



NORTHERN SPHERE MINING

FOCUSED DEVELOPMENT – SUSTAINABLE GROWTH



# Northern Sphere Mining Corp.

## ("Northern Sphere") Forward Looking Statement

This presentation includes certain statements that may be deemed "forward-looking statements." All statements in this discussion, other than statements of historical facts, which address future production, reserve potential, exploration activities and events or developments that Northern Sphere (the "Company") expects, are forward-looking statements. Such forward-looking statements include, without limitation: (i) estimates of future gold and silver prices, supply, demand and/or production; (ii) estimates of future cash costs; (iii) estimates of future capital expenditures; (iv) estimates regarding timing of future development, construction, production or closure activities; (v) statements regarding future exploration results; (vi) statements regarding cost structure, project economics, or competitive position, and; (vii) statements comparing Scadding gold and Black Diamond Silver to other mines, projects or metals. Although the Company believes the expectations expressed in such forward-looking statements are based on reasonable assumptions, such statements are not guarantees of future performance and actual results to differ materially from those in forward-looking statements. Factors that could cause actual results to differ materially from those in forward-looking statements include market prices, exploitations and exploration successes, continued availability of capital and financing, and general economic, market or business conditions. Investors are cautioned that any such statements are not guarantees of future performance, that the company expressly disclaims any responsibility for revising or expanding the forward-looking statements to reflect actual results or developments, and that actual results or developments may differ materially from those projected, in the forward-looking statements.

All non-compliant historical resource estimates presented in this presentation are historical and were prepared before the introduction of National Instrument 43-101 – Standard of Disclosure for Minerals Projects ("NI 43-101"). These resource estimates may not be relied upon until they are confirmed using methods and standards that comply with those required by NI 43-101. The potential for the exploration target to replicate the historical resource, or to reach the indicated range of tonnages, is conceptual and is based on historical reports, which cite approximate lengths, widths, depths, grades, and projections of the historical resources. Readers are cautioned that a qualified person has not completed sufficient exploration, test work or examination of past work to define a resource that is currently compliant with NI 43-101. The Company further cautions that there is a risk that exploration and test work will not result in the delineation of such a currently compliant resource. Neither the Company nor its personnel treat the historical resource estimate or the historical data as defining a current mineral resource, as defined under NI 43-101, nor do they rely upon the estimate or the data for evaluation purposes; however, these data are considered relevant and will be used to guide exploration as the Company develops new data to support a current mineral resources estimate in accordance with the requirements of NI 43-101.

# Key Management Team

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## Directors and Officers

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|                         |                         |
|-------------------------|-------------------------|
| John Carter             | CEO & Director          |
| Denis Laviolette        | Director                |
| Bob Leschyshen          | Director                |
| Monique Delorme CPA, CA | Chief Financial Officer |
| Steve Gray P.Geo        | Vice President          |

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# Company Mission

Northern Sphere's mission is to create maximum value for its shareholders, leveraging cutting tools and exploration techniques to make new discoveries in old mining districts.

As a district explorer, our vision is to revisit area plays that were once active and hot with mining and exploration with modern exploration techniques –to make new exciting discoveries!

...In the shadow of the headframe!

1

**Regional scale area plays,  
must have:  
“multi deposit potential”**

2

**Grade is king!**

3

**Incorporate “cutting edge”  
exploration techniques  
optimizing mineral targeting**



# Key Asset Focus

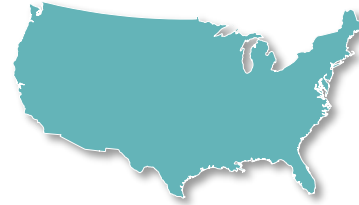


## Canada Operations: Ontario, Sudbury District

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|                          |                |
|--------------------------|----------------|
| Scadding Mine            | - Gold         |
| Alwyn-Porcupine          | - Gold, Copper |
| Tecumseh Property        | - Gold, Copper |
| East Red Rock Occurrence | - Gold, Copper |
| Glade Occurrence         | - Gold         |

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## US Operations: Arizona, Gila County

|                |                               |
|----------------|-------------------------------|
| Black Diamond- | Silver Sevens, McMorris Mines |
|                | - La Plata & Helene Mines     |
| Iron Nugget    | - Copper, Iron, Gold Showing  |
| Buckeye South  | -Zinc, Manganese Anomaly      |
| East Porphyry  | - Andesite Porphyry           |



# Path Forward



## Re-Alignment

- Divert focus to discovery, unlocking value in our districts.

## Focused exploration

- Continue to develop targets towards drilling catalysts.
- Perform additional remote sensing, prospect and ground truthing work.
- Grow existing land package.

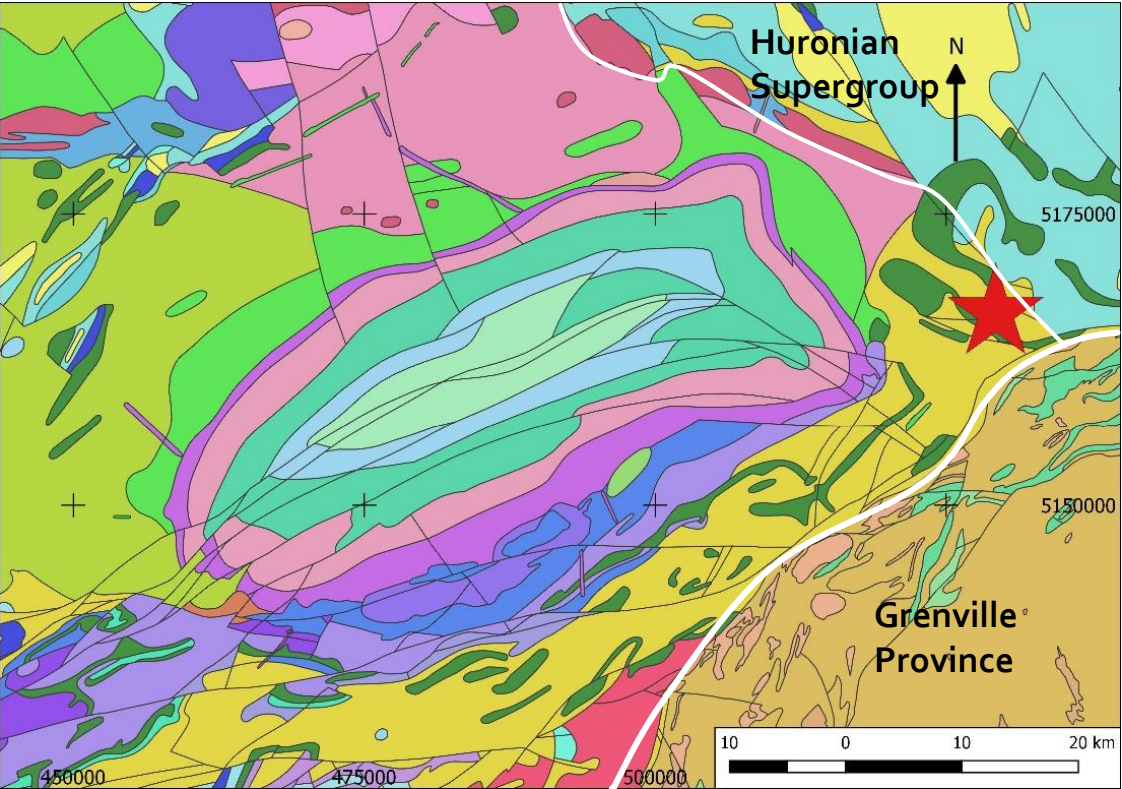




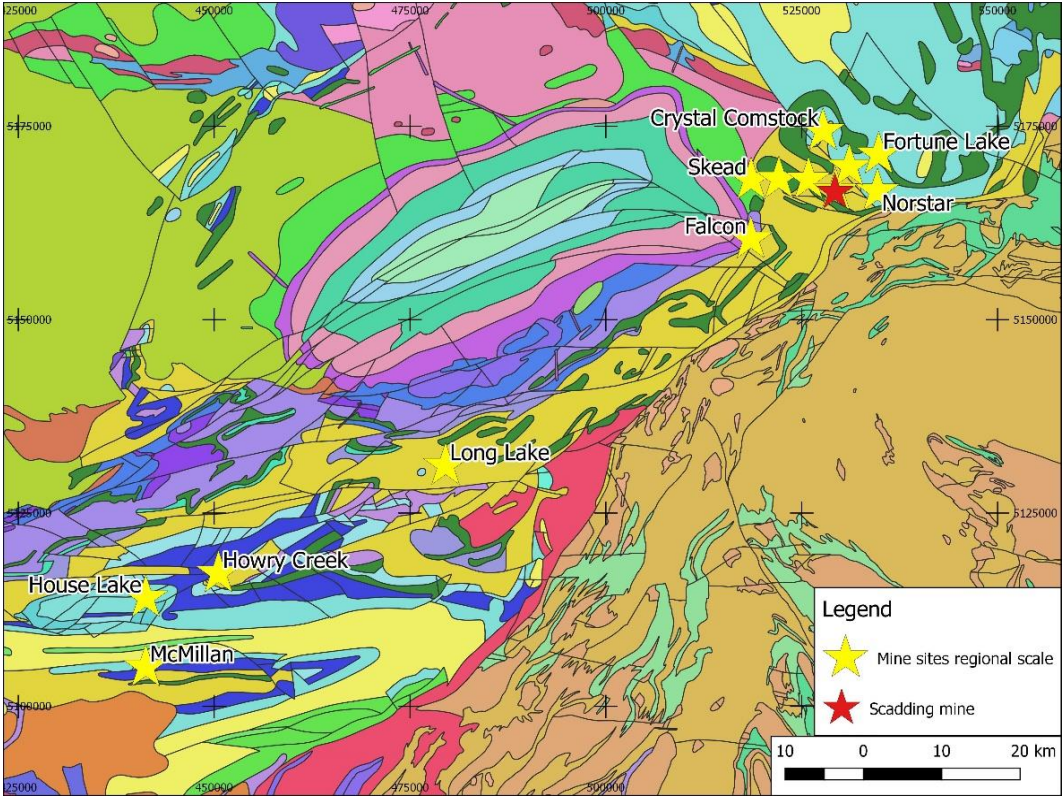
# Scadding – One of Canada’s first gold camps



