The Discovery of the Hunt Gold Zone: A Mobile Metal Ions Process (MMI) Success Story

Presented by:

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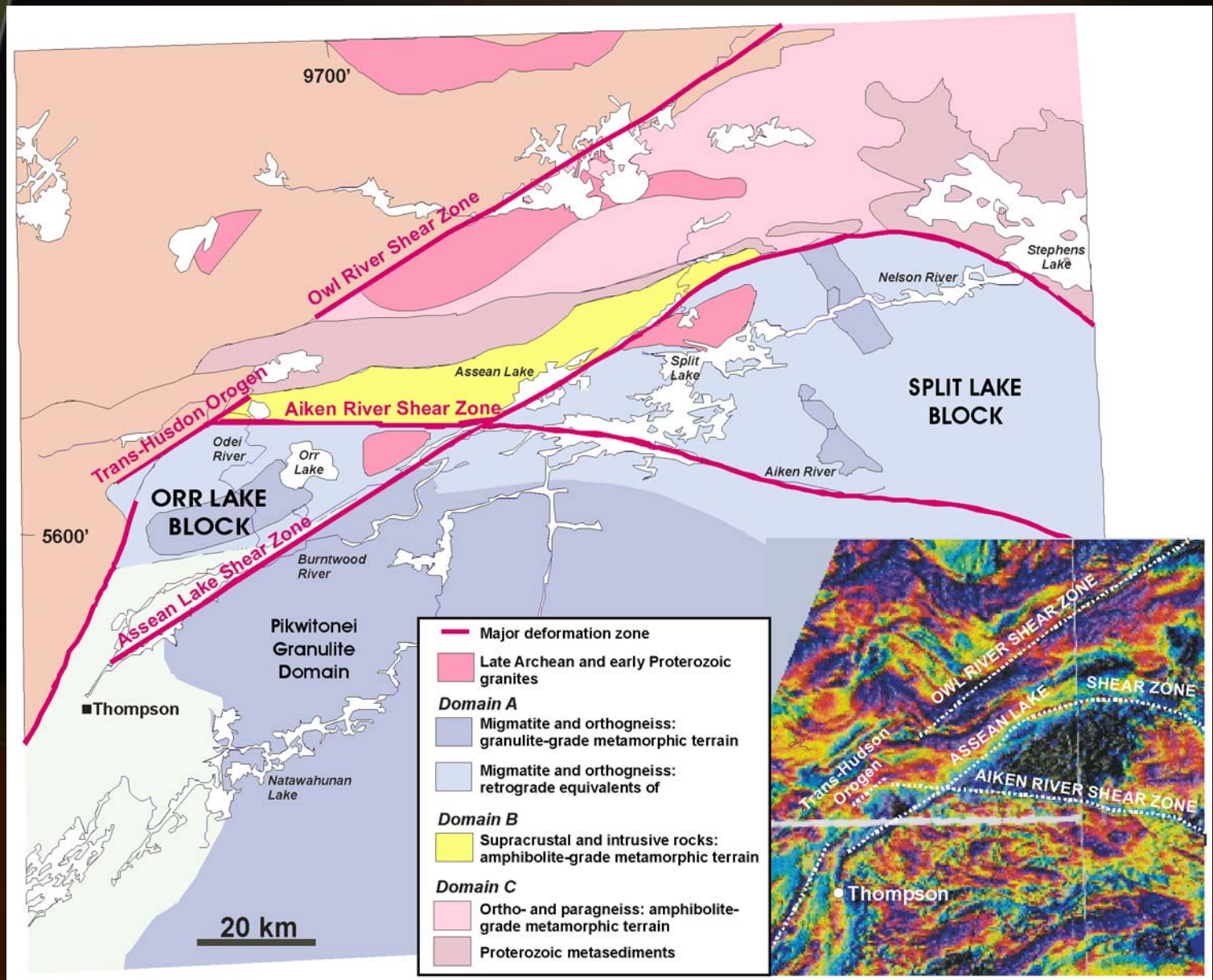
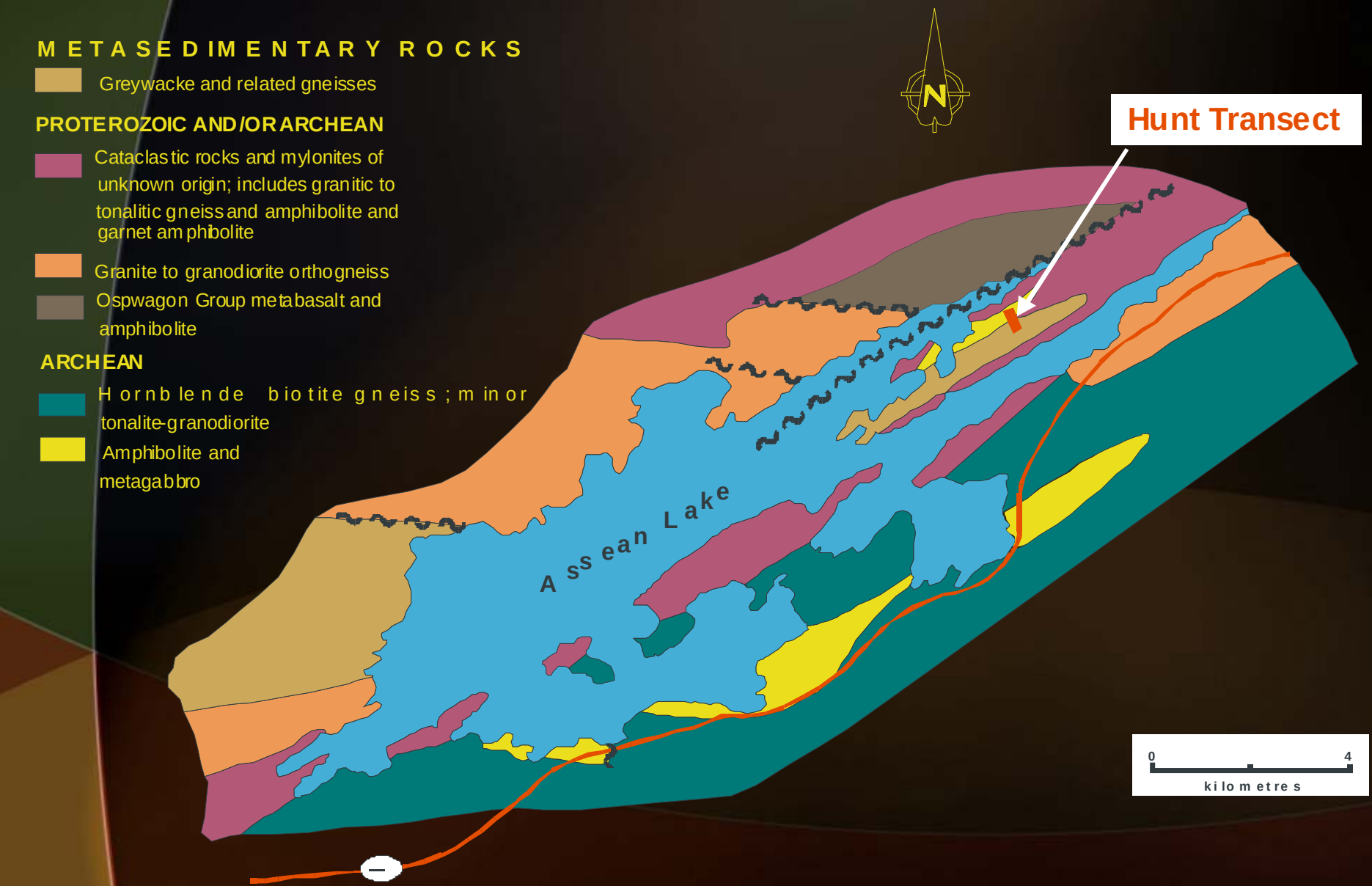
Project Location

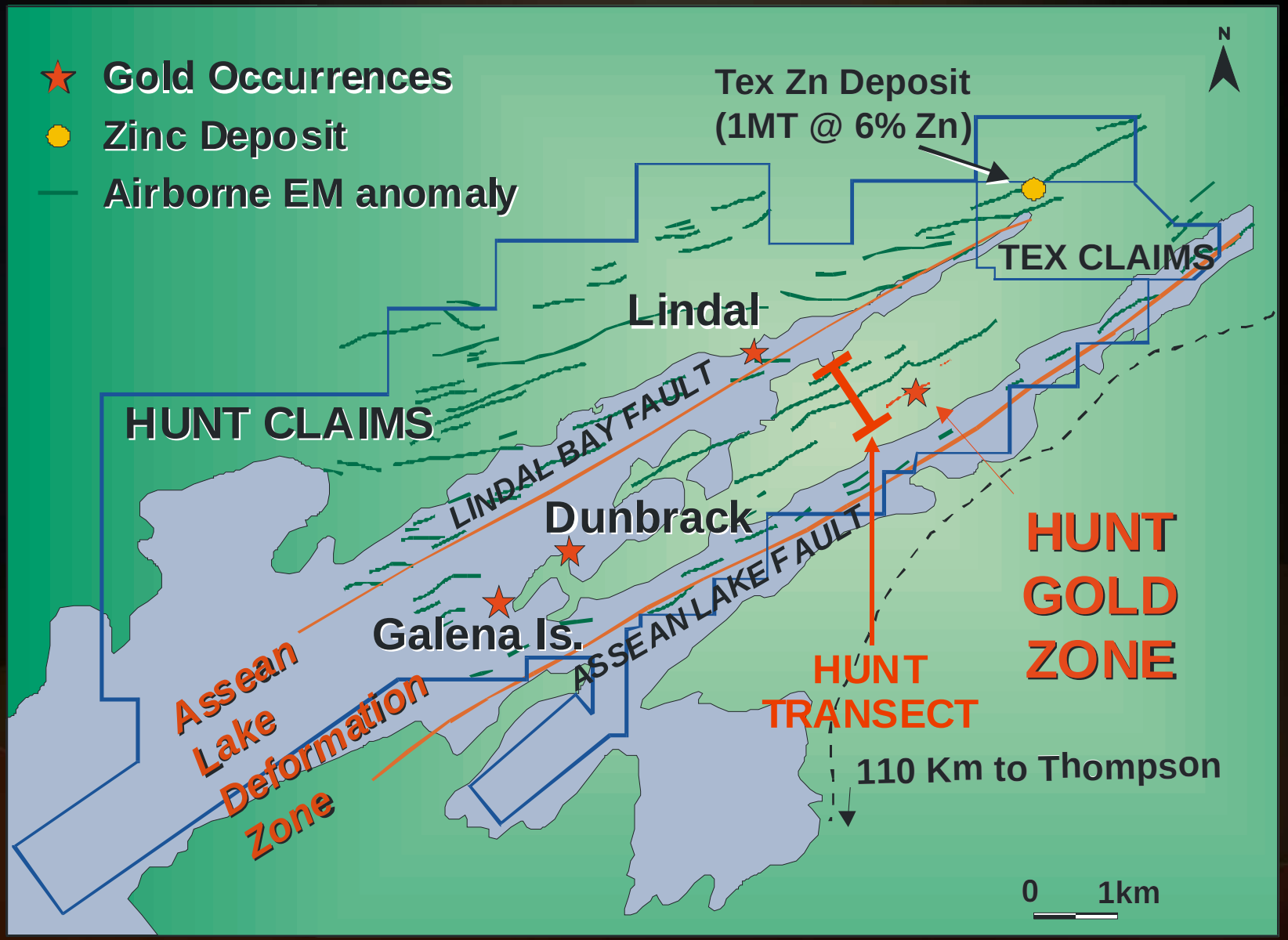
Geological Domains with Deformation Zones: Central Northern Manitoba



