



# High Grade Rhyolite-Hosted Gold at the Perron Project, Abitibi, Québec

Geology and structure

AMEX Exploration Inc.

XPLOR 2020 Conference

LAURENTIA



EXPLORATION

Jérôme Augustin, P. Geo, Ph.D.  
Laurentia Exploration

Kelly Malcolm, P. Geo (ON)  
VP Exploration, Amex Exploration

October 21, 2020



# Forward-Looking Statement

The purpose of this presentation is to provide general corporate information about Amex's activities current as of October 20, 2020. The information is given in summary form and does not intend to be complete; readers are urged to review the Company's full disclosure record available at [www.sedar.com](http://www.sedar.com). Information provided in this presentation, is strictly for informational purposes and should not be considered as advice or a recommendation to investors or potential investors in relation to purchasing, holding or selling of Amex's securities.

## **FORWARD-LOOKING STATEMENT**

This presentation contains "forward looking information" within the meaning of applicable Canadian securities laws, including statements regarding the future financial or operating performance of the Company, the planned exploration programs, continued positive drill results, the defining of new targets and mineralized zones, the prospective mineralization of the property, the preparation of a 43-101 compliant resources estimate on the property, the Company having the available funds and the general metals/gold market. Forward-looking information can also be identified by the words "may", "would", "could", "should", "will", "intend", "plan", "anticipate", "believe", "estimate", "expect" or similar expressions.

Investors are cautioned that forward-looking information is not based on historical facts but instead reflect Amex's management expectations concerning future results or events based on the opinions and assumptions of management considered reasonable at the date the statements are made. Although Amex believes that the expectations are reasonable, such information involves risks and uncertainties and undue reliance should not be placed on such information, as unknown and unpredictable factors could have material adverse effects on future results, performance, or achievements. Among the key factors that could cause actual results to differ materially from those projected in the forward-looking information are the following: general business, economic, competitive, geopolitical and social uncertainties; the actual results of current exploration activities; unforeseen expenses, the reinstatement of confinement and related government measures and guidelines in dealing with the Covid-19 pandemic, labour shortages, equipment shortages and interruptions in the supply chains, changes in general economic, business and political conditions, including changes in the financial markets; changes in applicable laws, environmental matters; and compliance with extensive government regulation; and other risks of the mining industry. Although the Company has attempted to identify important factors that could cause actual results to differ materially from those contained in forward-looking information, there may be other factors that cause results not to be as anticipated, estimated or intended. The Company does not undertake to update any forward-looking information, except in accordance with applicable securities laws.

In addition, readers are cautioned that exploration results that include drill results on wide spacings may not be indicative of the occurrence of a mineral deposit, such results do not provide assurance that further work will establish sufficient grade, continuity, metallurgical characteristics and economic potential to be classed as a category of mineral resource; and, the potential quantities and grades of drilling targets are conceptual in nature and, there has been insufficient exploration to define a mineral resource, and it is uncertain if further exploration will result in the targets being delineated as mineral resources.



# Qualified Person and Third Party Data

## QUALIFIED PERSON AND THIRD PARTY DATA

Qualified Person Maxime Bouchard M.Sc.A., P.Geo. (OGQ 1752) and Jérôme Augustin Ph.D., P.Geo. (OGQ 2134), Independent Qualified Persons as defined by Canadian NI 43-101 standards, have reviewed and approved the geological information reported in this presentation. The drilling campaigns and the quality control program have been planned and supervised by Maxime Bouchard and Jérôme Augustin. The quality assurance and quality control protocol include insertion of blank or standard every 10 samples on average, in addition to the regular insertion of blank, duplicate, and standard samples accredited by Laboratoire Expert during the analytical process. Gold values are estimated by fire assay with finish by atomic absorption and values over 3 ppm Au are reanalyzed by fire assay with finish by gravimetry by Laboratoire Expert Inc, Rouyn-Noranda. Samples containing visible gold mineralization are analyzed by metallic sieve. For additional quality assurance and quality control, all samples were crushed to 90% less than 2 mm prior to pulverization, in order to homogenize samples which may contain coarse gold. Core logging and sampling were completed by Laurentia Exploration. The Qualified Persons have not completed sufficient work to verify the historic information on the Property, particularly in regard to the historical drill results. However, the Qualified Persons believe that drilling and analytical results were completed to industry standard practices. The information provides an indication of the exploration potential of the Property but may not be representative of expected results.

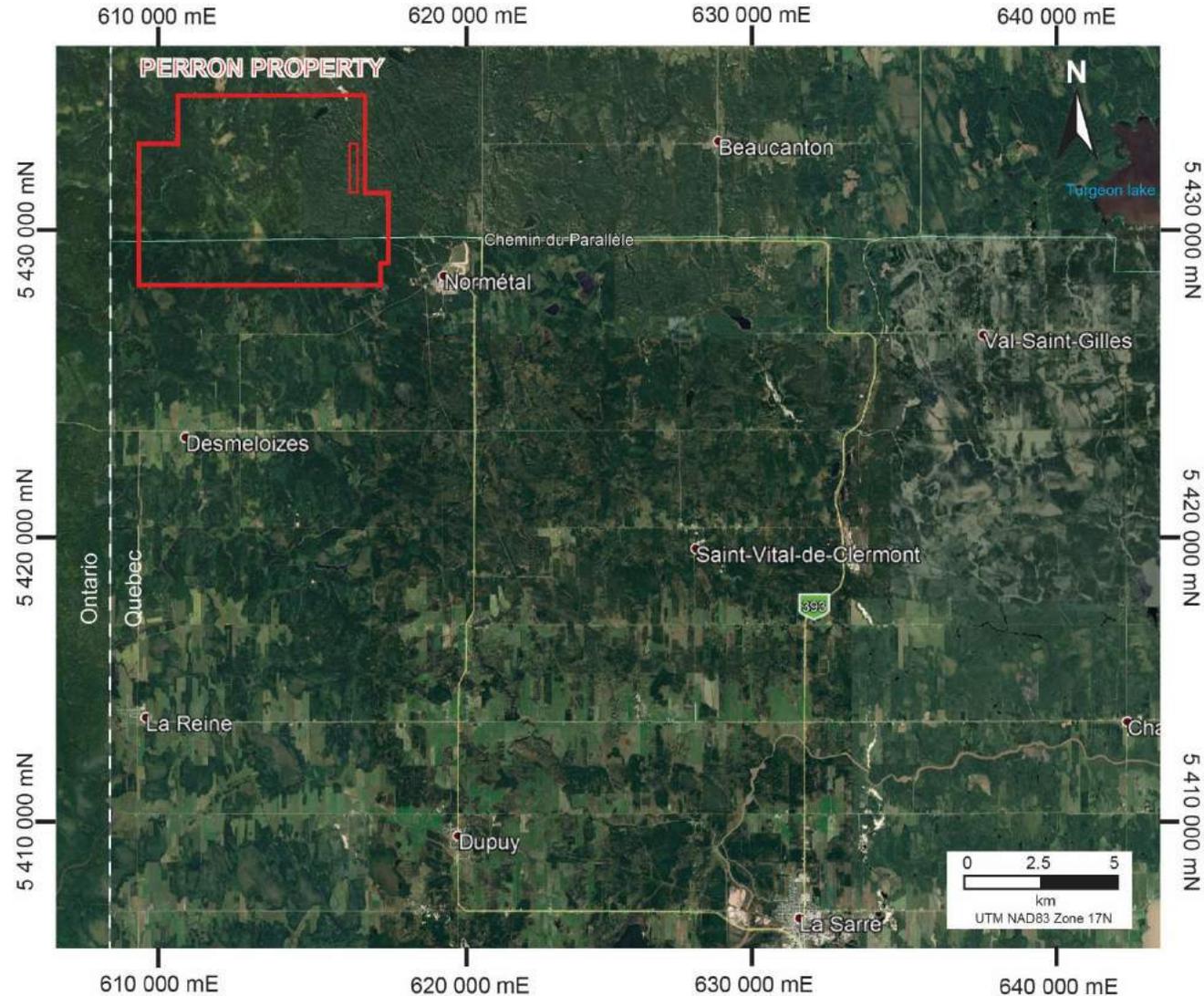
Third Party Data Certain information in this presentation regarding the presence of mineral deposits, the grades and the size of such deposits is based on information that has been obtained from publicly available information and industry reports. Such reports generally state that the information contained therein has been obtained from sources believed to be reliable, but the accuracy or completeness of such information is not guaranteed. We have not independently verified or cannot guarantee the accuracy or completeness of that information and investors should use caution in placing reliance on such information. Results from other projects are provided for information purposes only and are not indicative of the results that may be obtained from the Company's properties.

## Non IFRS measurements

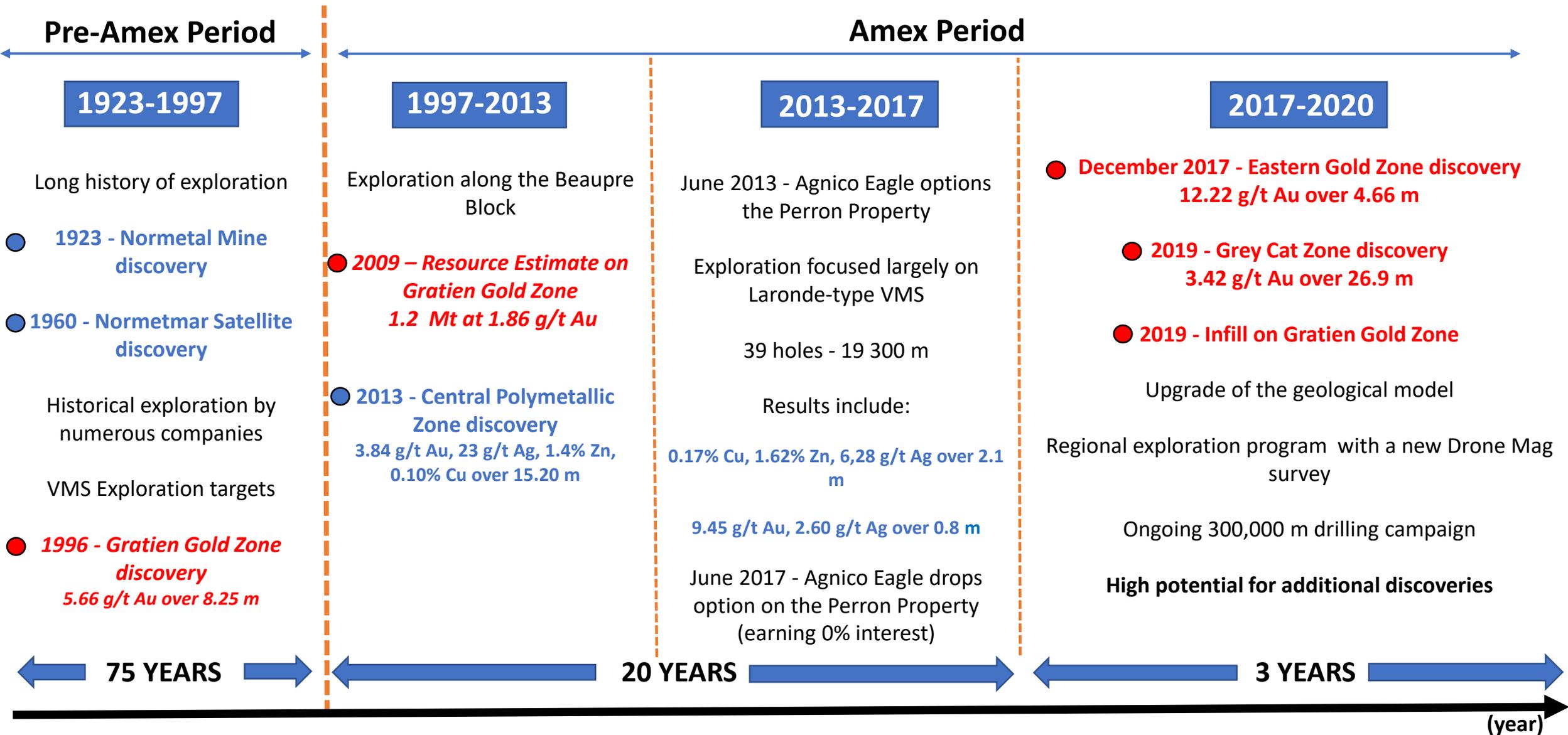
This presentation refers to "All in drilling Cost" and "Cash on hand". These financial performance measures have no standardized meaning under International Financial Reporting Standards ("IFRS") and are therefore unlikely to be comparable to similar measures presented by other issuers. Management uses these measures internally to evaluate the operating performance of Amex and assess performance trends. Management understands that certain investors, and others who follow Amex's performance, also assess performance in this way. This data is intended to provide additional information and should not be considered in isolation or as a substitute for measures of performance prepared in accordance with IFRS. For further detail, refer to Amex's financial statements and Management's Discussion and Analysis for the year ended December 31st, 2019 and three-month period ended.



