# SOLSTICE



#### G O L D

# **KAHUNA GOLD PROJECT**

# A Technical Overview

March 2019

### FORWARD LOOKING STATEMENTS

This document contains certain forward-looking statements ("FLS") relating but not limited to the Company's expectations, intentions, plans and beliefs. FLS can often be identified by forward-looking words such as "emerging", "goal", "plan", "intent", "estimate", "expects", "scheduled", "may" and "will" or similar words suggesting future outcomes or other expectations, beliefs, plans, objectives, assumptions, intentions or statements about future events, performance or treasury levels. FLS in this presentation also include, but are not limited to, the extent and timing of described programs, such as drilling, ground magnetics, rock sampling and till sampling. There can be no guarantee that continued exploration at Kahuna, which is at an early stage of exploration, will lead to the discovery of an economic gold deposit. While the Company believes the boulders described in this presentation are sourced locally for the reasons outlined in this presentation, there can be no certainty that their source is local, or that it will be located on Solstice claims. Factors that could cause actual results to differ materially from any FLS include, but are not limited to, delays in obtaining or failures to obtain required governmental, environmental or other project approvals, inflation, changes in exchange rates, fluctuations in commodity prices, delays in the development of projects and other factors. FLS are subject to risks, uncertainties and other factors that could cause actual results to differ materially from expected results.

Assay results from grab samples (boulders and outcrop) are selected samples and are not necessarily representative of the mineralization hosted on the property. Grab sample weights range from 0.75kg to 3kg.

Potential shareholders and prospective investors should be aware that these statements are subject to known and unknown risks, uncertainties and other factors that could cause actual results to differ materially from those suggested by the FLS. Shareholders are cautioned not to place undue reliance on FLS. By its nature, FLS involve numerous assumptions, inherent risks and uncertainties, both general and specific, that contribute to the possibility that the predictions, forecasts, projections and various future events will not occur. Solstice Gold undertakes no obligation to update publicly or otherwise revise any FLS whether as a result of new information, future events or other such factors which affect this information, except as required by law.

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Ian Russell, P.Geo., is the Qualified Person as defined by NI 43-101 standards responsible for reviewing the technical content of this presentation.

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### Part One – The Big Picture

# WHAT IS THE TARGET?

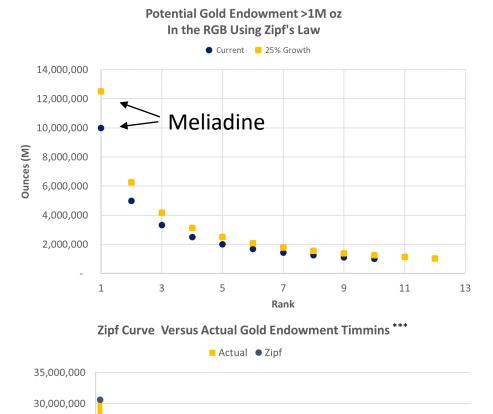
- Meliadine-type iron formation associated gold deposit (part of orogenic or mesothermal class of deposit).
- Deposits can be large best example Homestake (~41 M oz past production) hence attractiveness as an exploration target.
- Can present good continuity due to association with laterally extensive iron formations.
- Key factors for large deposit potential\*:
  - ✓ First order regional scale, deep-seated structures or breaks, e.g. Cadillac Malartic
  - ✓ Regional structures often close to major volcanic/sedimentary boundaries or basins
  - ✓ Associated with late collisional and transpressional environments
  - ✓ Late timing of gold relative to complex structural history could be reworking of long-lived systems
  - $\checkmark\,$  Jogs in regional faults, second and third order faults, folding
  - ✓ Developed close to cratonic margins
  - $\checkmark\,$  Gold often associated with arsenopyrite.
- Local Meliadine factors:
  - Can be arsenopyrite-rich, associated with sulphidized iron formation but also hosted in sediments
  - Associated with splays and folds close to the regional Pyke Fault
  - Complex structural history, strong plunge control of orebodies
  - Deposits type respond to magnetics and EM, latter important in determining potential sulphides.

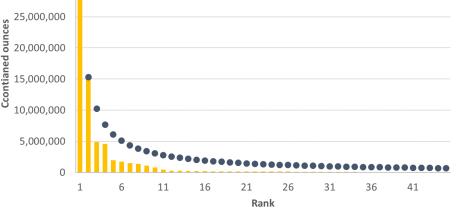
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# UNDISCOVERED OUNCES IN POTENTIAL GOLD DISTRIC

- Using Zipf's Law we can conservatively estimate the number of deposits >1 million ounces in the Rankin Gold Belt
- If we *assume Meliadine is the largest* deposit in the Belt at ~10mm ounces of Total Resources 9 more deposits to be found for a total of 19 million additional ounces.
- If we reasonably assume Meliadine has 25% growth in Total Resources over its lifetime 11 more deposits to be found for a total of 26 million additional ounces.
- The lower graph is the comparison of the estimate of the • endowment in the Timmins camp versus the known endowment.
  - Indicates a good correlation and indicates there is additional • potential for gold discovery in the Timmins Gold Camp, the core of which is roughly 1/3 the size of the Kahuna Gold Project.\*
- Zipf's Law is a formula that can be used to predict a well established relationship between numbers in data sets. It has been shown to be an effective tool in predicting size and distribution of deposits in gold belts.\*\*

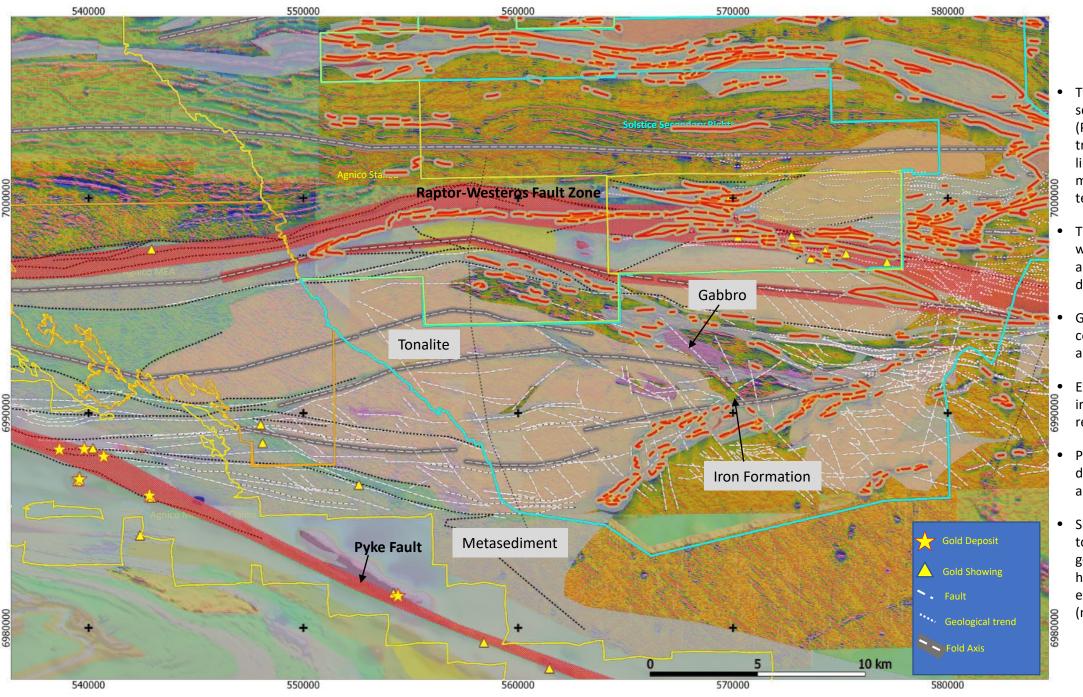
\*\*A Time-Series Audit of Zipf's Law as a Measure of Terrane Endowment and Maturity in Mineral Exploration Pietro Guj, Matthew Fallon, T. Campbell McCuaig, Robert Fagan Economic Geology (2011) 106 (2): 241-259.





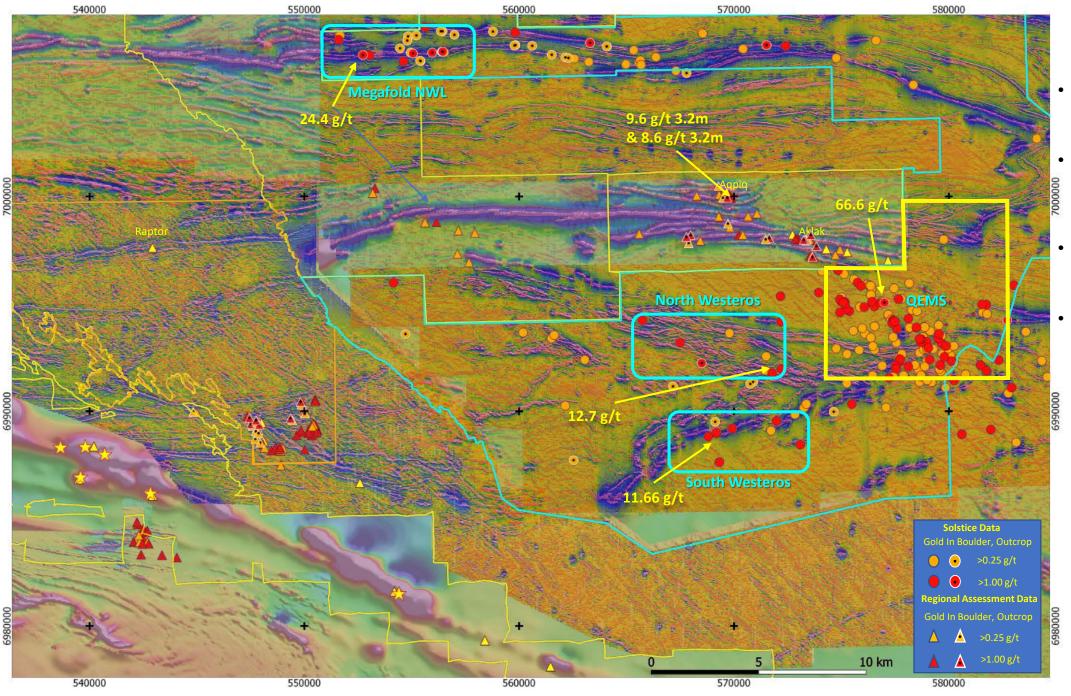
<sup>\*\*\*</sup>Geology Ontario and company documents.

<sup>\*</sup>Estimate only and does not imply same geology or gold endowment.



### S S L S T I C E

- Two fundamental regionalscale first-order features (Pyke Fault and RWFZ) traverse the area. RWFZ likely plumbs to upper mantle depths base down telluric profiles to the west.
- They are both associated with gold mineralization although RWFZ is in early days of discovery.
- Geology and Structure correlates with Meliadine area.
- Extensive development of iron formations – key regional host
- Prevalent dextral displacement across the area.
- Slide shows known gold up to ~2017. Since then the gold potential of the region has been significantly expanded by Solstice work (next slide).

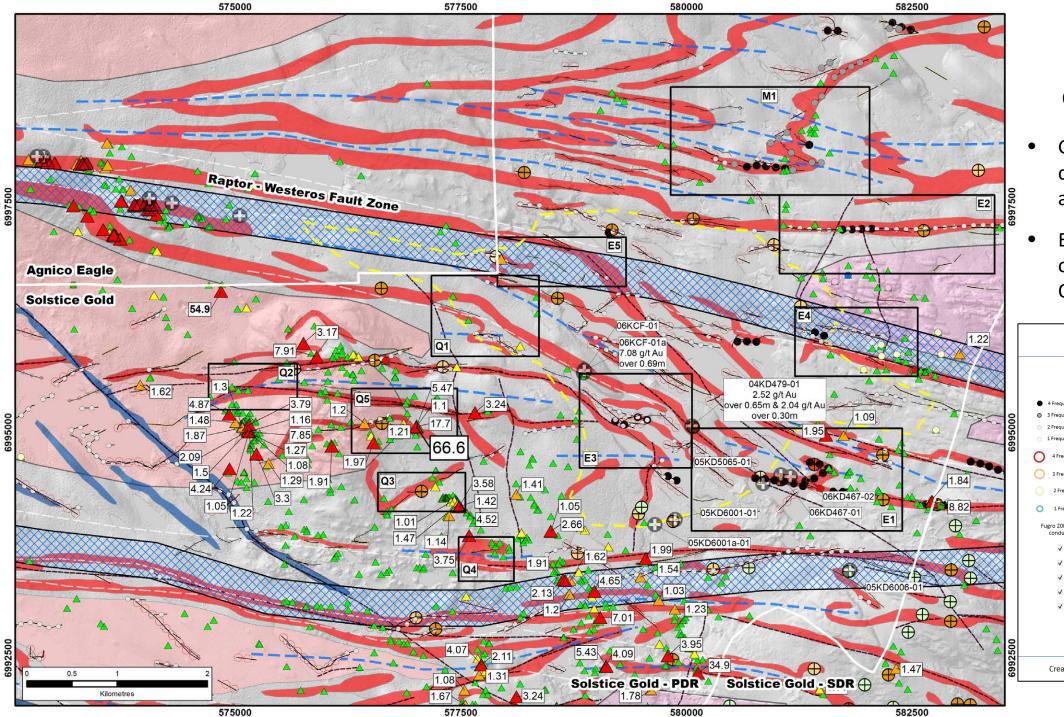


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- Significant gold discovered in key QEMS target - a 45km<sup>2</sup> area.
- Also significant gold in the Westeros fold and NW Megafold, all associated with magnetic rocks.
- Systematic exploration less than one year old but has made significant progress.
- Current focus is QEMS, the focus of the next few slides.



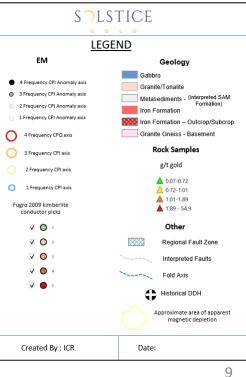
### Part 2 – QEMS Geology, Structure and Geophysics

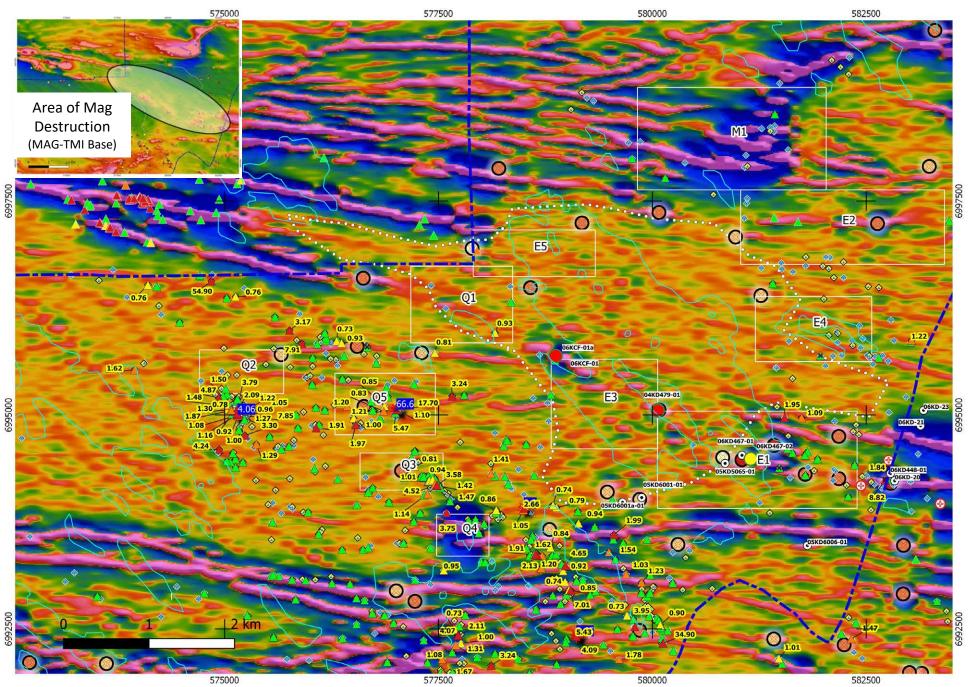


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#### **QEMS Geology**

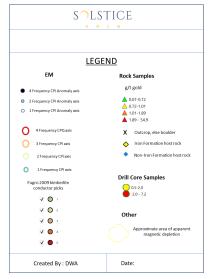
- Geology on CWM
  claims derived from
  assessment file data.
- Extensive development of iron formation over QEMS area.





