

BEARD

Borehole Enhanced and Automated
Realtime description

Martin Blouin
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Borehole Enhanced and Automated Realtime Description

BEARD



database training



Machine learning algorithms are trained on a database of core libraries photos

deployment on the field



BEARD automatically describe rock chips from photos

Why we are here



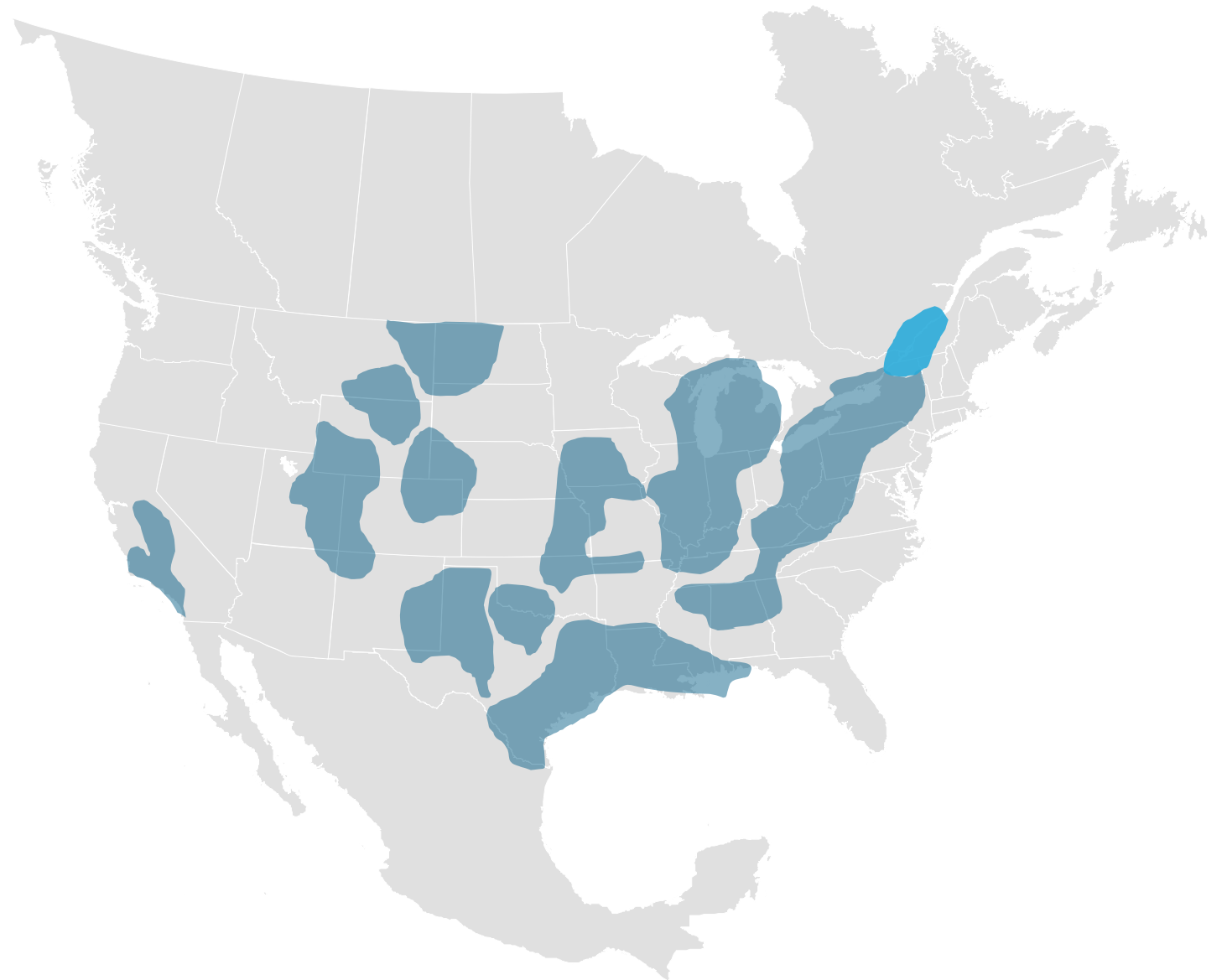
BEARD actually under development/deployment



Short term potential for BEARD



Long term potential for BEARD



Meet the team



Martin Blouin, PhD

Cofounder and CEO

As a CEO, researcher and scientist, Martin leads the majority of the projects related to artificial intelligence.

He has a 10-year experience in geophysics and data integration applied to geosciences.



Lorenzo Perozzi, PhD

Cofounder and VP

As a researcher and entrepreneur committed to ethics in the implementation of AI, Lorenzo was recruited to participate in the co-construction of the Montreal Declaration for a Responsible Development of Artificial Intelligence. He ensures that this aspect is being reflected in all activities of Geolearn.



Jérôme Simon

Technical Director

Jérôme ensures the integrity of databases and the reliability of the results. Propelled by his experience with digital methods in science, he develops interpretation techniques combining computer vision and artificial intelligence



JS Marcil, ING., MSc

Product Development Manager

With 20 years of E&P experience, JS is in charge of product development at Geolearn. Based on its field background, JS directs product development activities to Geolearn's various customers, from design through to production



Our vision

Geodata, enhanced!