# Located in Québec, CANADA

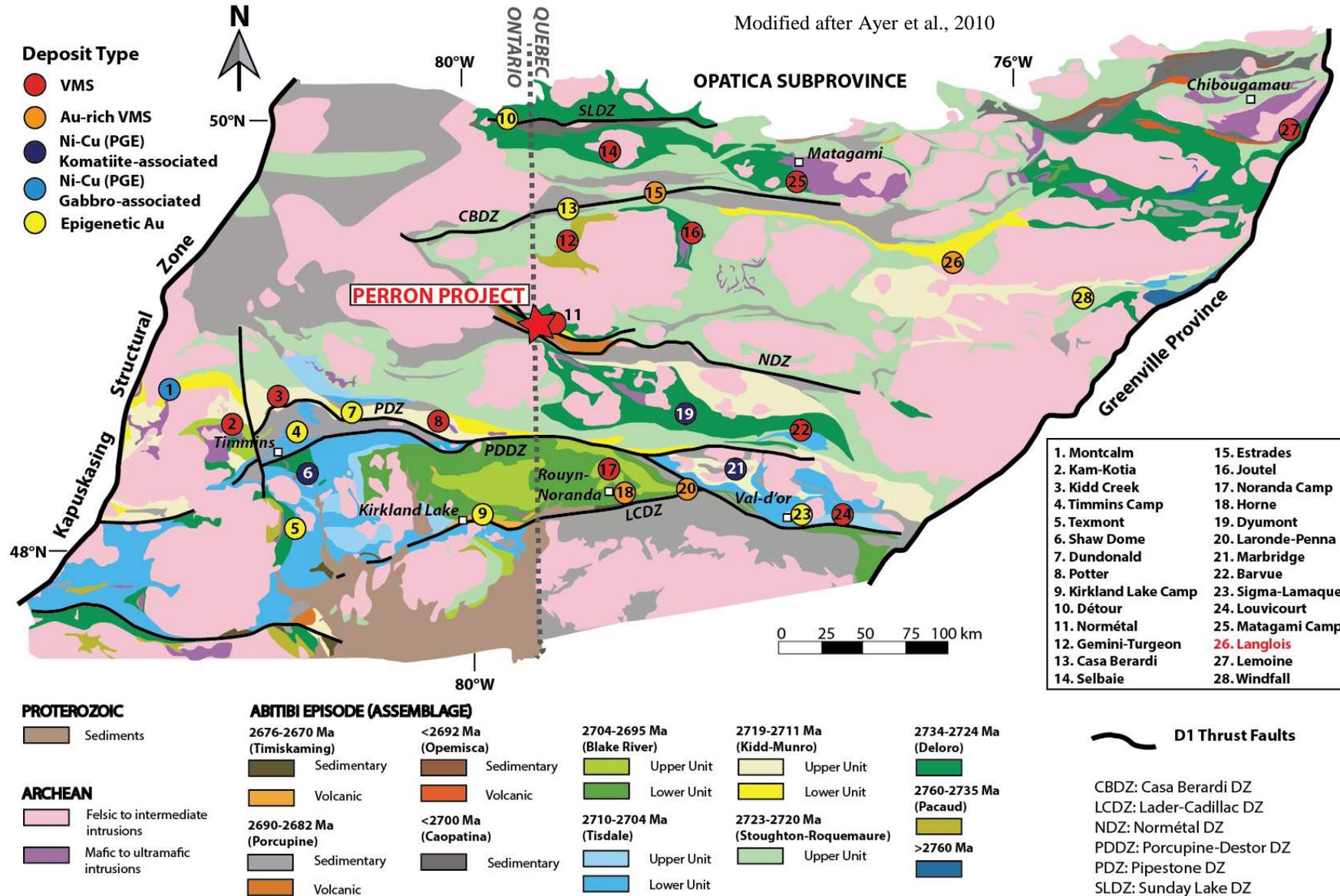


# Perron Project History



# Regional Geology

- Perron Property located in the prolific Abitibi Subprovince
- Tectonostratigraphic assemblages dated from > 2760 Ma to 2670 Ma
- Several greenstone belts
- Multiple gold and base metal deposits
- **Historical Abitibi production**
  - ~170 Moz Au
  - ~400 Moz Ag
  - ~15 Billion tons of Cu
  - ~35 Billion tons of Zn



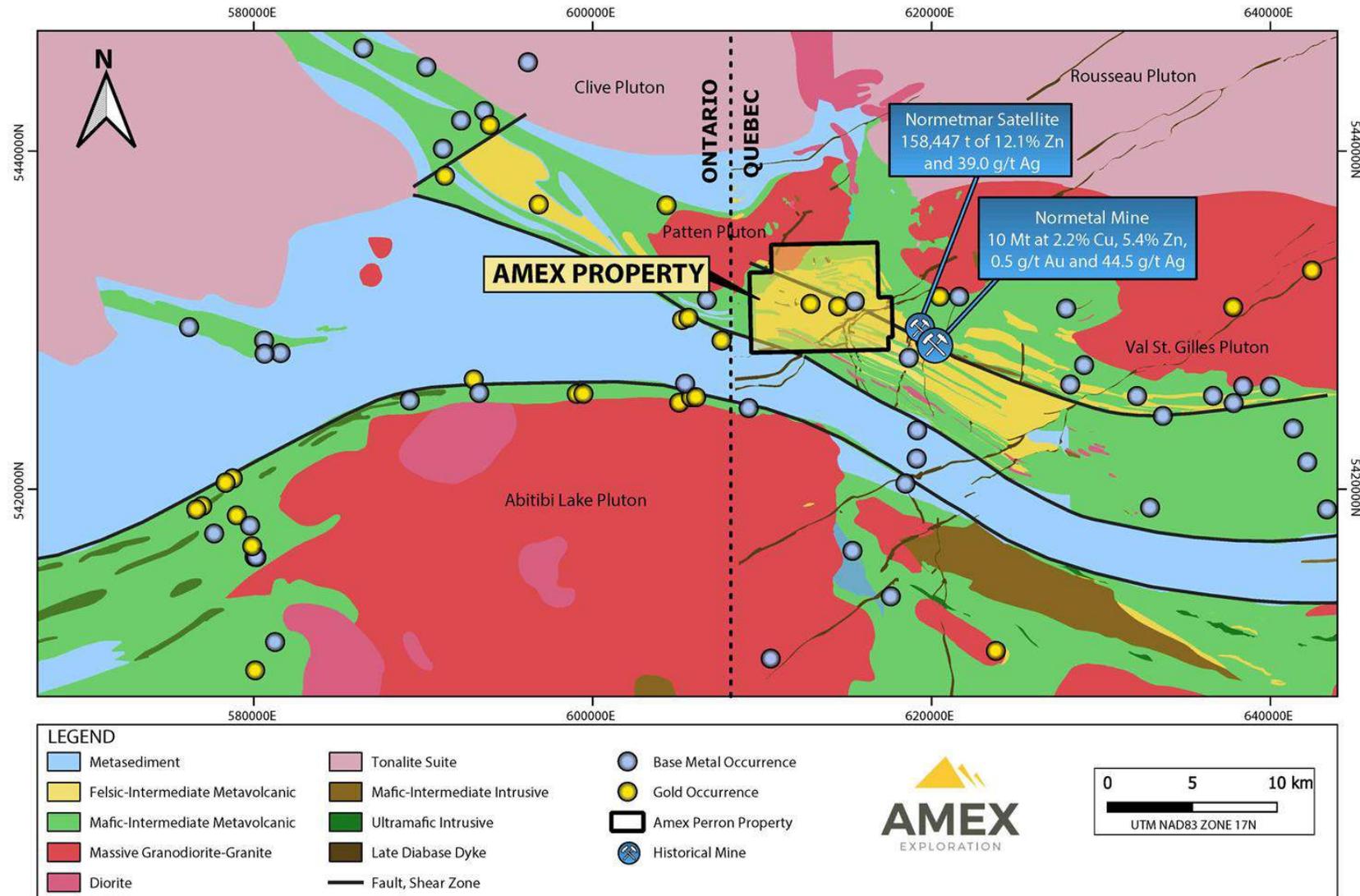
# Regional Geology

- Archean Burntbush-Normétal Greenstone Belt
- Volcanic assemblage comprising basalt, andesite, rhyolite, mafic dykes and late unconformable Chicobi sediments
- Polyphase deformation events
- **Several gold and base metal occurrences**
- **Historical base metal Normetal Mine and Normetmar satellite**

VMS

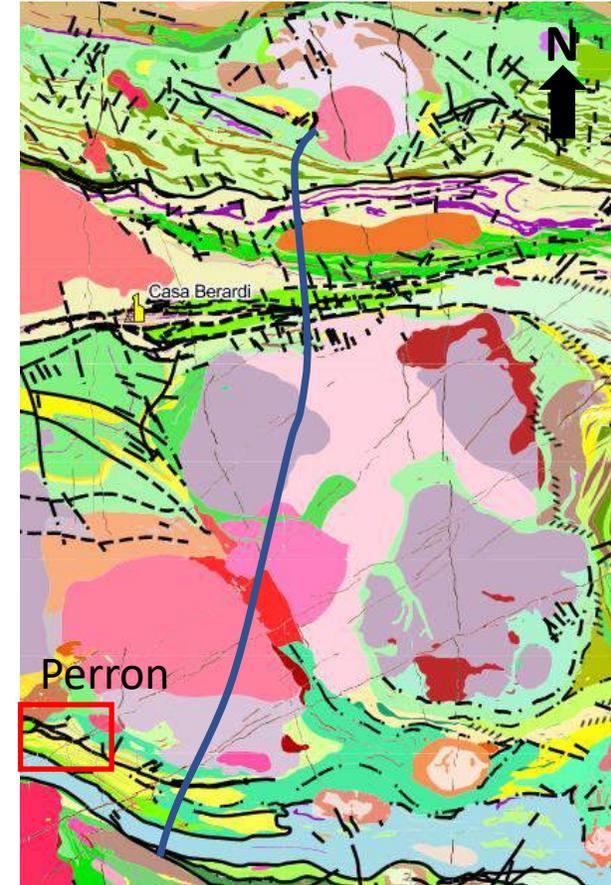
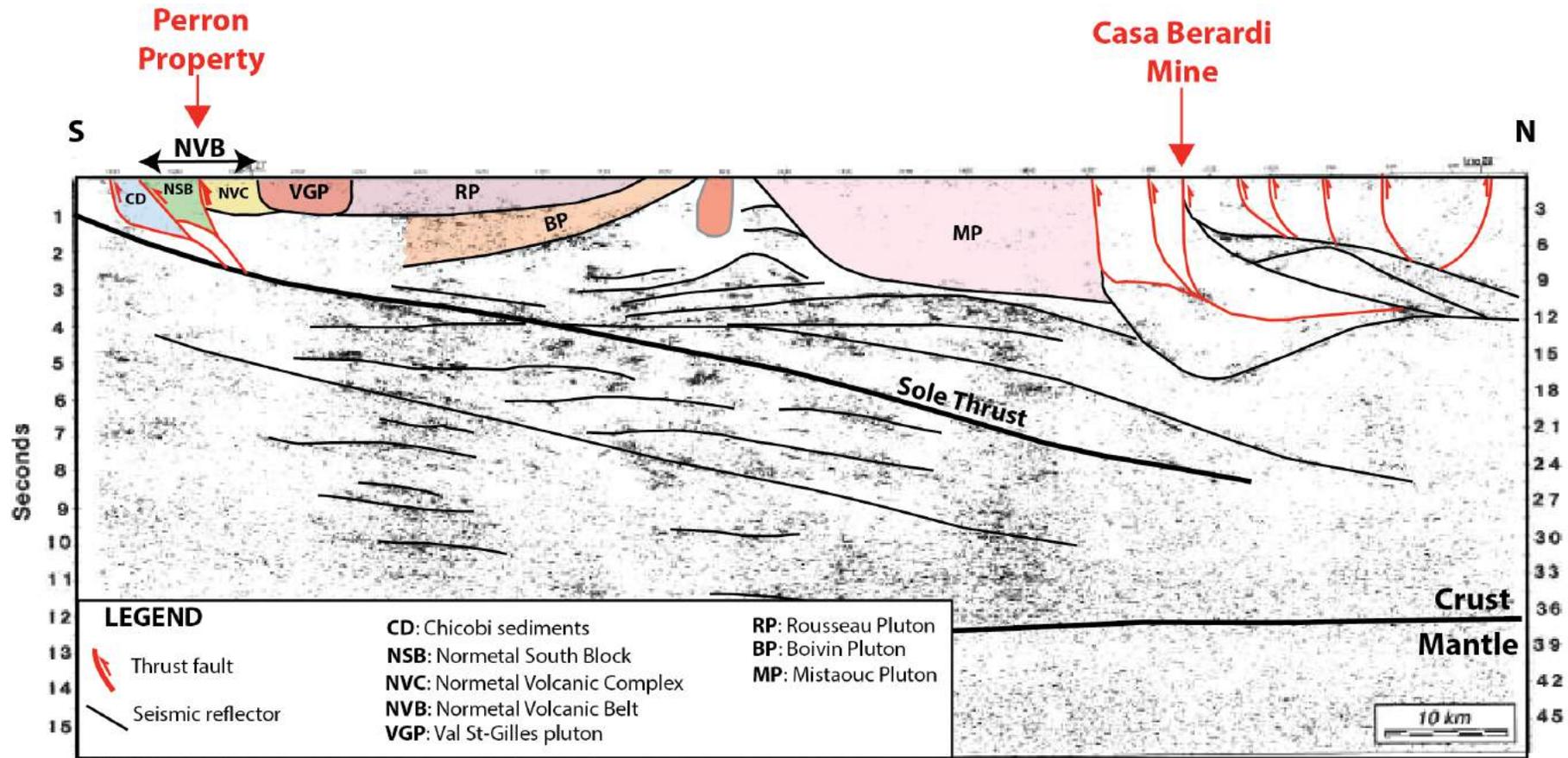