#### **QEMS** Targets

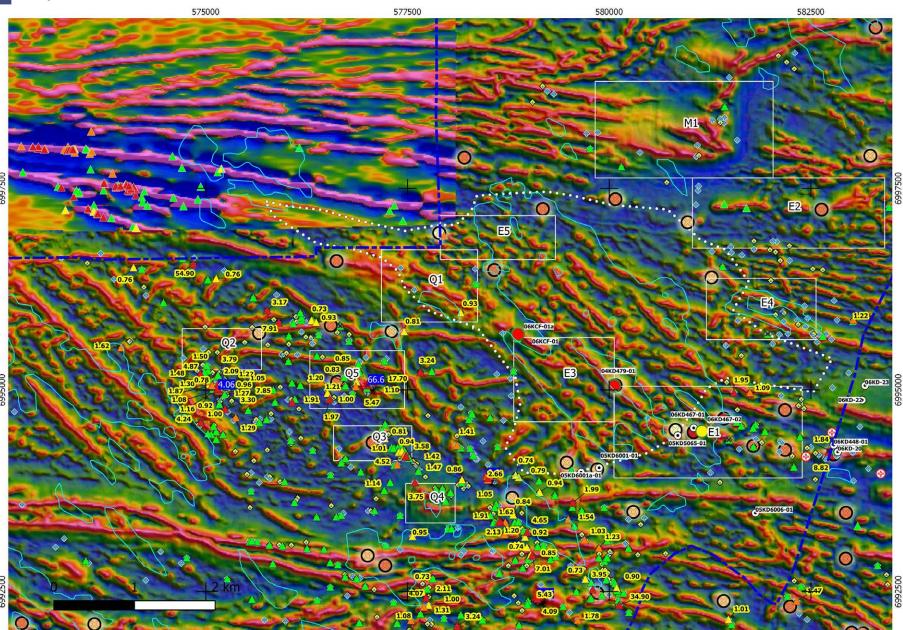
- 30m (2002) gridded 2VD magnetics
- Prominent area of likely magnetite destruction (dotted line).
- Area is confirmed by second mag survey in 2004 so is real. Extends beyond lake area. Also other lakes do not mask magnetic response in area.
- Associated with grunerite rich assemblages and reduced magnetic susceptibilities interpreted to be associated with alteration and destruction of primary magnetite at the expense of grunerite.
- Gold occurrences associated with reduced magnetic responses and retrograde assemblages including actinolite.
- Overburden ranges from 6-17 metres and does not mask the magnetic or EM responses.
- 5 historic dd holes on the project for a total of 398m over 2.8km of strike length, we believe 3 holes missed their targets while 2 holes intersected the FeFm along with gold mineralization and bottomed in FeFm.



# **QEMS TARGETS**

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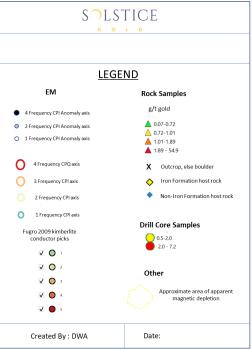
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- 15m gridded 2VD magnetics (reprocessed from 2004 dataset) support geological interpretation of confutation of gold-bearing SAM formation sequence from adjacent claims.
- Shows rotation of main strike through ~30 degrees to NW-SE over Enterprise Lake.
- Also shows continuous magnetic features associated with the Qaiqtuq gold in boulder field (also with gold in outcrop from limited work to date), e.g., the Q2 and Q5 target areas.

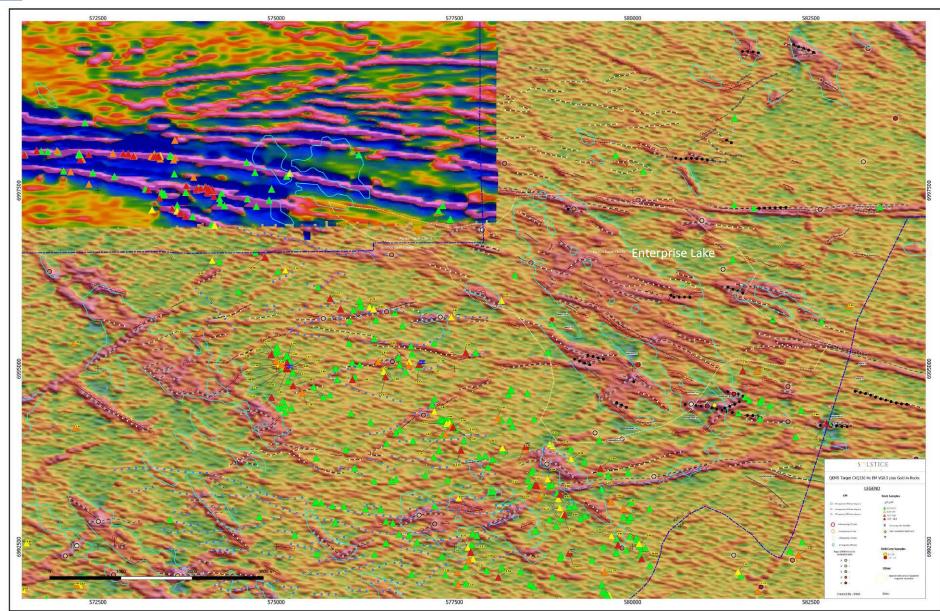


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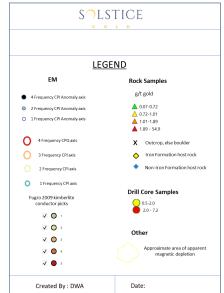
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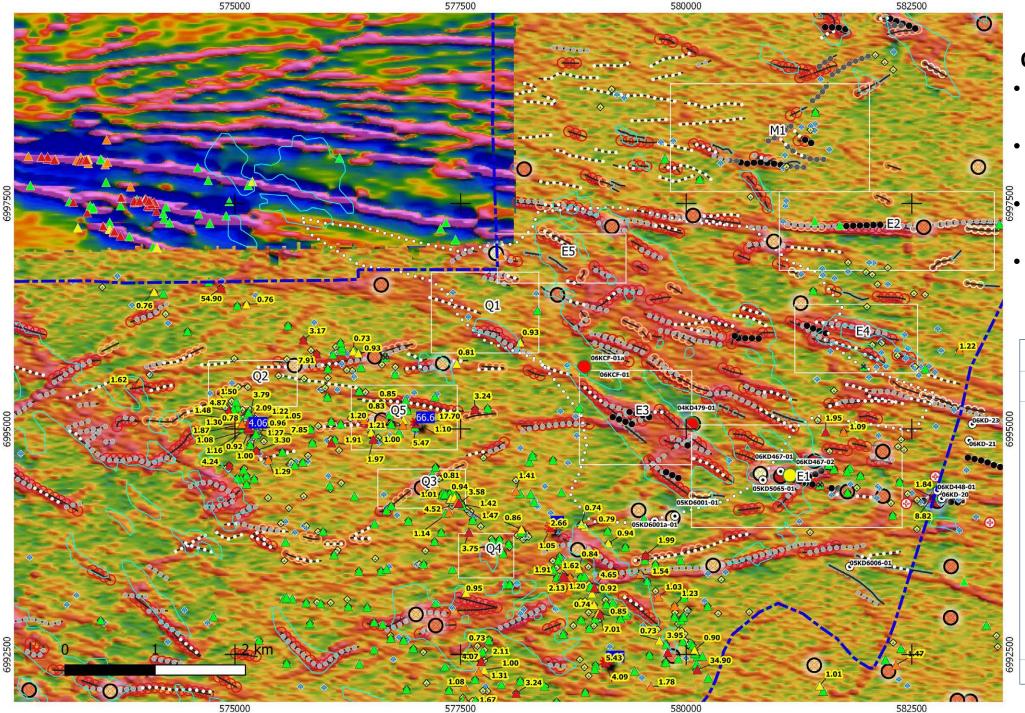
### **QEMS TARGETS**





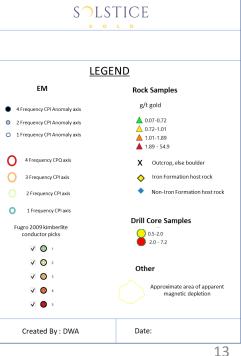
- Re-working of 15m gridded EM datasets (in progress) shows distinct responses which trace geology and/or structure.
- Slide shows 3300 Hz coaxial out of phase response which clearly shows through going features under and beyond Enterprise Lake.
- Also shows chevron style pattern in Qaiqtuq area which, at least in part trace known iron formation.
- EM anomalies underneath and beyond Enterprise Lake are parallel to the RWFZ, interpreted as potentially mineralized structures, some of which have confirmed gold in very sporadic, mainly diamond-focused drilling.
- Suggests interaction between structures and NW-SE striking iron formations observed in magnetic data.

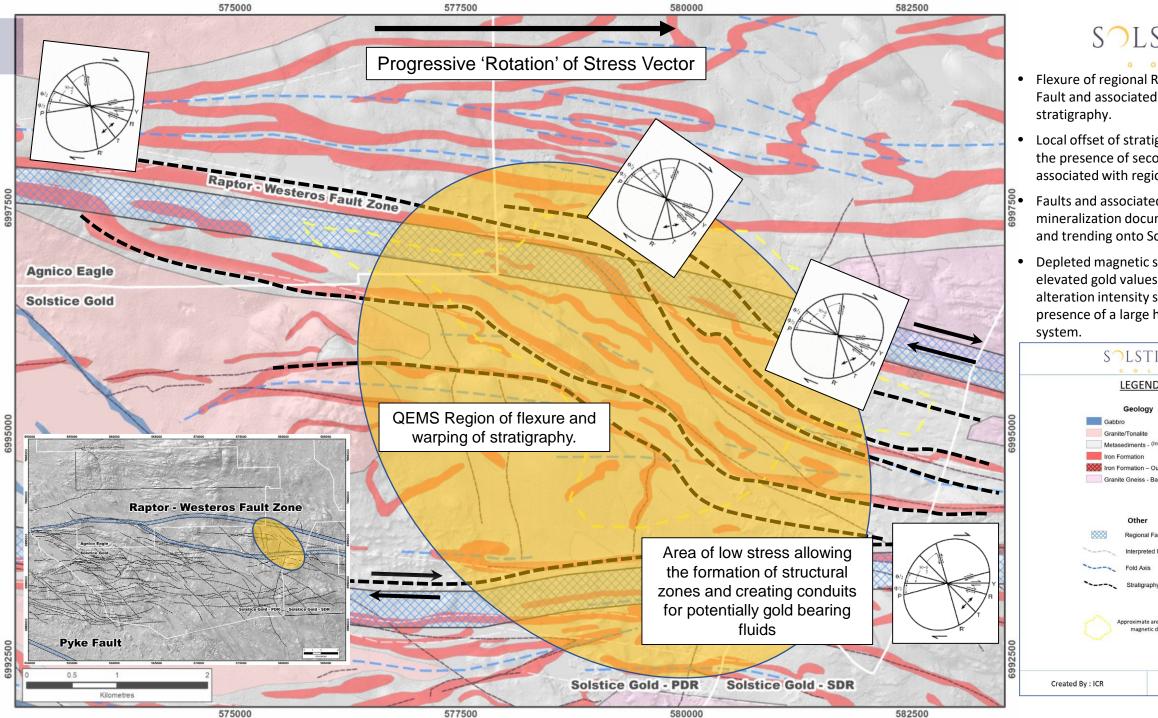




#### **SCLSTICE QEMS Targets**

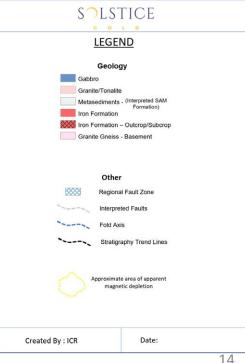
- 3300 Hz coaxial EM with anomaly trends and gold results.
- Main target areas outlined by white boxes.
- Next slides review several of these target areas.
- More work required in +45km QEMS areas due to their discovery late in the 2018 field season.