Favorable Geology hosting  
Major Fault Zone Intersections



Successful Recent & Historic  
Mining of Base & Precious Metals

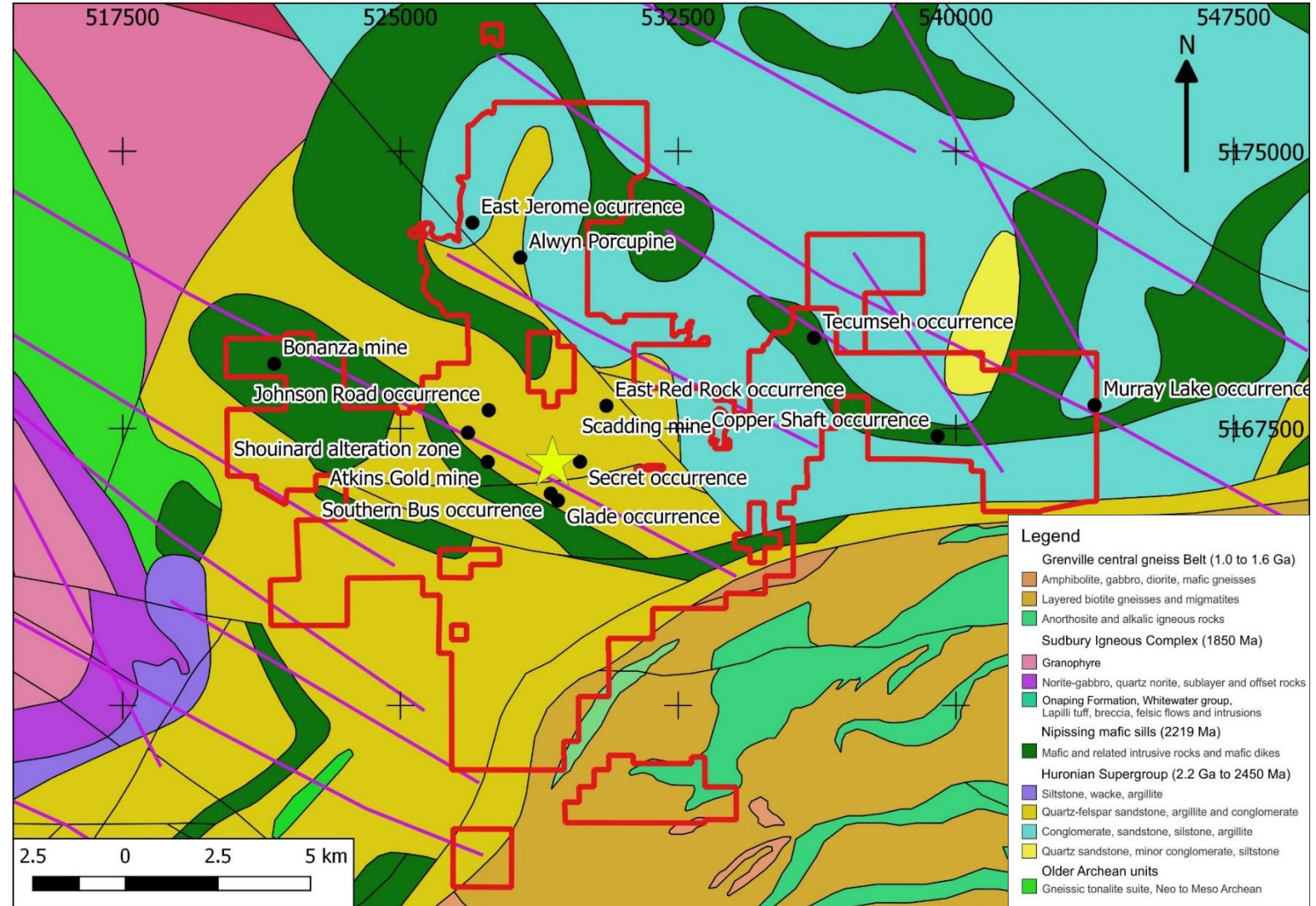


Geological map of the Sudbury Mining District from the Ontario Geological Survey



## Scadding Regional Overview

- Accessible by serviced, all-season roads
- Multiple known mineralized showings throughout property
- The Scadding mine produced over 29,000 ounces of gold from ~140,000 tons of ore at a head grade of 7.2 grams per ton in the late 1980s.
- Strong correlation at property scale between gold showings and mines with Nippissing (2219 Ma) mafic sills and dykes

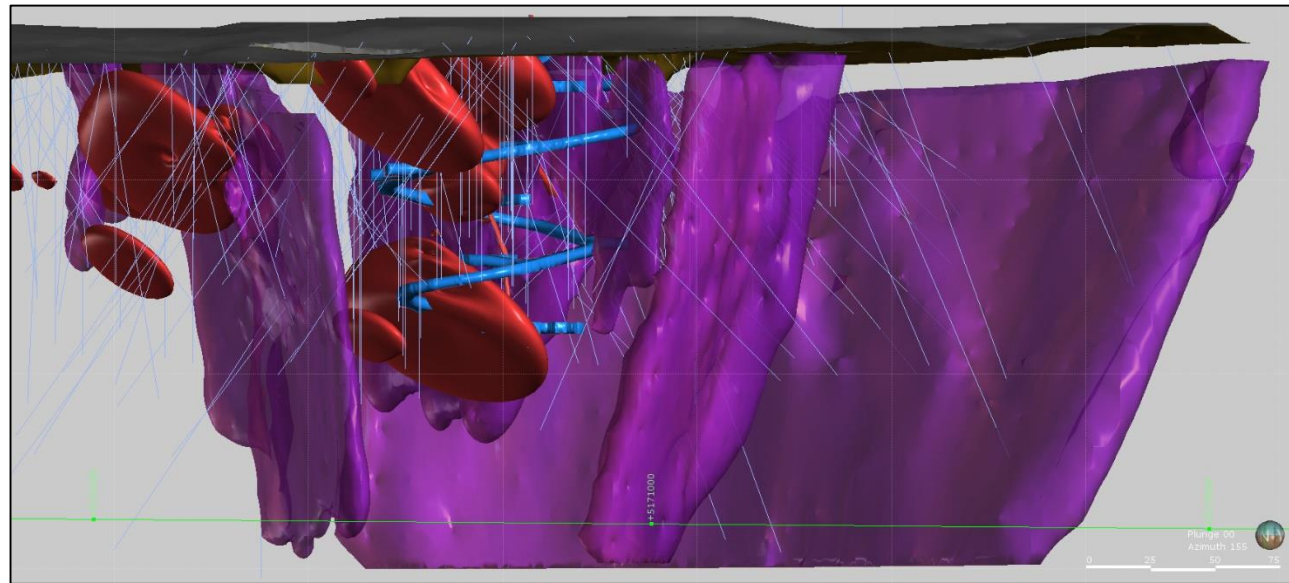
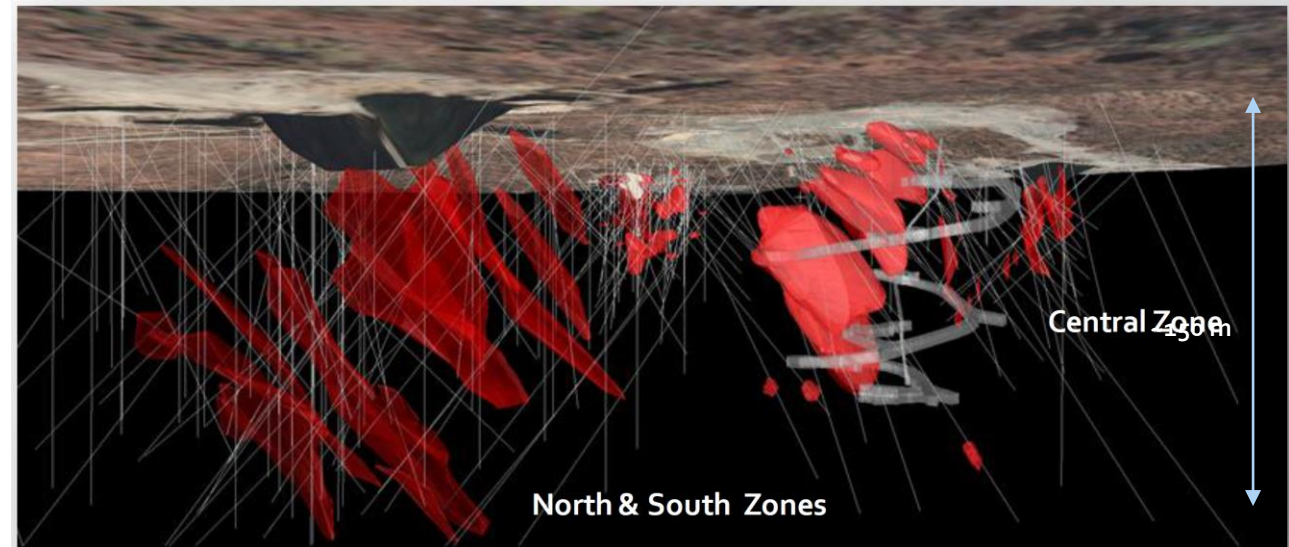