## BURNTBUSH-NORMETAL GREENSTONE BELT



# Regional Geology

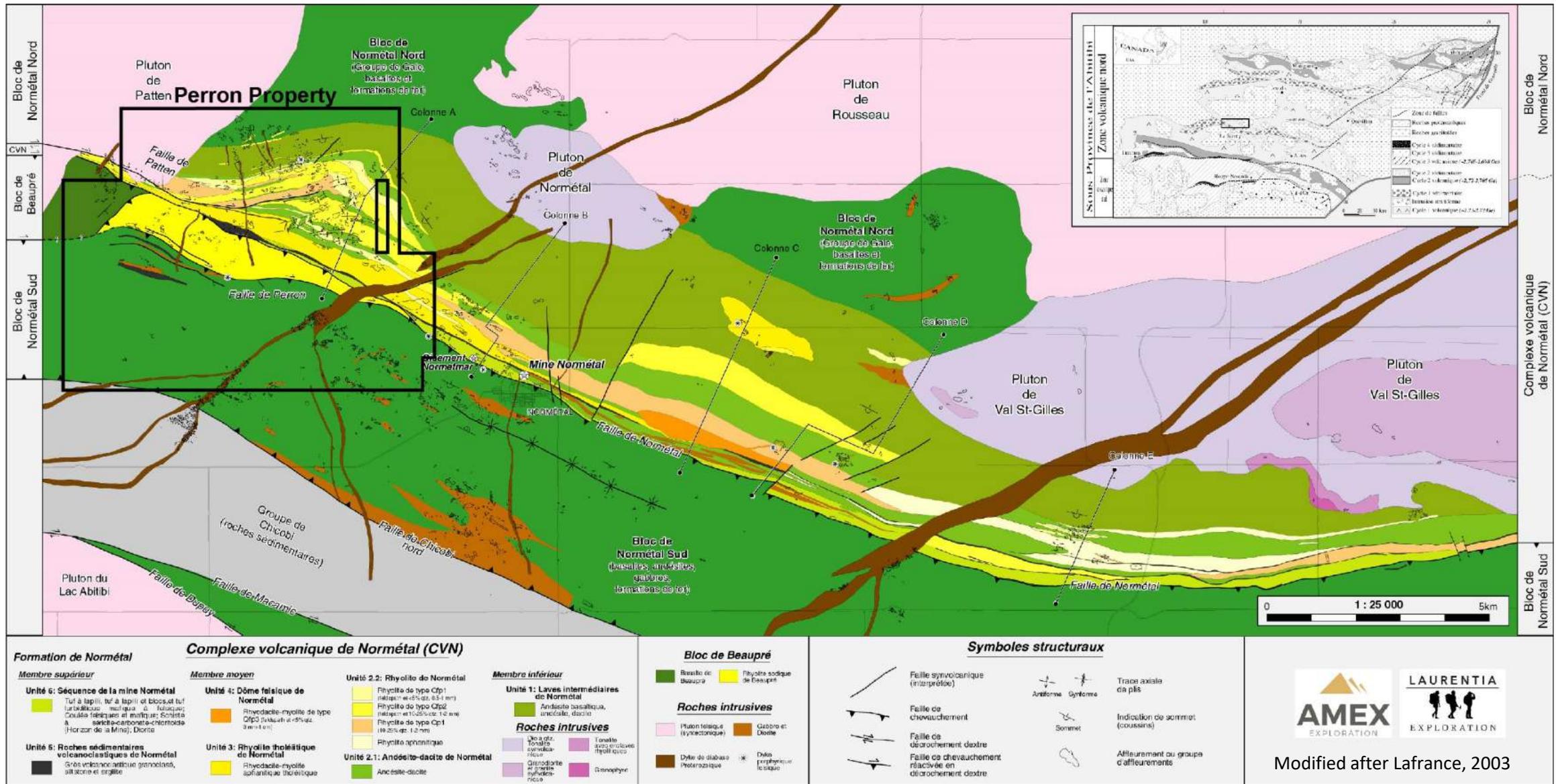
- Deep structure on the Normétal Volcanic Belt (~10 Km depth)
- South-vergent thrusting event (D1)
- Listric faults connected with a sole thrust (imbricate fan system)
- Similar system with Casa Berardi Mine



Modified after Lacroix and Sawyer, 1995  
Lithoprobe Seismic reflexion



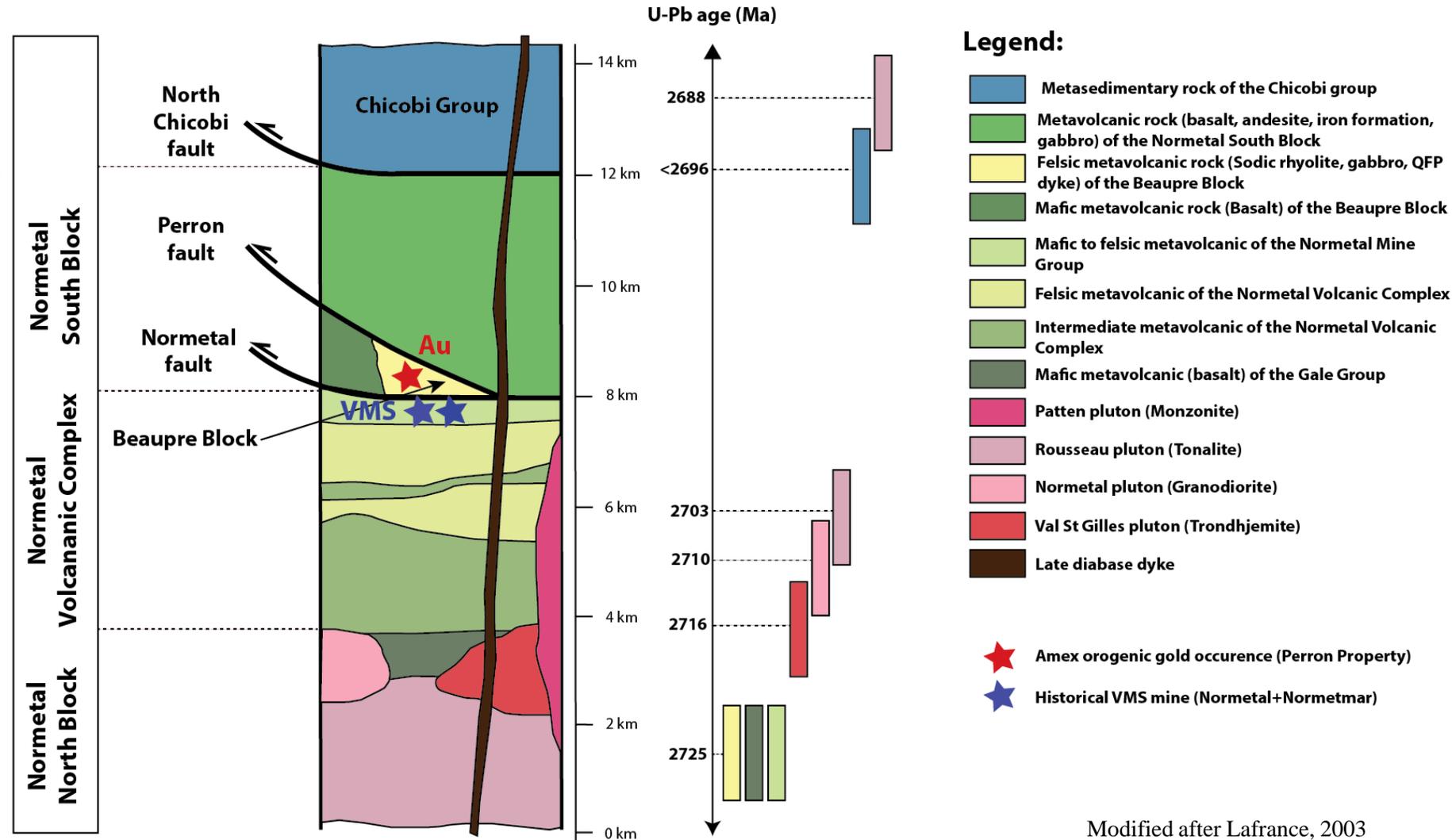
# Regional Geology



## Normetal Volcanic Belt

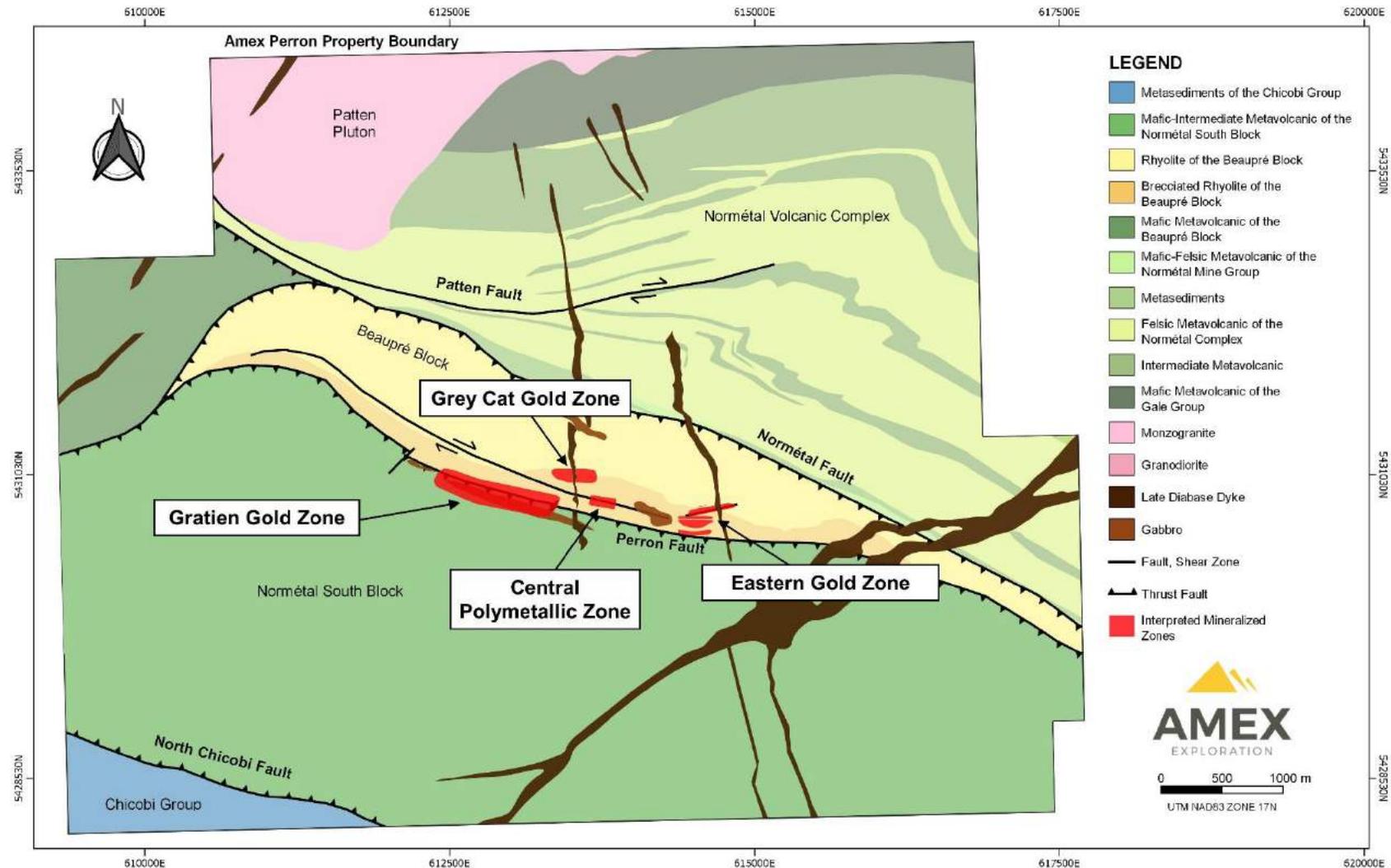
# Regional Stratigraphy

- Stratigraphic Log
- Volcanic assemblage comprising basalt, andesite, rhyolite, mafic dykes and late unconformable Chicobi sediments
- Polyphase deformation events
- Several gold and base metal occurrences
- **Historical base metal Normétal Mine and Normetmar satellite**