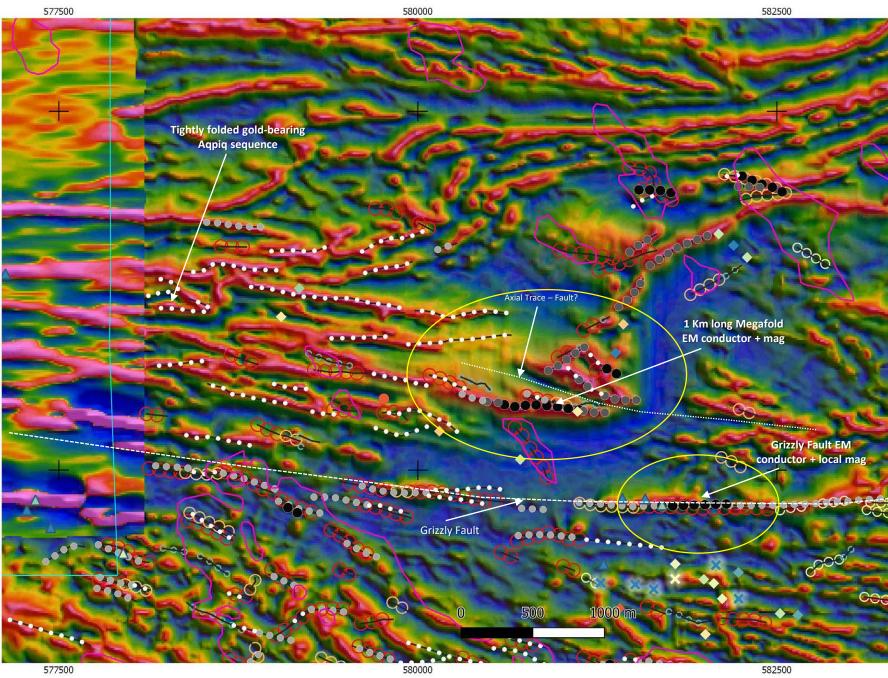
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- Flexure of regional Raptor-Westeros Fault and associated warping of
- Local offset of stratigraphy indicates the presence of secondary fault arrays associated with regional fault.
- Faults and associated gold mineralization documented by Agnico and trending onto Solstice ground.
- Depleted magnetic signature, elevated gold values and increased alteration intensity suggests the presence of a large hydrothermal



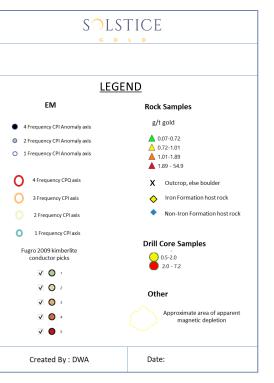


### Part 3 – Review of Targets

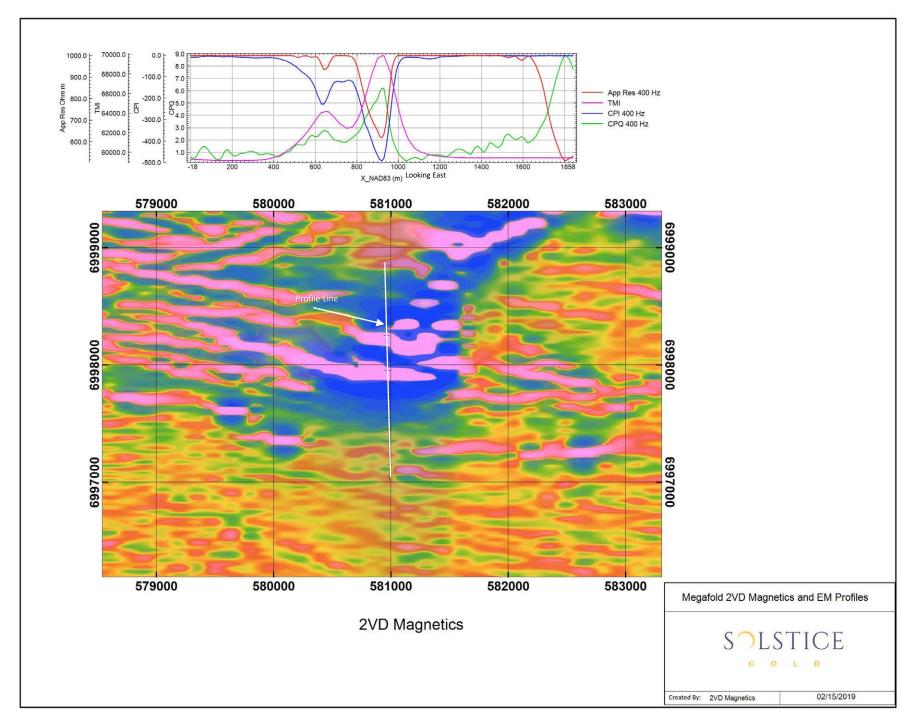


# Megafold and Grizzly Targets (2VD magnetics base)

- Known gold-bearing sequence trends onto property with 3+km strike length.
- Strong conductor at Megafold associated with large fold repeat.
- Grizzly fault possibly traces major synform.
- Local well developed conductor and discontinuous mag.



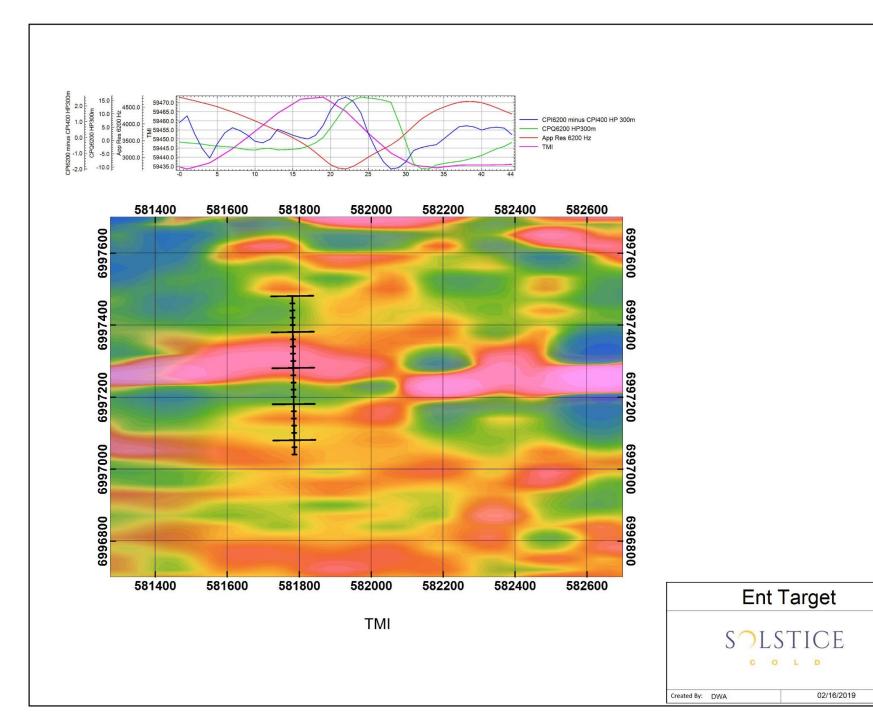
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#### Megafold Drill Target

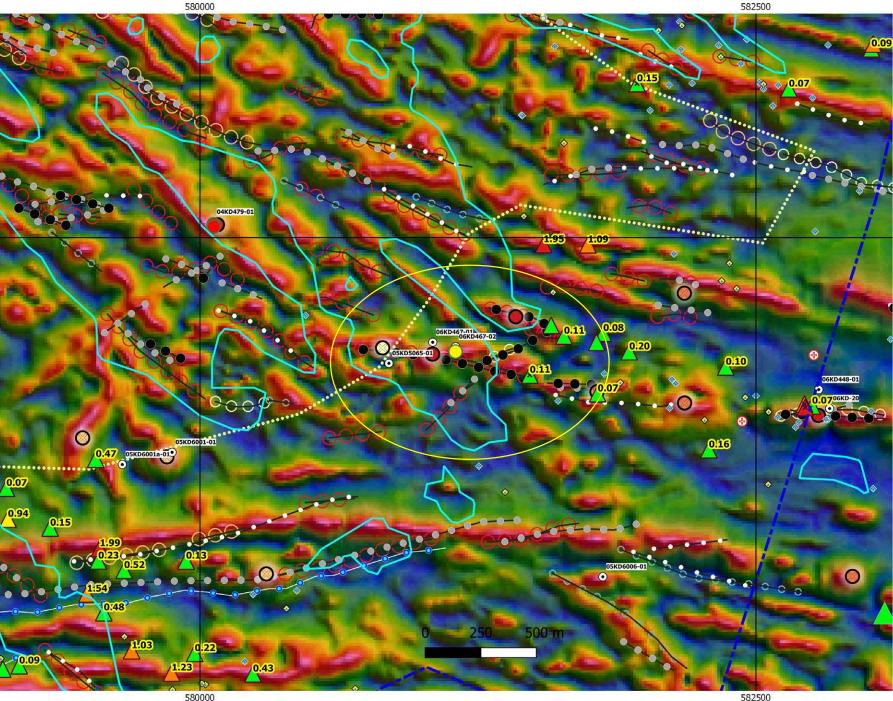
- Coincident EM and Magnetic anomalies.
- Part of **+1Km anomaly** large scale target.
- Numerous conductors to the west are also targets if Megafold hosts gold.
- Fold thickened and repeated host sequence.
- Till covered. Needs to be sectioned by drilling in a number of places to best test the target.



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#### **Enterprise 2 Target**

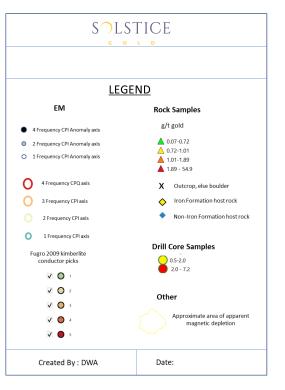
- Part of regionally extensive Grizzly Fault.
- 600 long conductor.
- Subdued Mag.

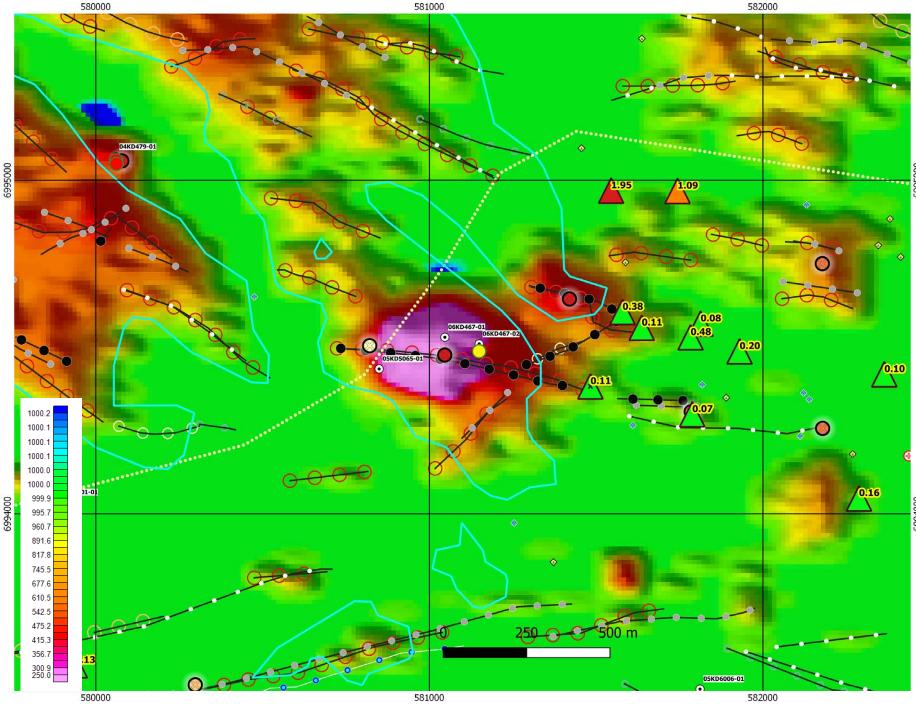


### **SCLSTICE**

#### South Enterprise Drill Target

- Mapped gold-bearing iron formations trend westwards into 1.2 km-long strong EM anomaly.
- Likely folded.
- Isolated kimberlite picks are more likely part of more extensive stratabound target (see sections).
- Three short historical holes. One drilled to south of target, others fail to test the target (see sections. Next slides).

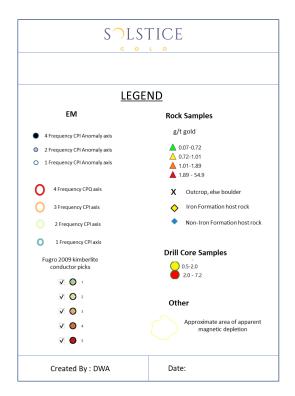


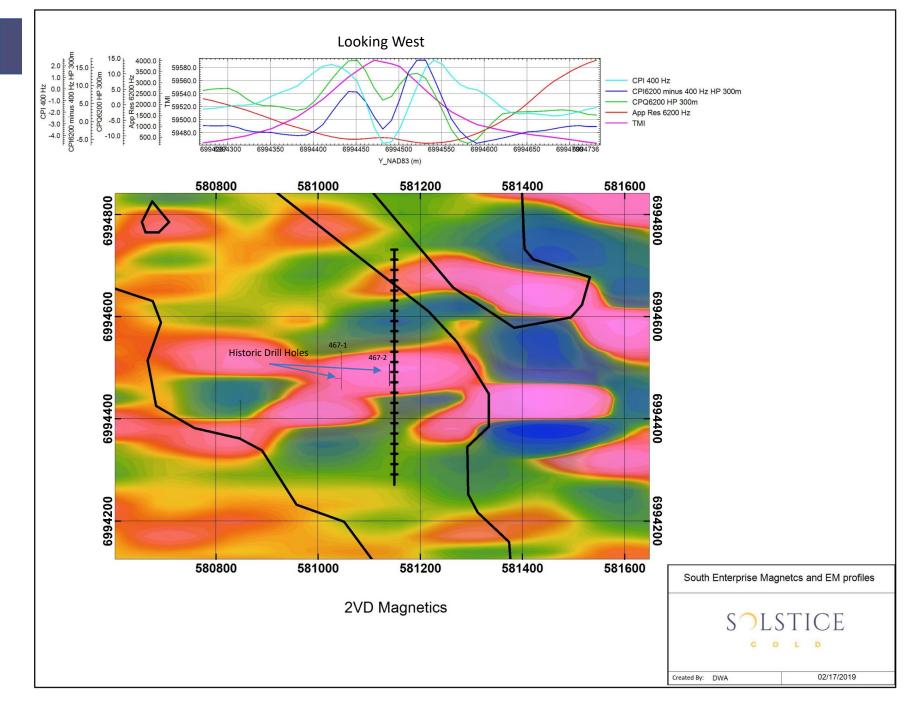


### **SCLSTICE**

#### South Enterprise Target

- 400 Hz apparent resistivity.
- Strong anomaly is present on all frequencies and both in phase and out of phase.
- See next slide also.



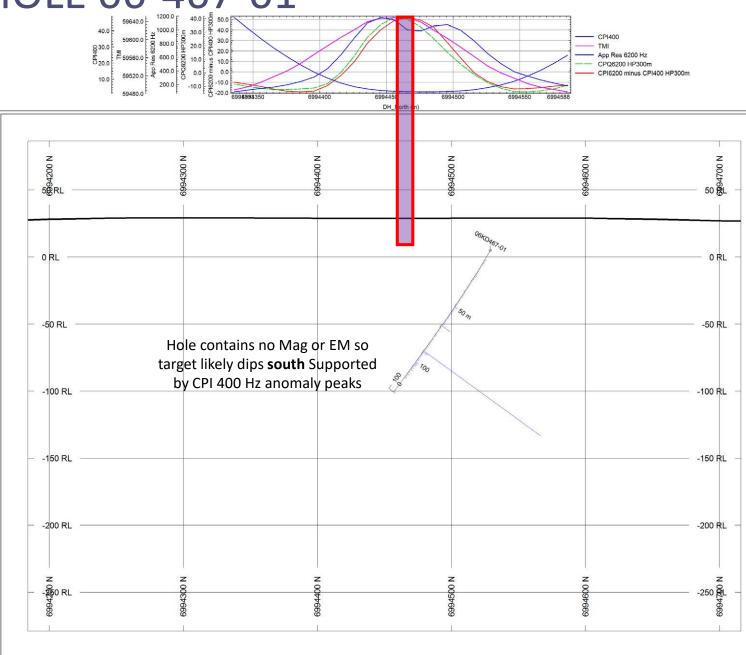


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### South Enterprise Target Magnetic and EM Profiles and 2VD TMI Plan Map

- Strong in Phase and Out of Phase responses.
- Correlated with Mag High.
- Two historical holes fail to test target next slides).