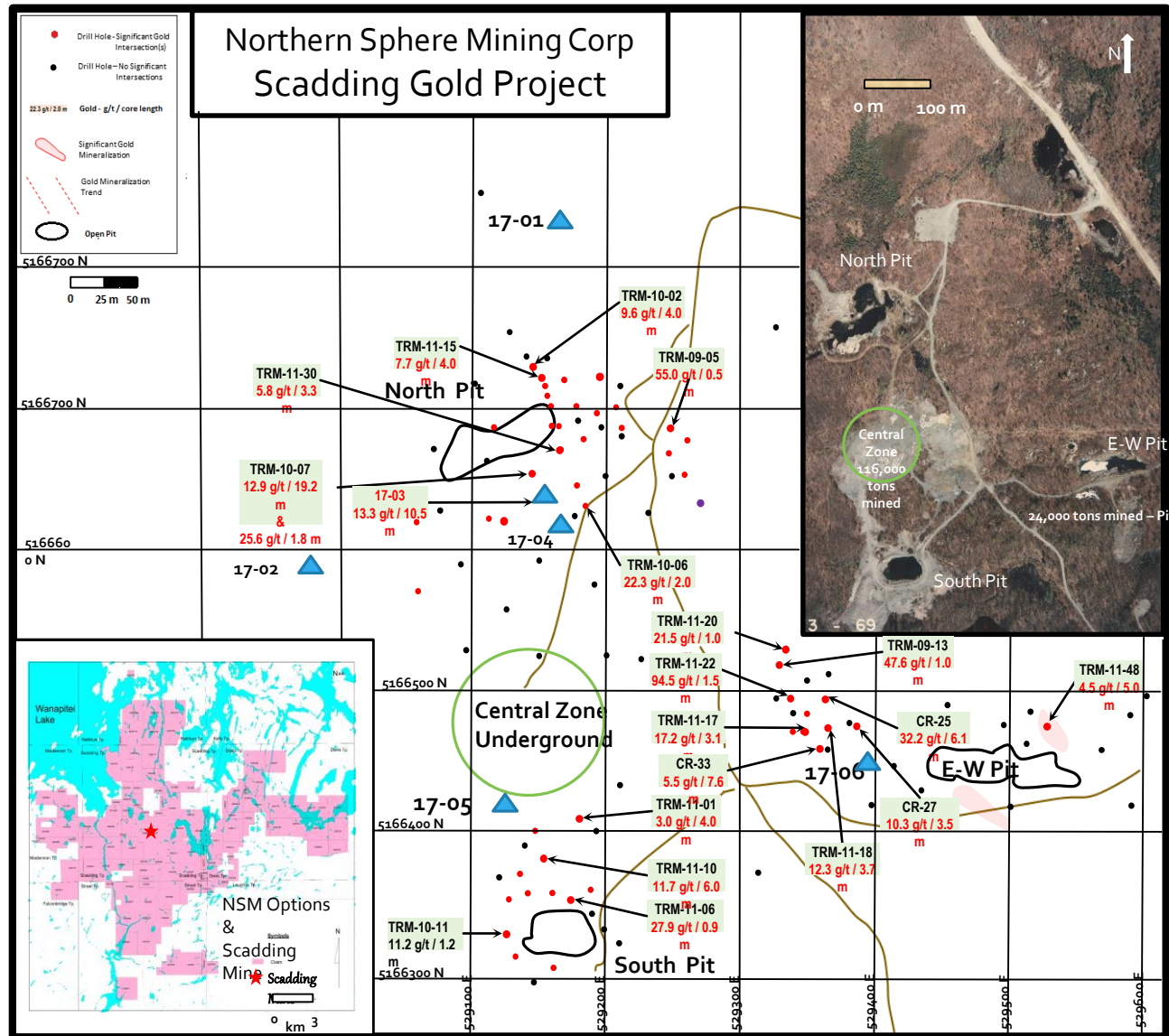
# Scadding Mine – Past-Producing Mine

## Extensive historical drilling & associated data

- Existing underground ramp to access higher grade zones
- Poorly understood deposit at depth: limited drilling to depth  $> \sim 150\text{m}$
- Close relationship between diabase intrusive bodies and mineralization
- Further testing of the North zone in 2017 revealed high ( $> 13\text{ g/t}$ ) gold content over significant ( $> 10\text{ m}$ ) length



# Drill Highlights : Scadding Mine



**Significant DDH Intercepts from the 2009-2011; 2017 campaigns**

| Hole ID   | From (m) | To (m) | Core length (m) | Grade Au (g/t) |
|-----------|----------|--------|-----------------|----------------|
| 1RM-09-04 | 85.6     | 86.7   | 1.1             | 7.0            |
| TRM-09-05 | 89.4     | 89.9   | 0.5             | 55.0           |
| 1RM-09-13 | 66       | 67     | 1.0             | 47.6           |
| TRM-10-02 | 30       | 34     | 4.0             | 9.6            |
| 1RM-10-06 | 70       | 72     | 2.0             | 22.3           |
| 1RM-10-07 | 52.4     | 71.6   | 19.2            | 12.9           |
| 1RM-10-07 | 110.2    | 112    | 1.8             | 25.6           |
| 1RM-10-10 | 41       | 43.7   | 2.6             | 4.5            |
| TRM-11-10 | 53       | 68.8   | 15.8            | 5.4            |
| 1RM-11-12 | 32       | 38     | 6.0             | 2.8            |
| 1RM-11-15 | 30       | 40     | 10.0            | 3.5            |
| 1RM-11-18 | 52       | 55.7   | 3.7             | 12.3           |
| TRM-11-22 | 31.5     | 33     | 1.5             | 94.5           |
| 1RM-11-30 | 84       | 87.3   | 3.3             | 5.8            |
| TRM-11-31 | 76       | 79     | 3.0             | 3.7            |
| 1RM-11-48 | 98       | 103    | 5.0             | 4.5            |
| NSM-17-03 | 146      | 156.5  | 10.5            | 13.3           |

\*Holes reported above were drilled and analyzed under 43-101 QA/QC protocols.



# Other showings and historic shafts



## Alwyn-Porcupine Mine - Exploration Phase

Gold and copper in 2 m wide quartz-carbonate vein and stockwork

- 1901 - Historic records - 6.86 g/t gold, 3% copper
- 1983 - Mine dewatered, structure resampled
- 15.1 g/t gold, 6.0 % copper over 6 ft

Chalcopyrite Mineralization with Malachite staining



## Tecumseh Project - Exploration Phase

Gold & Copper in quartz carbonate veins & sheared diabase

- Eight kilometres north of Scadding mine
- 2 Historic shafts sunk on quartz carbonate veins
- 10 m & 15 m deep, 150 m apart

Ankerite altered quartz vein with chalcopyrite in Nippissing Diabase

# Other showings and historic shafts

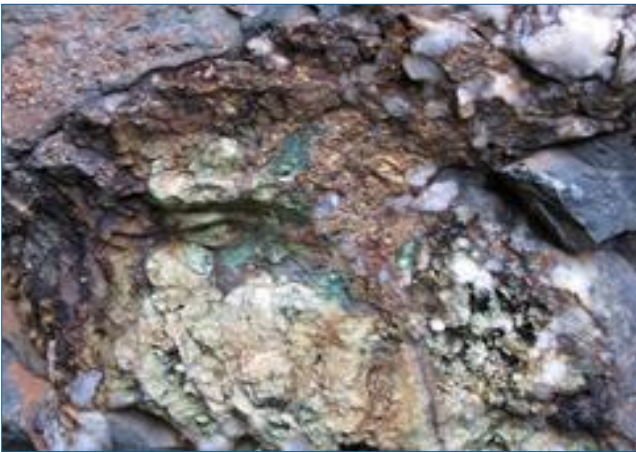


## East Red Rock Occurrence - Exploration Phase

Brecciated Zone – 100 m in diameter

- 2500 ton bulk sample taken
- 9.3 g/t gold, up to 7.0 % copper

Brecciated Argillaceous Gowganda Formation



## Glade Occurrence - Exploration Phase

Mineralization at contact between felsic intrusives and Nippissing diabase

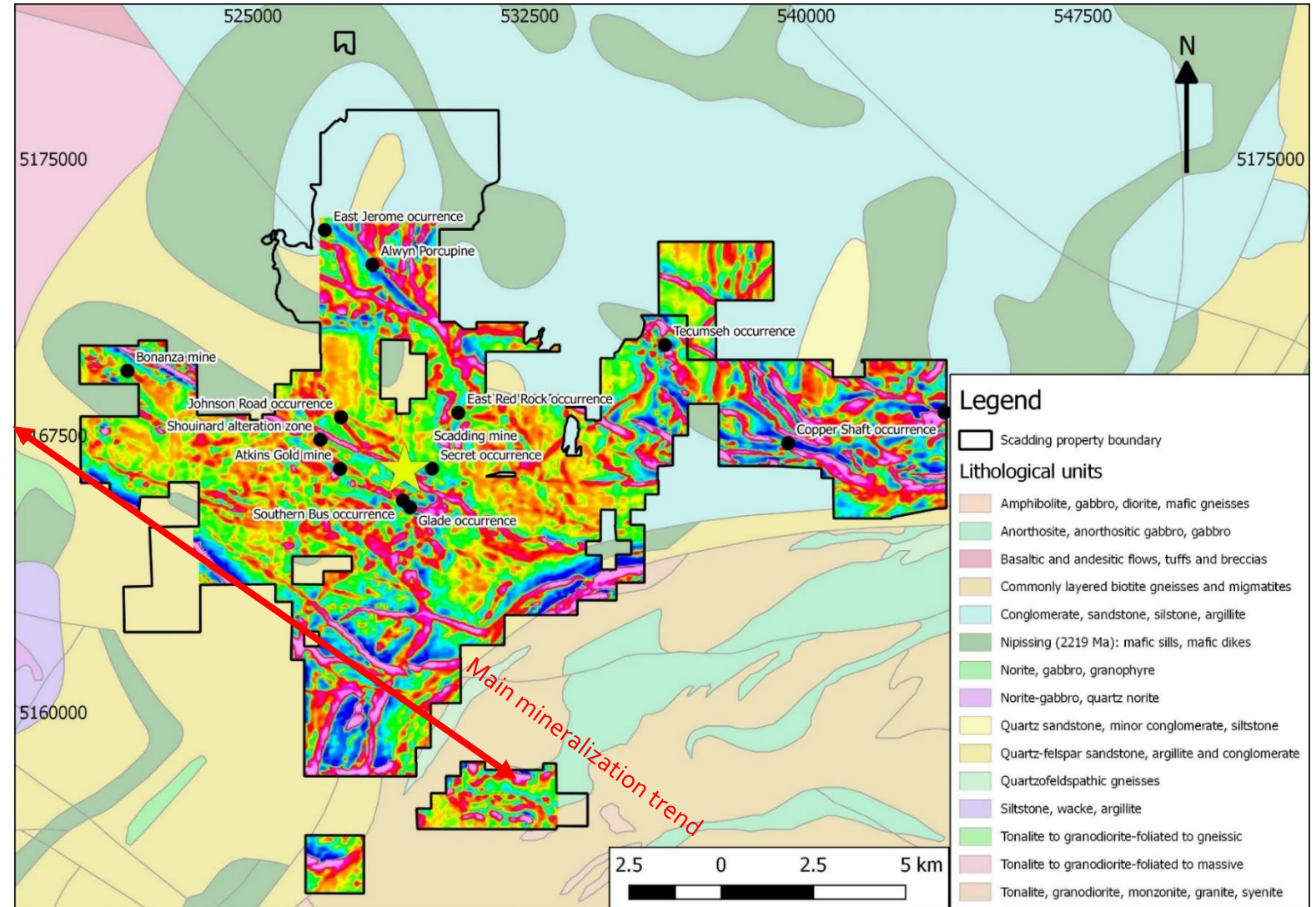
- Excellent trench sample result
- Numerous specks of visible gold in sub horizontal quartz veins