Hunt Transect Geology



Assean Lake Property



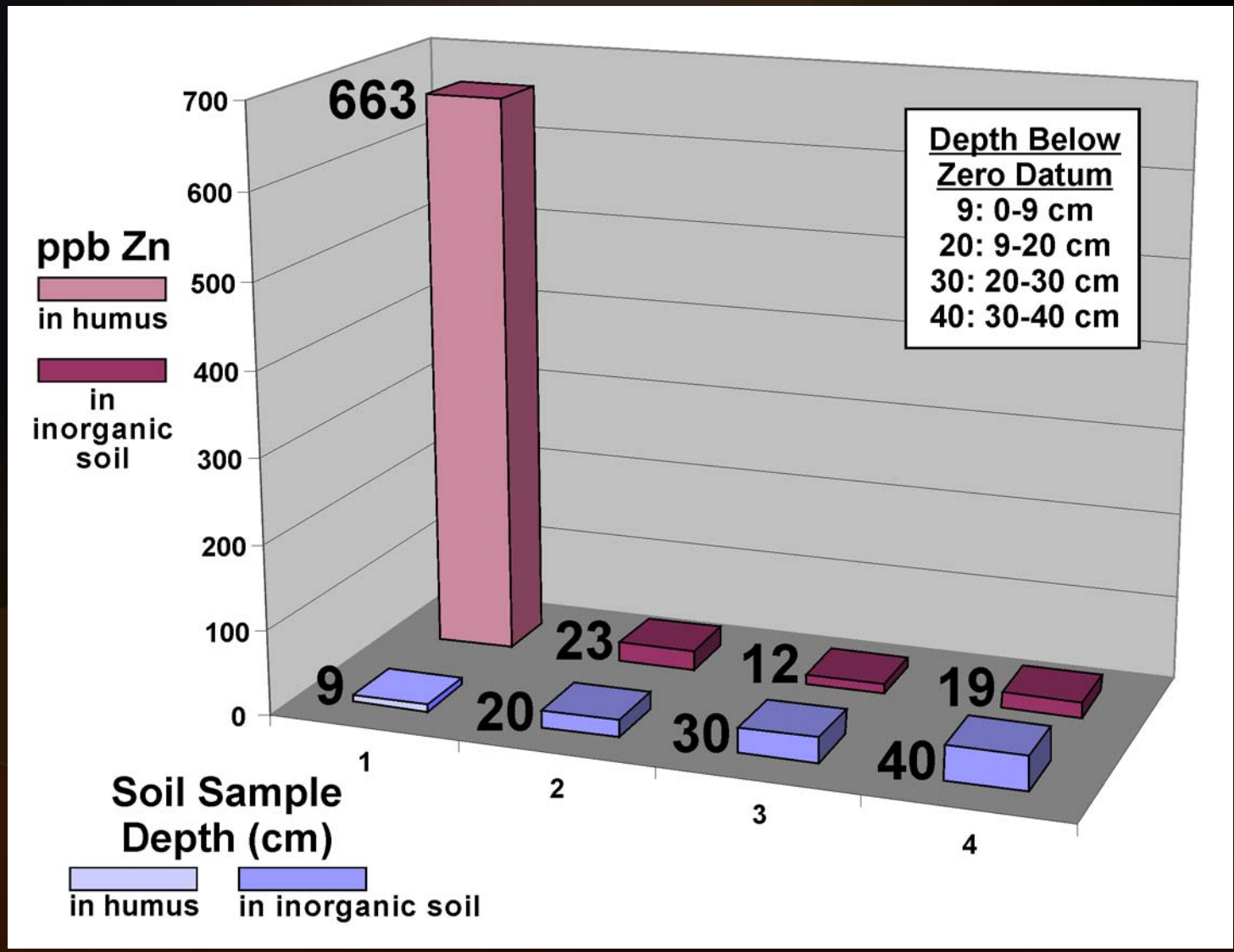
Hunt Transect Overburden

- **Active layer (cms - labrador tea, blueberry, grass, lichen)**
- **Peat (1 m maximum)**
- **Glaciolacustrine Clay (15 m)**
- **Sand, Gravel, Boulders (17 m)**
- **Barren Volcanic and Sedimentary Rock overlying Hunt Zone (25 m)**

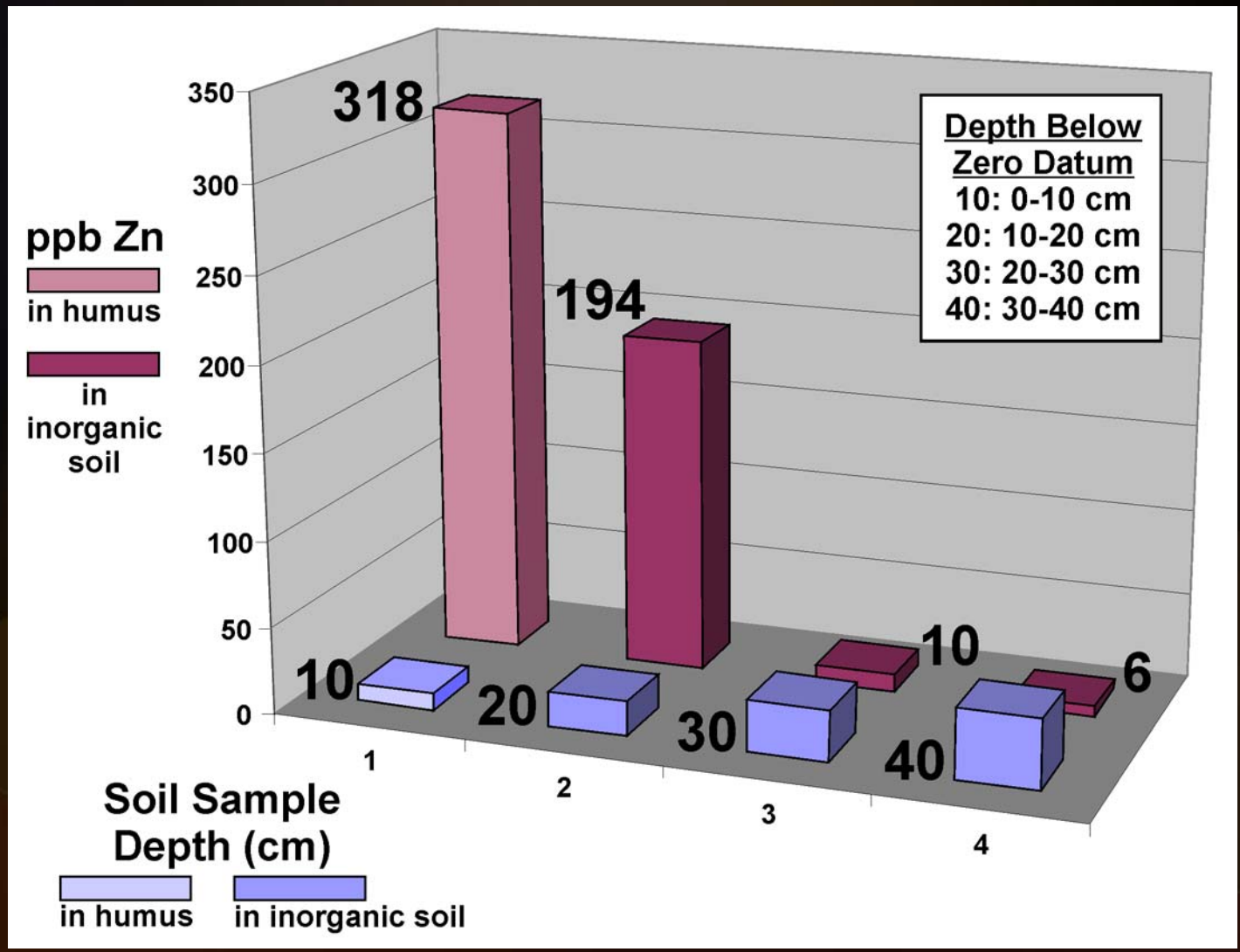
Hunt Gold Zone Orientation Survey

1. **Vertical profiling along one transect over the geophysical and geological targets**
2. **Samples collected every 10 cm (to 40-60 cm) through the overburden profile at 20 stations spaced 50 m apart**
3. **Organic material not mixed with inorganic soil; results interpreted separately**
4. **Analysis by MMI-A and –B; ICP-MS finish**
5. **Analytical data displayed as “response ratios” (RR)**