### DRILL HOLE 06-467-01



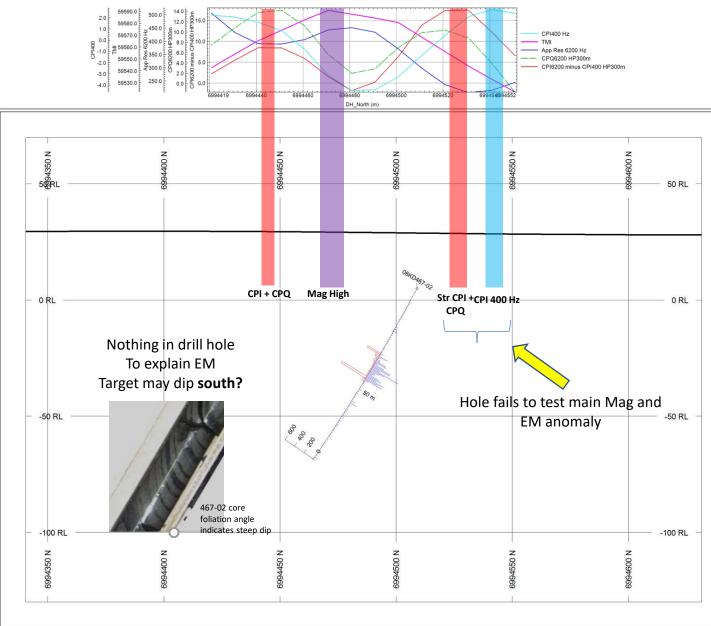
 Hole hit greywacke with nothing to explain strong magnetic and EM anomaly.

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- Target either near vertical or may dip south.
- Target is thus not tested by this drill hole.

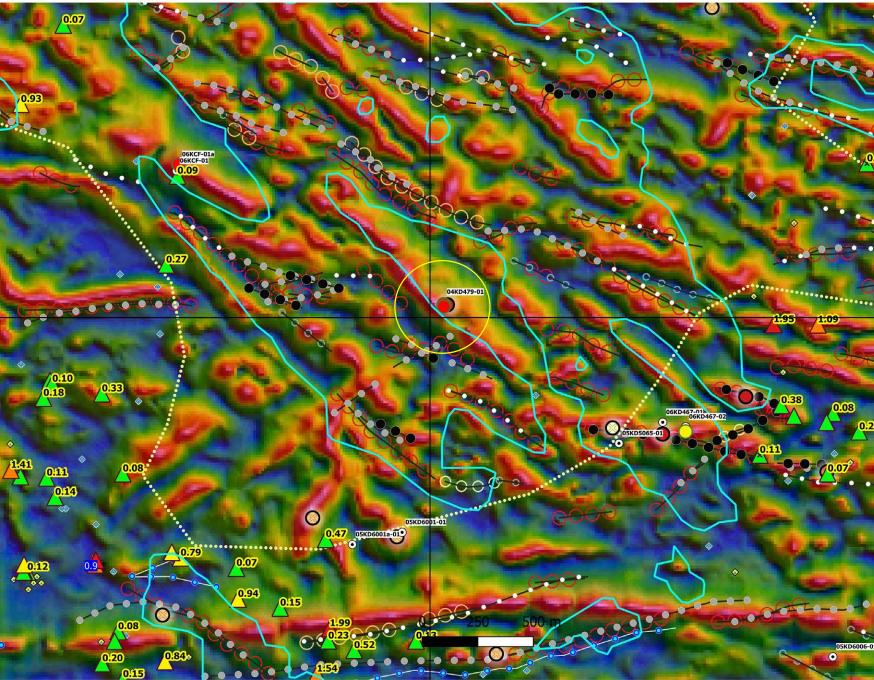
### DRILL HOLE 06-467-02



 Follow up to the east hole oversteps main strong EM anomaly and does intersect it.

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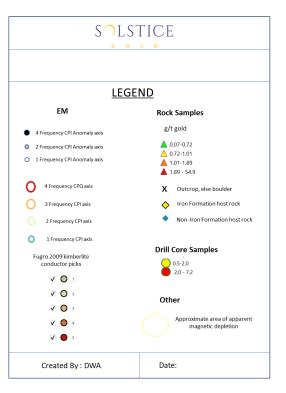
- May have explained, in part, the magnetic anomaly (which is gold-bearing – 0.62g/t over 0.6m and 0.87g/t over 0.5m).
- But would be an unusually flat north dip.
- Also does not explain second EM anomaly down hole.
- Entire section needs to be drilled to determine cause of strong EM.

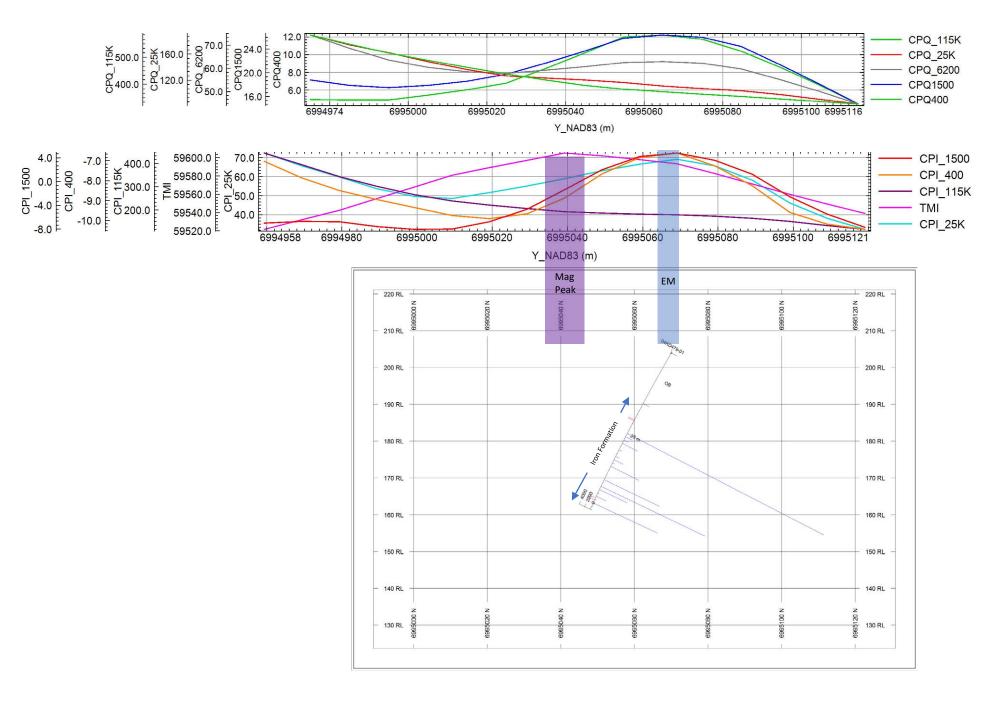


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#### 04 479-01 Drill Hole

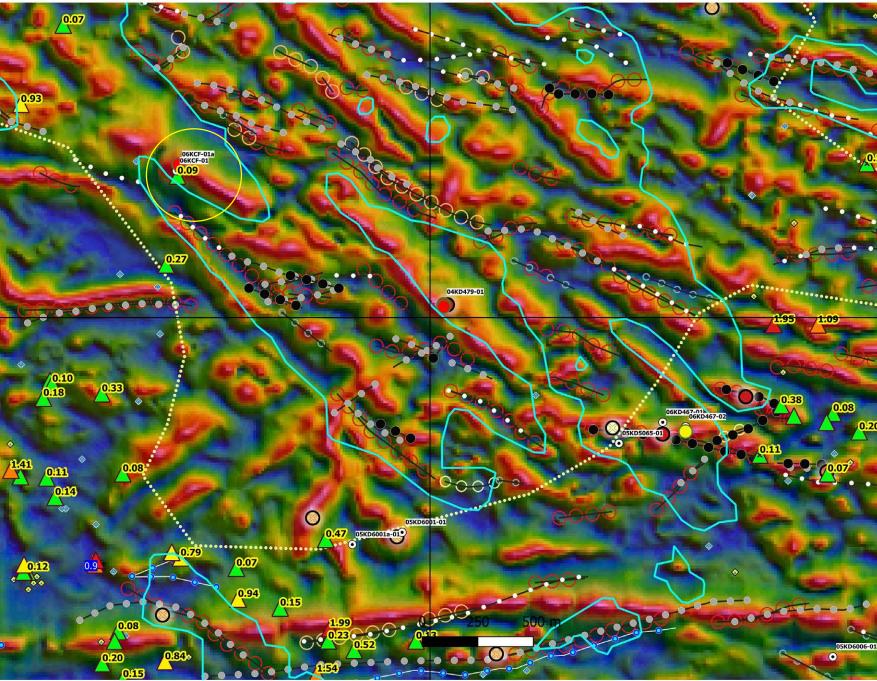
- Drilled as spot kimberlite target but, like nearly all picks lies on linear feature – iron formation in this case.
- Drilled FeFm over its entire length (see next slide).
- Lies on at least 1.2km NW-SE mag trend
- Strike is parallel to Aklak 4 rotated mag trend.
- Supports possible presence of SAM
  formation under Enterprise Lake.





#### 04 479-01 Drill Section, Magnetic and EM profiles

- Drilled as diamond target (high confidence kimberlite pick).
- Hole hits FeFm at 15.8m and stops in FeFm at 47.9m.
- Sporadic pyrrhotite sections, very little gold sampling but two narrow sections noted (2.04g/t/0.3m and 2.52g/t over 0.65m).
- Original log states: "Hole was terminated as approaching centre of target as it was believed the magnetic and conductive anomaly was explained by the magnetite and sulphides". In other words, it did not intersect kimberlite but did hit goldbearing unit.
- Section suggests overshot EM and did not traverse the magnetic anomaly.
- Log notes reduced magnetic susceptibility 'presumably due to increased grunerite at expense of magnetite'.
- Opens up 1.2km strike length.

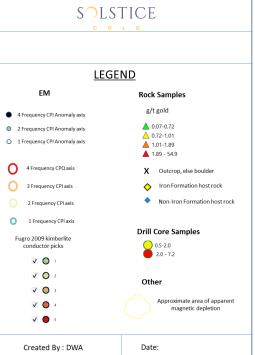


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#### 06 KCF-1 and 1a Drill Holes

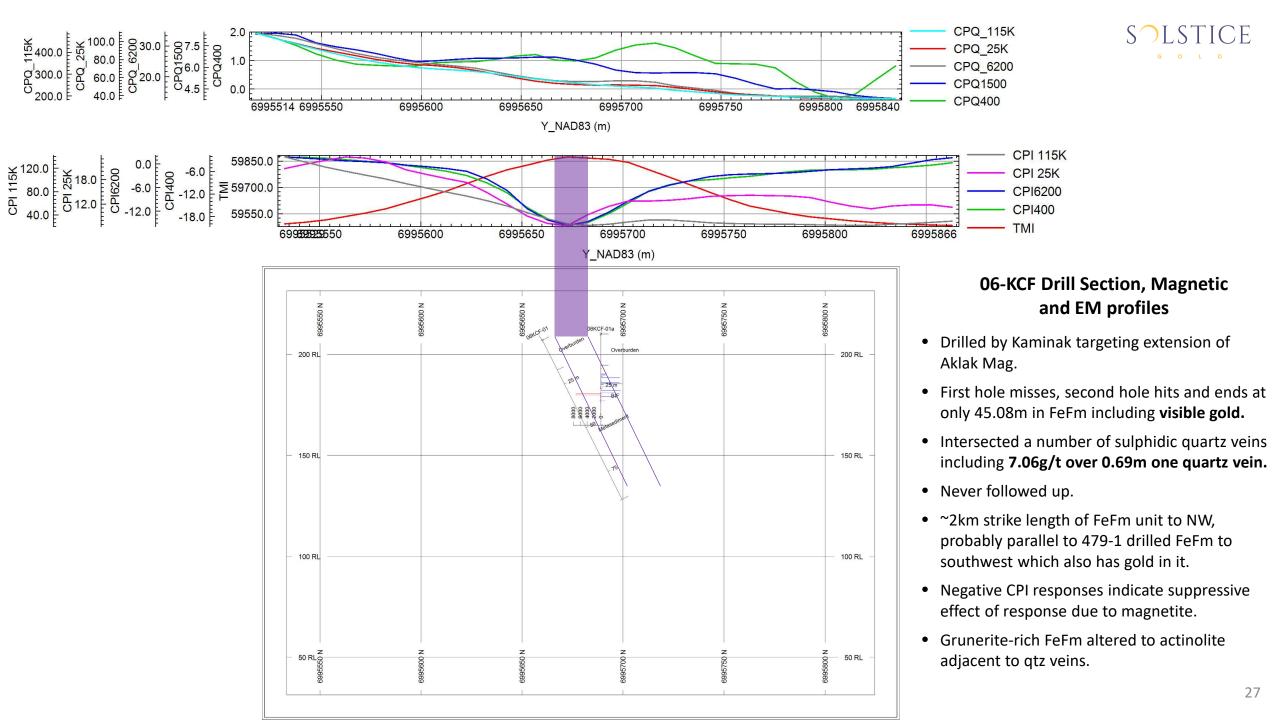
Drilled to target continuation from the NW on Agnico claims of Aklak 4 gold bearing unit.

- First hole drilled wrong way, second (45m hole) stops in FeFm with visible gold.
- Never followed up and confirms continuation of ~2km FeFm trend.
- May be part of Qaiqtuq trend which extends +5km to the west where it is associated with extensive gold in boulders and locally, in outcrop.



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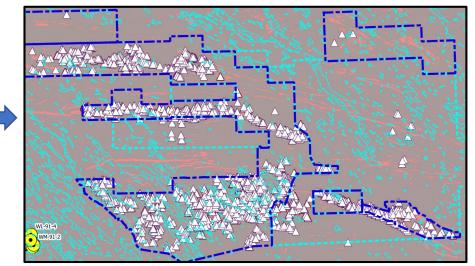


# Regional ICP Geochemistry – How to Assess 920km<sup>2</sup>? <sup>SOLSTICE</sup>

- Solstice has collected over 3400 surface samples and analyzed these for gold and a suite of elements.
- Meliadine style mineralization and mesothermal gold systems in general are often associated with 'pathfinder" elements like Arsenic, Bismuth, silver and others.
- Combined with geology and geophysics, rock geochemistry can define new target areas and provide detail for follow up. It is a necessary step in the exploration process and has been employed systematically for the first time on the property.
- Results from Solstice claims are very positive and demonstrate that significant, and previously unknown, gold is present in rocks in many parts of the large 920km<sup>2</sup> property.
- Follow up work defines a 45km<sup>2</sup> area (QEMS) with extensive elevated gold over a wide area.
- Geological and geophysical interpretation and evaluation of surficial geology suggest that exposed gold bearing rocks trend eastwards beyond know areas beneath areas of blanket till at QEMS, opening up a wider area for potential gold discovery.
- In the following slides, we examine the regional and more local distribution of gold and pathfinder elements with comparison to the neighbouring CWM claims (Agnico) where significant gold is documented from relatively minor past work.
- We believe that our data clearly expand the previously known limit of gold mineralization and hence potential in the district which opens up a very large area under our control to the potential discovery of new gold deposits. Meliadine is a large gold deposit and, given the recent age of exploration and development in the area compared to well known gold districts, the Meliadine district would be unusual if it did not host additional significant gold deposits in the right structural and geological environment.

