Using big data and advanced analytics to solve some of the Abitibi's geologic riddles

Charles Beaudry, Orefinders Resources Inc., Lakefield, Canada

The exploration and mining industries have sought evolutions in data driven decision making since the revolutionary Goldcorp Challenge in 2000. A recent example includes Goldcorp, again, and their IBM Watson technology partnership to further understand their Red Lake deposits. Additionally, Barrick has partnered with technology giant Cisco to improve its operations utilizing Big Data analytics.

Orefinders is following the lead of these industry frontrunners to employ Big Data and Advanced Analytic technologies which are tailored to our focus on exploration, acquisition, and development of gold assets in the Abitibi. This distinctive approach is designed to improve Orefinders odds of success by utilizing computer assisted interpretation and decision-making methodologies which are rooted in the existing data available from Ontario and Quebec's Abitibi region.

The Abitibi hosts one of the world's greatest mineral endowments across a spectrum of commodities and deposit styles. Having seen over 100 years of exploration, the resulting compiled data is abundant and valuable, yet disorganized and underutilized. With such data available in mass quantities, the exploration industry has long faced the problem of fragmented data which often exists in incompatible formats that cannot be analyzed in a cohesive and unified fashion.

Orefinders approach is based on the compilation of data from all available sources into a single, integrated, regional dataset. Orefinders then applies a solid understanding of deposit types to identify the significant features that correlate with a specific targeted deposit class. Knowing where the deposit is located and which deposit models are applicable, Orefinders then calculates the probability distribution of deposit value and discovery risk for a given mineral opportunity.

Charles Beaudry, Orefinders Vice President of Exploration and chair of the PDAC's Geoscience Committee, will present this topic.