Chalcopyrite with quartz carbonate and malachite



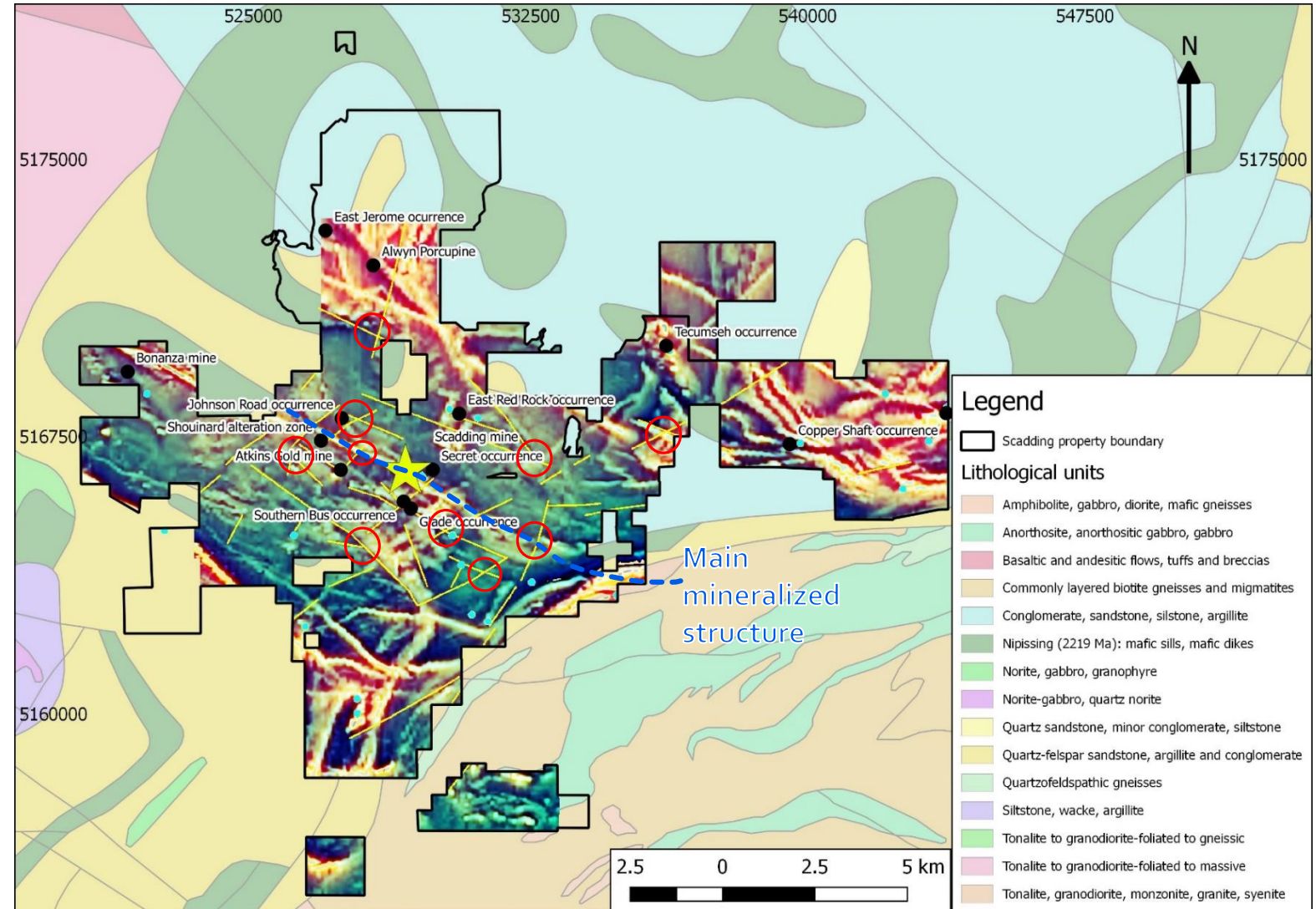
## Scadding: Remote Sensing

- Magnetic survey performed covering most of the property
- First vertical derivative image shows well defined markers oriented parallel to known NW-SE trend of Nipissing intrusives
- The high conductivity contrast between the host rock (quartz-dominated) and the intrusive (mafic magnetic) makes for reliable data in robust conditions



## Putting it all together

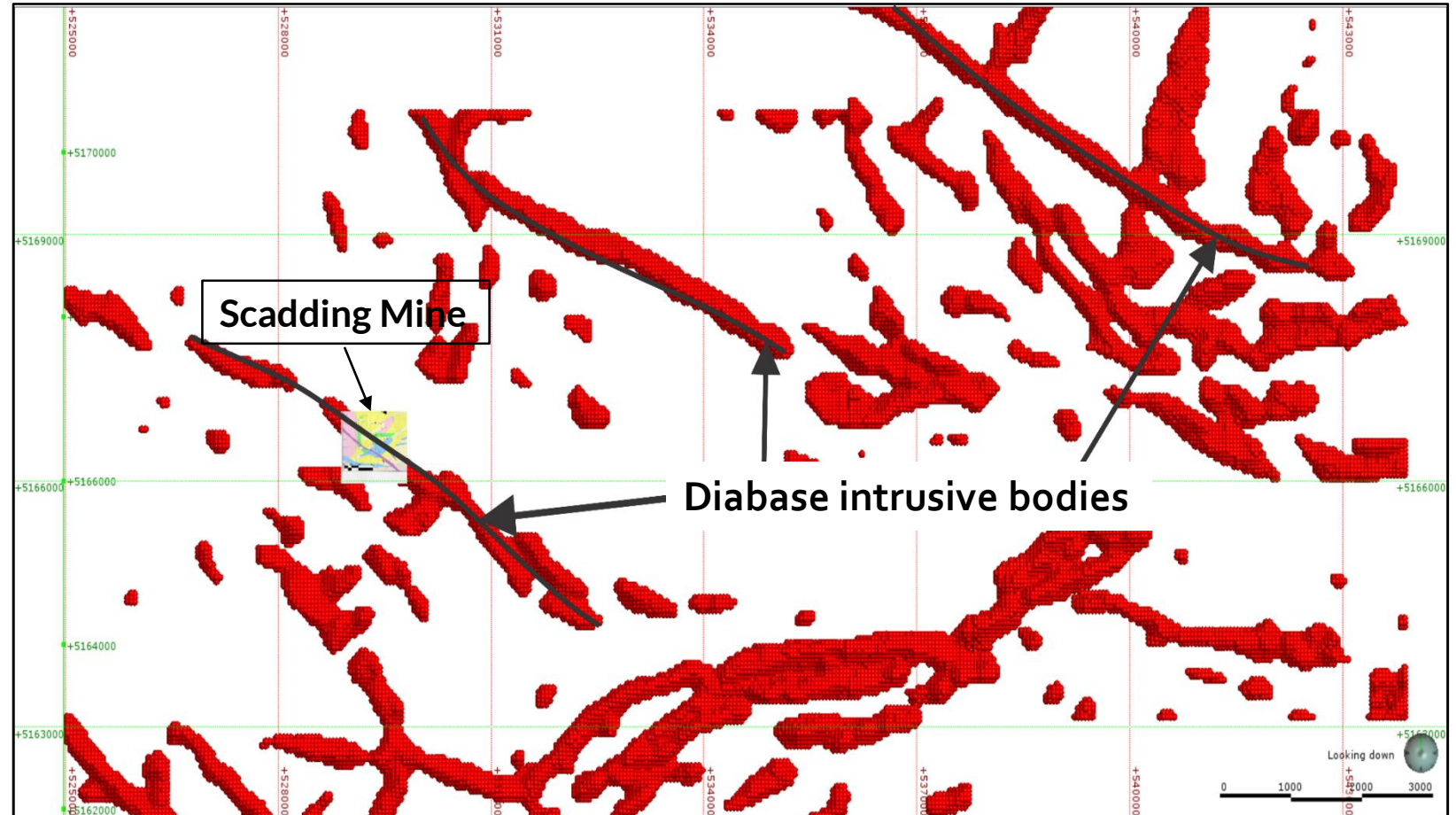
- Ternary image combining TMI, 1<sup>st</sup> and 2<sup>nd</sup> vertical derivatives to highlight lineaments and interpret structures.
- Adds definition to the interpreted structures and highlights the correlation between known mineralization and the intersection of primary NW-SE structures with interpreted secondary NE-SW structures.
- Circled in red are additional structure intersections, mainly hosted in prospective quartz-dominated metasediments of the Huronian Supergroup