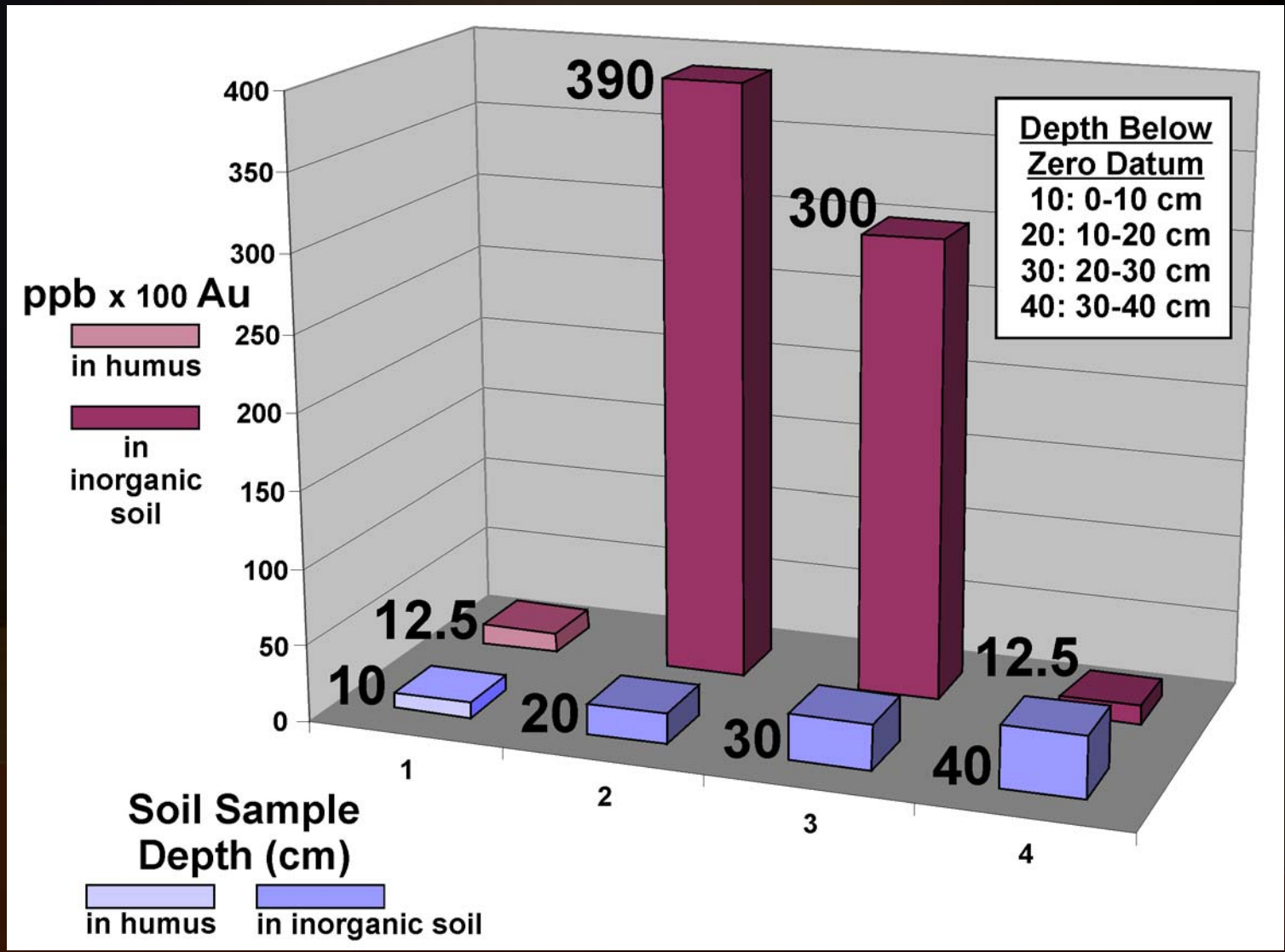
Hunt Transect Zn (ppb) MMI-A Vertical Profile



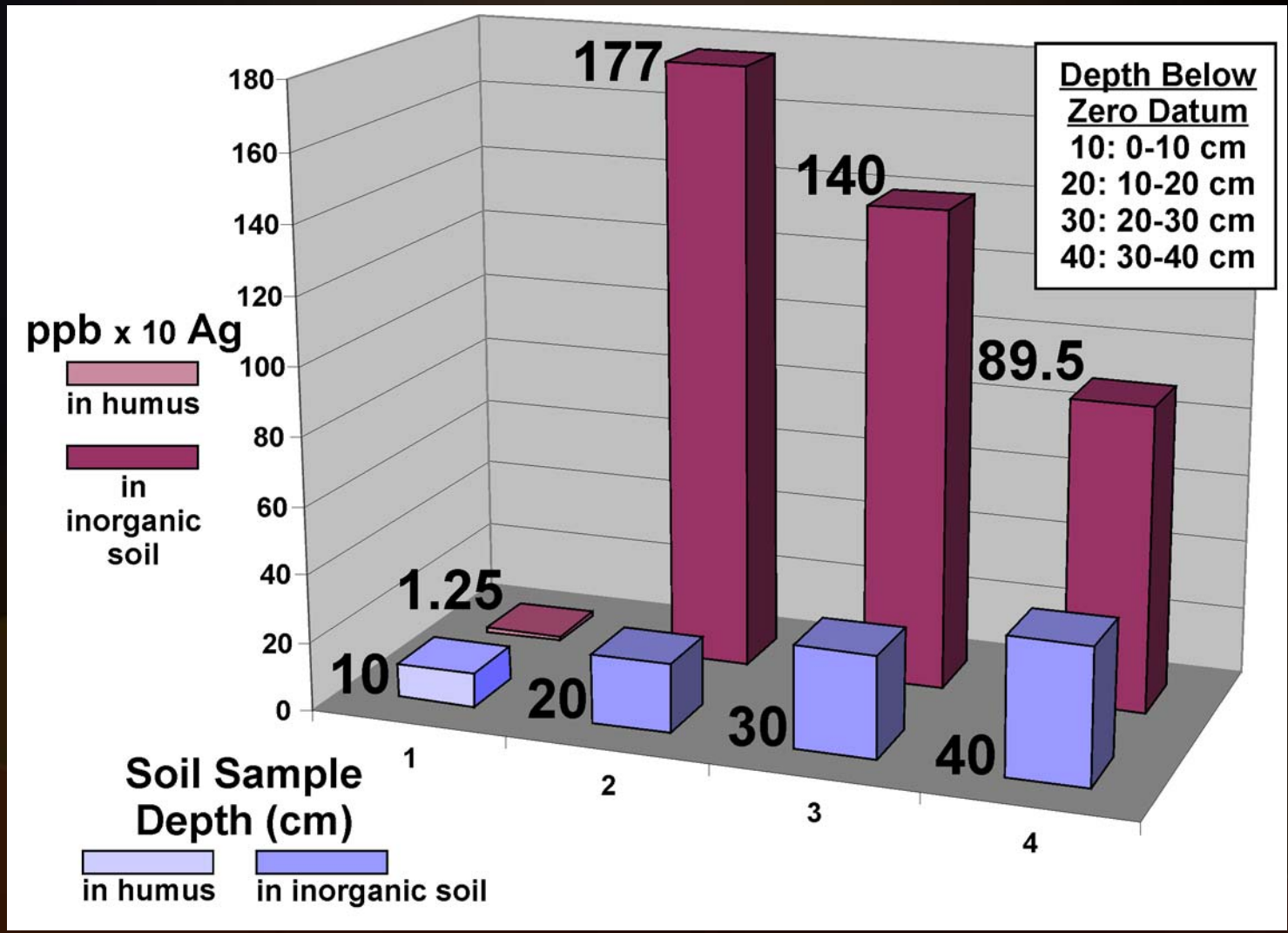
Hunt Transect Zn (ppb) MMI-A Vertical Profile



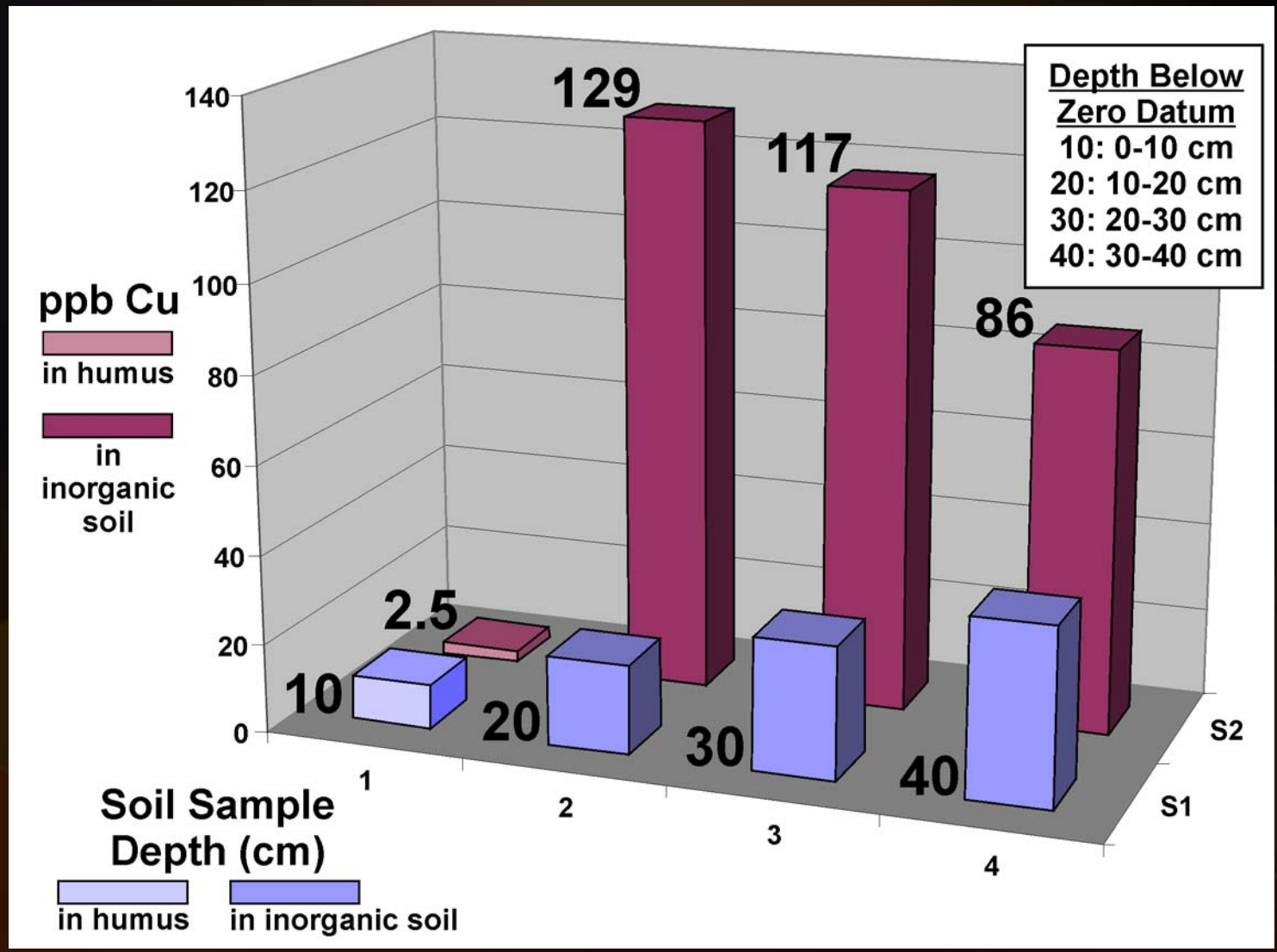
Hunt Transect Au (ppb) MMI-B Vertical Profile