### **DATA Sources**

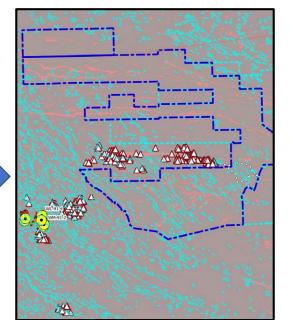
SGC data : 3479 grab samples

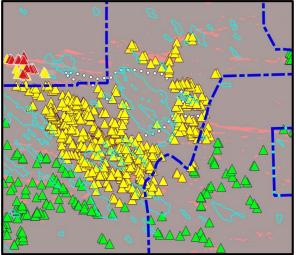


Generate statistics on elements from QEM Samples (n=775)

Aklak (CWM) grab samples (Agnico claims) (n=836)

Note: 2004-5 CWM digital data from government assessment files. The following comparison may be affected to some extent by analytical techniques which differ between historical methods and those used by Solstice. However, Solstice believes the patterns and trends presented to be valid unless noted.





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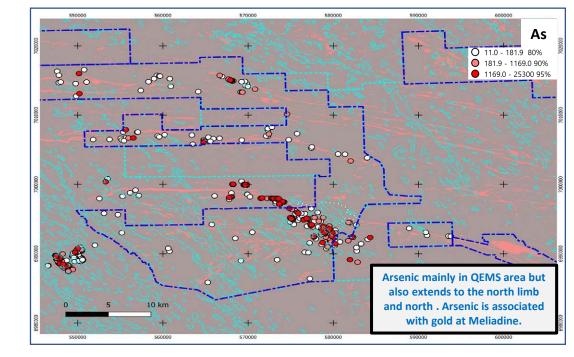


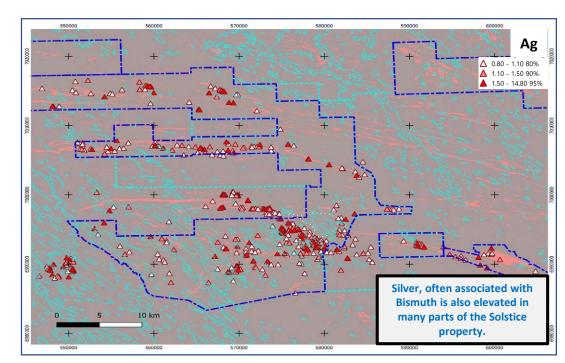
### Part 4: Property-wide data

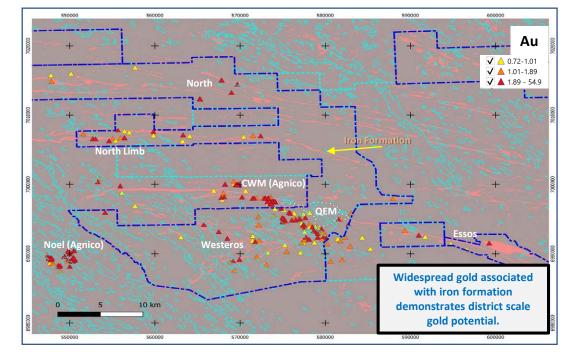
Note For all element plot except gold the 80<sup>th</sup>, 90<sup>th</sup> and 95<sup>th</sup> %ile values derived from the QEMS dataset are displayed, e.g. As 0 11.0 - 181.9 80% 181.9 - 1169.0 90% 1169.0 - 25300 95%

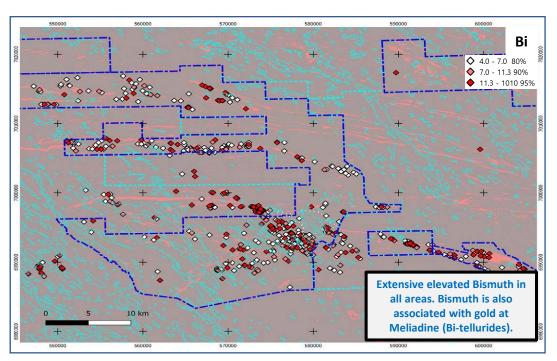
For gold, to maintain continuity with the news release values, the 631 sample Qaiqtuq area dataset was used to generate 80<sup>th</sup>, 90, and 95<sup>th</sup> percentiles values as follows (g/t): Au  $\checkmark \land 0.72-1.01$  $\checkmark \land 1.01-1.89$  $\checkmark \land 1.89 - 54.9$ 

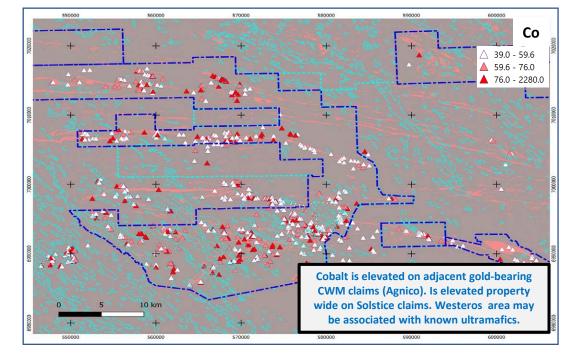
All Solstice samples are grab samples, most are boulders, see news releases and <u>www.solsticegold.com</u> for breakdown of outcrop versus boulder samples and statistics by sub areas.