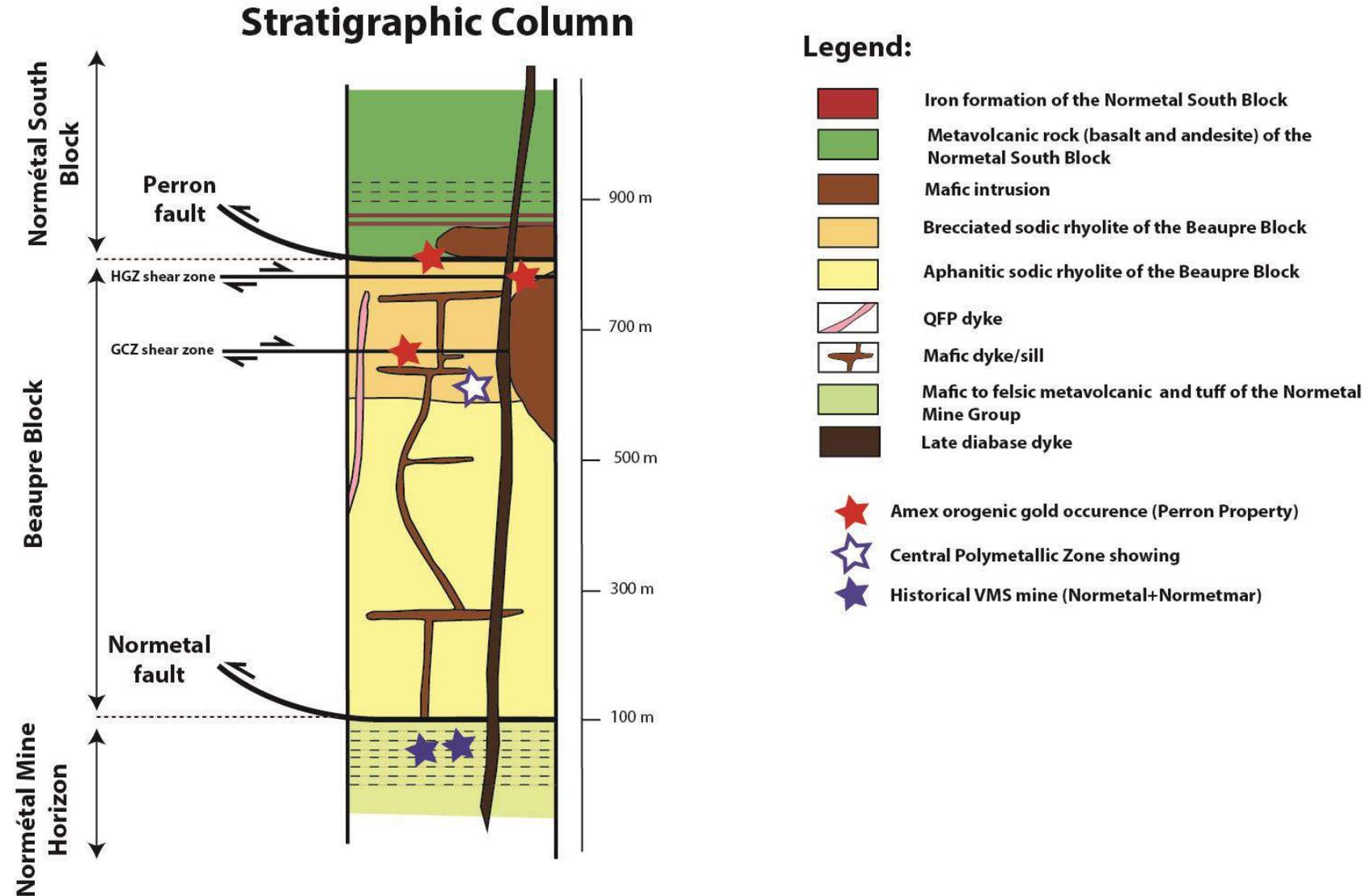
# Perron Property Geology

- Volcanic assemblage comprised of basalt, andesite, rhyolite, mafic dykes
- Reverse polarity with the bottom of the stratigraphic to the north
- Two deformation events (D1+D2) controlled by the main Perron and Normétal thrust faults
- Exploration along strike of the 3+km Perron gold corridor
- **Three gold zones and one base metal occurrences hosted in the Beupré Block**

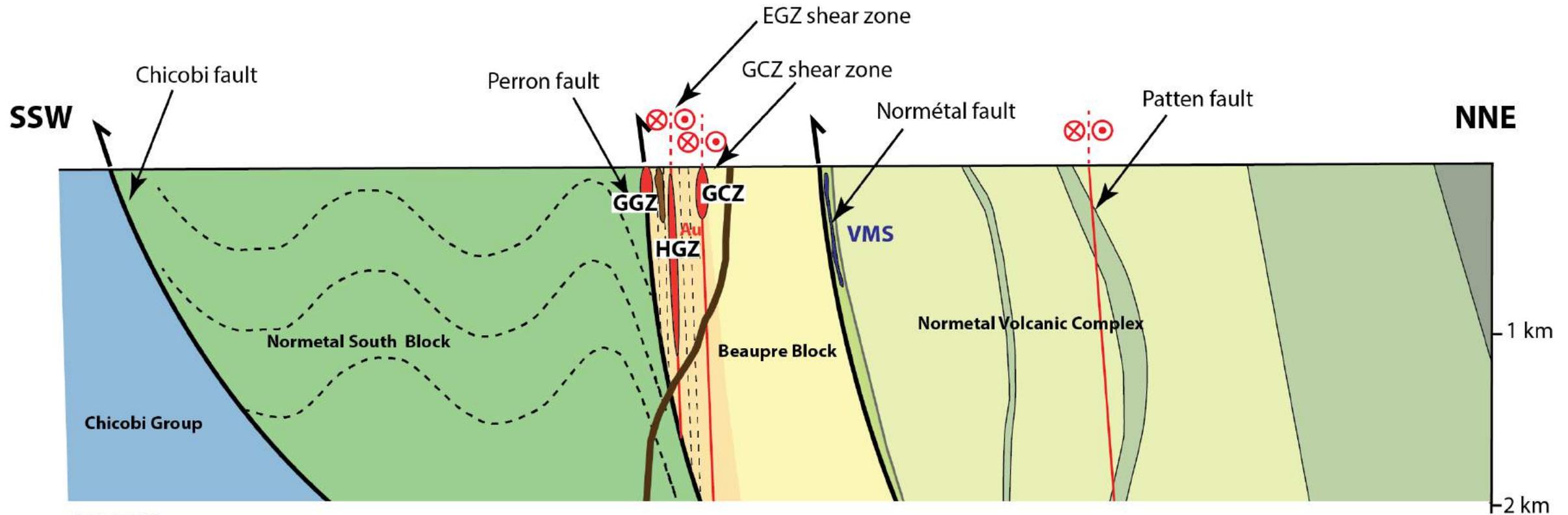


# Perron Property Geology

- Beaupré block defined by sodic rhyolite with two distinct textures - Brecciated and Aphanitic.
- Swarm of mafic dykes/sill
- Two deformation events (D1+D2) controlled by the main Perron and Normétal faults and third order dextral shear zone
- **Three gold zones and one significant base metal occurrence hosted on the stratigraphic top of the Beaupre Block including:**
  - **High Grade Zone (HGZ)**
  - **Grey Cat Zone (GCZ)**
  - **Gratien Gold Zone (GGZ)**
  - **Central Polymetallic Zone (CPZ)**



# Perron Property Geology



## LEGEND

- |   |   |   |  |
|---|---|---|--|
|  | Metasediments of the Chicobi Group                          |   | Intermediate Metavolcanic of the Normetal Volcanic Complex |
|  | Mafic-Intermediate Metavolcanic of the Normetal South Block |  | Mafic Metavolcanic of the Gale Group                       |
|  | Brecciated Rhyolite of the Beaupre Block                    |  | Mafic Intrusion  |
|  | Sodic Rhyolite of the Beaupre Block                         |  | Late Diabase   |
|  | Mafic-Felsic Metavolcanic of the Normetal Mine Group        |  | D1 Thrust Fault  |
|  | Felsic Metavolcanic of the Normetal Volcanic Complex        |  | D2 Dextral Shear Zone                                      |
|   |   |  | Gold Zone  |
|   |   |  | VMS Zone   |

0 1 km



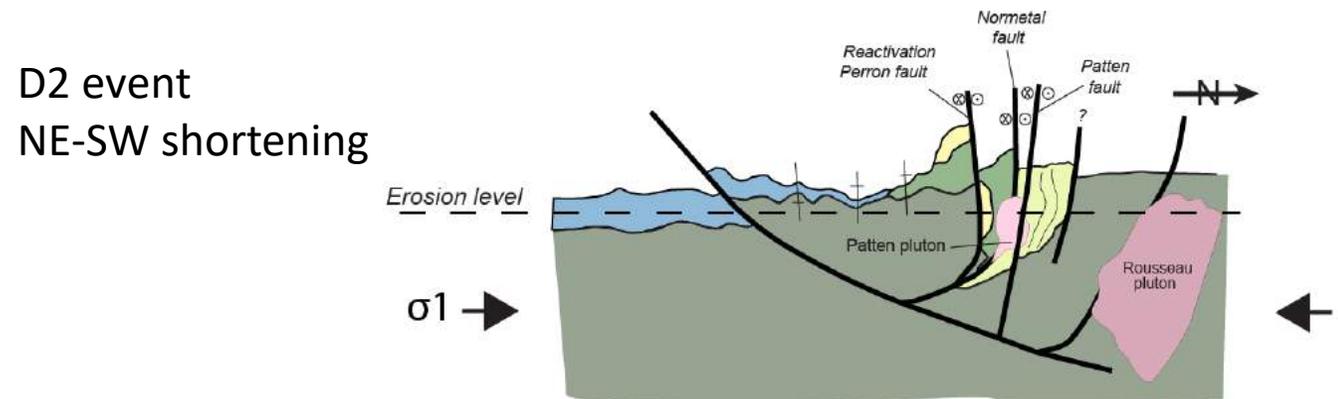
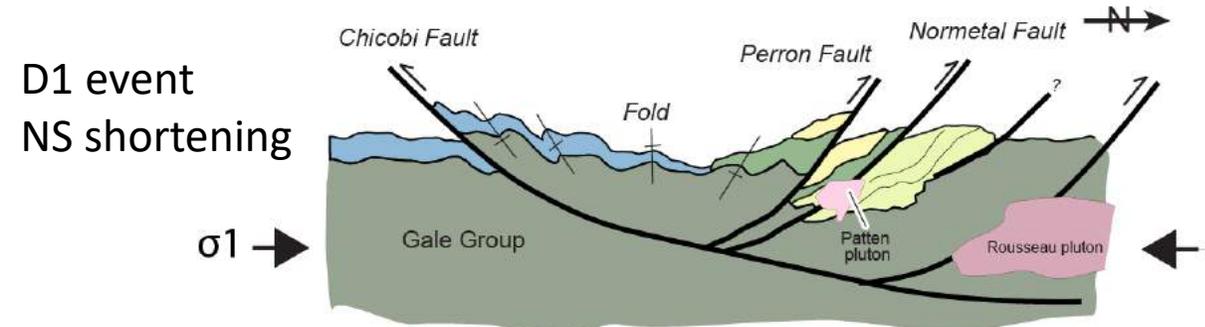
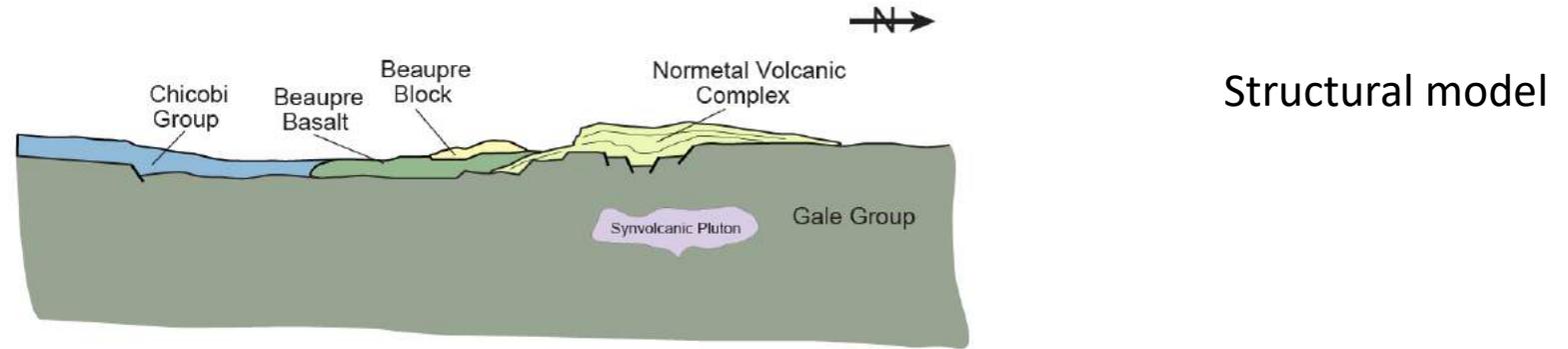
LAURENTIA



EXPLORATION

# Structural Geology

- Two deformation events (D1/D2) associated with S1 and S2 foliation fabrics
- D1 deformation event associated with thrust faults (Perron and Normetal)
- D2 deformation defined by reactivation of the thrust faults and formation of third order subvertical dextral faults
- **Late D2 deformation clearly associated with the regional gold mineralization pulse**
- Late diabase dykes crosscut all of the stratigraphic sequence



Modified after Lafrance, 2003

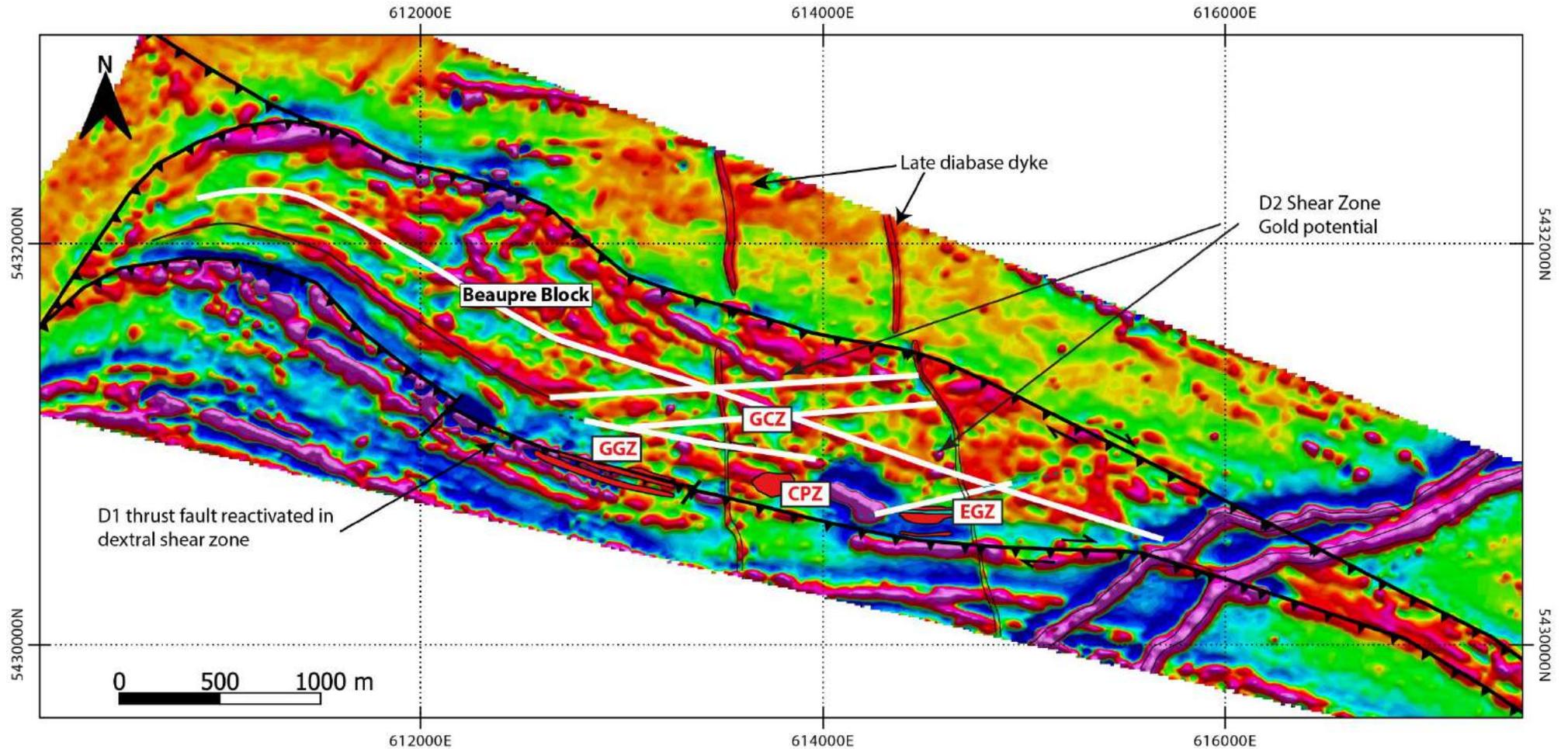


# Structural Geology

## Several distinct magnetic lineaments

- Thrust faults (Perron and Normetal faults)
- Second to third dextral shear zone (N090 to N70 trending)

