



EXPLORATORY DRILLING

EXPLAINED: *What It Is & How It Works In Practice*

MN

EXPLORATION

BY THE NUMBERS

Developing an exploration program is a long and time-intensive process with many steps prior to any drilling. After a grassroots exploration program has been conducted with extensive research of geophysics, geochemistry, and surface mapping, there is still a small chance the explorer will have identified a viable target (AOI). In the rare case of finding positive mineralization indicators and potential for a deposit, the next step of the exploration team is to sample the subsurface targets at depth using exploratory core drilling.

With proper land access from the surface owner and permitting from state and federal regulators in place, the exploration team will implement a drilling plan and budget to drill for core samples. Core drilling is done in the later phase of exploration because it is the most expensive step of the operation and therefore only used when there is adequate potential of mineralization.

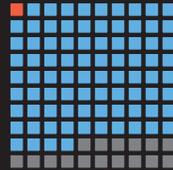
This direct method uses a diamond core drill bit composed of industrial diamonds that allow it to cut through rock and collect a continuous cylinder of rock core 2-5 inches in diameter. The average depth of an exploration drill hole targeting nonferrous metallic minerals is approximately 1,000 feet, but varies dependent on the geography of the mineral deposit being targeted.

Core drilling is an exercise in technical precision. An exploration team can usually hit 1,000 feet of depth in less than two weeks of drilling time, but sampling may require multiple drill holes depending on the target potential and program budget. Once boring is complete, site reclamation takes place to fill drill holes with local soil materials and clays to return the site to its natural state with only minor, temporary impacts.

The core is then described in detail and chemically assayed to measure the metal content in the rock. If signs of mineralization are favorable, further drilling will likely follow in order to more thoroughly evaluate the extent and grade of mineralization.

BIG ROCK'S BOTTOM LINE

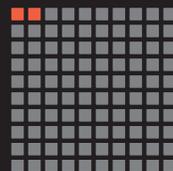
Exploration that leads to discovery takes innovative thinking and operational excellence. Big Rock enables our clients' success by providing exceptional value through tailored, turn-key service applying the highest level of technical expertise in the most cost-effective package.



■ MINERAL EXPLORATION
■ WATER SUPPLY
■ OTHER

A TINY FOOTPRINT:

Mineral exploration drill holes make up less than 1% of all drilling in the state.



■ DRILLED PARCELS
■ UNDRILLED PARCELS

SETTING A HIGH BAR:

Based on over 50 years of exploration data, only 2.2% of all leased state parcels had drilling completed on them.



VERY LONG ODDS:

99% of state leases were terminated after 10 years because no discoveries were made.

SOCCER FIELD



70' x 70'

The average size of a drill pad is approximately 1/10 of an acre.



AN OPERATION WITH MANY CRITICAL PARTS!

It costs an estimated \$100,000 to drill 1,000 feet of drill core (\$100 per/ft).

A drilling program costs may include:

- Geologist
- Site selection
- Geophysics
- Labor
- Drilling