

# Benchmark Compares Mapping of Discreet High-Grade Zones and Bulk Tonnage Potential at the Lawyers Project with Argentina's Cerro Negro Gold-Silver Mine

13.01.2020 | [Newsfile](#)

Edmonton, January 13, 2020 - [Benchmark Metals Inc.](#) (TSXV: BNCH) (OTCQB: CYRTF) (WKN: A2JM2X) (the "Company" or "Benchmark") - is pleased to present preliminary results from detailed geological mapping that was undertaken to provide a modern geological framework for the Lawyers property. This allows for targeted exploration and provides context for the mineralized zones on the Lawyers property within the Toodoggone mineral district in terms of the structure, stratigraphy, alteration, and mineralization. The Lawyers Project is situated in the Stikine Terrane of northern British Columbia, Canada, and falls within the prolific, mineral endowed 'Golden Horseshoe'.

John Williamson, CEO of Benchmark, commented, "Our geological team continues to further our understanding of the Lawyers project with bedrock mapping and other studies. This key component was only part of the larger 2019 program that included soil, rock, trench, and channel sampling, a geophysical magnetic survey, acquisition of a detailed DEM (Digital Elevation Model), drone imagery, and a +10,500 metre drill program. All things considered, we are seeing the potential for Lawyers project and the Toodoggone district to emerge as a gold-silver metallogenic belt having discreet high-grade zones with lower grade halos that are analogous to mines of the Deseado Massif in southern Argentina."

A British Columbia Geological Survey (BCGS) regional mapping program in the early 1990's spanned much of the Toodoggone District including the Lawyers property, but the project area has seen little subsequent geological mapping. Benchmark designed a mapping program with the goals of 1) improving our understanding of the geology beyond the regional scale government data, 2) identifying the controls on mineralization at both property and deposit scales, 3) providing a strong foundation for ongoing interpretation of structural, geochemical, and lithological data, and 4) tying the property scale geology into the regional Toodoggone geological framework, all of which are critically important for understanding the known mineralization and vectoring towards new exploration targets.

## Stratigraphy

The Lawyers property is predominantly underlain by a shallow northwest-dipping sequence of volcanic and sedimentary rocks of the Lower Jurassic Toodoggone Formation (Figure 1), part of the Hazelton Group that is exposed throughout the prolific metal-endowed Stikine Terrane. Magmatic events in Stikine during the Late Triassic and Early Jurassic are the driving source for the development of mineralizing porphyry and epithermal systems. On both the east and west sides of the Bowser Basin the same magmatic and mineralizing events are recognized (Logan and Mihalynuk, 2014), forming an arch of gold and polymetallic mineralization referred to as the Golden Horseshoe (see May 30 news release).

Figure #1 - Geological map of the Lawyers property and accompanying cross sections showing the relationship between structure, stratigraphy and epithermal mineralization across part of the central Lawyers Trend.

To view an enhanced version of Figure 1, please visit:  
[https://orders.newsfilecorp.com/files/6169/51341\\_ae8b6dc8f4215876\\_001full.jpg](https://orders.newsfilecorp.com/files/6169/51341_ae8b6dc8f4215876_001full.jpg)

The Toodoggone Formation can be divided into upper and lower volcanic cycles as illustrated on the

simplified stratigraphic column in Figure 2. The Lawyers property is predominantly underlain by lower cycle rocks comprised of thick sequences (>300 m) of dacitic and andesitic tuffs and flows. These volcanic strata erupted concurrently with the development of deeply rooted faults that focused both magmatism and mineralization (Figure 1). Magmatism is expressed as the Black Lake intrusive suite that outcrops in the southern region of the property (Diakow et al., 1993). Locally Asitka and Takla Group rocks are exposed along the margins of the Black Lake intrusive and are in part fault bounded. Similar relationships are often observed in the southern Toodoggone and spatially associated with porphyry style mineralization, including at Kemess.

Localized conglomerates and volcanics within the lower cycle are confined within blocks dropped by steeply dipping syn-volcanic faults and can potentially be used as a vector towards epithermal mineralization. The entire Toodoggone Volcanic sequence is unconformably overlain by the younger Sustut sediments.

#### Structure

The lawyer's property has undergone a relatively simple brittle deformation history of syn-volcanic graben development and subsequent strike-slip deformation. The most dominant structural features on the property are a series of well-developed NW-NNW (310-340°) striking faults that are subvertical to steeply SW or NE dipping. They typically show evidence of normal displacement with localized, late, strike-slip reactivation. These are the oldest structures on the property and represent syn-volcanic growth faults that formed during Lower Jurassic extension and block faulting.