Hunt Transect Ag (ppb) MMI-B Vertical Profile



Hunt Transect Cu (ppb) MMI-A Vertical Profile



Hunt Gold Zone Orientation Survey: Observations

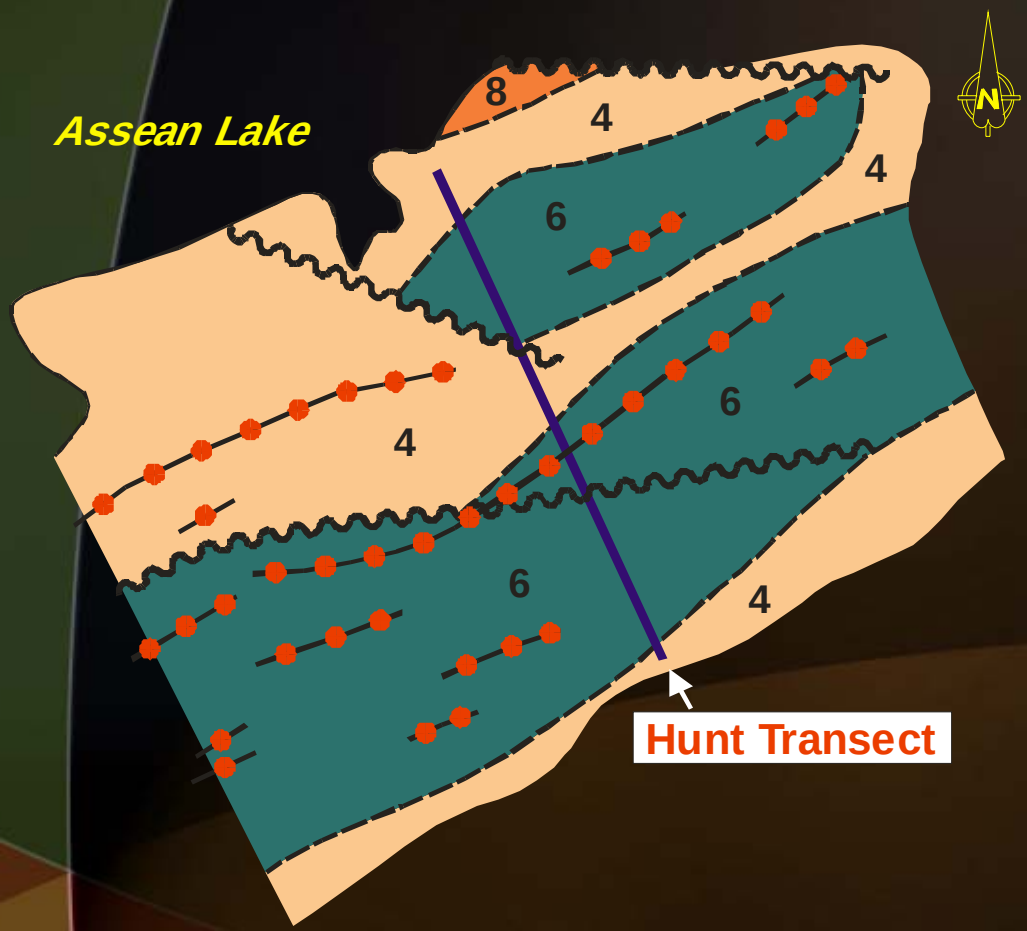
1. **Vertical profiling identified high-contrast residence sites at 10-30 cm below the “zero datum” for base and precious metals. The optimum sampling location is 10-20 cm.**

2. **The depth of the optimum sampling location in the soil profile occurs below the zero datum, which is the point at which soil formation is initiated in any particular landscape environment.**

3. **Distinctive Zn, Cu, Au, Ag and Pd responses occur over “historic” ground EM conductors and associated structures, and these anomalies represent follow-up drill targets.**

Hunt Transect

1. **Sample Collection (N=22)**
2. **50 m spacings**
3. **Silty clay B-Horizon**



4 Burntwood greywacke

6 Transition Series hornblende amphibolite and chert

8 Pegmatite

Ground EM conductor

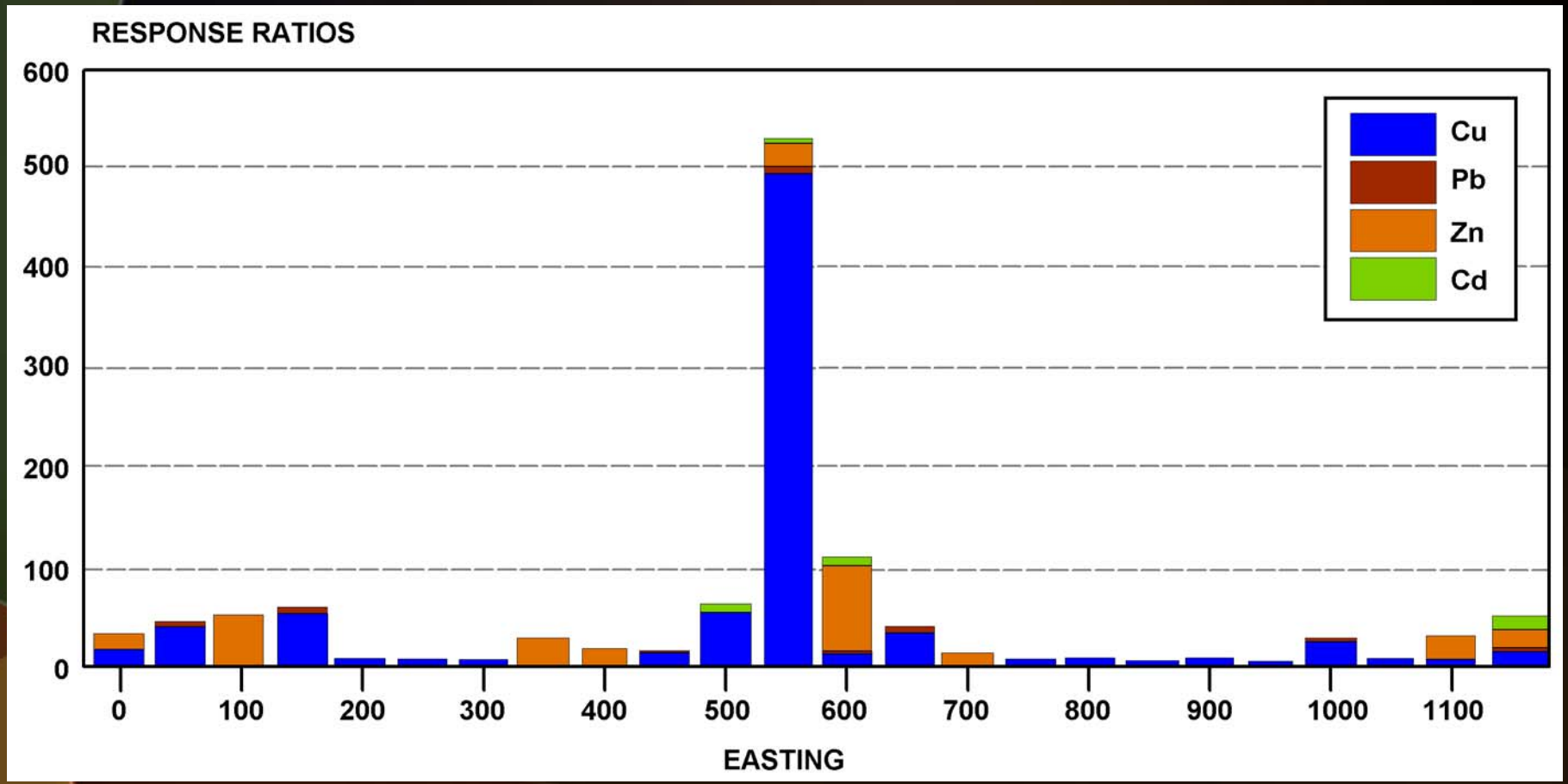
Fault (inferred)

Geological contact (inferred)

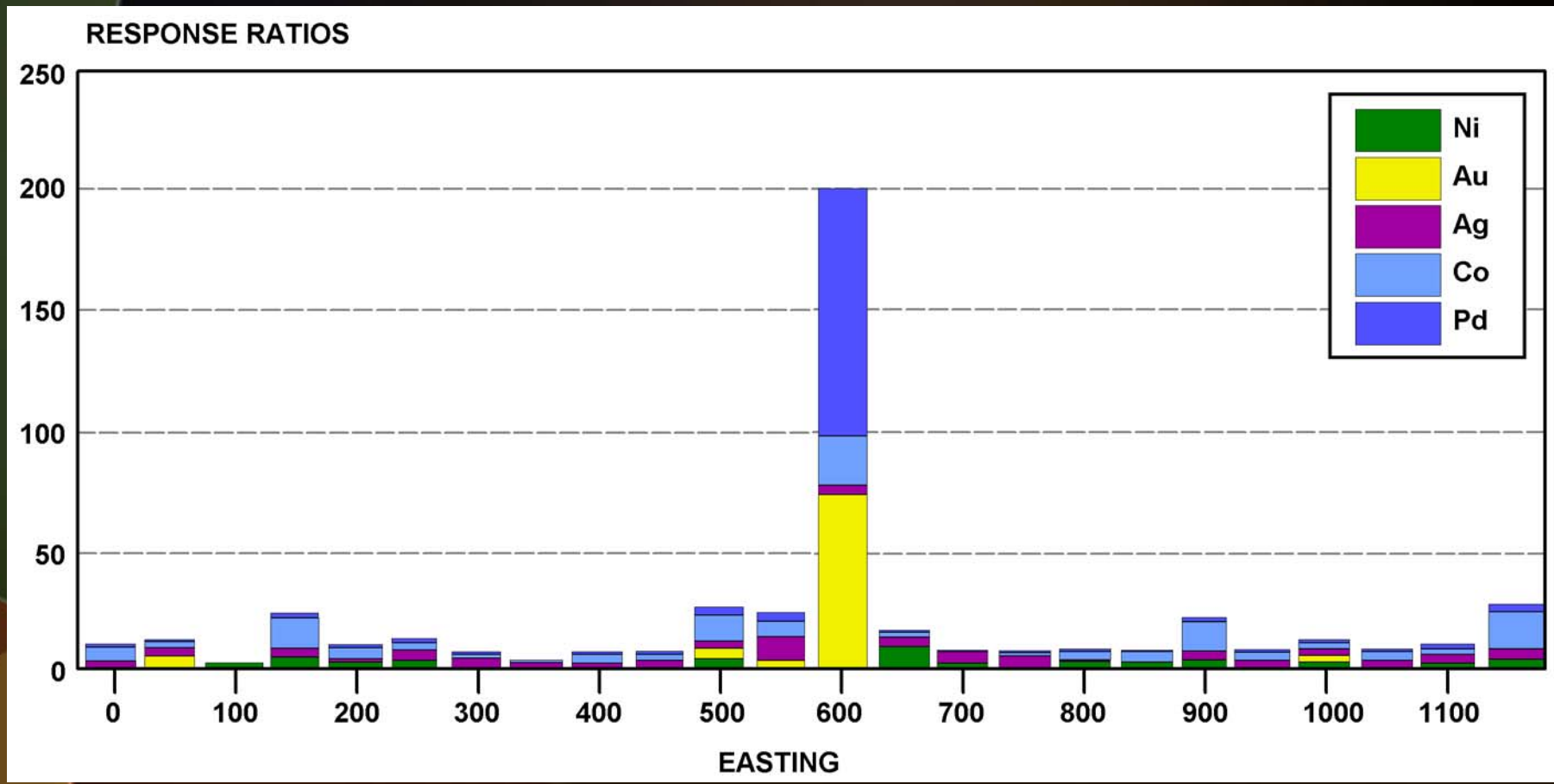
0 500

metres

Manitoba-Hunt Transect
MMI Responses: Base Metals



Manitoba-Hunt Transect
MMI Responses: Precious Metals



Hunt Transect Interpretations

1. **A base metal (MMI-A) anomaly comprising Zn, Cd and Cu was defined over a ground EM conductor.**

