-sulphides (py)
  - Later pyrite veining crosscutting S1 and cross-cutting tensional quartz veins define a second stage.
  
- In 2018 drilling, visible gold noted on shear vein, at the contact of sub-volcanic intrusion with massive andesitic-dacitic units in Nivré West.





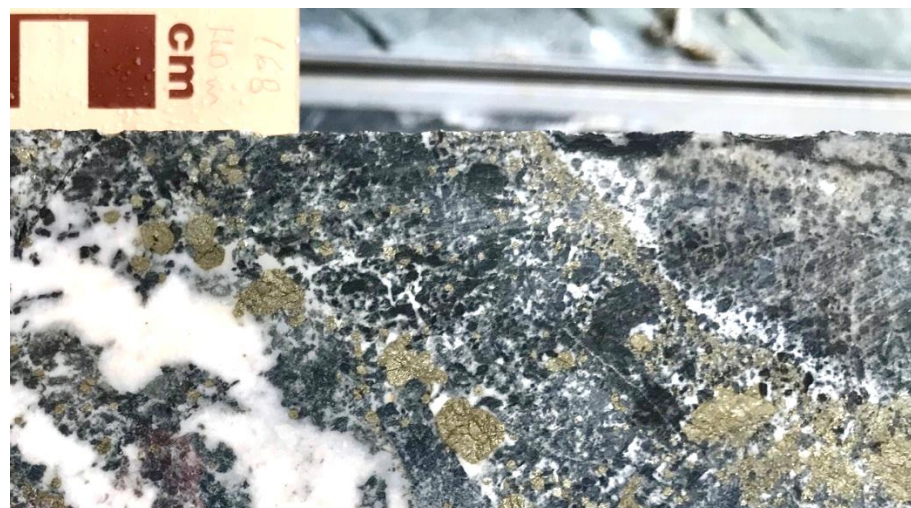
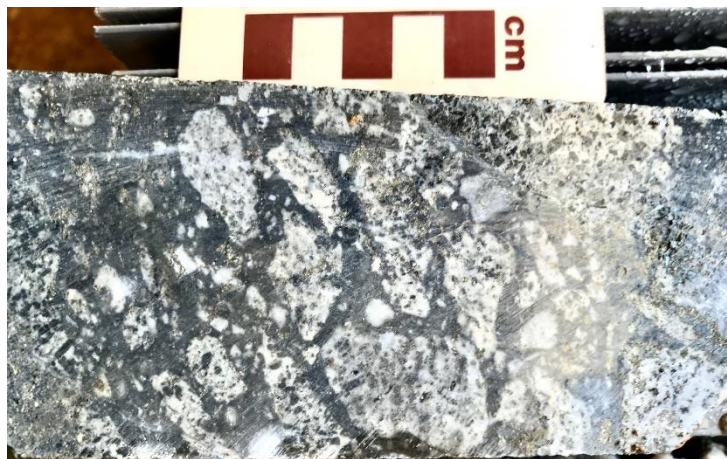
# Gold mineralization and sulphide

- Extension along newly mapped silica-tourmaline zones, north of Nivré. Drilling planned at Roche D'Olon, 7 kilos and D'Artagnan prospects.
- IP chargeability has shown an excellent response to sulphides present at Nivré.
- Resistivity also maps out zones of silica-tourmaline alteration.



# Metallogenic indicators

- Nivré deposit is hosted by Proterozoic volcanic rocks of the Paramaca Group, metamorphosed to greenschist facies - no known clastic sedimentary rocks in local stratigraphy
- Volcanogenic component of mineralization evidenced by small VMS occurrence south of Dorlin permit and chert beds
- Gold mineralization consists of envelope with inner tourmaline-sulphide core surrounded by chlorite-sulphide zone, in rocks with high content of  $K_2O$ , As, B and  $MgO$
- Available data suggests a zoned hydrothermal system controlled by a network of paleofractures reworked by a late muscovite-sulphide-quartz stockwork
- Isotope studies (Lerouge et al., 1998) indicate large input of seawater in the Dorlin hydrothermal fluids and evidence of a magmatic component.





# Thank you

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