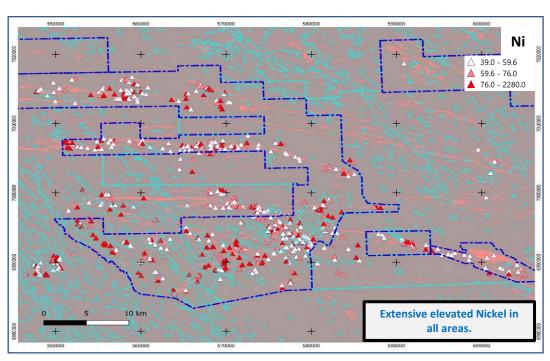


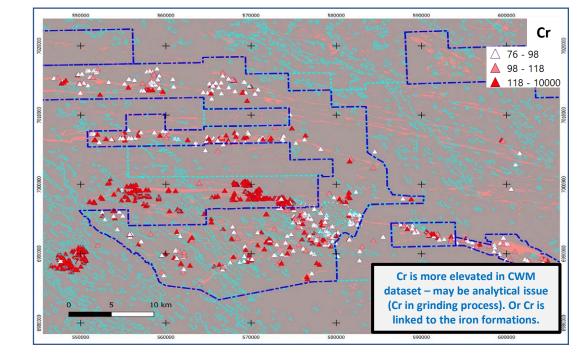


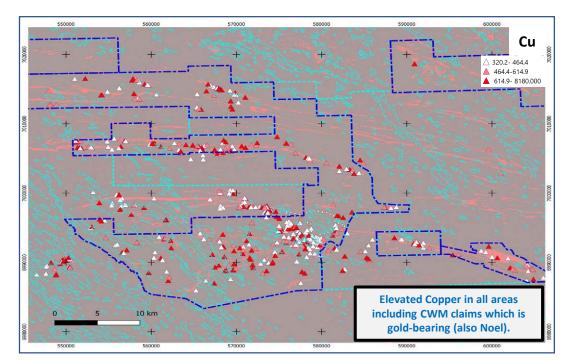


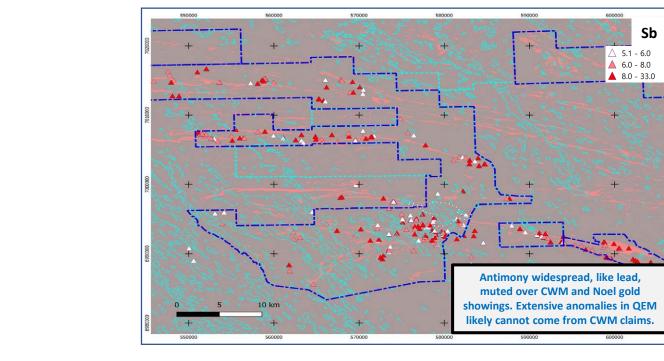


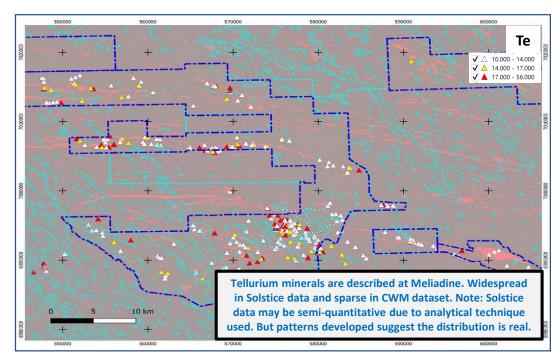


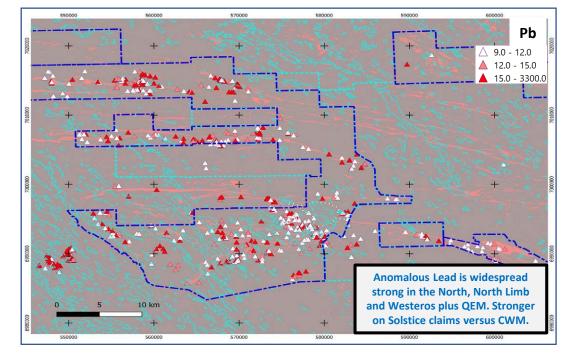


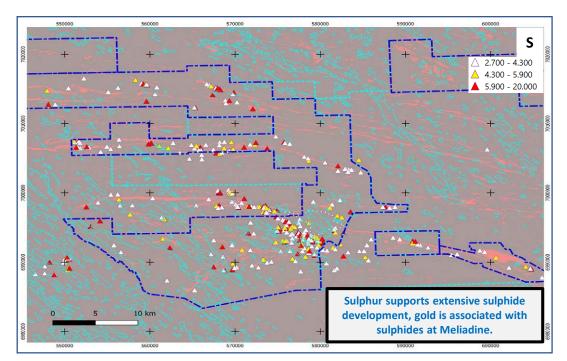


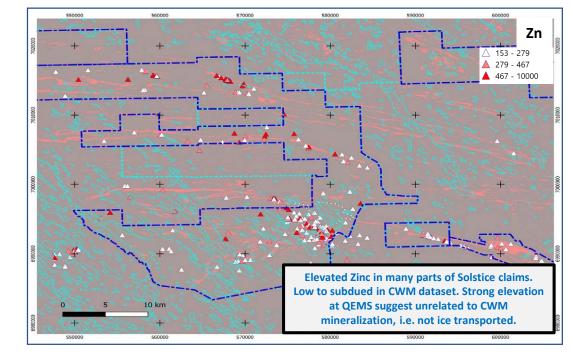


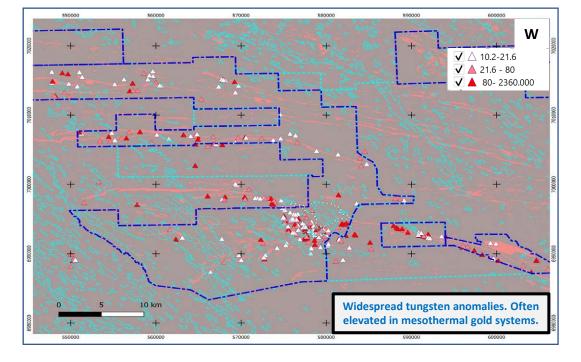














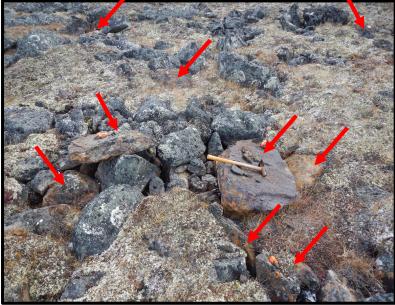
### Part 5: Westeros and QEMS Data

# QAIQTUQ BOULDERS



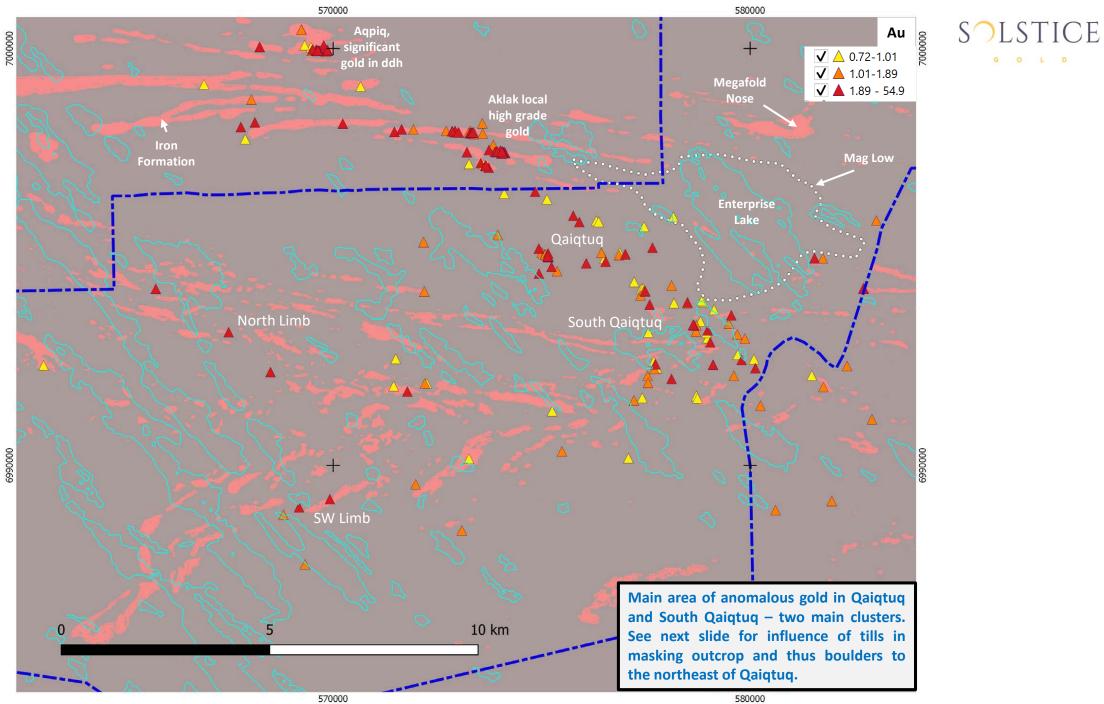




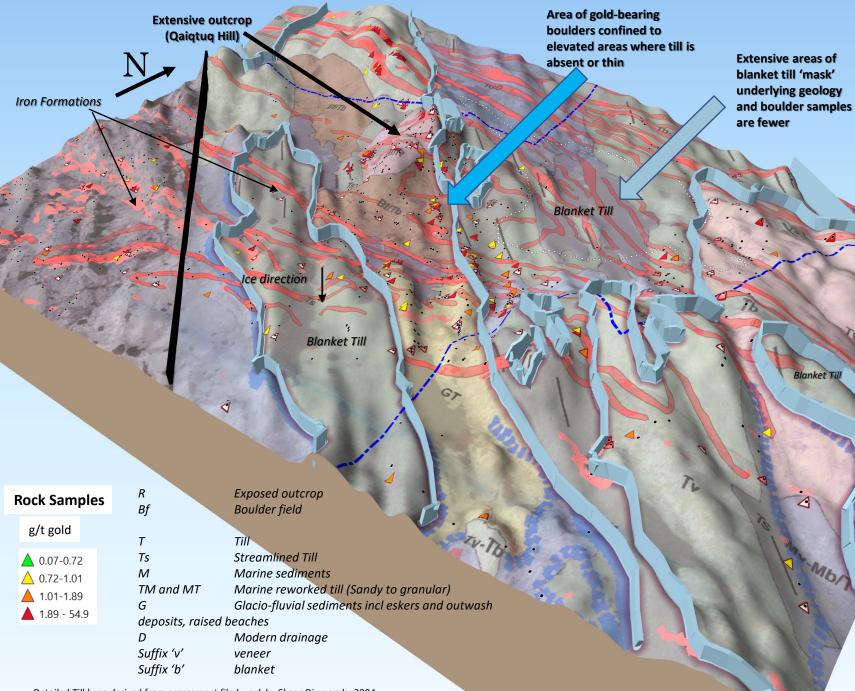


= Mineralized Boulder





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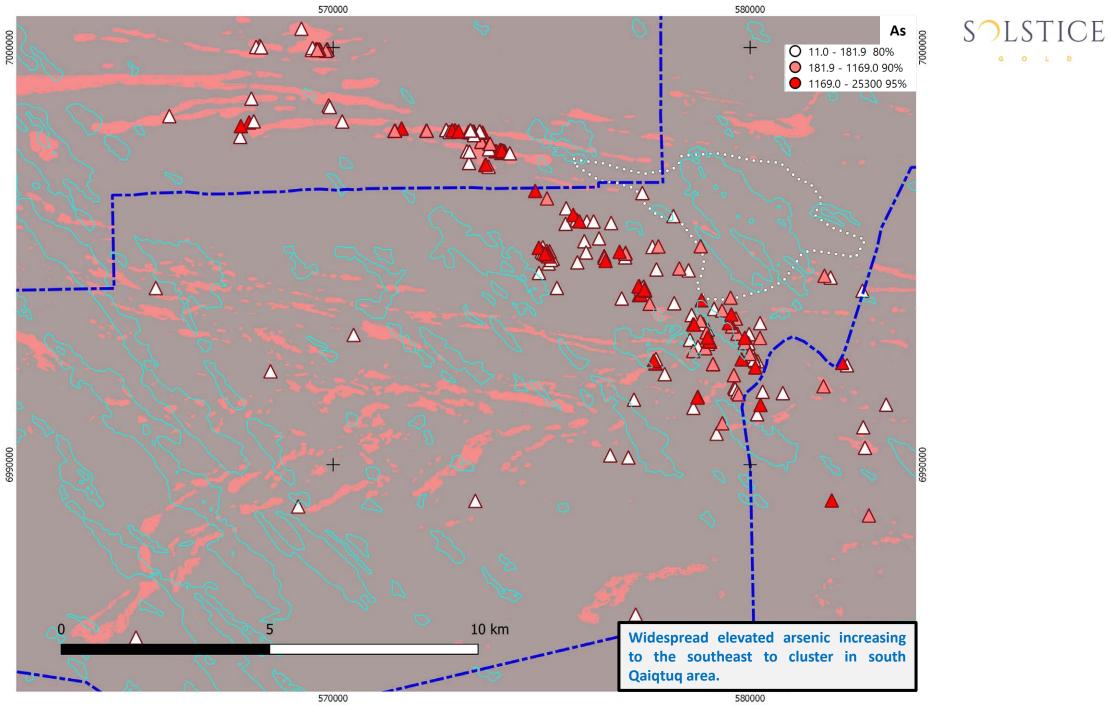


#### **3D** perspective view of Qaiqtuq Hill

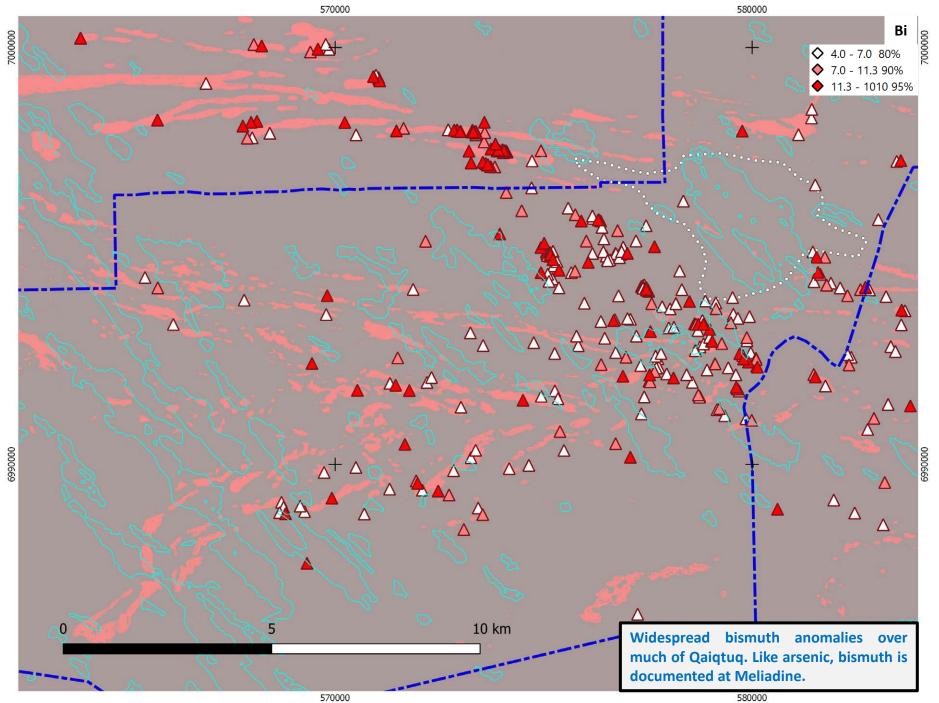
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- Area of gold boulders and local in situ gold likely sourced from Qaiqtuq Hill. This is an elevated (+60m) area of largely exposed rocks and/or boulder field.
- Area recognized as boulder/outcrop and thin till by 2004 diamond till mapping (Shear).
- Boulders down ice of Qaiqtuq and also in cluster south of Qaiqtuq exposed in narrow channel define by thin tills, outcrop and boulder field.
- Geology trends at high angle to till direction but east of Qaiqtuq is masked by an extensive area of blanket till with sparse boulders.
- Given the gold-bearing nature of the exposed and partially exposed Qaiqtuq segment, it is likely that gold-bearing rocks continue eastwards but surface expression of gold in outcrop and boulders is muted.
- This is confirmed by local outcrop and the very minor amount of historical drilling in the area of Enterprise Lake Opens up a 45km<sup>2</sup> target area.

Note: Vertical exaggeration of 12x on figure to emphasize topography.

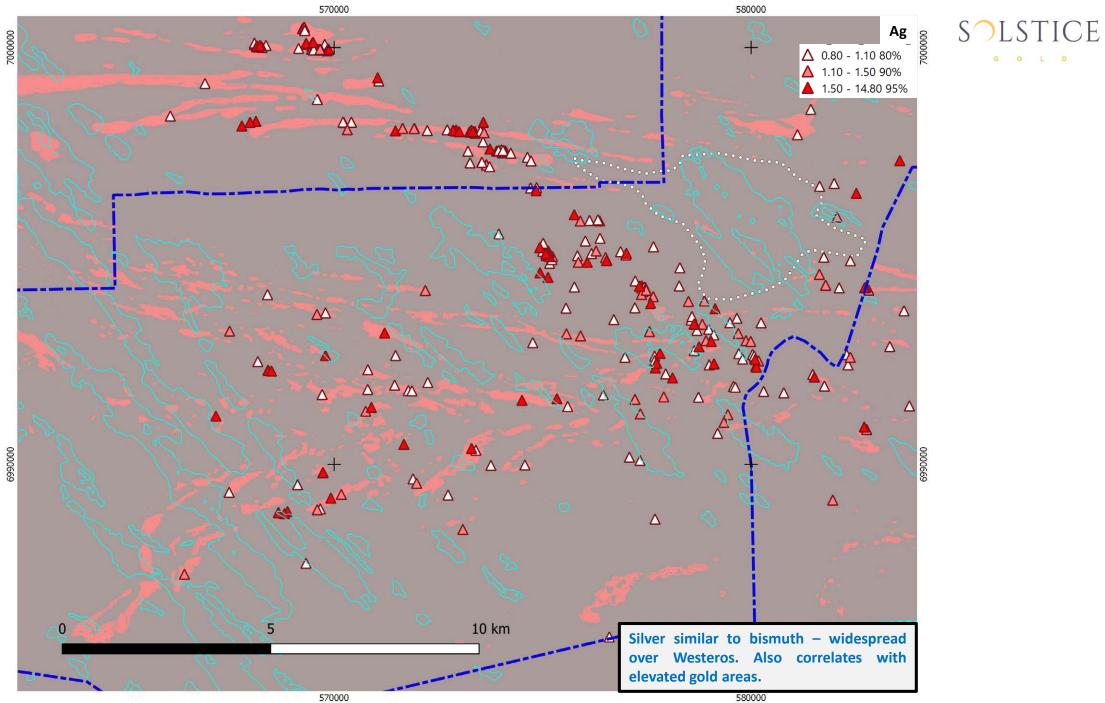


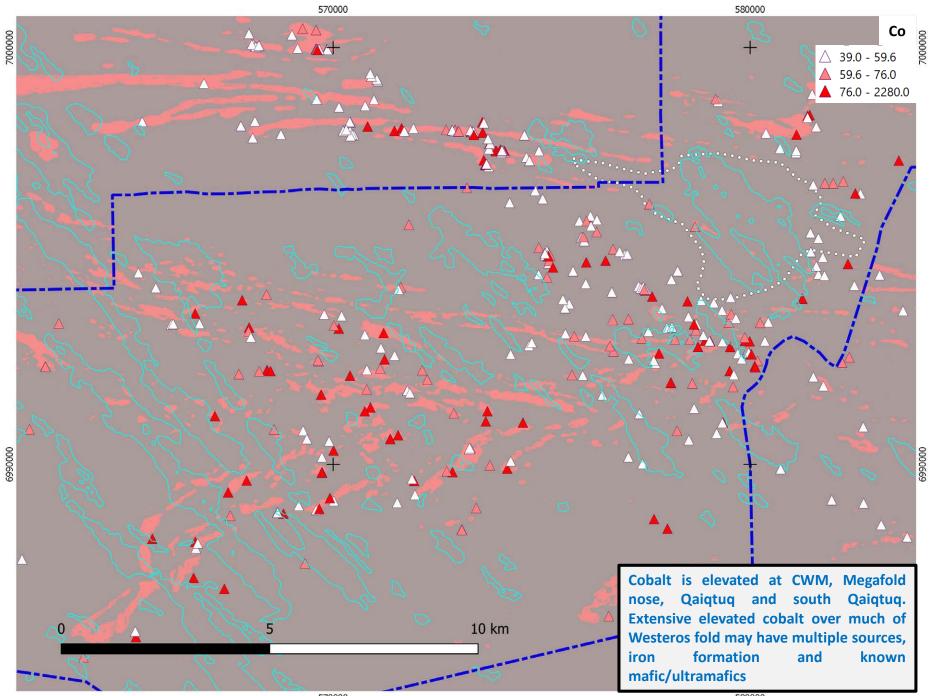
GOLD



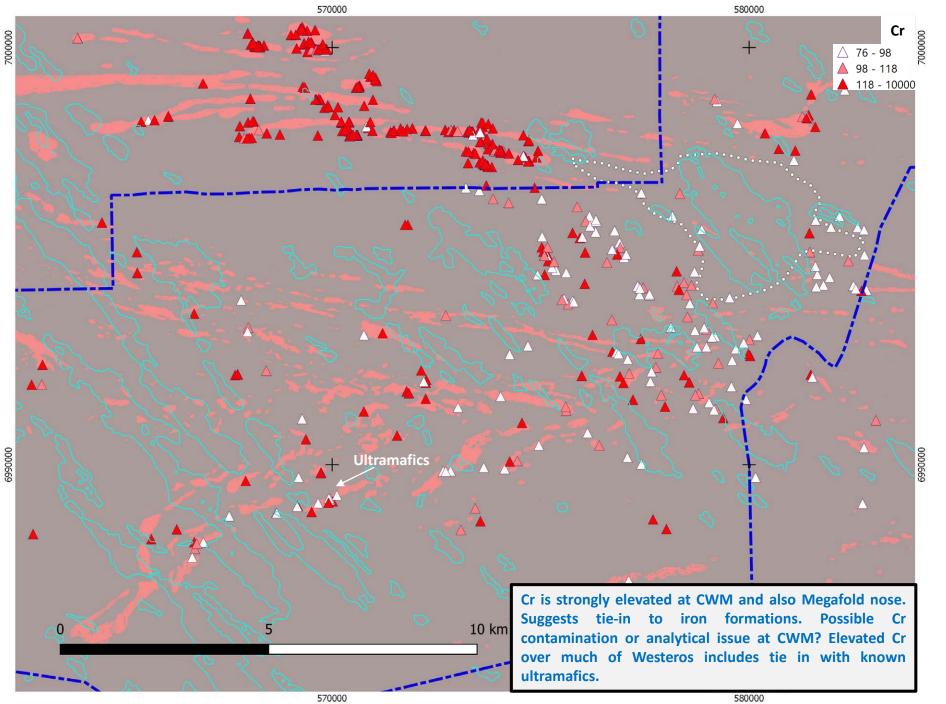
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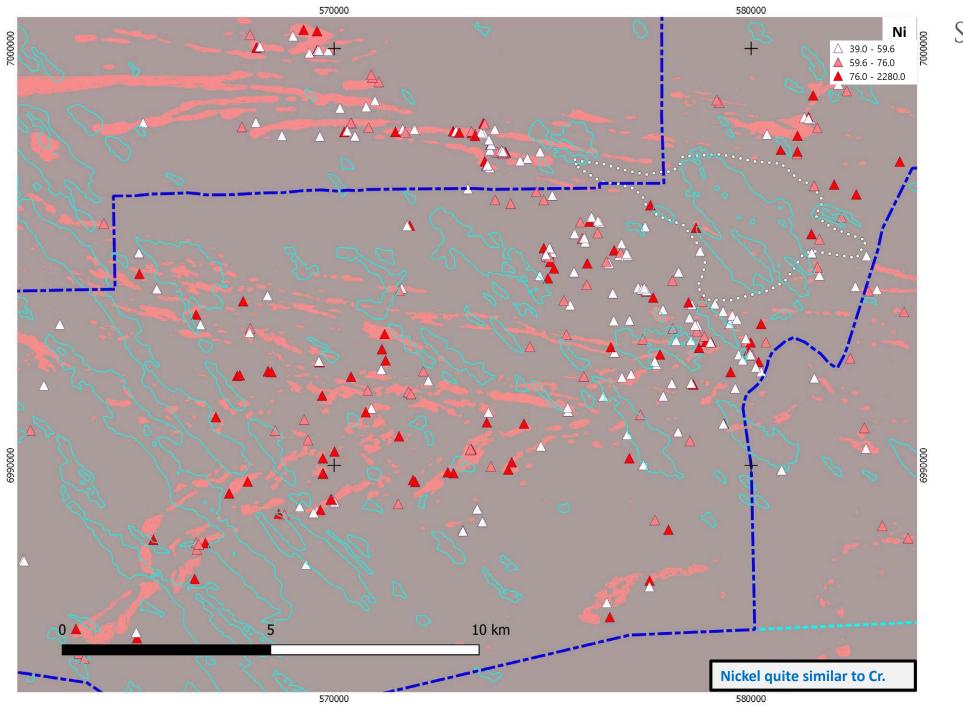