The orientation and characteristics of the mineralized zones within the Lawyers Trend are consistent with the development of robust hydrothermal systems within a pre-existing NW-NNW trending fault and fracture system. This system is likely reflecting the original volcanic basin geometry, and these structures acted as a conduit for fluids to migrate and precipitate metals. The NW structures and associated mineralization are locally offset by E-W and SW-NE trending strike-slip faults, typically with less than 10 metres of displacement. The structural relationships observed in outcrop and drill core are also observed in the magnetic data, providing numerous new exploration targets.

#### Alteration

Volcanic strata on the property are only very weakly altered and original textures are generally well preserved. Narrow localized zones associated with mineralization in the main zones do show intense silicification and potassic alteration. While a variety of alteration is observed across the property, ranging from a massive advanced argillic zone north-west of Cliff Creek to the strong quartz-sericite-pyrite alteration concentrated along structures in the Marmot area. The alteration, variation and zonation suggest that the epithermal mineralization on the Lawyers property was part of a large-scale hydrothermal system.

Figure #2 - Simplified stratigraphic section for the Lawyers project and the broader Toodoggone region. The different types of intrusive rocks, mineralization, and the time period for which they span is illustrated on the right side of the diagram.

To view an enhanced version of Figure 2, please visit:

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With proximity to mineralized zones, a range of different alteration assemblages are recognized, from distal to proximal:

- Propylitic - epidote, chlorite, albite
- Hematite - pervasive alteration and replacement of mafic minerals
- Argillic - kaolinite, smectite, illite, sericite
- Advanced Argillic - pyrophyllite, dickite, alunite
- Phyllitic (QSP) - quartz-sericite-pyrite alteration
- Silicic - microcrystalline quartz, silica flooding
- Potassic - fine-grained potassium feldspar as adularia ± sericite

#### Analogous Deposits in Argentina

The Deseado Massif of southern Argentina has a similar geological setting, and comparable scale and scope potential, providing a useful analogue for the mineralizing systems of the Toodoggone region. In Argentina, Jurassic volcanism occurred during widespread extensional tectonism that led to the formation of numerous low-sulphidation epithermal deposits temporally and spatially related to the volcanic activity. Many of the operating mines in this region began as high-grade underground mines that developed into open-pit operations as the bulk-tonnage potential of the mineralizing system was recognized. An example is Newmont-Goldcorp's Cerro Negro gold-silver low-sulphidation epithermal mine. Utilizing both open pit and underground mining methods, Newmont-Goldcorp's Cerro Negro mine produced 452,000 oz Au in 2017 and is estimated to contain proven and probable reserves of 5 million ounces (Moz) of gold and 35.2 Moz of silver as of June 2018 (Goldcorp, Oct 24, 2018). We believe that, with the shared characteristics of geological and tectonic setting and the styles of mineralization, there is potential for the Toodoggone region to emerge as a similar gold-silver metallogenic belt.

#### Quality Assurance and Control

Results from samples were analyzed at ALS Global Laboratories (Geochemistry Division) in Vancouver, Canada (an ISO 9001:2008 accredited facility). The sampling program was undertaken by Company personnel under the direction of Rob L'Heureux, P.Geol. A secure chain of custody is maintained in transporting and storing of all samples. Gold was assayed using a fire assay with atomic emission spectrometry and gravimetric finish when required (+10 g/t Au). Analysis by four acid digestion with 48 element ICP-MS analysis was conducted on all samples with silver and base metal over-limits being re-analyzed by atomic absorption or emission spectrometry. Rock chip samples from outcrop/bedrock are selective by nature and may not be representative of the mineralization hosted on the project.

The technical content of this news release has been reviewed and approved by Michael Dufresne, M.Sc., P.Geol., P.Geo., a qualified person as defined by National Instrument 43-101.

#### About Benchmark Metals Inc.

Benchmark is a Canadian mineral exploration company with its common shares listed for trading on the TSX Venture Exchange in Canada, the OTCQB Venture Market in the United States, and the Tradegate Exchange in Europe. Benchmark is managed by proven resource sector professionals, who have a track record of advancing exploration projects from grassroots scenarios through to production.

#### ON BEHALF OF THE BOARD OF DIRECTORS

s/ "John Williamson"  
John Williamson, Chief Executive Officer

For further information, please contact:

Jim Greig  
Email: [jimg@BNCHmetals.com](mailto:jimg@BNCHmetals.com)  
Telephone: +1 604 260 6977

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