2. **A precious metal (MMI-B) anomaly comprising Au, Ag, Pd, Co and +/- Ni was defined adjacent to the base metal anomaly.**

3. **Both anomalies are offset from one another by 50 m.**

4. **Drill testing is warranted.**

Exploration (DDH) Subsequent to Mobile Metal Ion (MMI) Process Surveys

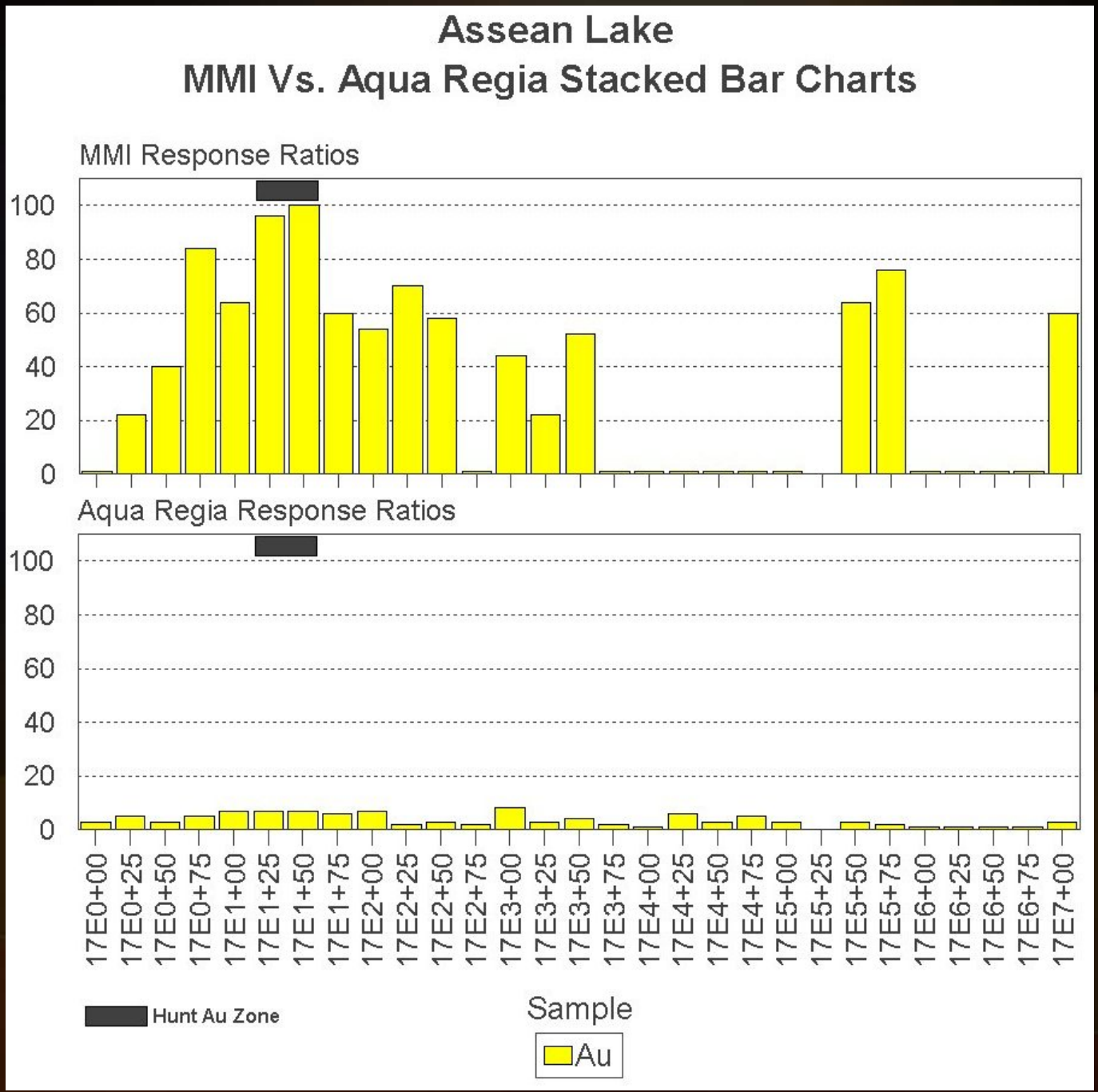
1. **5.1% Zn, 1.6% Pb, 0.4% Cd, 28.8 g/t Ag over narrow widths (pelitic and diopsidic sediments)**

2. **22.2 g/t Au and 190 g/t Ag (chert/ultramylonite)**

Hunt Gold Zone Orientation Survey #2 (MMI vs. Aqua-Regia)

1. **Single transect (N=29 sites) over the Hunt Gold Zone**
2. **Sampling protocols: MMI and "Traditional B-Horizon" for AR**
3. **Data displayed as Response Ratios and Concentration**

Assean Lake
MMI Vs. Aqua Regia Stacked Bar Charts



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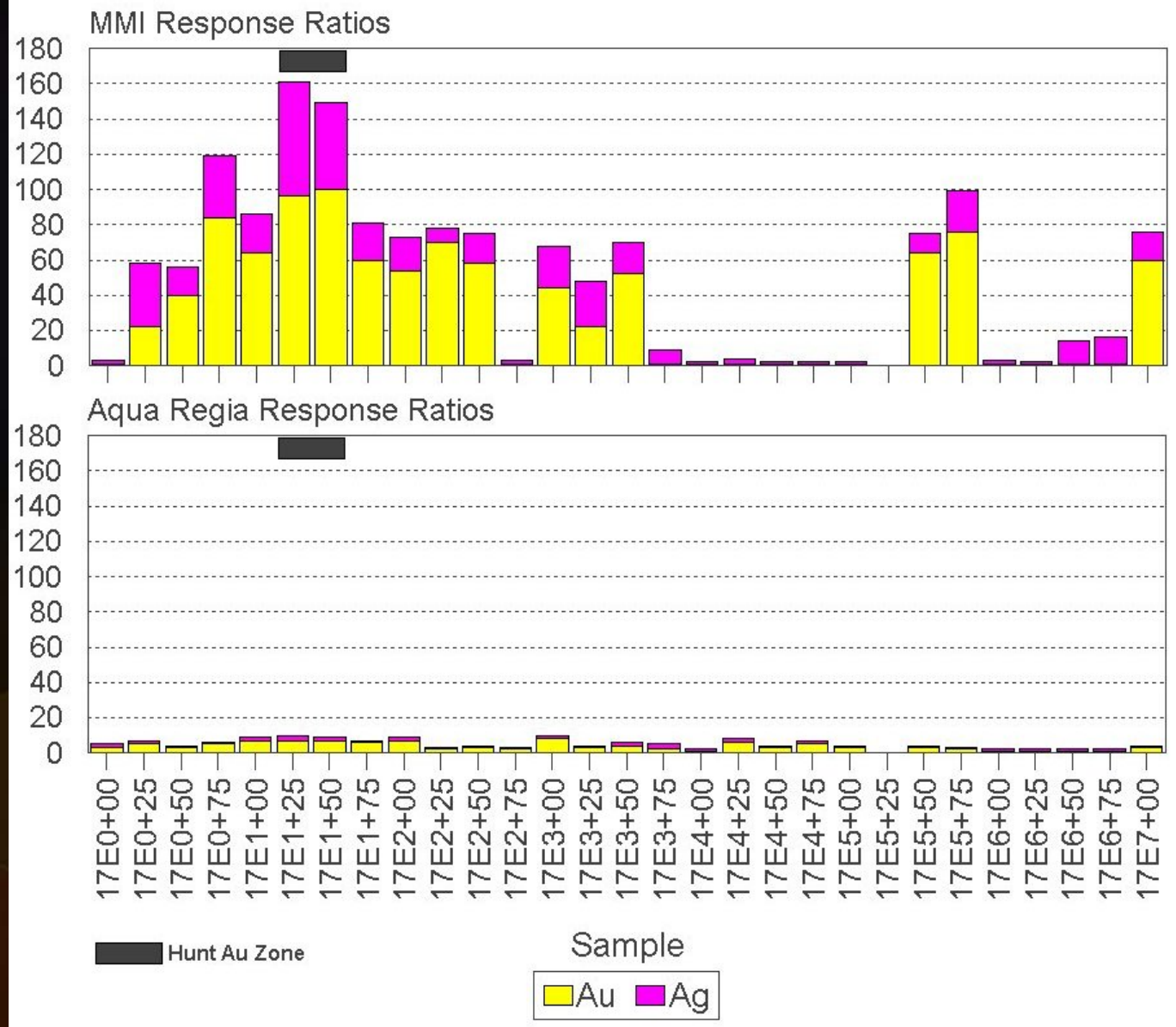
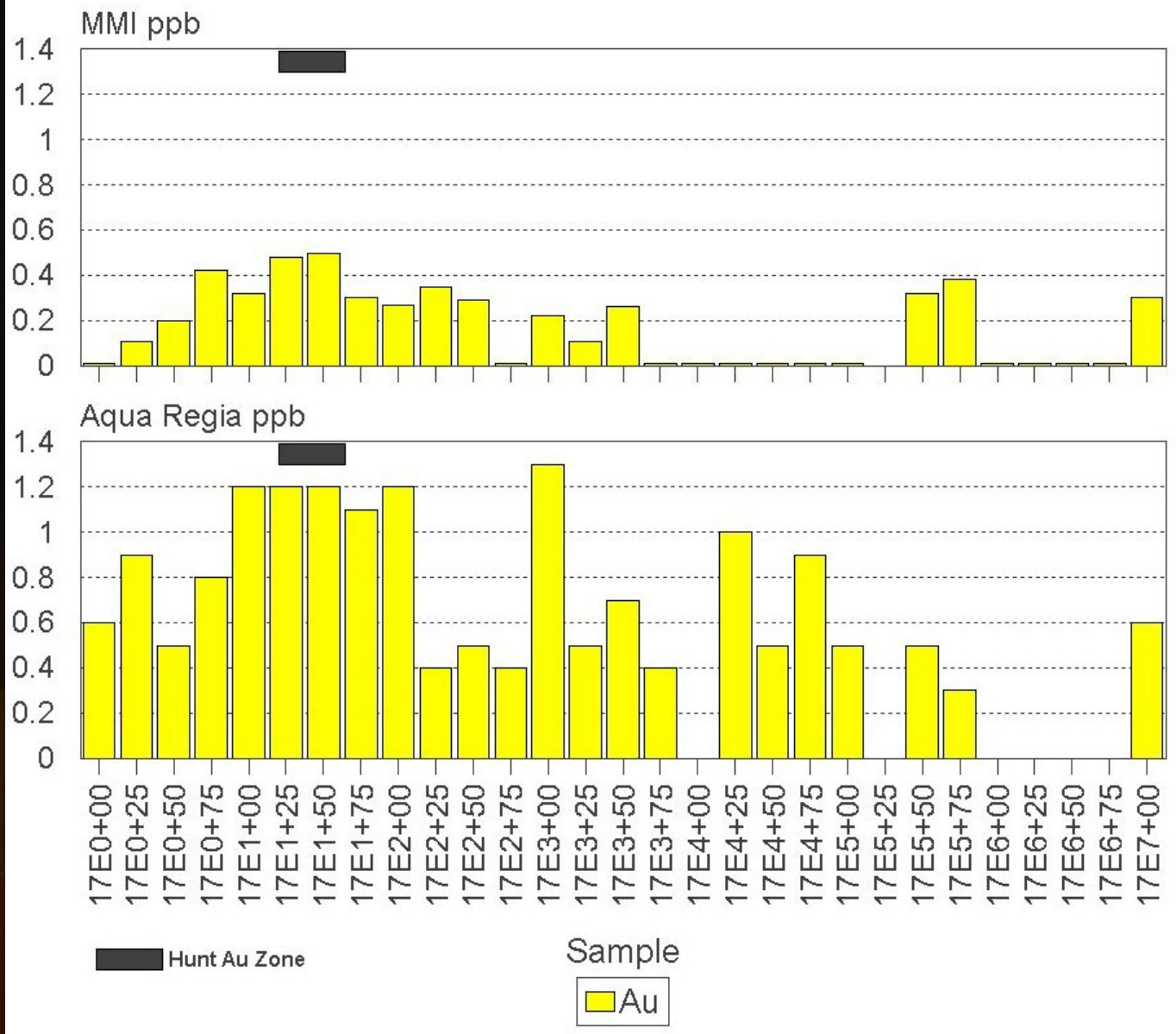
MMI Vs. Aqua Regia Stacked Bar Charts