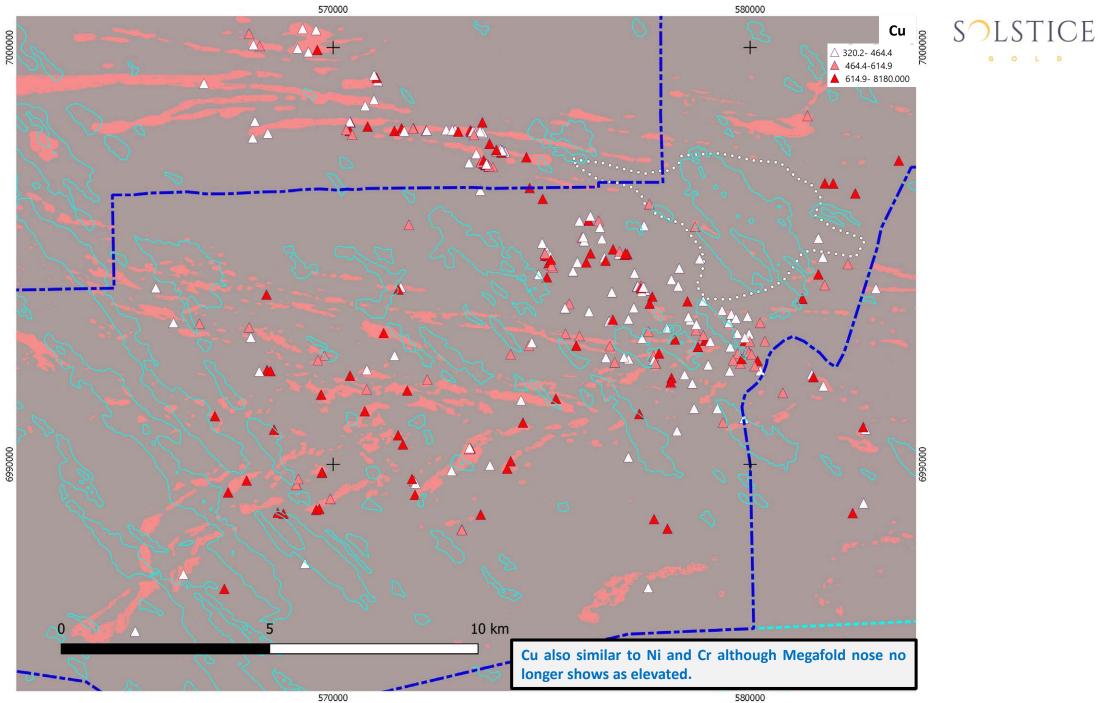






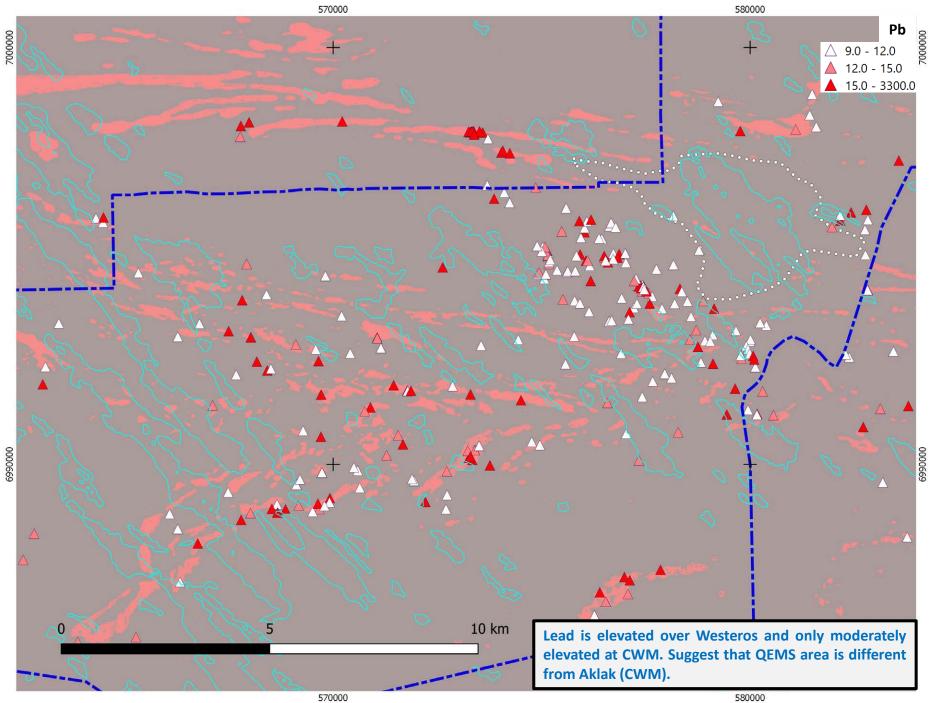




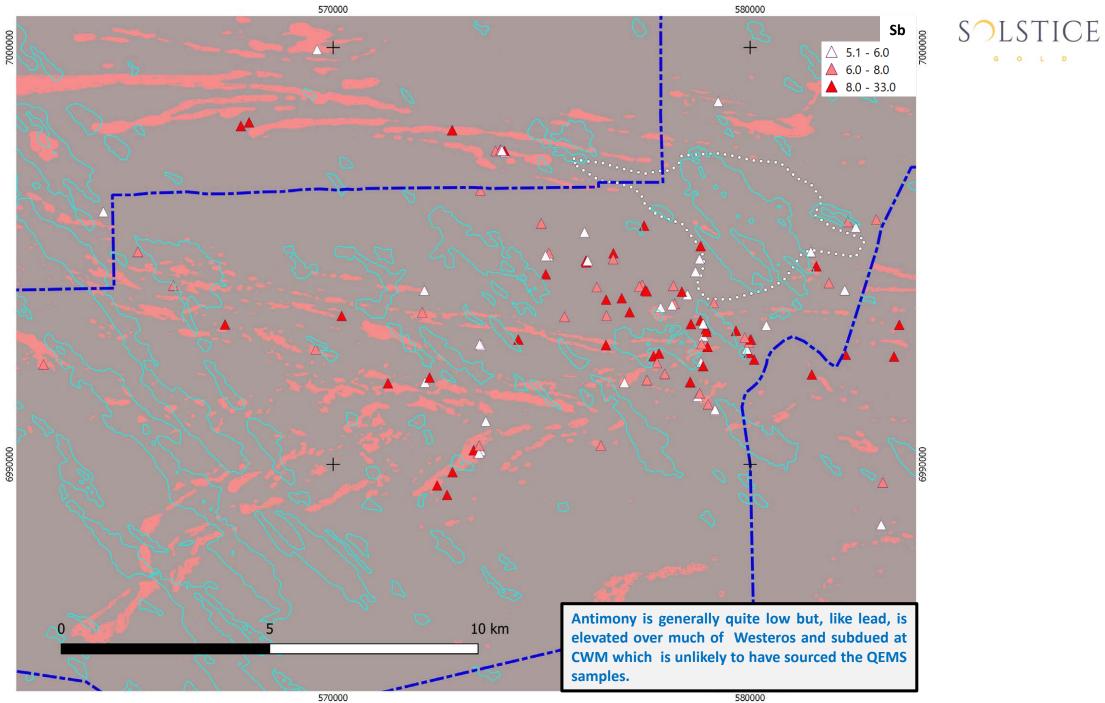




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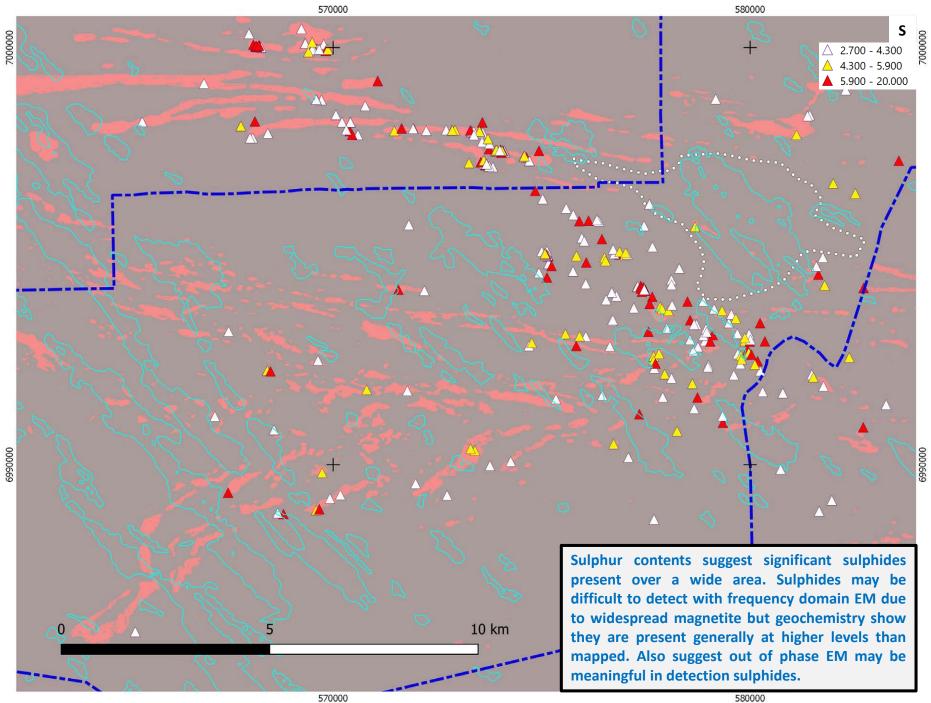


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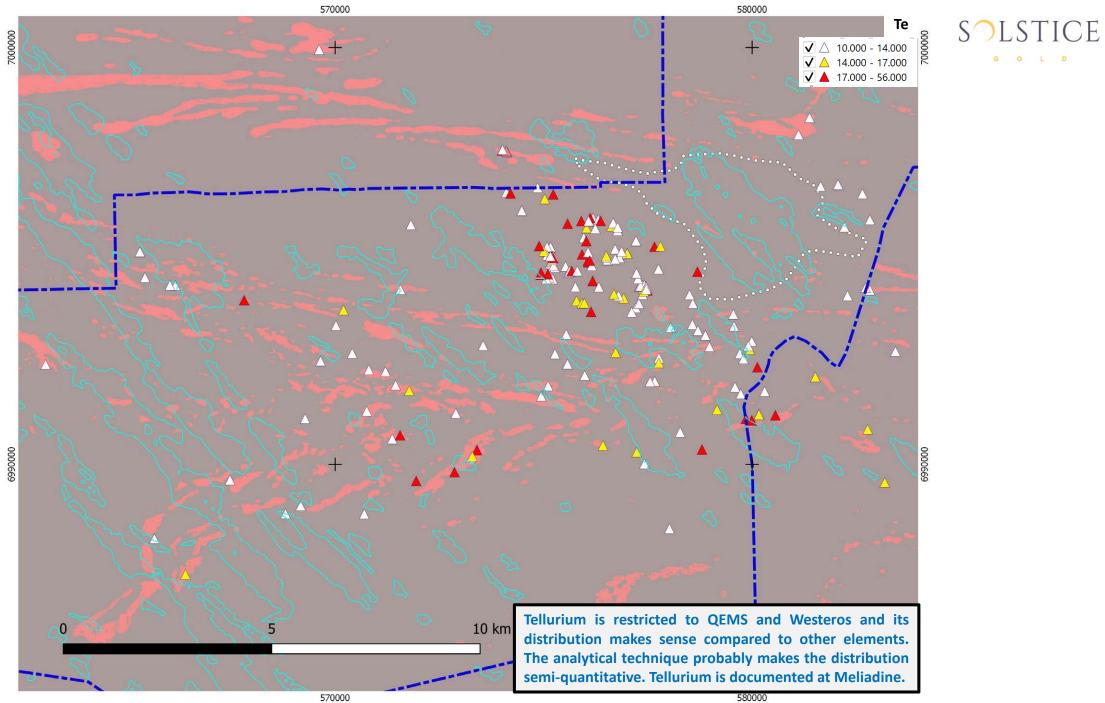
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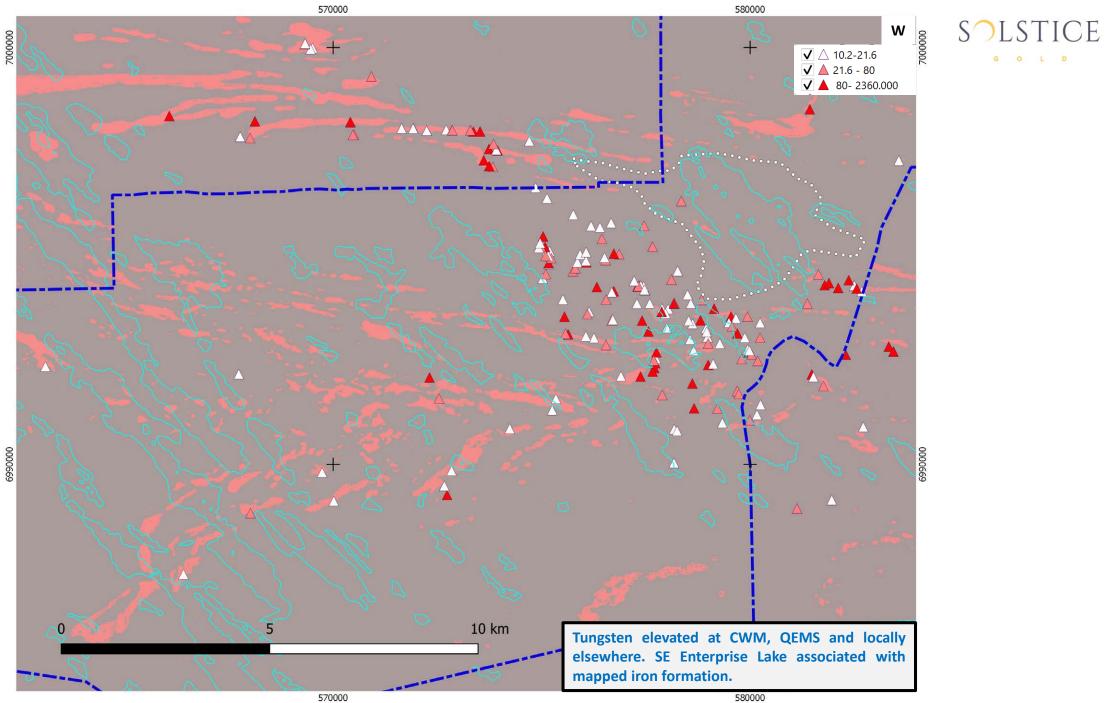
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present over a wide area. Sulphides may be difficult to detect with frequency domain EM due to widespread magnetite but geochemistry show they are present generally at higher levels than mapped. Also suggest out of phase EM may be