Drone Mag survey, 2020



# Structural Geology

- Three gold zones show increasing plunge from the West to the East (10° to 75°)
- These features could be associated with transpressional event during D2
- Impact for exploration along strike and to depth of known zones as well as elsewhere on the Beapre block



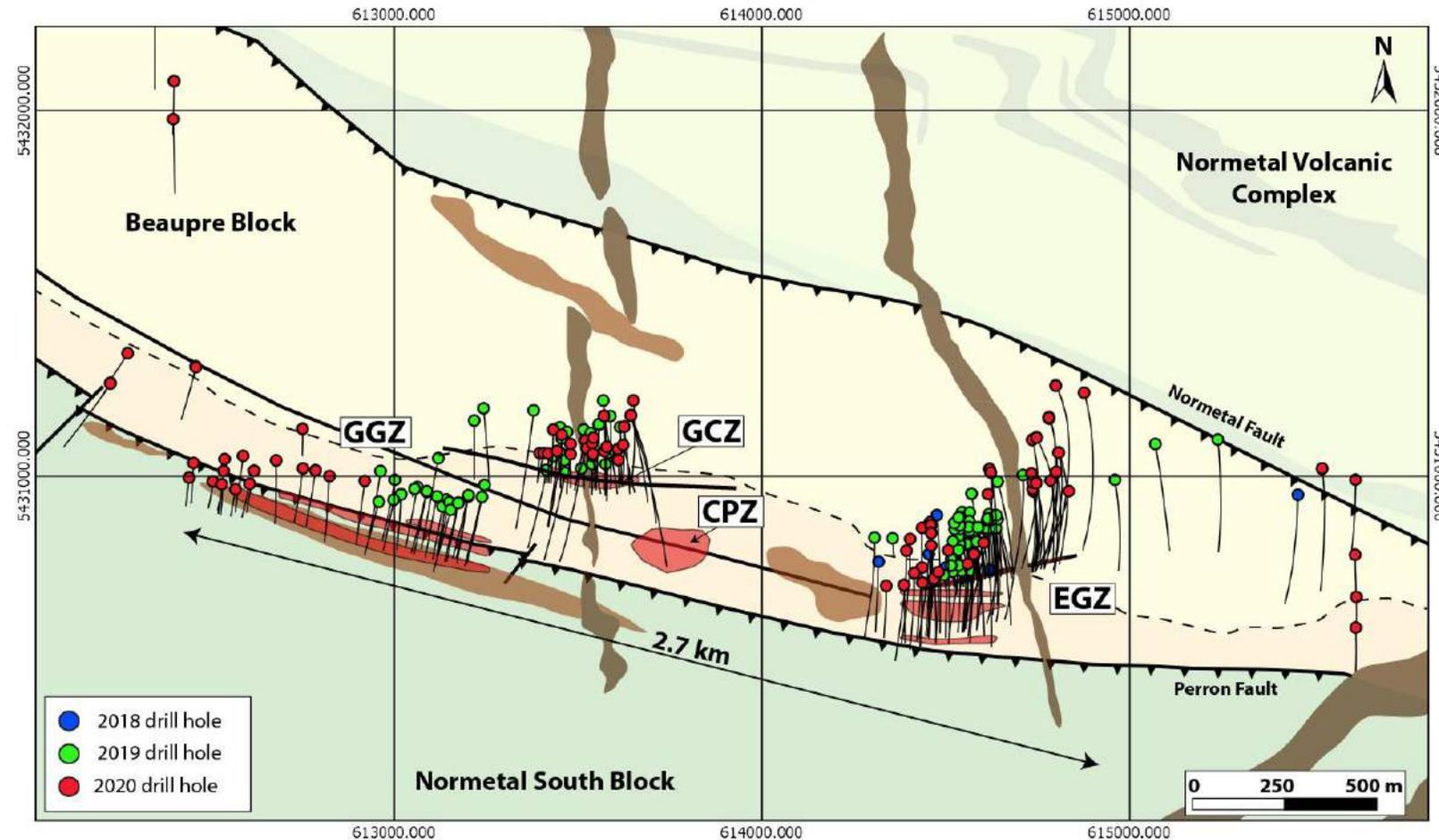
EBL Consultants enr.



# Gold Mineralization

## What we know

- Gold mineralization hosted in brecciated rhyolite or along the mafic dyke/intrusion (South margin of the Beaupre block)
- Gold mineralization is controlled along a strike of 2.7+ km Perron gold corridor
- Gold mineralization style defined by gold bearing quartz veins with sulfides and visible gold surrounded by a strong quartz-sericite alteration halo
- **Late D2 deformation clearly associated with the regional gold mineralization pulse**
- **High potential for additional discoveries**



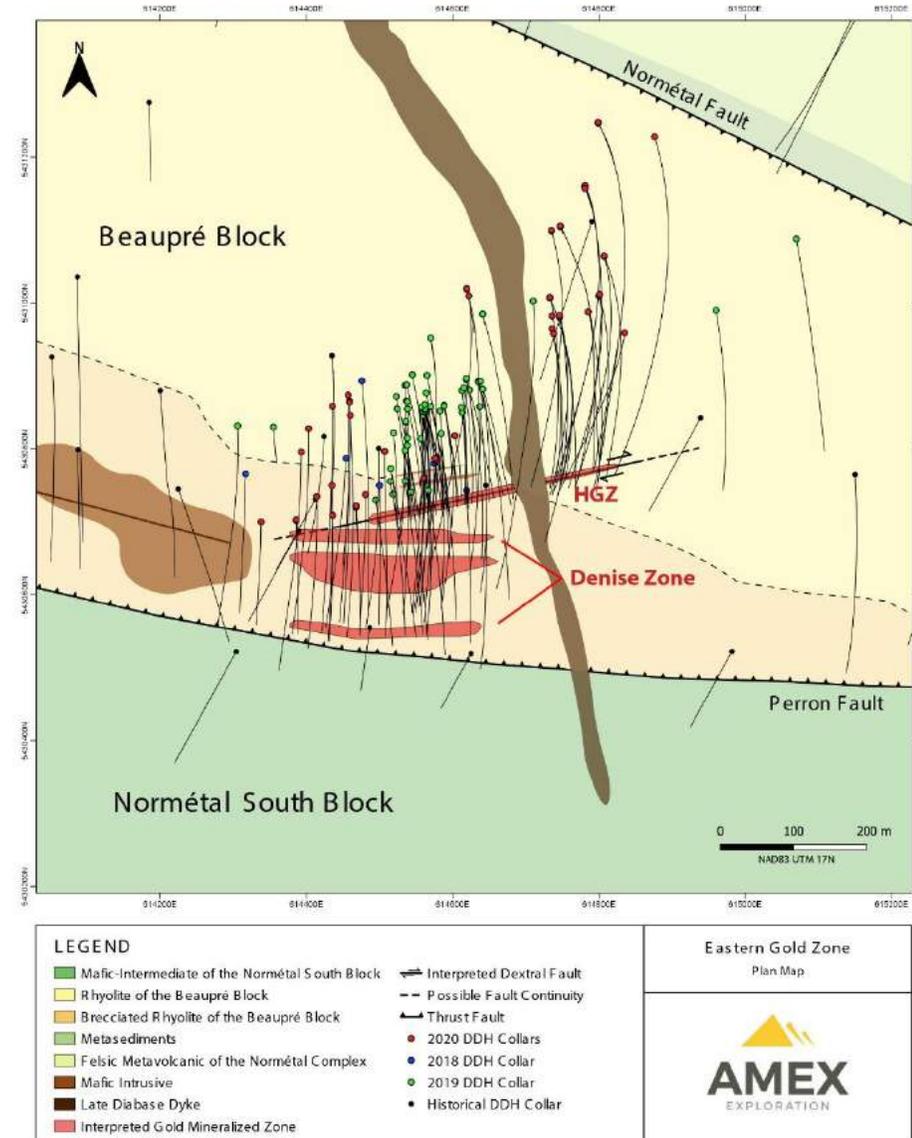
EGZ: Eastern Gold Zone  
GCZ: Grey Cat Zone

GGZ: Gratien Gold Zone  
CPZ: Central Polymetallic Zone

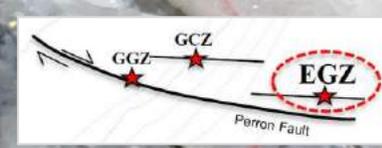
# Eastern Gold Zone



- Most High gold grades at the scale of the Property
- Two distinct gold zones both hosted in brecciated rhyolite
- **High Grade Zone (HGZ)** controlled by a N080-trending dextral shear zone plunging at 70° to the ENE
- **Denise Zone** defined by several gold panels along an E-W trending fault system and associated with a mafic intrusion
- Mineralization style associated with gold bearing quartz-carbonate veins with sulfides and visible gold or disseminated style.
- Open in all directions along strike and to depth
- **+60 drill holes** have intersected gold mineralization greater than **10 g/t Au** over variable widths
- **Metallurgy program:** overall gold and silver recoveries greater than 99%.

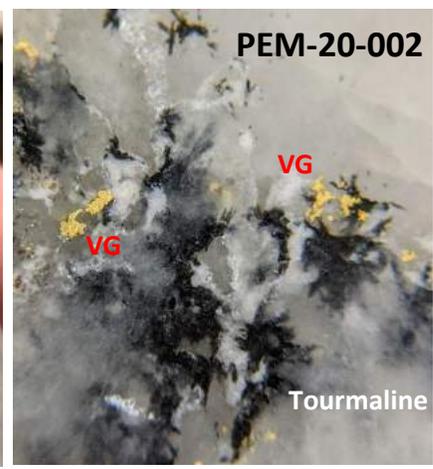
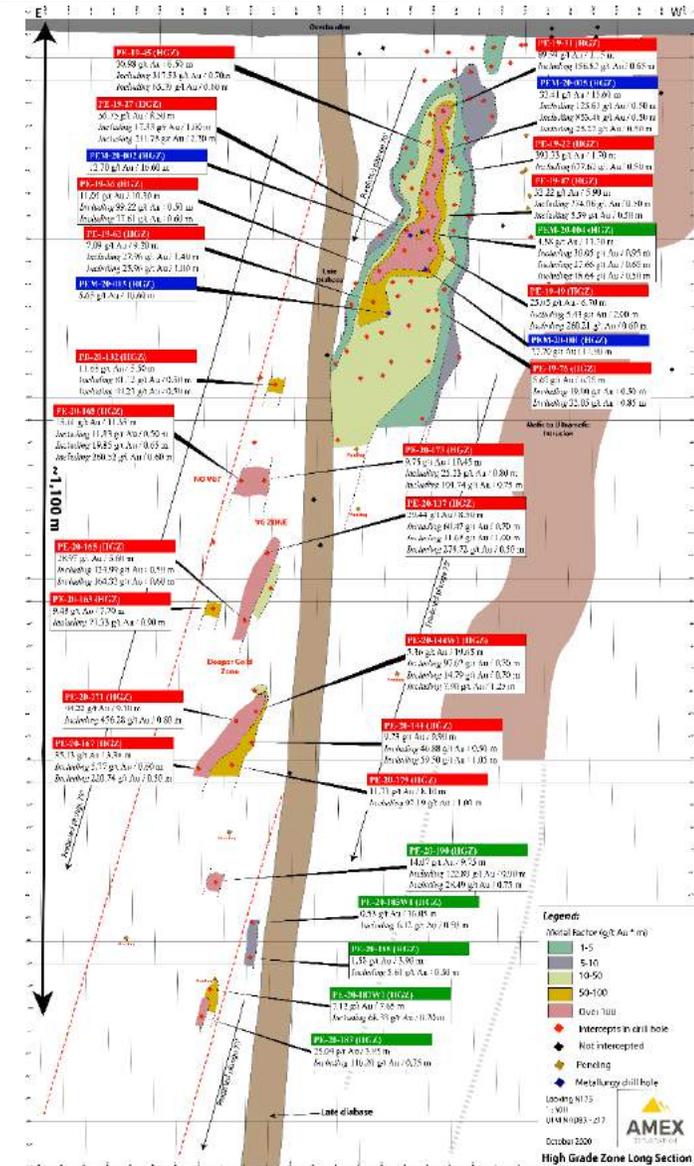