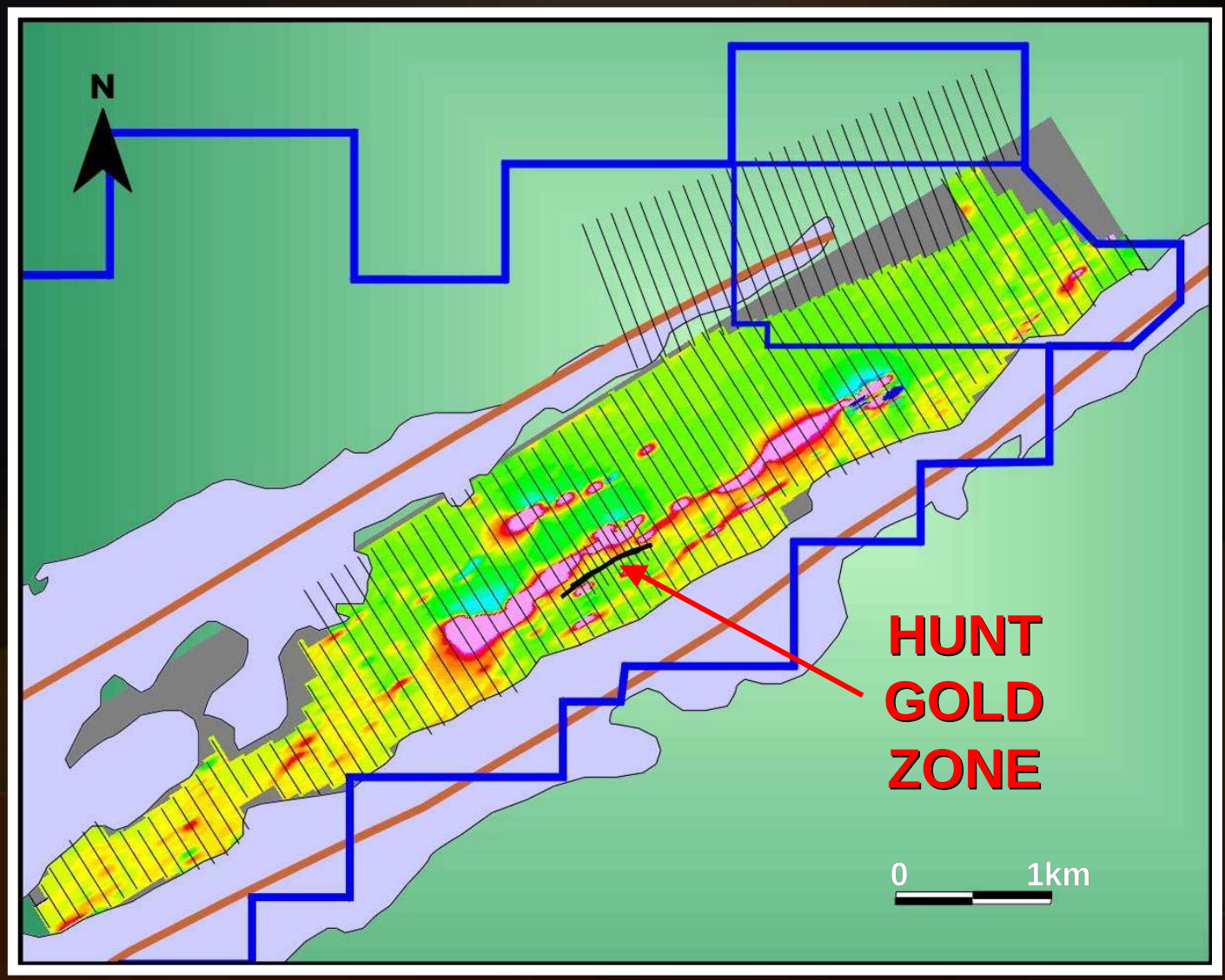
Assean Lake
MMI Vs. Aqua Regia Stacked Bar Charts