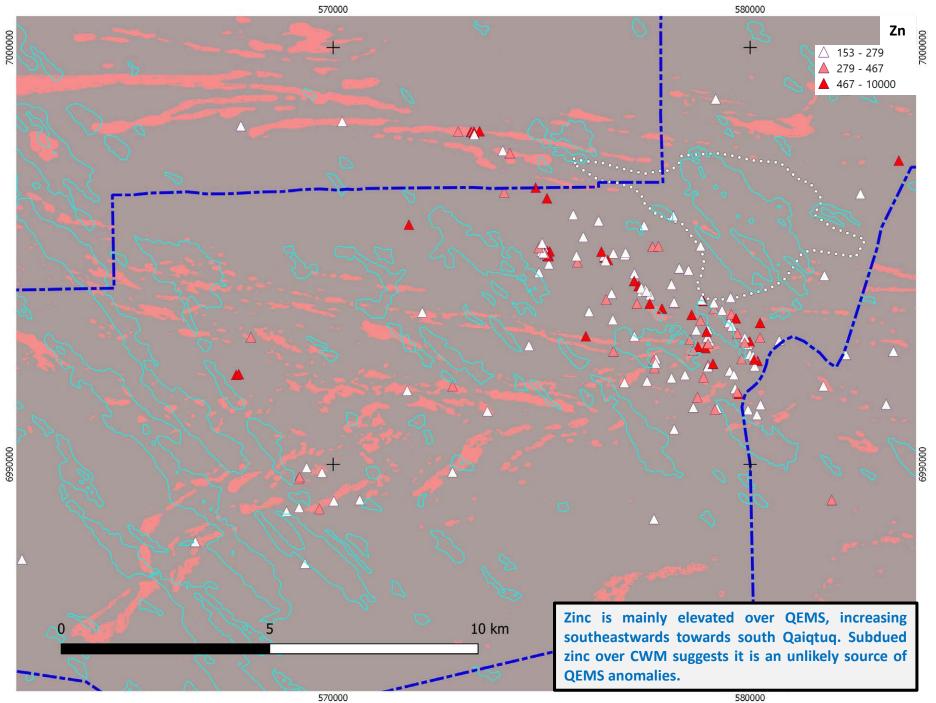




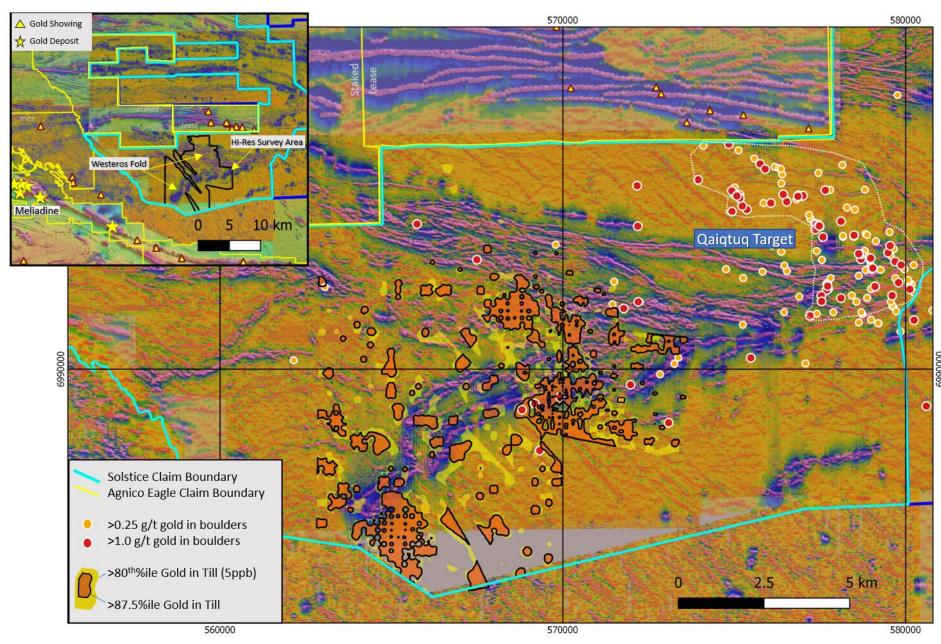




GOLD



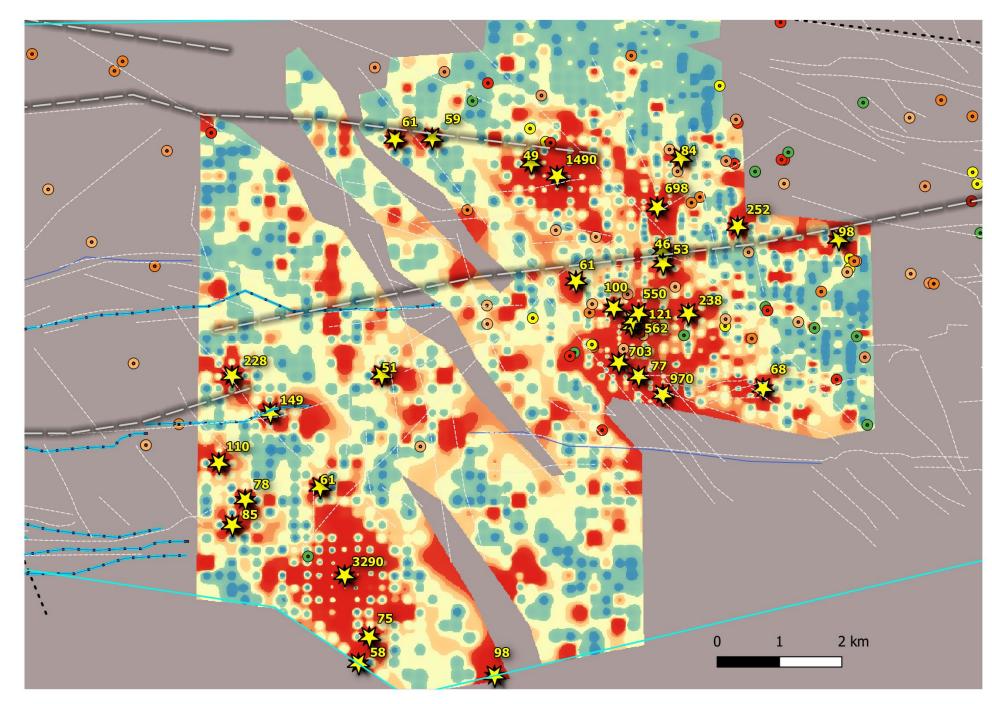




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#### Hi-resolution Tills

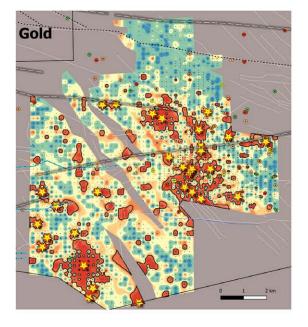
- Conventional till sampling is time consuming and expensive. Results are received long after field work has been completed.
- Explorers in northern regions have developed cheaper methodologies with faster turnarounds.
- Tightly spaced (100-200m) samples of frost boils (1Kg) are sieved to -600 mesh and analyzed for gold and a suite of elements.
- Expands coverage over a wide area and also covers areas where little or no outcrop exists.
- Solstice took 2050 samples covering an area of approximately 85km<sup>2</sup> over the Westeros fold, southwest of the Qaiqtuq area of elevated gold in boulders (see news release dated November 27, 2018 for additional details).
- Three main areas of >80<sup>th</sup> %ile anomalies are shown which show a good correlation with magnetic regions likely underlain, at least in part, by iron formation. Some of these have anomalous gold in rocks (circles).
- The use of the hi resolution method has been successful and has identified areas for potential follow up. 52

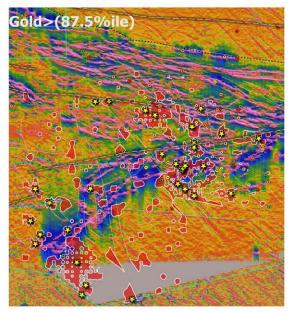


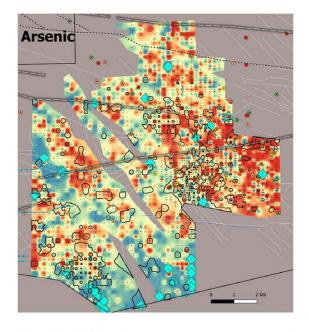
# S S L S T I C E

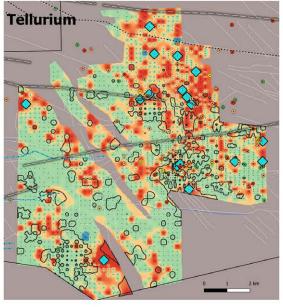
#### **Hi-resolution Tills - GOLD**

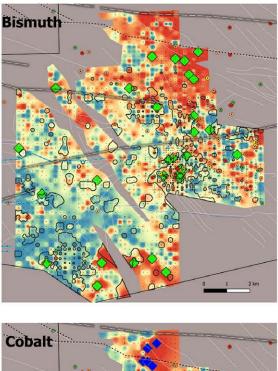
- This map shows the areas of >80<sup>th</sup> percentile gold in tills (red) and also shows as stars individual samples with strongly elevated gold.
- These values are considered highly anomalous given the nature of the sampled material.
- Highlighted values (n=32) represent the 98.5<sup>th</sup> percentile of the sample population and range up to a maximum of 3290 ppb (or 3.29g/t).

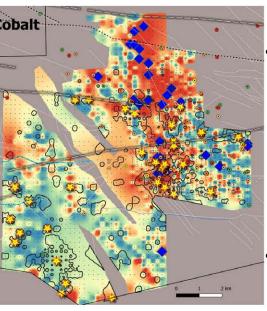












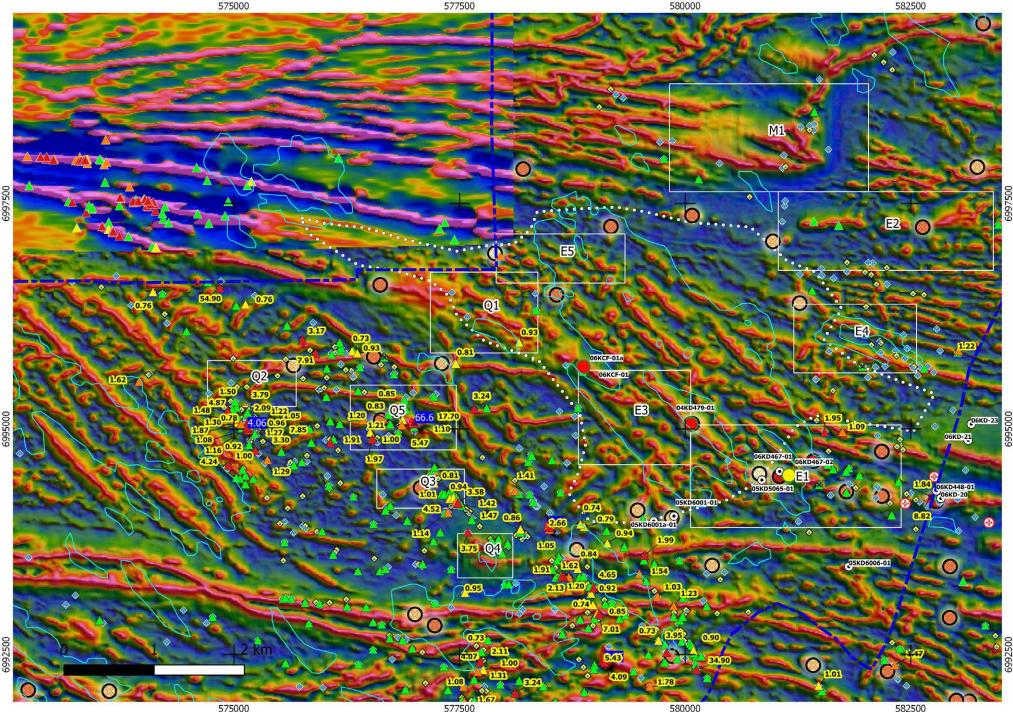
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#### **Hi-resolution tills - Pathfinders**

- Red brown = >80<sup>th</sup> %ile and highlighted points are >95<sup>th</sup> %ile data.
- Pathfinder elements show some association with elevated arsenic and bismuth although both elements are anomalous outside areas of strong gold enrichment.
- Bi and Te are generally elevated over northern parts of the sampled grid, close to the north limb of the Westeros fold where it may be coincident with large throughgoing structures.

Cobalt, typically associated with mafic or ultramafic rocks is elevated in the southern part of the area where reconnaissance work by Asamera in 1999 documented a layered ultramafic intrusive with Pt+Pd of 1.34g/t. Cobalt is probably related to this area. The presence of economically interesting Pt+Pd requires addiotnal work.

Cobalt is also strongly anomalous in the northern part of the survey area suggesting the presence of potentially unknown mafic and/or ultramafic rocks. 54



#### SUMMARY

- Numerous Target areas, many associated with an extensive area of inferred magnetic depletion.
- Magnetic depletion occurs in jog on regional RWFZ.
- Mineral assemblages and late actinolite associated with gold mineralization.
- It is likely that much of the SAM target formation lies beneath Enterprise Lake which requires drilling across its width in several locations.
- M1, E1 targets drill ready, need significant amount of drilling due to strike length and need to cross all units.
- Magnetics and EM associated with most targets, EM being re-processed.
- Late 2018 discovery at Qaiqtuq requires early 2019 mapping and sampling to detail geology and, if possible, extend current extent of in situ gold. Target is at least 5km long and is fold repeated.
- Objective will be to test for high grade surface mineralization and to establish key geological control before drilling. Due to scale of target, requires significant drilling to adequately test.
- All identified sub target areas warrant drilling.

## THE PATH FORWARD

- Work to date has identified widespread gold over a broad area in an attractive structural setting for a potential large gold deposit.
- Some targets are drill-ready whereas Qaiqtuq, the area of most known gold, requires detailed follow up.
- Relatively low cost high quality technical work can add significant value to avoid prospecting with a drill which is very high cost.
- 1) Incorporate results of re-processing of EM to refine targets.
- 2) Map and sample Qaiqtuq and other areas in early summer 2019. Target expanding on the new discovery of gold in this area in late 2018.
- 3) Incorporate results into targeting, set up for drill program.
- 4) Possibly two phases to ensure ice-based targets under Enterprise Lake is tested.

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