# Eastern Gold Zone

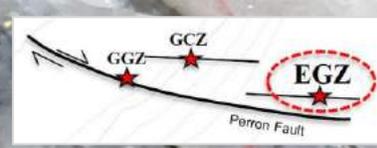


## High Grade Zone

- Intersected > 1 vertical kilometre of high grade mineralization starting from surface
- Gold mineralization forms an oreshoot plunging at 75° to the East
- Widespread quartz-sericite alteration
- Sheared gold bearing quartz-carbonate veins with sulfides and visible gold
- Close association with visible gold and sphalerite

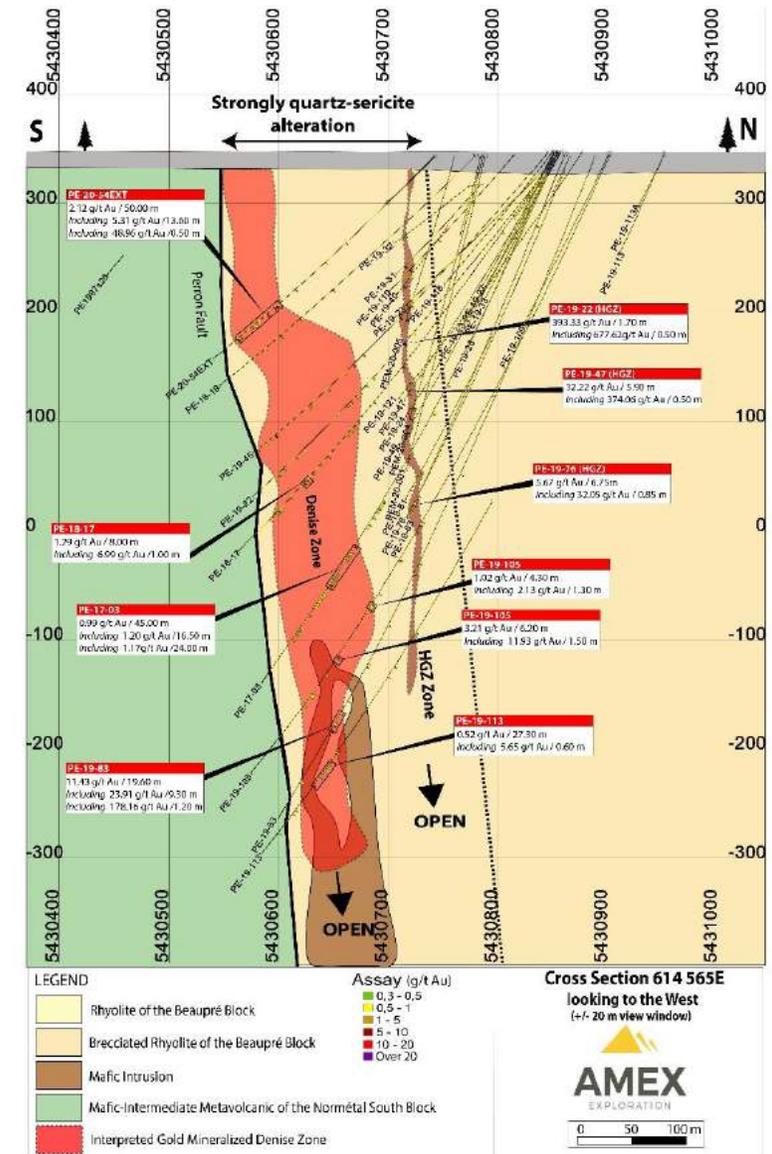


# Eastern Gold Zone

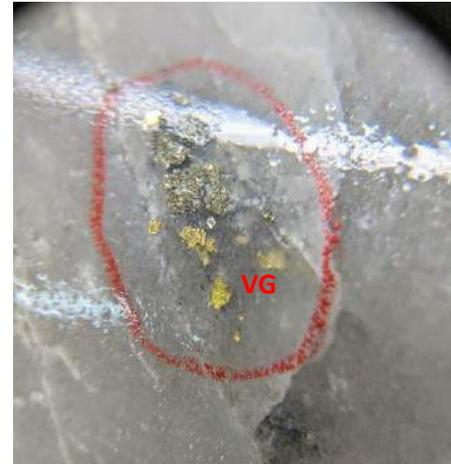
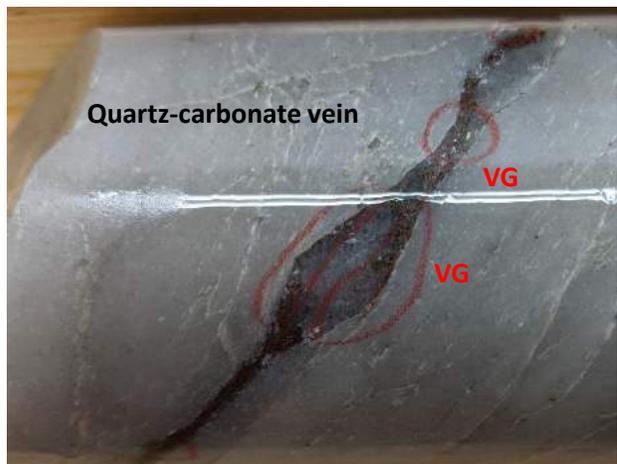


## Denise Zone

- Hosted in brecciated rhyolite strongly altered with quartz and sericite
- Gold mineralization associated with small quartz-carbonate veins/veinlets with occasional visible gold and disseminated sulfides (sphalerite+pyrite+pyrrhotite)



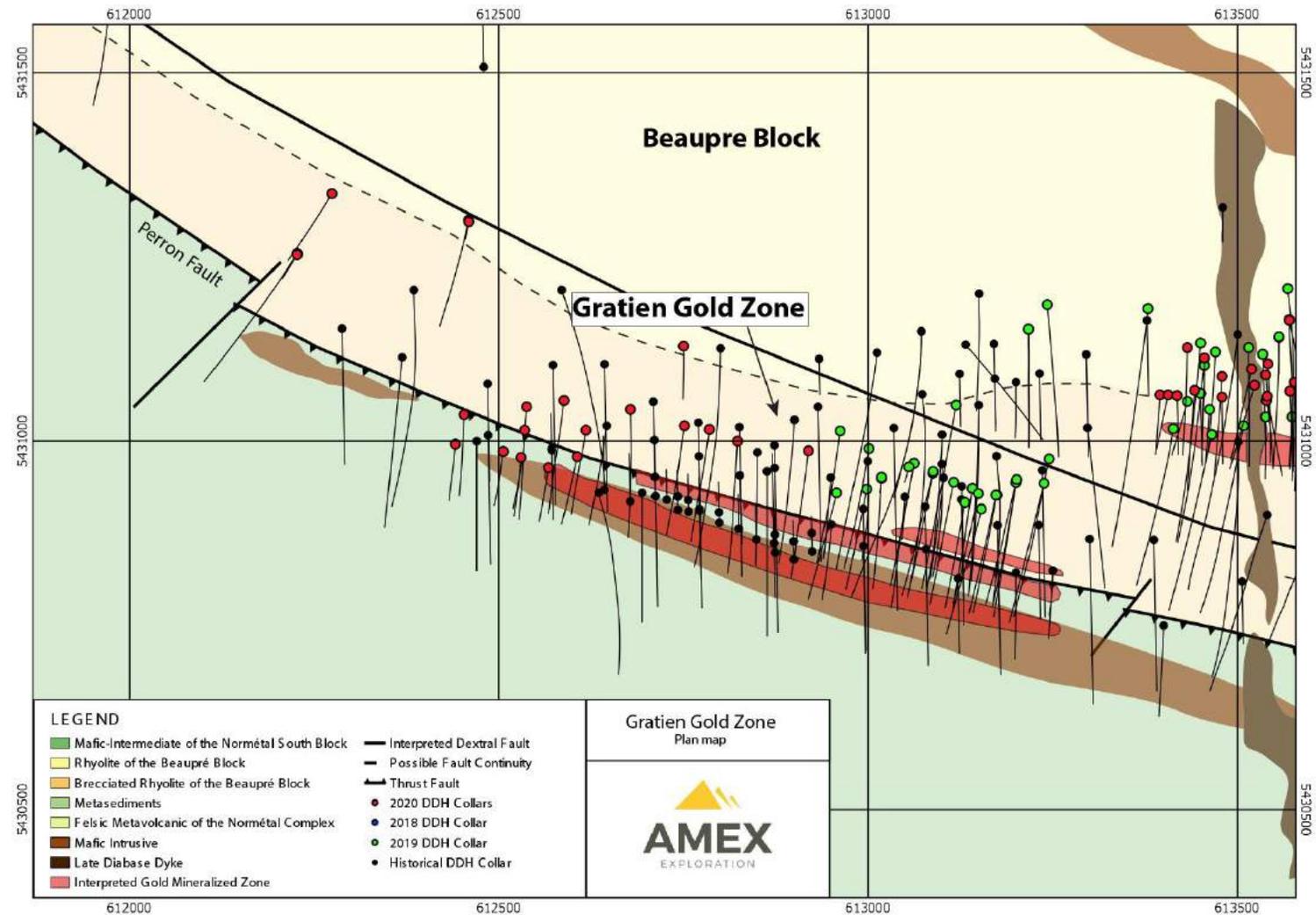
PE-20-192



# Gratien Gold Zone



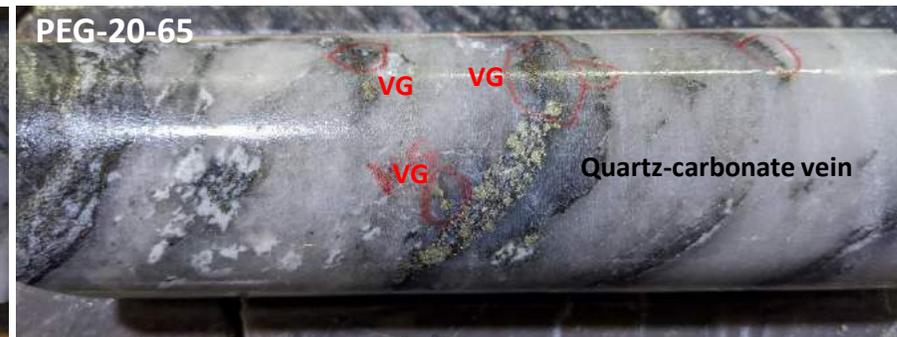
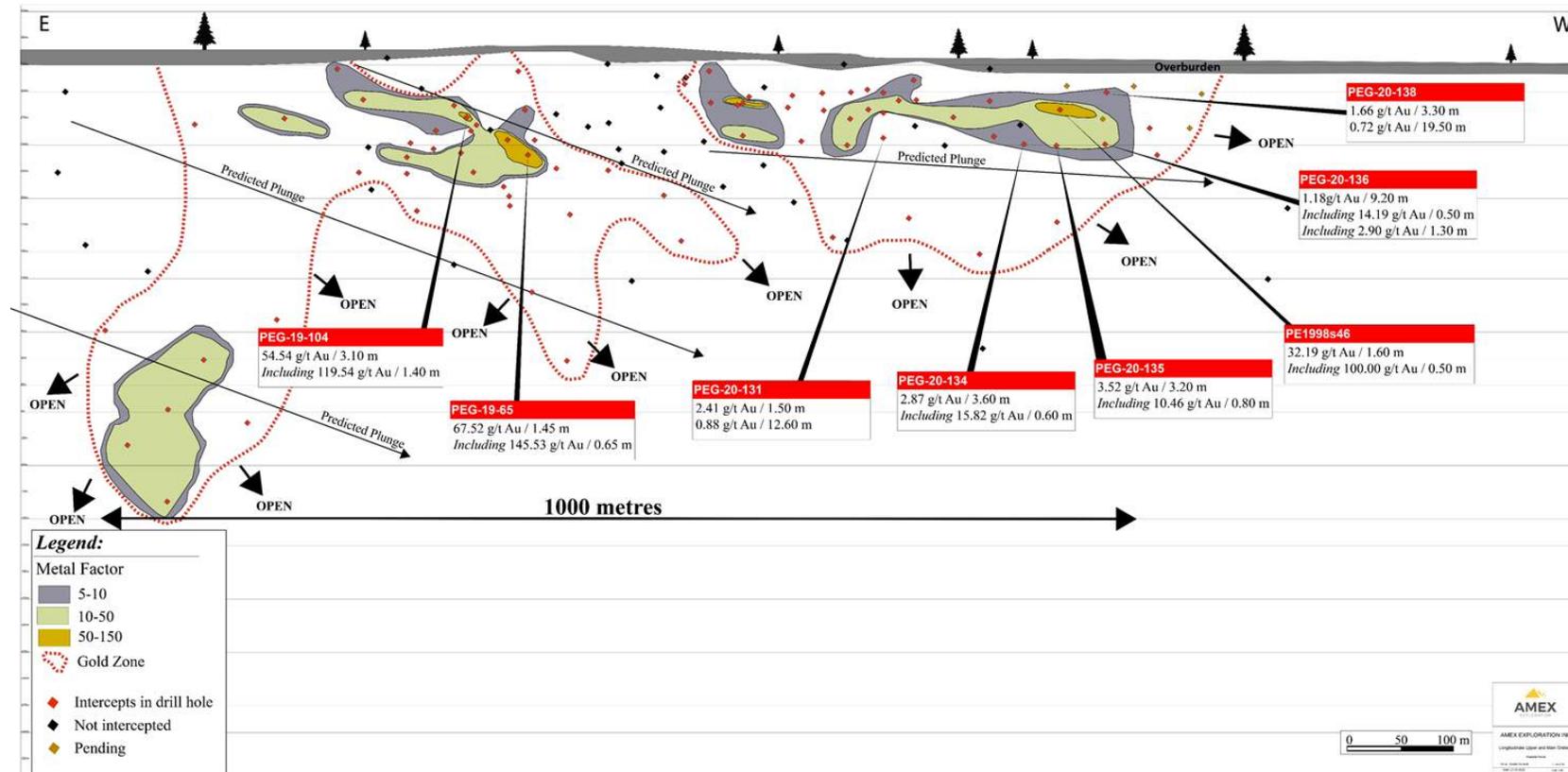
- Multiple gold panels along 1+km strike length
- Number of stacked vertically dipping lenses of gold mineralization within the Gratien zone - two prominent zones, the Gratien Main and Upper Gratien
- Gold mineralization style defined by gold bearing quartz veins with sulfides and visible gold surrounded by a weak quartz-sericite alteration halo
- Gold mineralization wraps an elongate mafic intrusion
- **Late D2 deformation clearly associated with the regional gold mineralization pulse**
- Continued drilling will test continuity and extension of these gold-bearing lenses