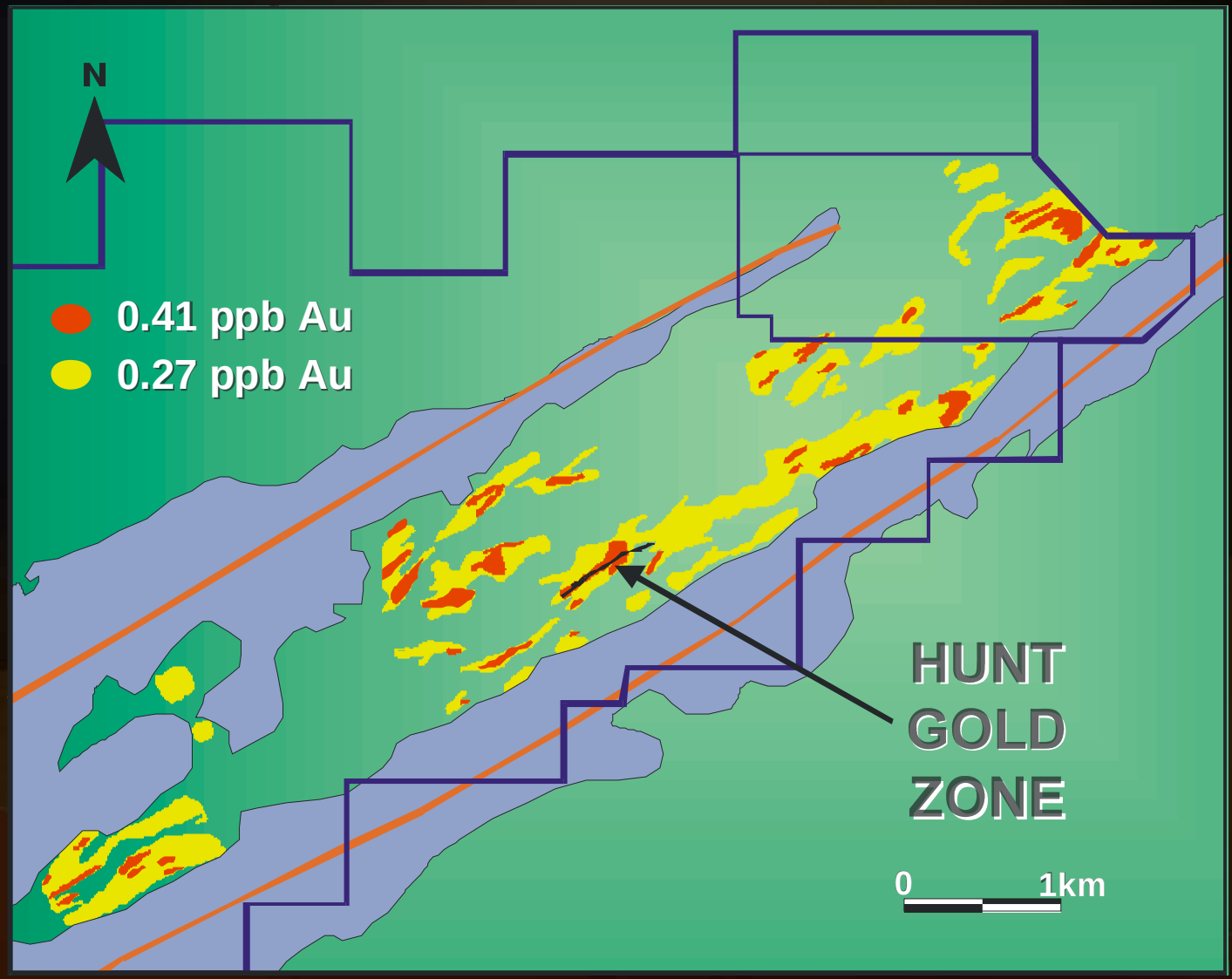
Conclusions: Orientation Survey #2

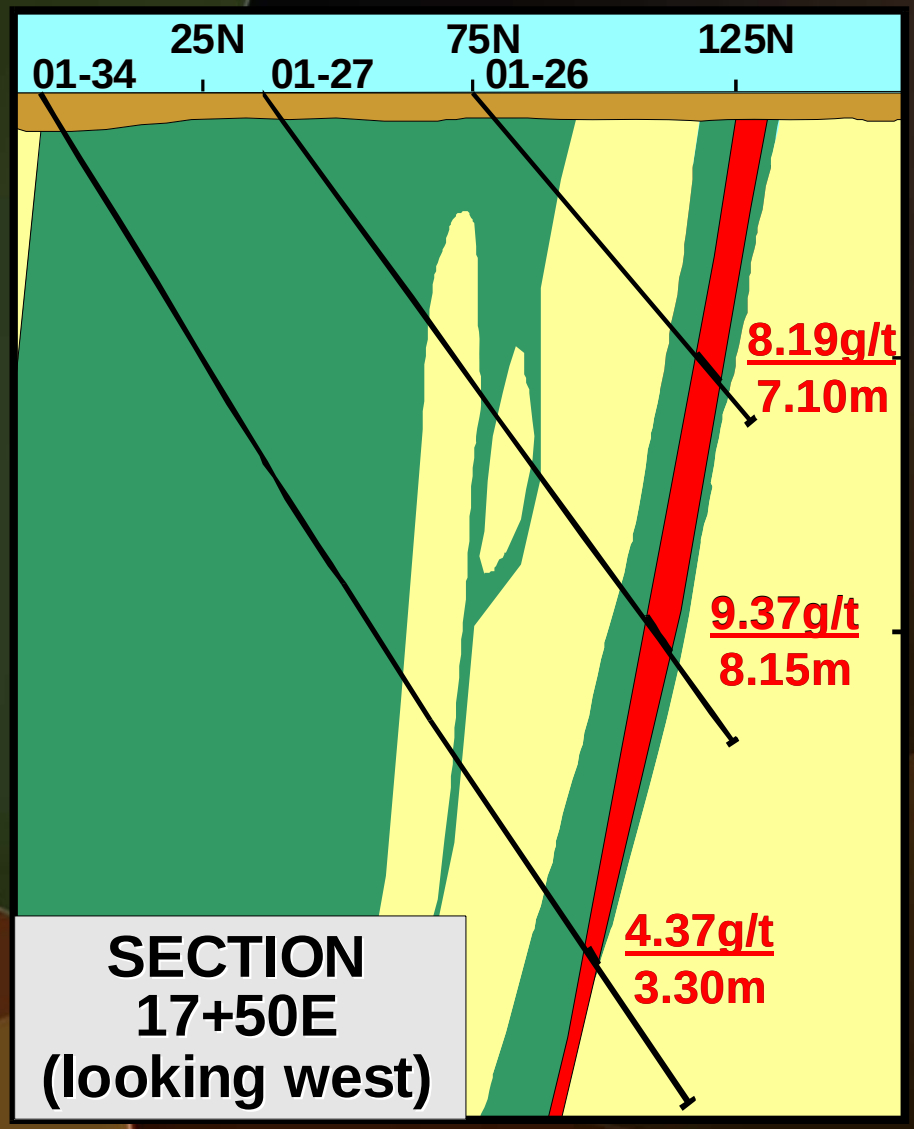
1. **Strong partial acid digest (aqua-regia) reports higher concentrations of metals from the substrate, but lacks focus and contrast over the Hunt Gold Zone.**
2. **Spurious elevated analyses generated away from the Hunt Gold Zone.**
3. **The preferred extraction is MMI based on superior focus and contrast.**

