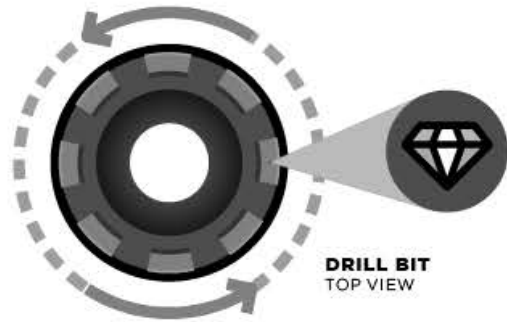


EXPLORATORY DRILLING

UNDERSTANDING THE PROCESS



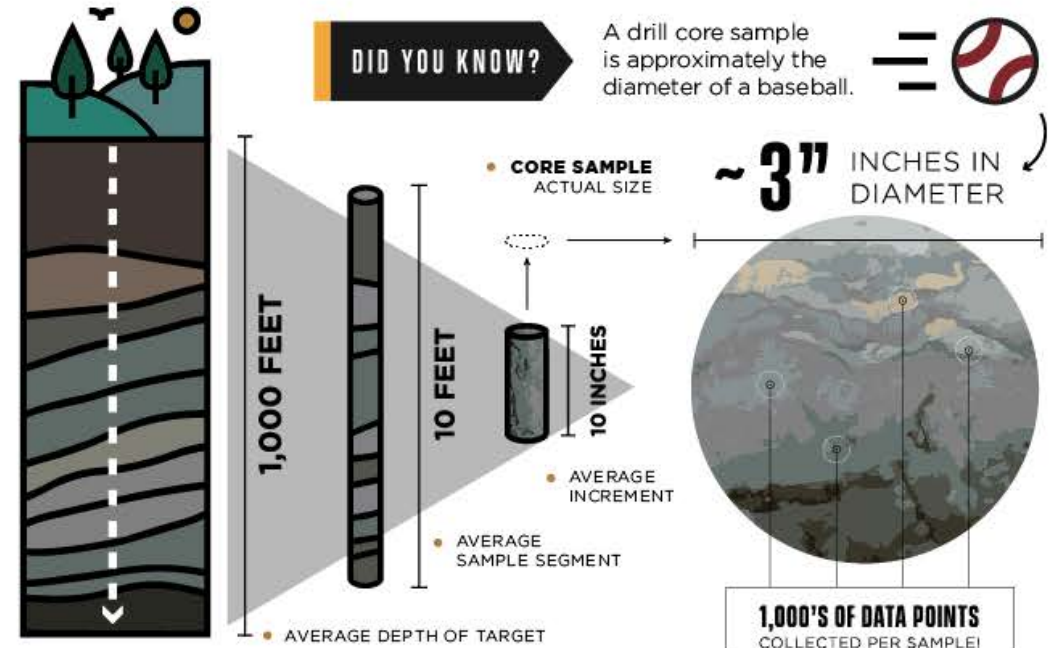
AKA DIAMOND CORE DRILLING

Diamond core drilling uses a cylindrical bit with embedded industrial diamonds, which rotates at the end of drill rod (or pipe). The opening at the end of the diamond bit allows a solid column of rock to move up into the drill pipe and be recovered at the surface without invasive digging.

STRENGTH	DURABILITY	IMPACT
◆◆◆◆◆	◆◆◆◆◆	◆◆◆◆◆

WHO DOES THE DRILLING & WHY?

Geologists are essentially Earth detectives. They use science to uncover the story of how our planet was formed over billions of years, from stardust to the modern world we know today. One of their tools for gathering clues is exploratory core drilling. This precision sampling technique enables them to study rocks that are buried deep in the Earth and otherwise inaccessible to humans, with no excavation required.



BY THE NUMBERS | EXPLORATORY DRILLING IN PRACTICE

A drill pad is the physical space occupied by all equipment, materials, and personnel needed to perform the exploration. For scale, the figure below illustrates the approximate size of a drill pad in comparison to a regulation soccer field.

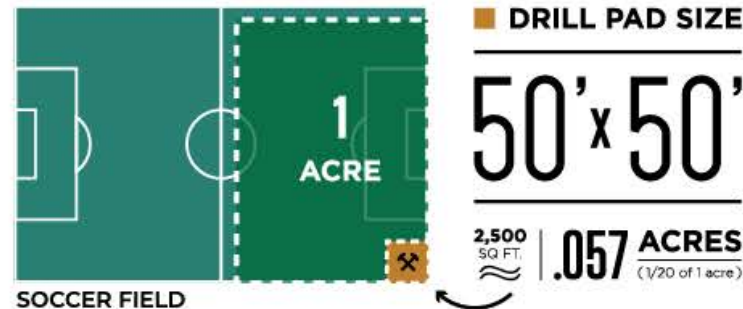


Fig 1 : MN DNR: https://files.dnr.state.mn.us/lands_minerals/mineral_faqs/mn_minexpact.pdf