We research, design & build AI technologies to help our clients solve real-world problems using geodata and reducing uncertainties.



Our mission

Delivering more than products and services building blocks for a growing community

At Geolearn, we believe that Artificial Intelligence has the power to disrupt the geoscience industry in a positive fashion, if done the right way. Our team is dedicated at making sure your data go the extra mile with those technologies and at getting you involved in the process.

Example of success: Pred^{kor}

A change of pace in core logging

Pred^{kor}

Results

Photo

Model: Lithologie principale

Table: 1 Predikor-litho

From	To	Code 2			Prediction
45.27	45.00	TLB			Predikor-litho2 TLB - 73%, I2J - 27%
45.66	45.85	TLB			2 Predikor-litho2 TLB - 73%, I2J - 27%
45.85	47.19	TLB			2 Predikor-litho2 TLB - 80%, I2J - 20%
47.19	47.38	TLB			2 Predikor-litho2 TLB - 75%, I2J - 25%
47.38	48.13	TLB			2 Predikor-litho2 TLB - 85%, I2J - 15%
48.13	48.29	TLB			2 Predikor-litho2 TLB - 91%, I2J - 9%
48.29	49.88	TLB			2 Predikor-litho2 TLB - 100%, I2J - 0%
49.88	50.42	TLB			2 Predikor-litho2 TLB - 100%, I2J - 0%
50.42	57.26	TLB			2 Predikor-litho2 TLB - 100%, I2J - 0%
57.26	57.45	TLB			2 Predikor-litho2 TLB - 85%, I2J - 15%
57.45	58.40	TLB			2 Predikor-litho2 TLB - 96%, I2J - 4%
58.40	58.59	TLB			2 Predikor-litho2 TLB - 90%, I2J - 10%
58.59	59.53	TLB			2 Predikor-litho2 TLB - 100%, I2J - 0%

Depth referenced
core photos

Predictions

Timeline

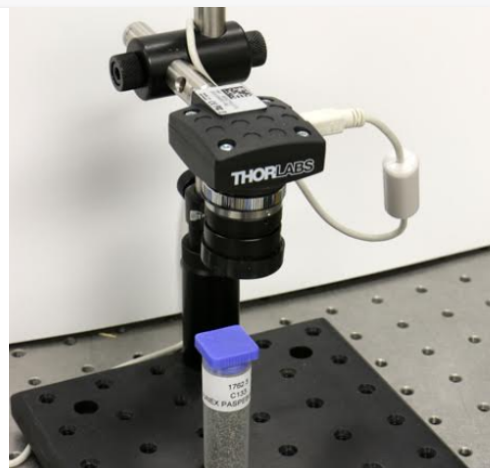


2019

July

**Image capture
suite ready**

Fast sampling of
core shack database



September



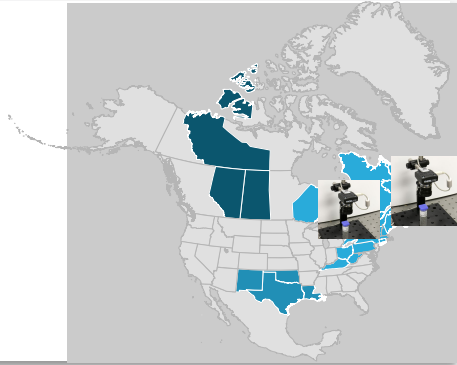
**First public core
shack completed**

Compilation of log and
image for St-Lawrence
Lowlands

October 2019

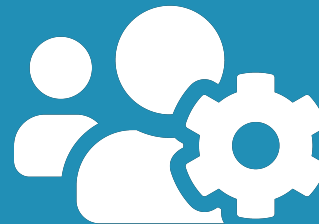
Replicating the acquisition tool

Getting a robust workflow to capture more data in Nova Scotia and Ontario



2020

November 2019



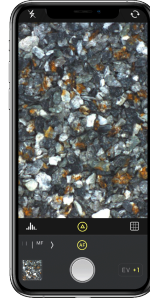
ML algorithms parametrization

Tune and train ML algorithms to create predictive models

February 2020

Hand-held prototype Ready for pre-launch

Getting the predictive tool to
our beta tester



April 2020



BEARD

Commercial launch

Active research of public and
private partners with core
shacks

SWOT Analysis

Strengths

- Sound experience in AI applied to geosciences
- In-house workflows already adapted for this product

Threats

- Emerging competitors
- Rapid saturation of the market?
- Big players with massive resources



Weakness

- Resource limitations
- Geographic location

Opportunities

- Underserved market
- Few (or no) competitors
- Emerging need for the product
- Rapid growth

BEARD - Action Steps



PROOF OF CONCEPT

Demonstrate the technical validity of the approach



GATHER MORE DATA

Get deals with public and private coreshack owners



BUILD A COOL TOOL

Get the predictive model in a hand-held format that will facilitate and optimize field work



BEARD

EXPAND THE MARKET

Grow geographically but also target new applications like geotechnical drilling



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