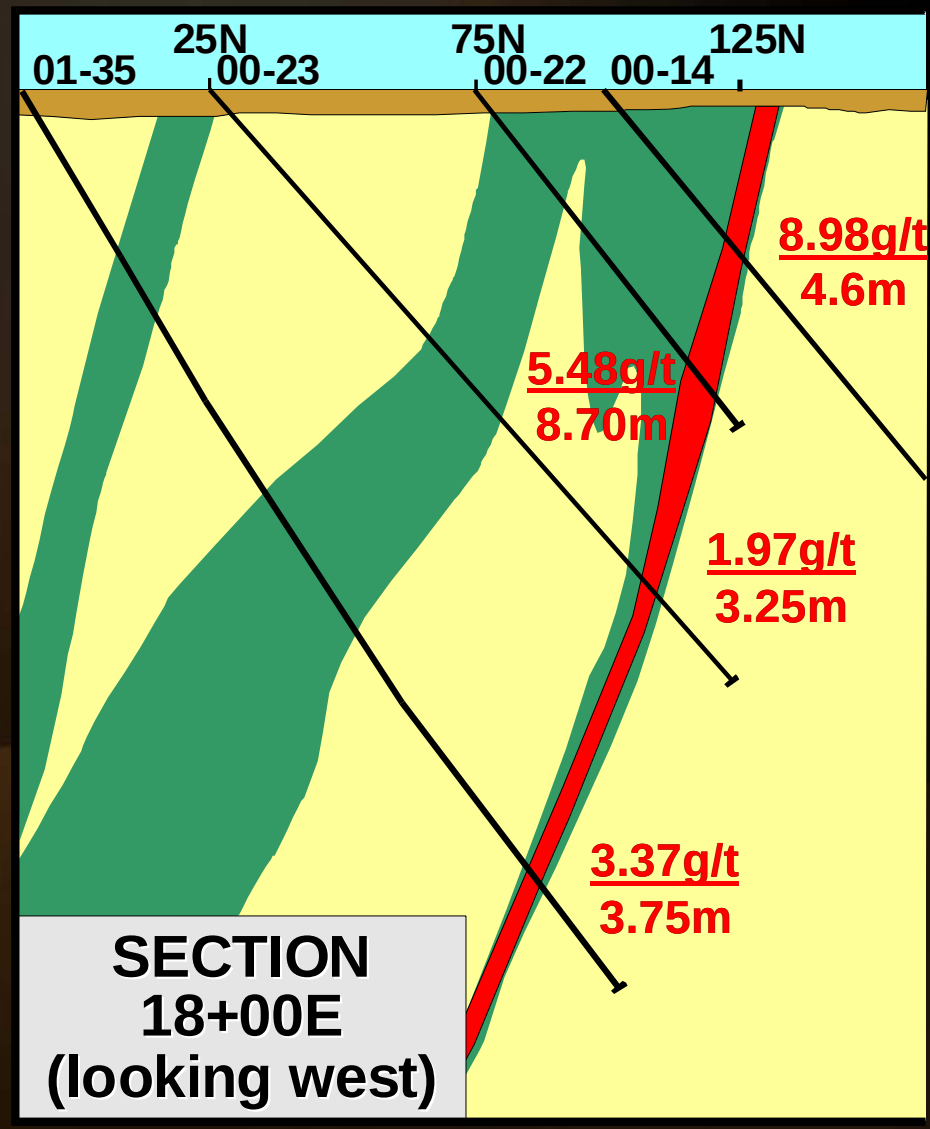
Ground Magnetics



MMI Gold Geochemistry



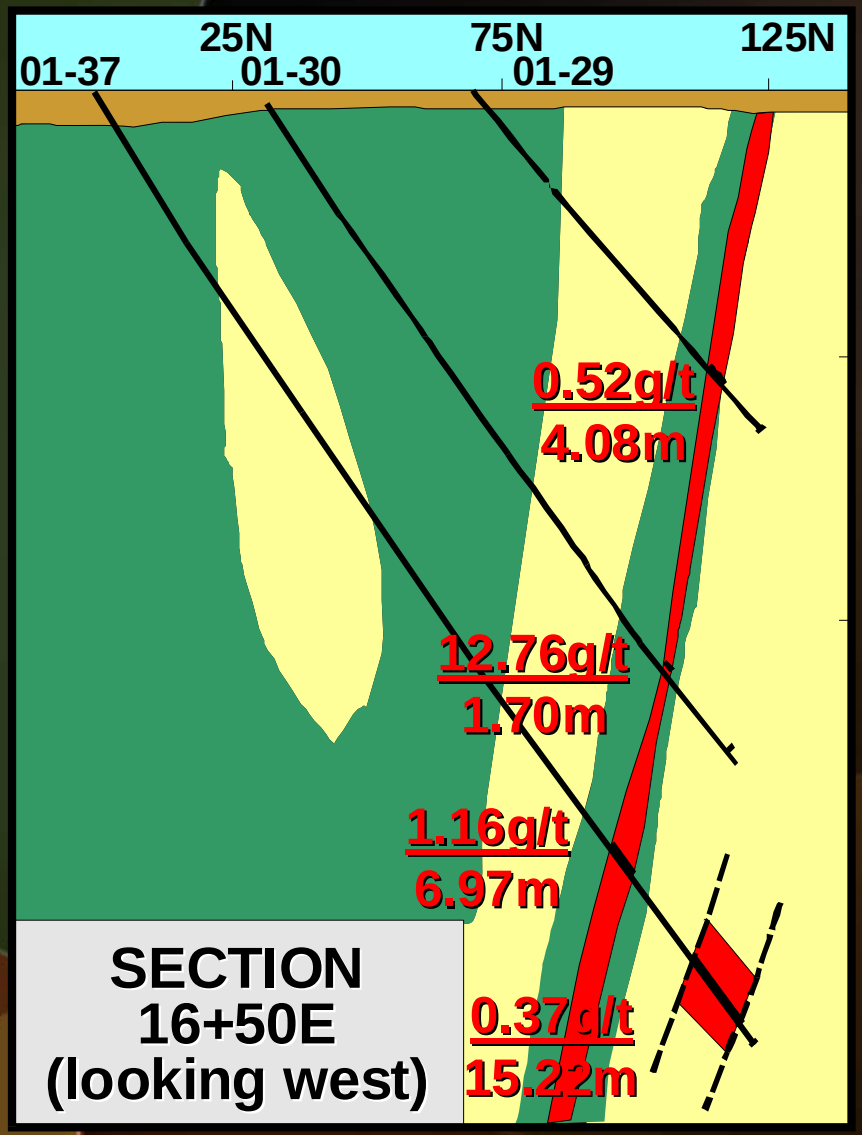


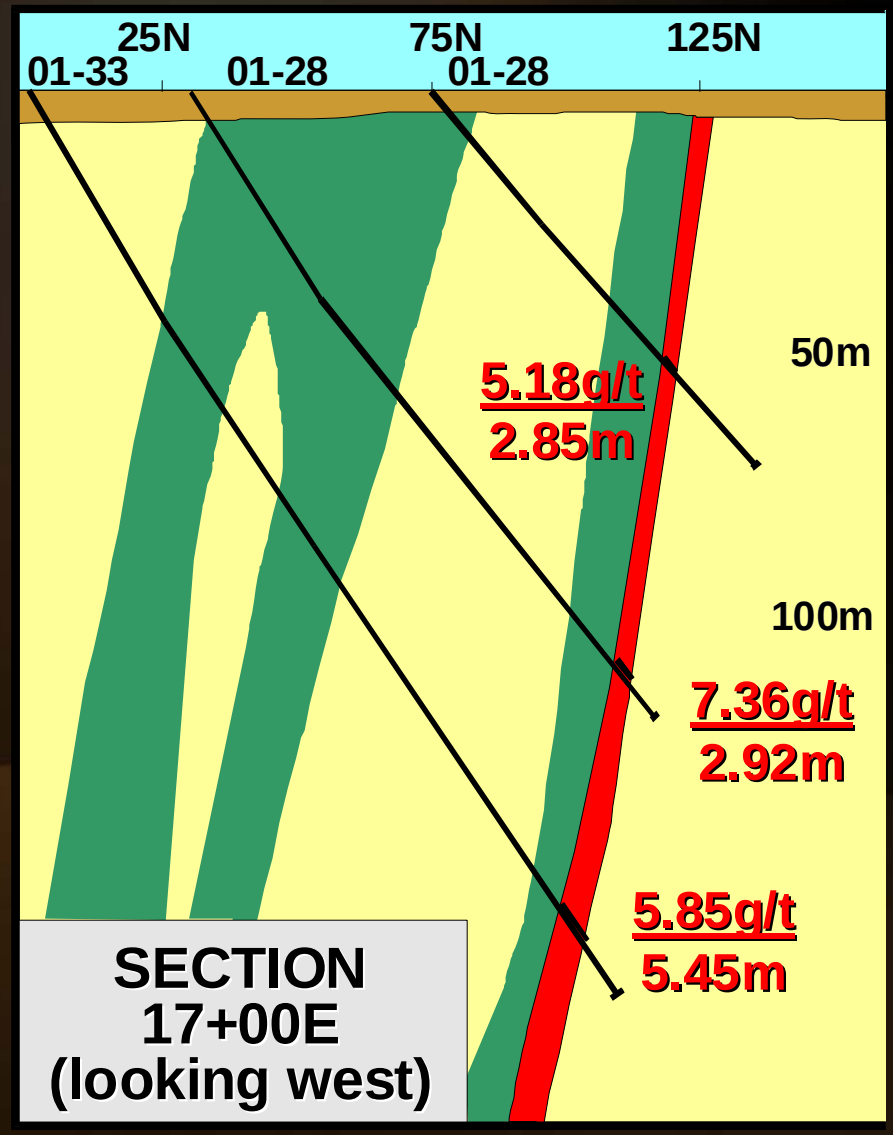


GOLD ZONE

GABBRO

PARAGNEISS, SCHIST





GOLD ZONE GABBRO PARAGNEISS, SCHIST

Hunt Gold Discovery

1. **Hunt Zone intersected by 24 holes**
2. **Strike length 700 m**
3. **Drilled to a depth of 150 m (open)**
4. **Grades up to 9.37 g/t gold over 8.15 m in well-defined ore shoot**
5. **Typical of shear-hosted gold deposits in Precambrian terrains in Canada**
6. **200,000 oz gold defined to date - and continuing**

Conclusions

1. **Orientation Program: dig a pit; vertical profiling to determine depth of sample collection and sediment type**
2. **Field notes at each station (depth, moisture, organic or inorganic material-%, discoloration/oxidation or eluviation and illuviation)**
3. **Consistency during the grid sampling**
4. **Interpret organic and different soil types separately before combining data**
5. **Assess responses in terms of both the pattern of variation as well as the magnitude of individual responses**
6. **MAINTAIN CONSISTENT SAMPLE DEPTH**

Acknowledgements

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and

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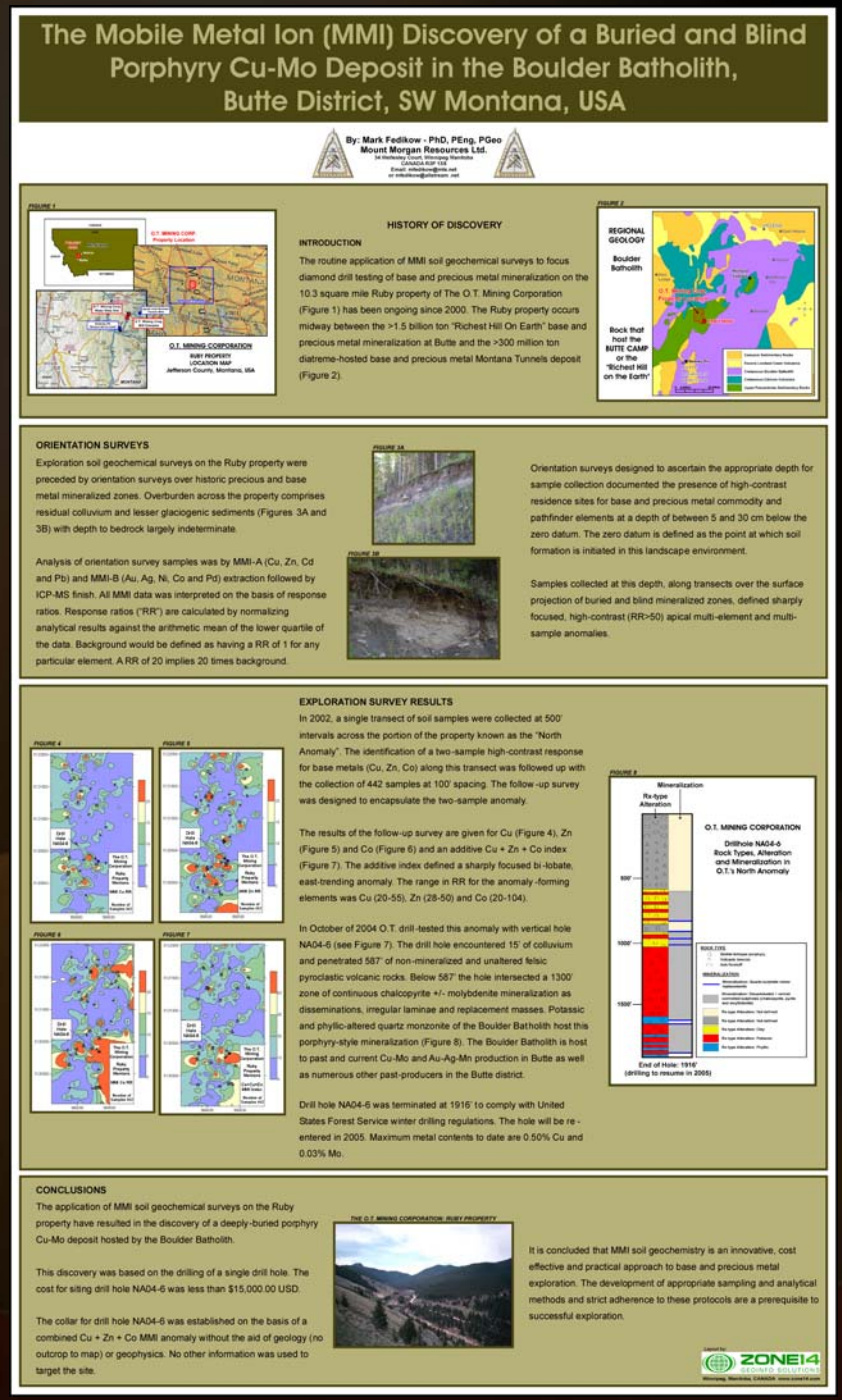
The MMI-Based Discovery of a Porphyry Cu-Mo Deposit Beneath 600’ of Post Mineralization Cover, SW Montana, USA



The Mobile Metal Ion (MMI) Discovery of a Buried and Blind Porphyry Cu-Mo Deposit in the Boulder Batholith, Butte District, SW Montana, USA

By: Mark Fedikow - PhD, PEng, PGeo
Mount Morgan Resources Ltd.

HISTORY OF DISCOVERY

INTRODUCTION

The routine application of MMI soil geochemical surveys to focus diamond drill testing of base and precious metal mineralization on the 10.3 square mile Ruby property of The O.T. Mining Corporation (Figure 1) has been ongoing since 2000. The Ruby property occurs midway between the >1.5 billion ton “Richest Hill On Earth” base and precious metal mineralization at Butte and the >300 million ton diatreme-hosted base and precious metal Montana Tunnels deposit (Figure 2).

REGIONAL GEOLOGY
Boulder Batholith
Rock that host the BUTTE CAMP or the “Richest Hill on the Earth”

ORIENTATION SURVEYS

Exploration soil geochemical surveys on the Ruby property were preceded by orientation surveys over historic precious and base metal mineralized zones. Overburden across the property comprises residual colluvium and lesser glaciogenic sediments (Figures 3A and 3B) with depth to bedrock largely indeterminate.

Analysis of orientation survey samples was by MMI-A (Cu, Zn, Cd and Pb) and MMI-B (Au, Ag, Ni, Co and Pd) extraction followed by ICP-MS finish. All MMI data was interpreted on the basis of response ratios. Response ratios (“RR”) are calculated by normalizing analytical results against the arithmetic mean of the lower quartile of the data. Background would be defined as having a RR of 1 for any particular element. A RR of 20 implies 20 times background.

Orientation surveys designed to ascertain the appropriate depth for sample collection documented the presence of high-contrast residence sites for base and precious metal commodity and pathfinder elements at a depth of between 5 and 30 cm below the zero datum. The zero datum is defined as the point at which soil formation is initiated in this landscape environment.

Samples collected at this depth, along transects over the surface projection of buried and blind mineralized zones, defined sharply focused, high-contrast (RR>50) apical multi-element and multi-sample anomalies.

EXPLORATION SURVEY RESULTS

In 2002, a single transect of soil samples were collected at 500’ intervals across the portion of the property known as the “North Anomaly”. The identification of a two-sample high-contrast response for base metals (Cu, Zn, Co) along this transect was followed up with the collection of 442 samples at 100’ spacing. The follow -up survey was designed to encapsulate the two-sample anomaly.

The results of the follow-up survey are given for Cu (Figure 4), Zn (Figure 5) and Co (Figure 6) and an additive Cu + Zn + Co index (Figure 7). The additive index defined a sharply focused bi -lobate, east-trending anomaly. The range in RR for the anomaly -forming elements was Cu (20-55), Zn (28-50) and Co (20-104).

In October of 2004 O.T. drill -tested this anomaly with vertical hole NA04-6 (see Figure 7). The drill hole encountered 15’ of colluvium and penetrated 587’ of non-mineralized and unaltered felsic pyroclastic volcanic rocks. Below 587’ the hole intersected a 1300’ zone of continuous chalcopyrite +/- molybdenite mineralization as disseminations, irregular laminae and replacement masses. Potassic and phyllic-altered quartz monzonite of the Boulder Batholith host this porphyry-style mineralization (Figure 8). The Boulder Batholith is host to past and current Cu-Mo and Au-Ag-Mn production in Butte as well as numerous other past-producers in the Butte district.

Drill hole NA04-6 was terminated at 1916’ to comply with United States Forest Service winter drilling regulations. The hole will be re -entered in 2005. Maximum metal contents to date are 0.50% Cu and 0.03% Mo.

Mineralization
Rx-type Alteration
O.T. MINING CORPORATION
Drillhole NA04-6
Rock Types, Alteration and Mineralization in O.T.’s North Anomaly
End of Hole: 1916’ (drilling to resume in 2005)

CONCLUSIONS

The application of MMI soil geochemical surveys on the Ruby property have resulted in the discovery of a deeply-buried porphyry Cu-Mo deposit hosted by the Boulder Batholith.

This discovery was based on the drilling of a single drill hole. The cost for siting drill hole NA04-6 was less than $15,000.00 USD.

The collar for drill hole NA04-6 was established on the basis of a combined Cu + Zn + Co MMI anomaly without the aid of geology (no outcrop to map) or geophysics. No other information was used to target the site.

THE O.T. MINING CORPORATION: RUBY PROPERTY

It is concluded that MMI soil geochemistry is an innovative, cost effective and practical approach to base and precious metal exploration. The development of appropriate sampling and analytical methods and strict adherence to these protocols are a prerequisite to successful exploration.

ZONE14 GEOMED SOLUTIONS