Fig 2 : IDEA Drilling: <https://www.ideadrilling.com/technical-sheets/>

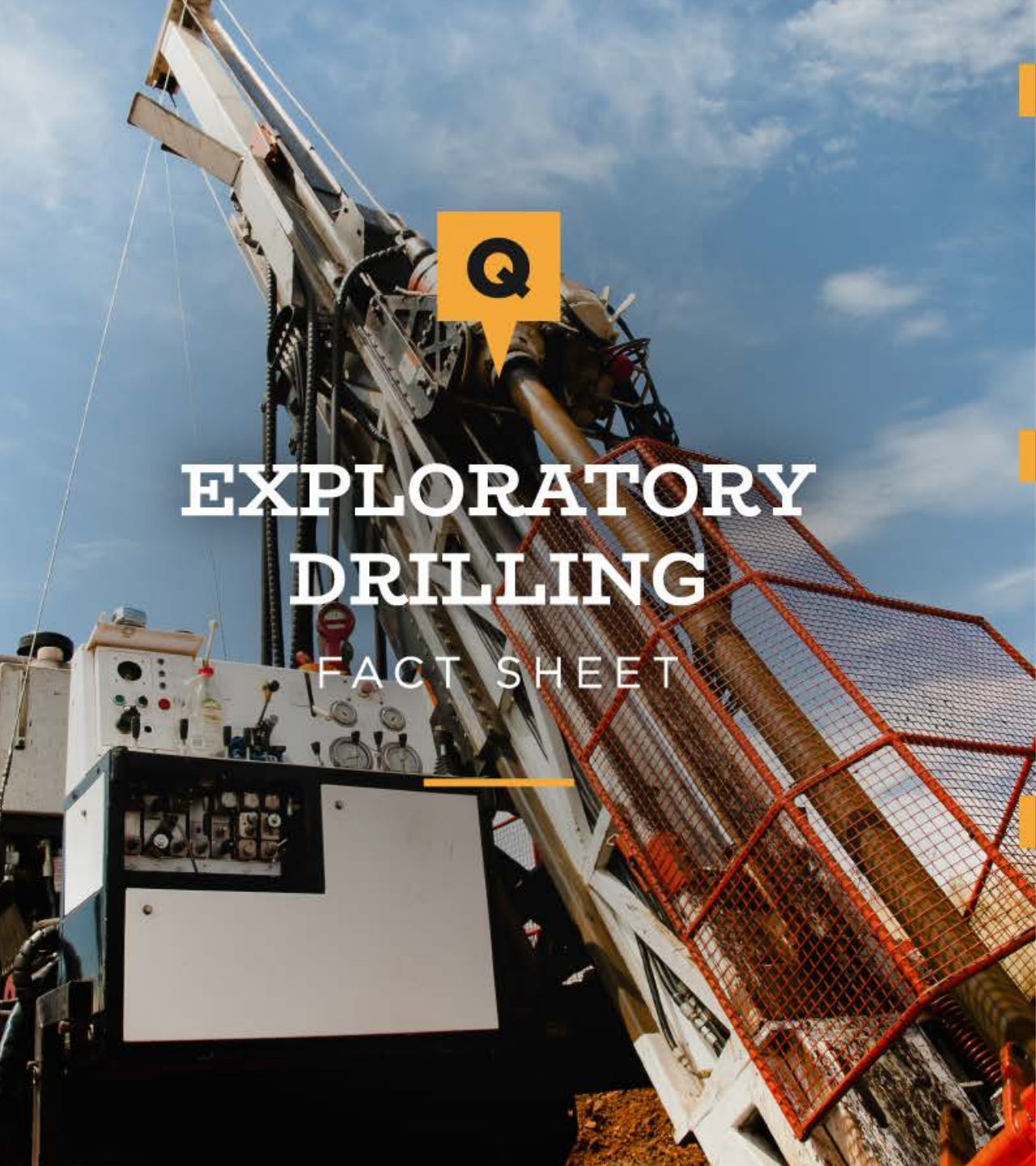
BIG DATA IN A SMALL PACKAGE

A technical team of geologists must gather numerous data points (clues!) and work to piece them all together in order to gain a full understanding of Earth's history as told by...

1.8 BILLION YEAR OLD ROCKS!

KEY DATA POINTS FROM CORE SAMPLE

- Lithology
- Alteration
- Rock quality (RQD)
- Geochemistry
- Mineralization
- Structure
- Geometry
- Fluorescence
- Photography



EXPLORATORY DRILLING

FACT SHEET

WHY?



CRITICAL SCIENTIFIC DATA



LOW-IMPACT, PRECISION TECHNIQUE



SHORT-TERM TEMPORARY FOOTPRINT



POTENTIAL ECONOMIC DISCOVERY

WHAT?



POTABLE WATER



CLAY (BENTONITE)



STEEL PIPE



BIODEGRADABLE LUBRICANTS

HOW?



COMPARABLE TO DRILLING A WATER WELL



LOW NOISE & DUST EFFECTS



NO TOXIC OR HAZARDOUS CHEMICALS



RECLAMATED TO ORIGINAL CONDITION