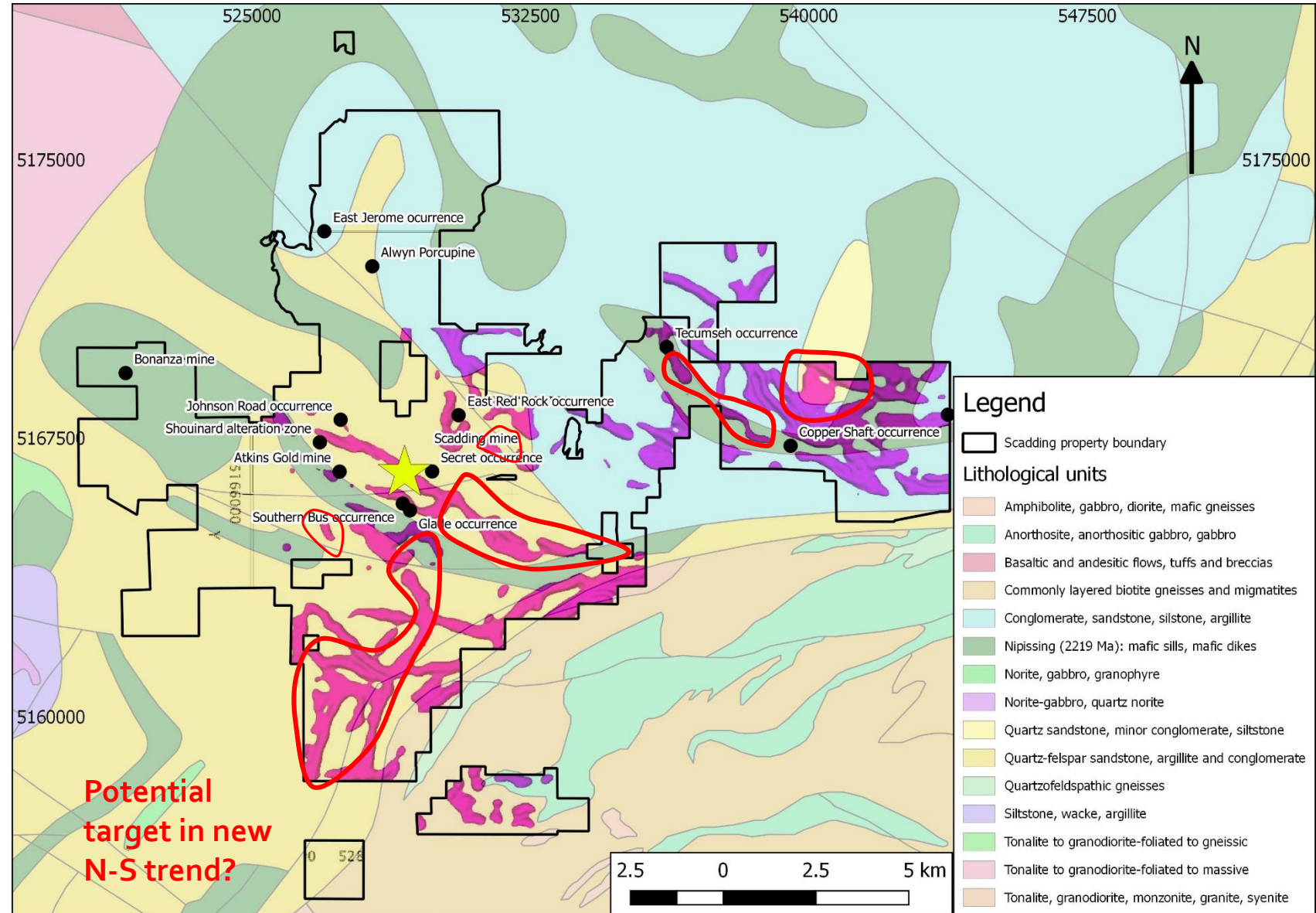
## Scadding: 3D inversion Mag

- 3D inversion of magnetic data to highlight diabase intrusive bodies trends
- Modelling of these diabase intrusives shows strong correlation to existing mineralization at the Scadding mine
- New parallel trends identified, correlate well with historic showing and shafts



## Target-generating geophysics interpretation work

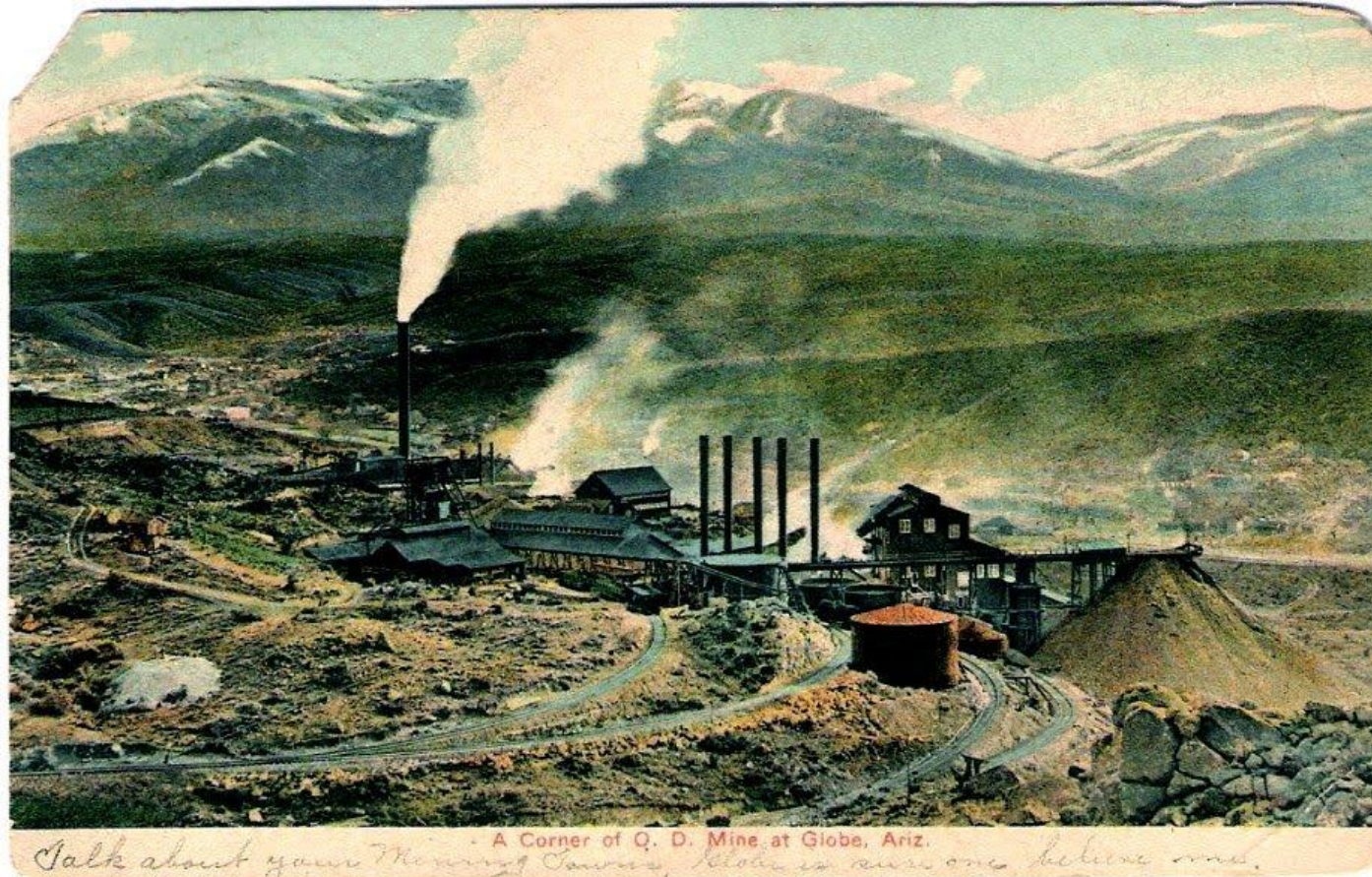
- Diabase bodies modelled from the geophysics data collected
- Highlights a proximal position of all known occurrences to the modelled diabase intrusives
- Interpretation work identifies numerous new areas of favorable geological setting for gold mineralization





# Black Diamond Property – Gila County, Arizona

Within the historical Globe-Miami copper silver district



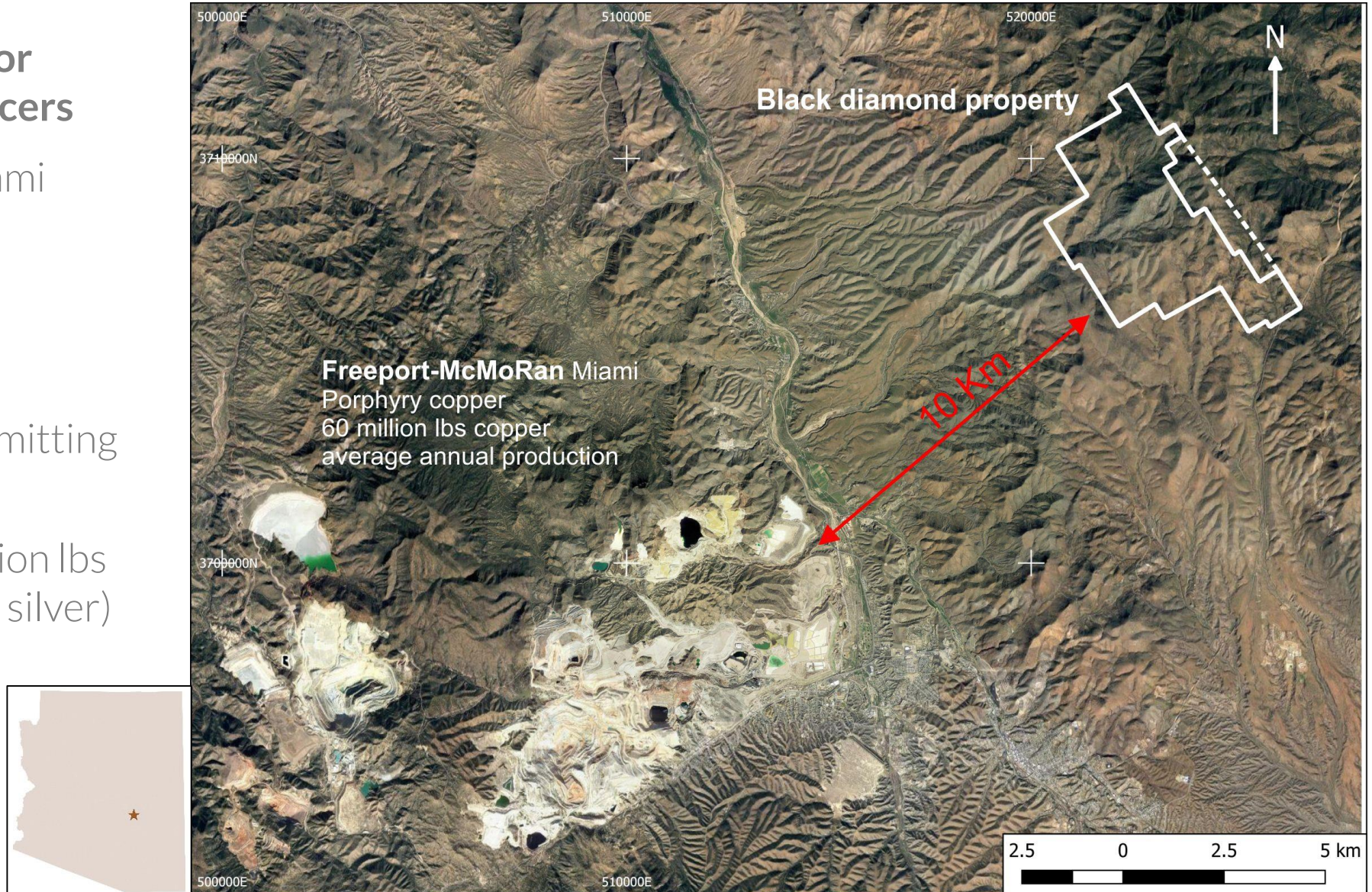
*A Corner of Q. D. Mine at Globe, Ariz.*  
*Talk about your Mining Camps, Globe is sure one believe me.*  
This view of the Old Dominion works about 1906 is looking approximately south toward the town of Globe in the valley at left with the snow capped Pinal Mountains on the horizon. A post by ABC Arizona communities on the Arizona 100 history blog: <https://arizona100.wordpress.com/page/5/>



# Black Diamond Property – Gila County, Arizona

## Proximity to known major Copper and Silver producers

- Freeport-McMoran Miami porphyry copper
- BHP Billiton Ltd.
- Quadra Mining Ltd.
- Resolution Copper (permitting stage)
- Grupo Mexico (232 million lbs Copper and 600 000 oz silver)