# Gratien Gold Zone



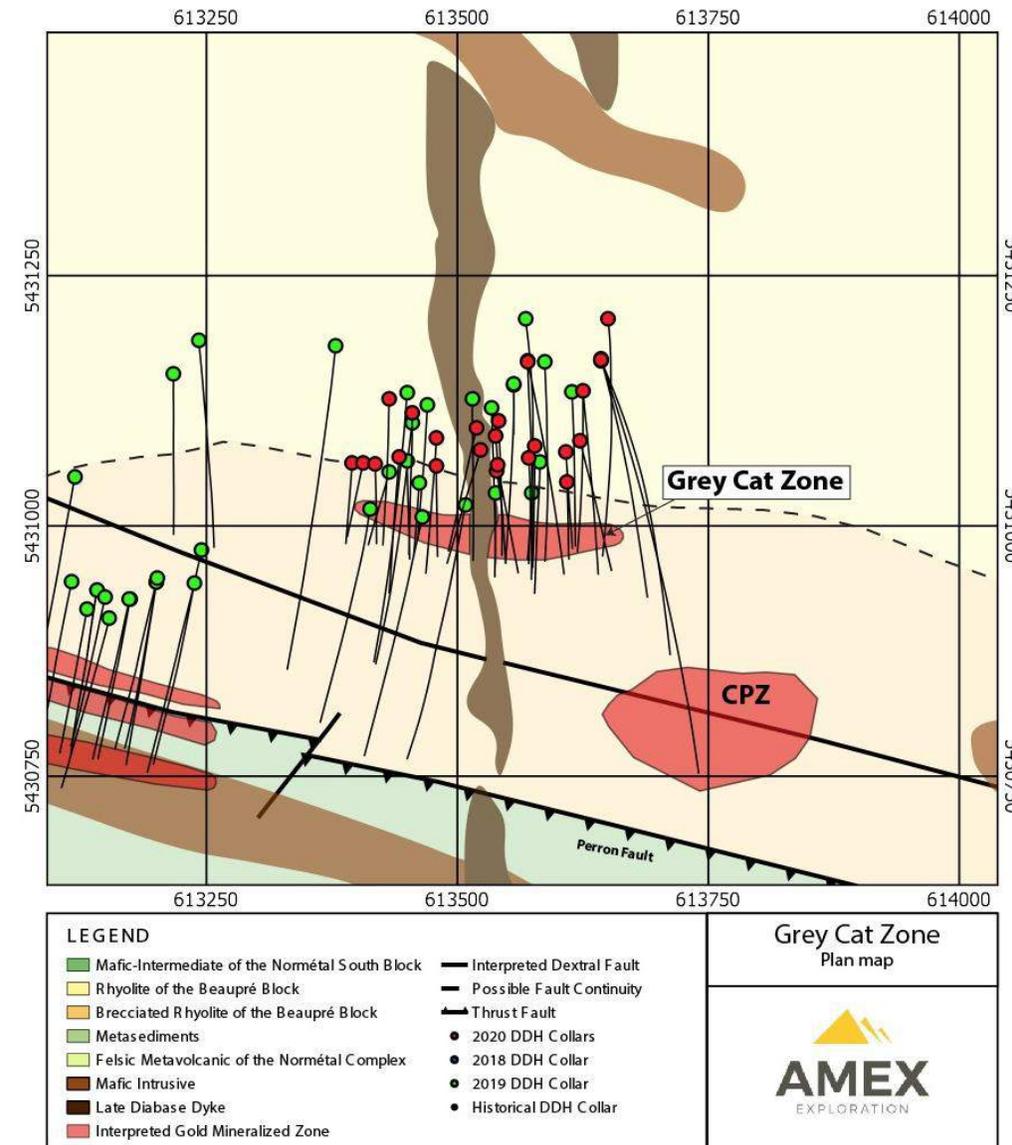
- Hosted in brecciated rhyolite and within andesite surrounding a linear mafic intrusion
- Gold values also identified in iron formation in the Normétal South Block
- Gold mineralization associated with small quartz-carbonate vein/veinlet with visible gold and sulfides (sphalerite+galena+pyrite+pyrrhotite)



# Grey Cat Zone

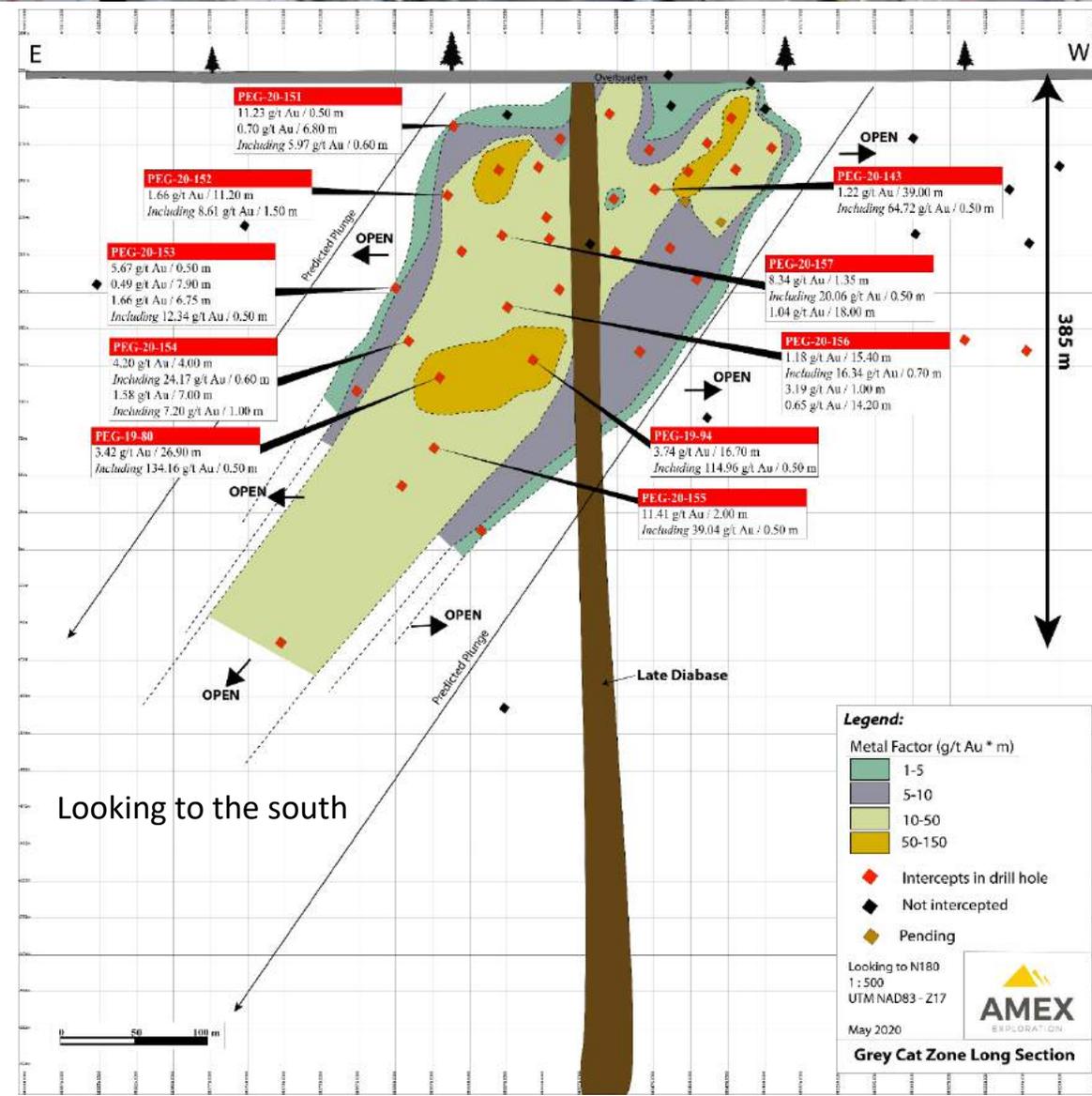
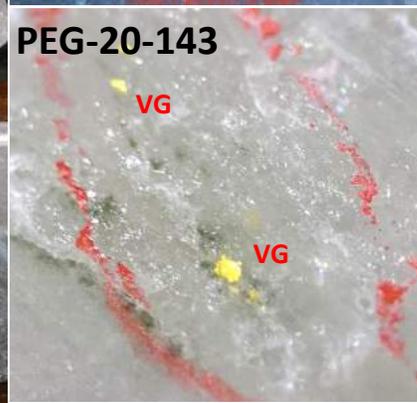
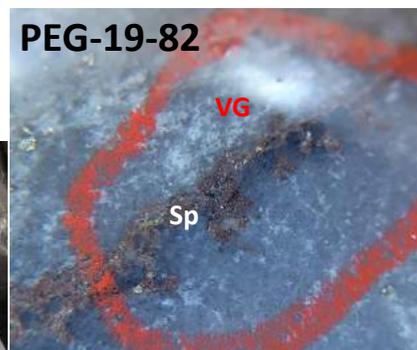
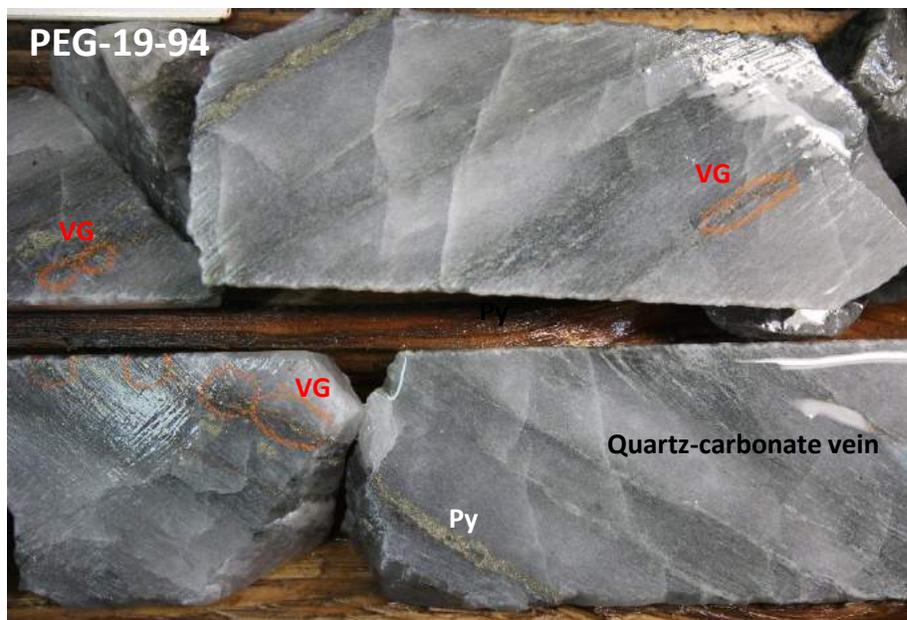


- New discovery hosted in brecciated rhyolite cross-cut by late mafic dyke
- Structurally controlled by an E-W-trending shear zone along 400 m horizontally and plunging 50° to the east
- **Similar mineralization style associated with quartz-carbonate veins with sulfides and visible gold**
- Moderate to strong quartz-sericite alteration
- Near surface mineralization of over 20 m width defined from 14 m below surface to a depth of 425 m – open to depth



# Grey Cat Zone

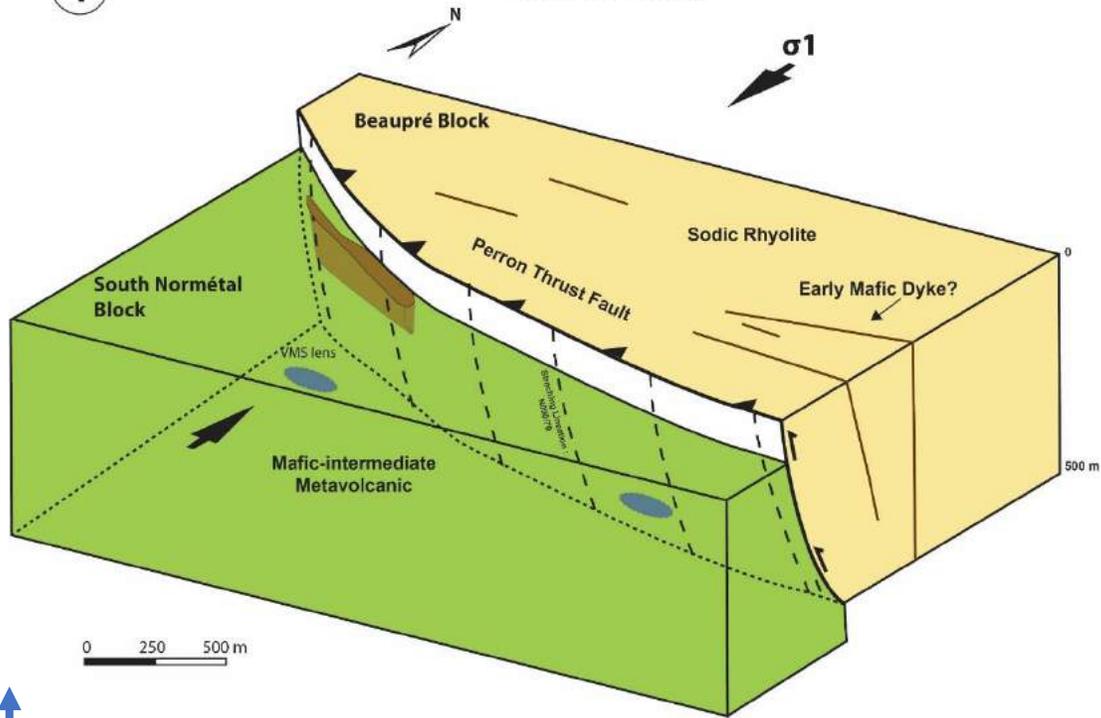
- Open in all directions
- Potential for development in open pit
- Similar structural setting and gold mineralization to HGZ