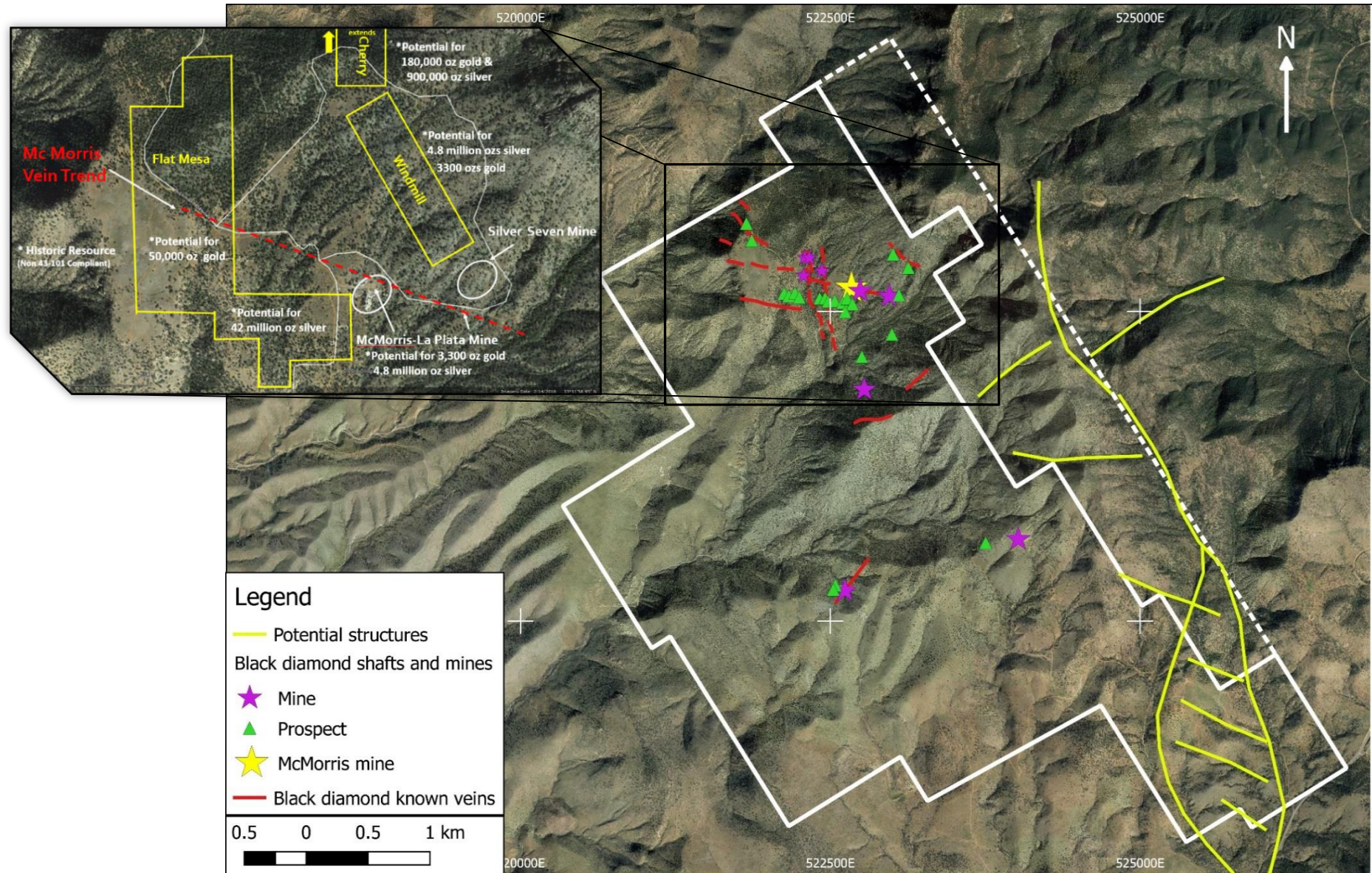




# Black Diamond Property

## Multiple showings and past producing mines on property

- Includes the McMorris mine
- Series of high grade epithermal silver-copper veins set in array





# US Operations: Arizona, Gila County

Black Diamond Property



Buckeye 2017 Diamond drilling



CSE: NSM



Patented Lands Exploration Field Office

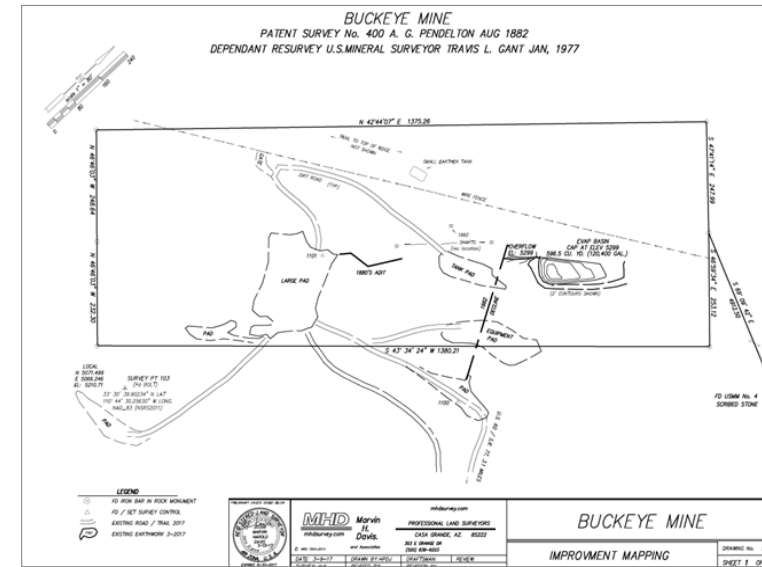
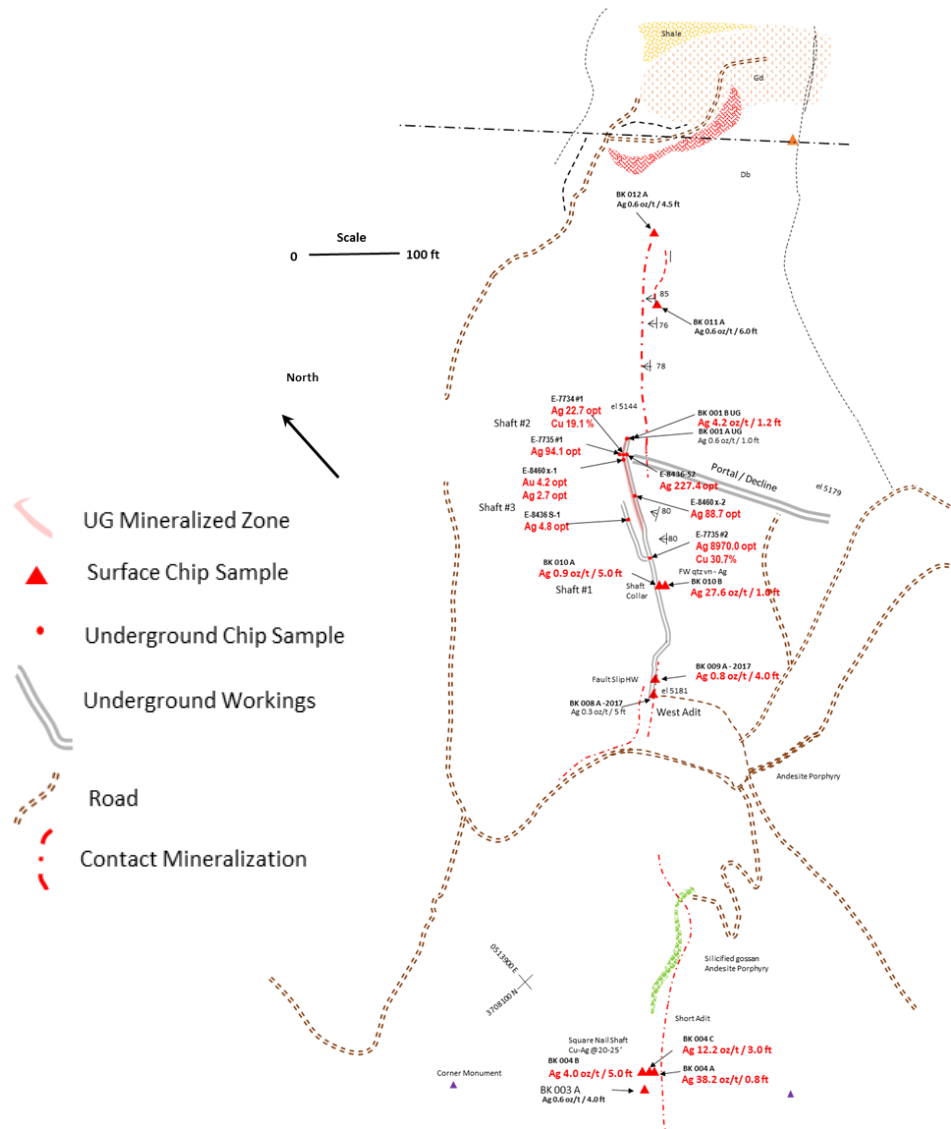


Stock Pile Area

Stockpile and laydown area



# Black Diamond property: Buckeye mine



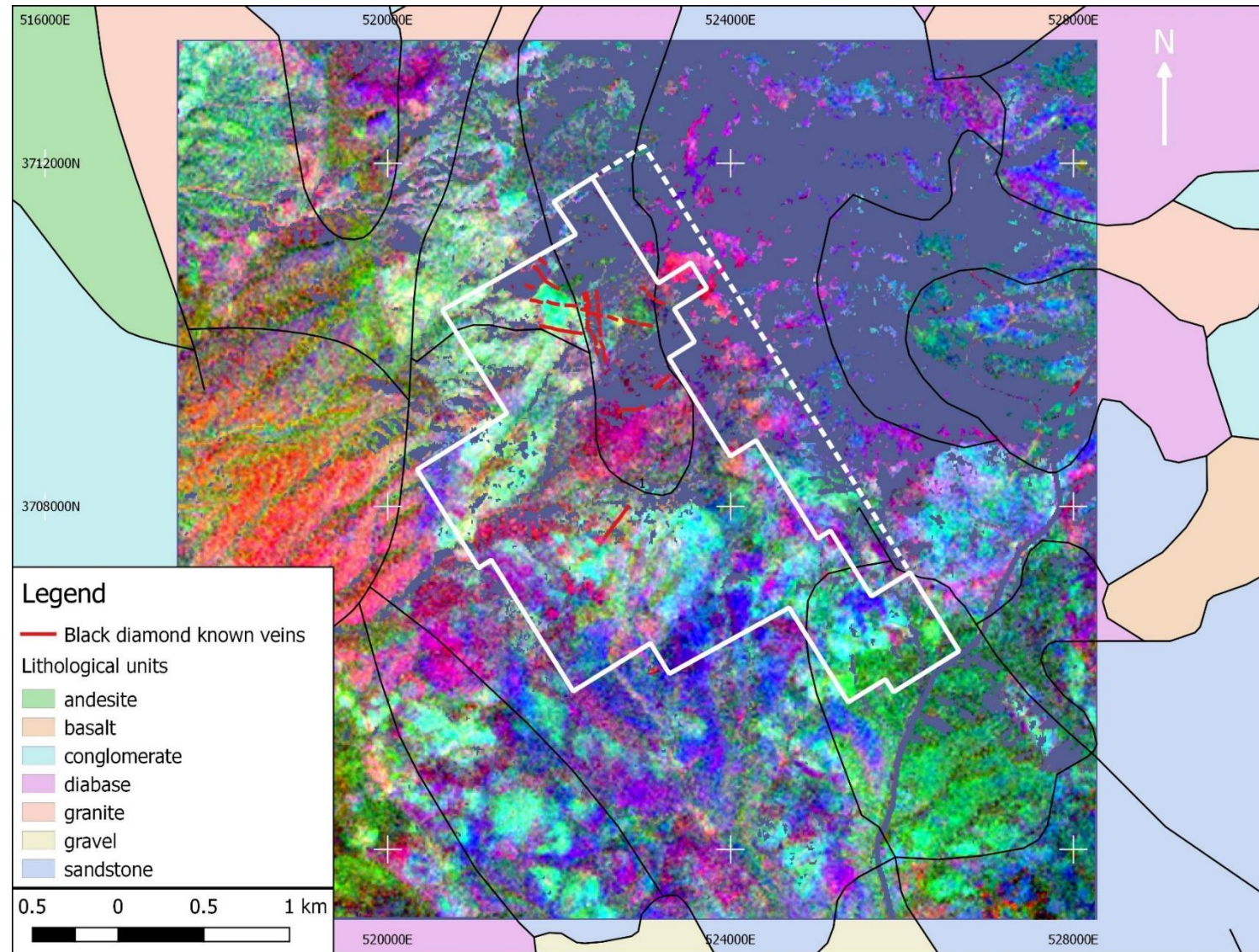
## Vein type copper-silver mine

- The Buckeye vein was drill tested and intercepted in all 16 holes in 2017
- In an area with a series of known Ag-Au-Pb-Cu veins associated with granitic intrusions and distinct phyllic and argillic alteration

## Generating targets using hyperspectral data

Hyperspectral data collection and interpretation over an area of 111 sq. km

- Hyperspectral study: successful reconciliation with known lithological units from USGS maps
- Highlights multiple zones of alteration related to the porphyry and epithermal environments (propylitic, phyllic, argillic, etc)
- Series of identified phyllic and argillic alteration zones located at intrusion contacts

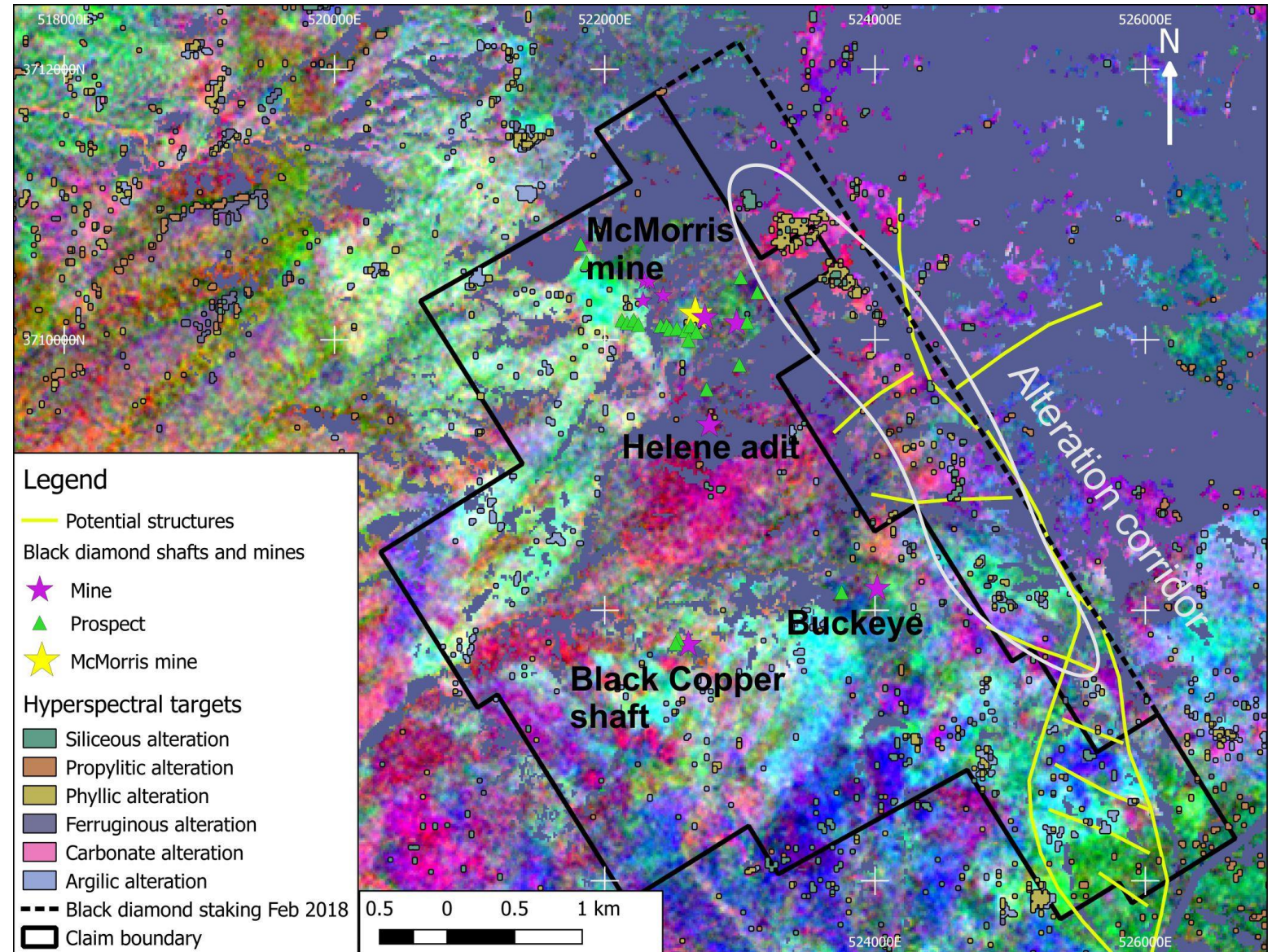




## Staking around Black Diamond property resulting from hyperspectral study generated targets

Hyperspectral data collection and interpretation over an area of 111 km<sup>2</sup>

- Active staking adjoining pre existing property in progress
- As of February 2018, 50 additional claims were staked to cover combined hyperspectral and soil anomalies on the western boundary of the property – increasing land position by 25%
- Ongoing staking accelerated by BHP Billiton's current staking activity along the Black Diamond property's western boundary



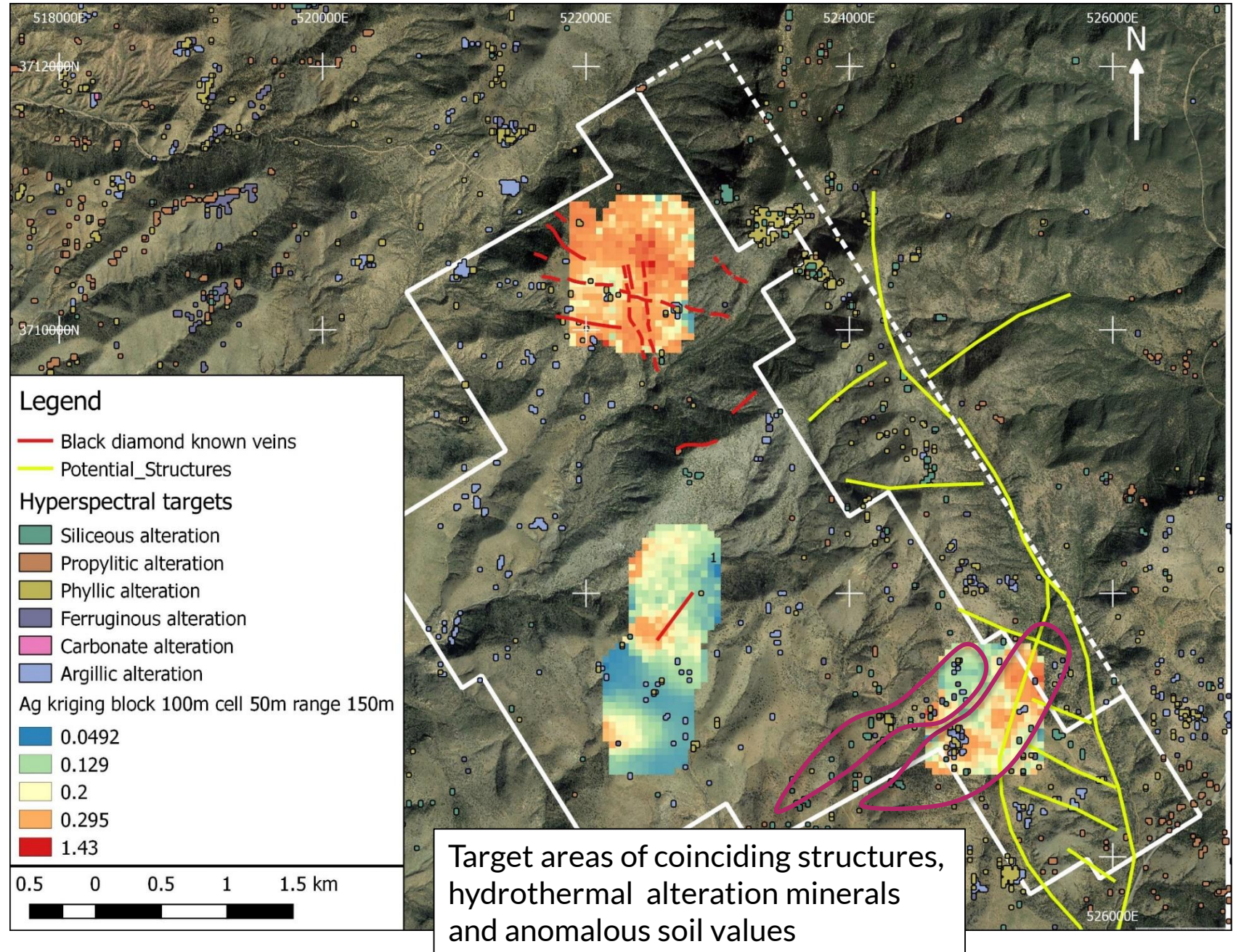


# Black Diamond Property

## Geochemical Soil Survey

### Kriging of silver values

- Silver kriging of the soil data highlighting a correlation between anomalous silver values and past producing mines.
- Overlaying various survey (geological, geochemical, hyperspectral, etc.) to highlight anomalous areas