# Genetic Model

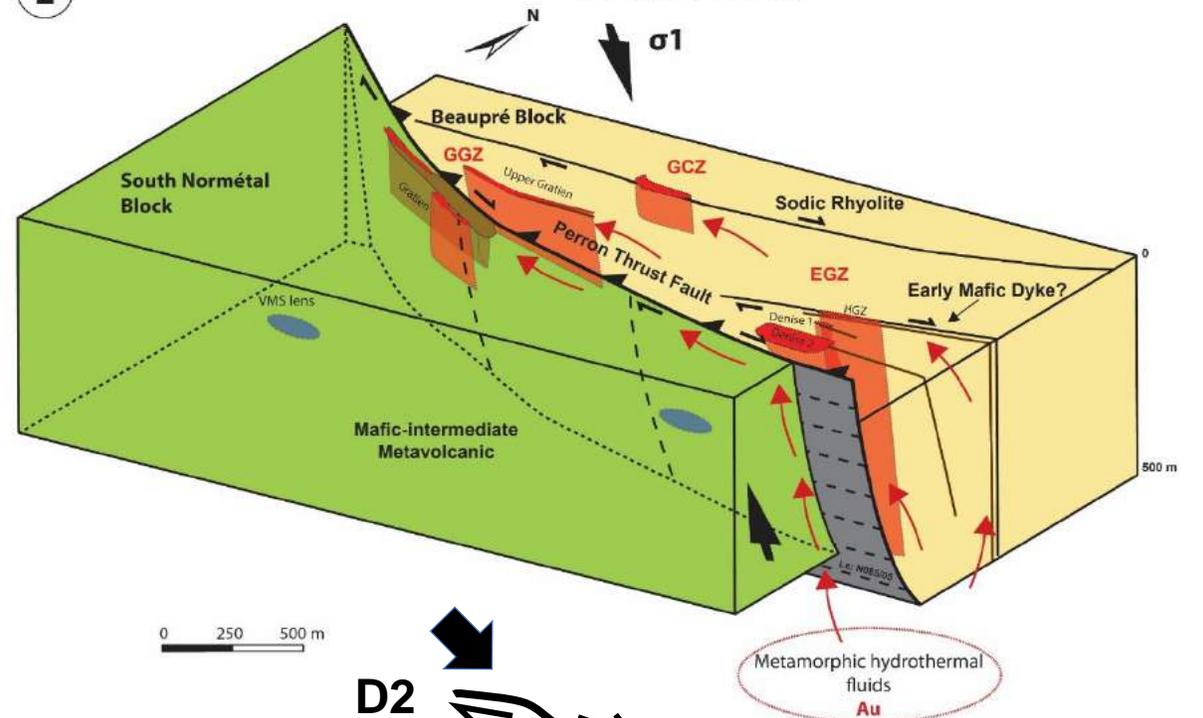
1

D1 Deformation event  
N-S shortening



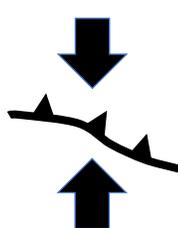
2

D2 Deformation event  
NW-SE shortening



Hydrothermal fluid

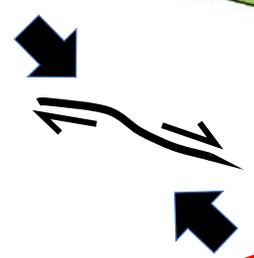
D1



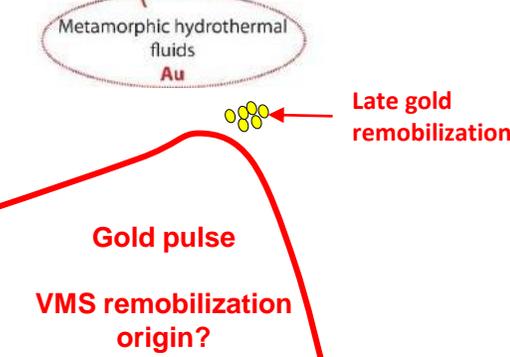
D1

Increase of metamorphic conditions

D2



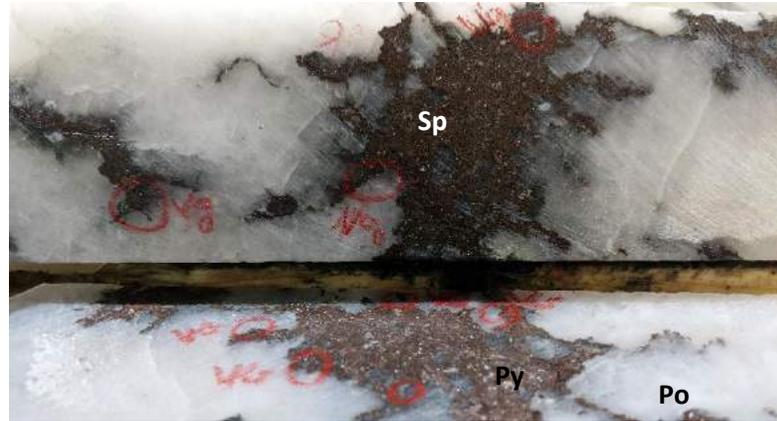
D2



# Genetic Model

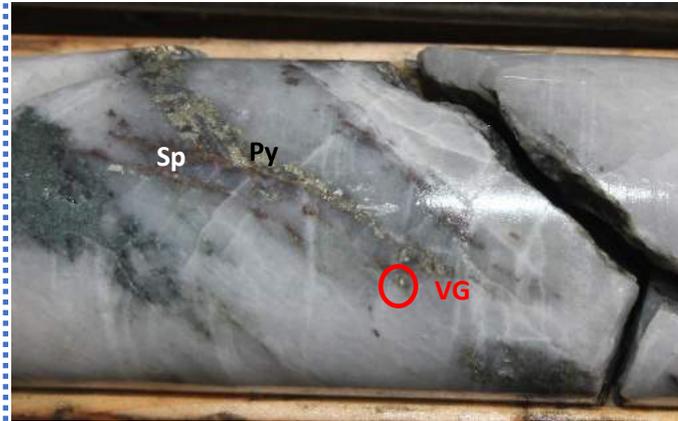
- Similar origin of hydrothermal fluid at the scale of the Beupre Block – enriched in gold and lesser base metals

High Grade Zone



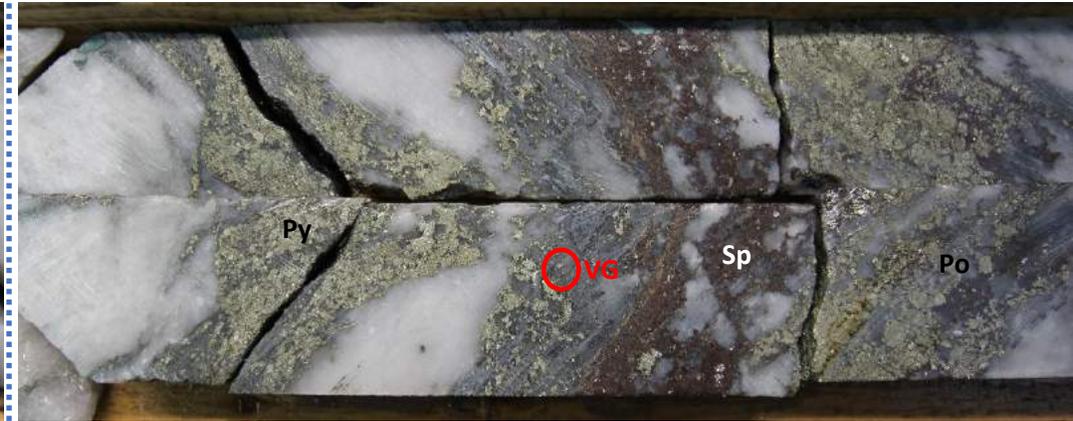
Quartz-carbonate vein associated with pyrite+sphalerite±pyrrhotite and VG

Grey Cat Zone



Quartz-carbonate vein associated with pyrite+sphalerite±pyrrhotite and VG

Gratien Gold Zone



Quartz-carbonate vein associated with pyrite+sphalerite±pyrrhotite±galena and VG

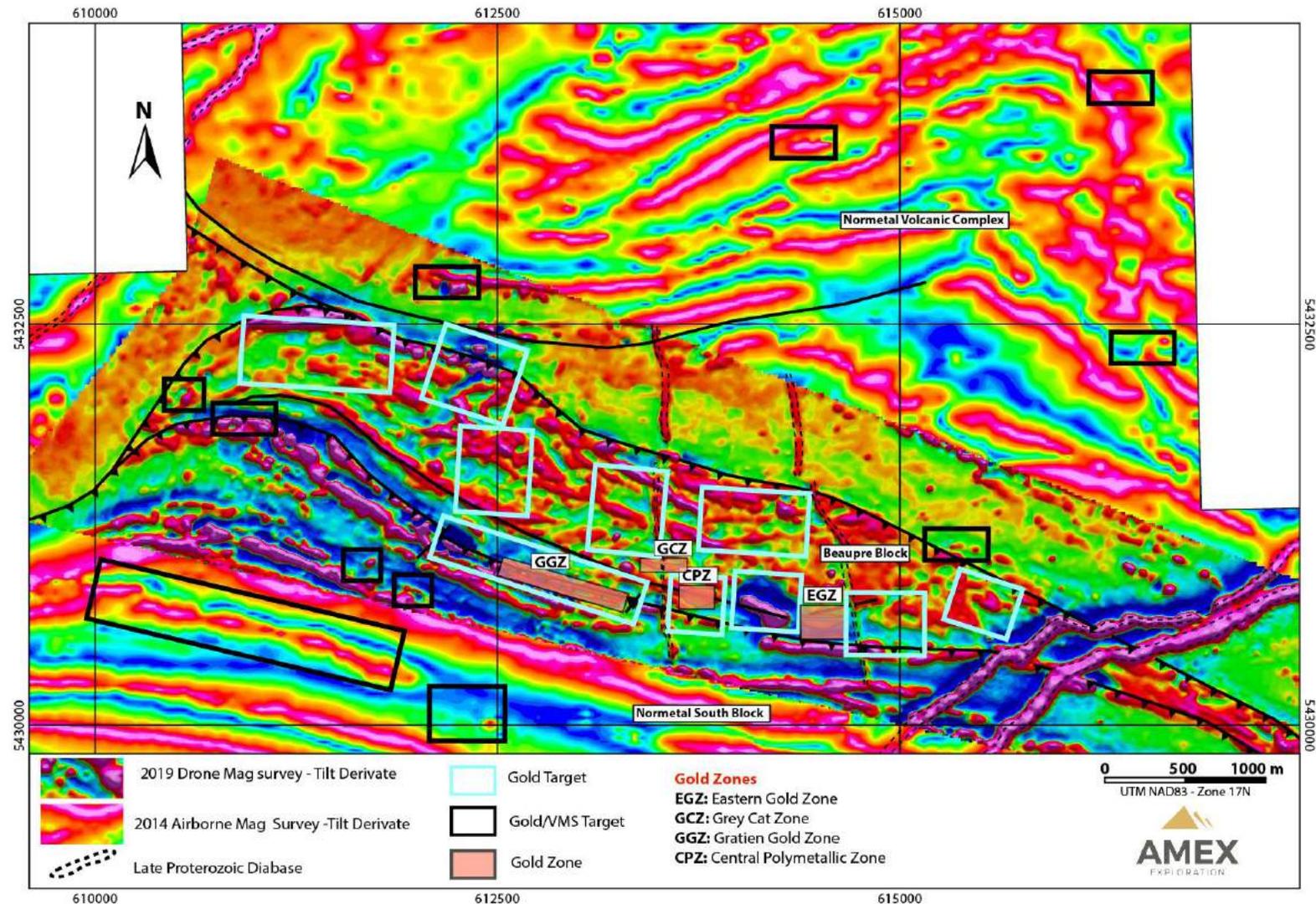
Similar features

## Hypothesis

- **Metamorphic source from a possible deep VMS remobilization in Normetal volcanic sequence**
- **Main hydrothermal fluid event during D2 deformation**

# Regional targets

- Identified numerous cryptic faults which may be associated with gold mineralization (D2 structures)
- Key targeting tools:
  - Identification of the alteration halo (sericite-silicification) surrounding all known gold mineralization on the project
  - Intersection of secondary/tertiary structures that cross the Normetal and Perron faults
  - Presence of mafic-ultramafic intrusions
- Blue shapes represent gold drill targets
- Black shapes represent VMS targets





# Questions