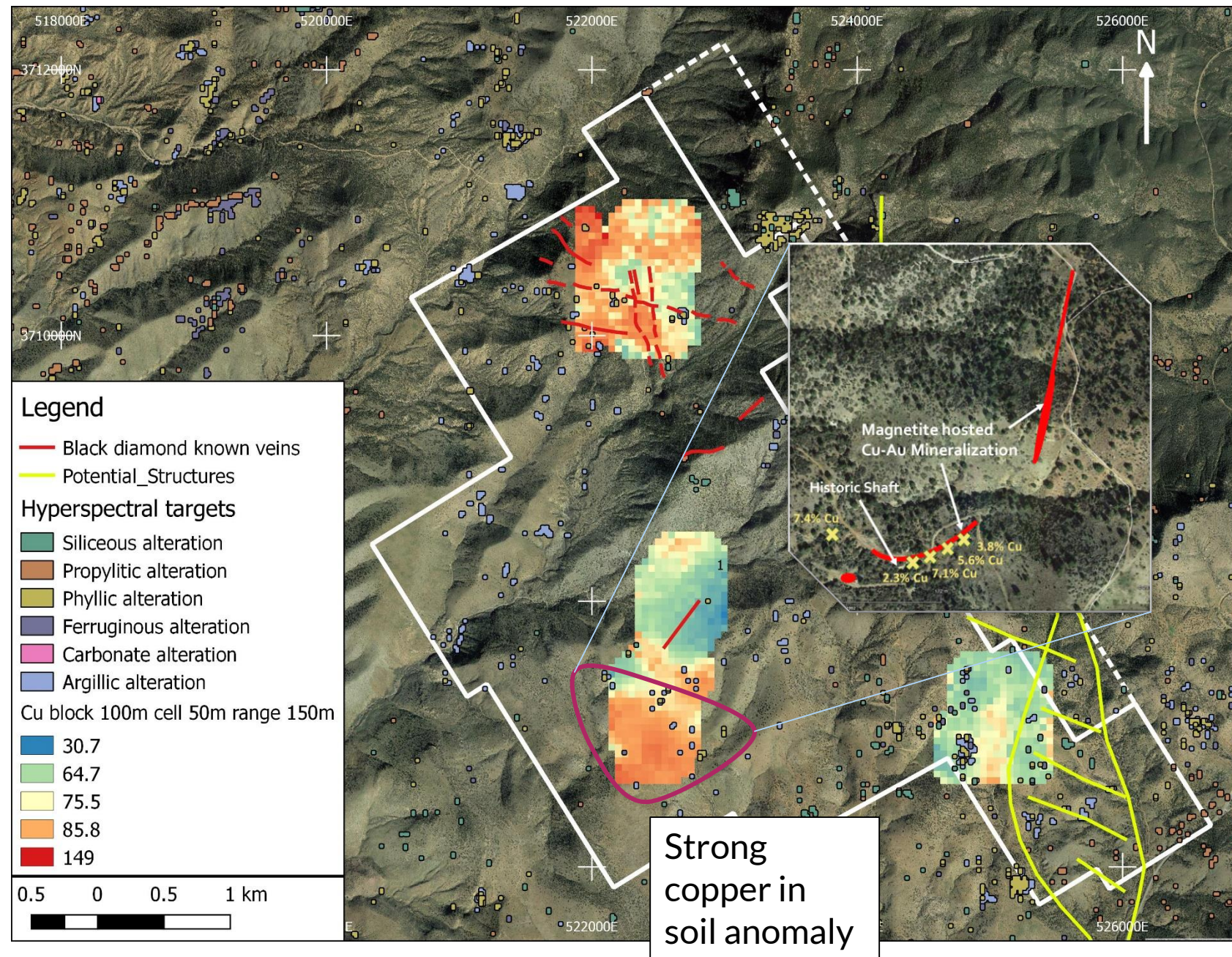


# Black Diamond Property

## Geochemical Soil Survey

### Kriging of copper values

- Copper kriging of the soil data highlighting the correlation between anomalous silver values and past producing mines.
- Overlaying various survey (geological, geochemical, hyperspectral, etc.) highlight anomalous areas



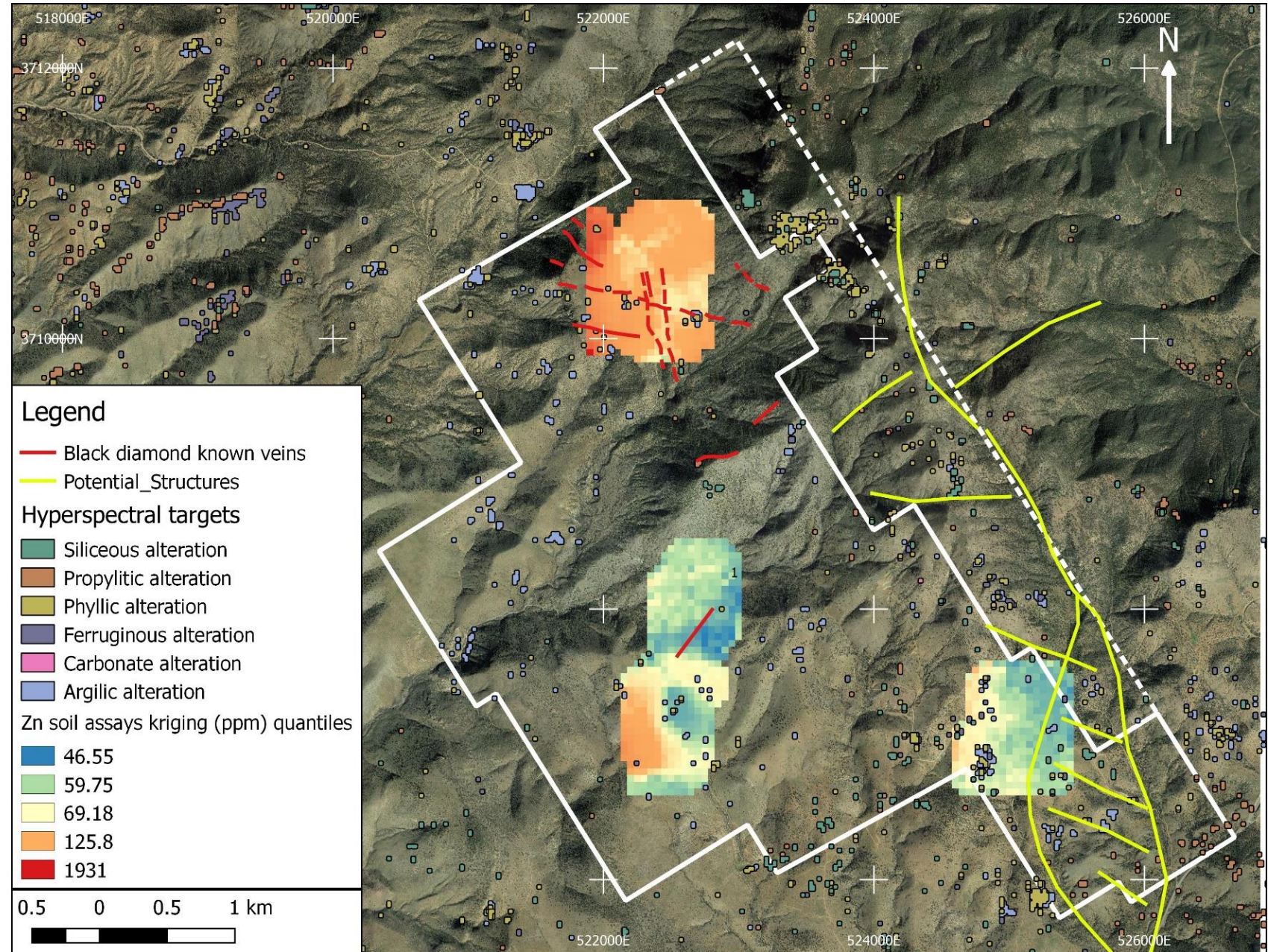


# Black Diamond Property

## Geochemical Soil Survey

### Kriging of zinc values

- Zinc kriging of the soil data highlighting the correlation between anomalous Zinc values and past producing mines.
- Overlaying various survey (geological, geochemical, hyperspectral, etc.) highlight anomalous areas



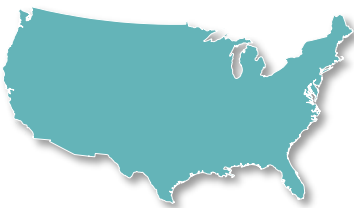


# Forecast: Twelve Month Plan



**Canada - Ontario**  
**\$2,000,000**

|             |  |
|-------------|--|
| \$100,000   | Expediate geologic mapping and prospecting over entire claim ground  |
| \$300,000   | Advanced exploration re-access Scadding underground mine, pit dewatering, surface stripping, bulk sampling   |
| \$1,200,000 | 6000 metres of diamond drilling testing targets generated by combining geochemical survey data, geophysical mag re-inversion and hyperspectral data interpretation |
| \$400,000   | M & A  |



**USA - Arizona**  
**\$1,200,000**

|           |                       |   |
|-----------|-----------------------|---|
| \$150,000 | Geochemical Survey    | Black Diamond   |
| \$150,000 | Staking               | Black Diamond East  |
| \$500,000 | Permitting - Drilling | <ul style="list-style-type: none"><li>• Iron Nugget</li><li>• McMorris Mine</li><li>• Silver Sevens</li><li>• Buckeye South</li></ul> |
| \$400,000 | M & A                 |   |

# Stock Information

CSE: NSM OTCQB: NSMCF

Shares Issued: 28.9 million

Market Cap: 2.14 million

Year High & Low: \$0.55 - \$0.07







## Contact Information

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