

State Geological Survey director: 1979 survey needs an update

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HOUGHTON - When Michigan became a state, the first department it formed was the Geological Survey.

That first survey work was done to map copper deposits in the state, which brought Douglas Houghton to the Keweenaw.

The Geological Survey's last published report was in 1979, the Eagle deposit. With the advancements in mapping since then, a new mapping survey could spur more exploration for mineral deposits, creating an economic benefit for the area, the survey's director said during a visit to Michigan Technological University.

Article Photos



Garrett Neese/Daily Mining Gazette
John Yellich, director of the Michigan Geological Survey, talks at Michigan Technological University Tuesday while holding the survey's last report, done in 1979.

"We had the iron and the copper which was right at the surface, and that's what they looked for, and they went underground," said John Yellich, the survey's director, who attended the dedication of three boulders, including one weighing 3.5 tons, from the Eagle Mine, at Tech [Tuesday](#). "It's only been in the last 30 years that we've understood more about those deeper rocks that are literally just a few hundred feet to tens of hundreds of feet under the ground. That's what we need to map, and that's what we need to be looking at."

The process starts in the same place it did in Douglass Houghton's day - doing surface mapping looking for outcrops to identify mineral types. Through geophysical studies, including magnetic susceptibility, seismic activity and direct current techniques, surveys have expanded to map the rocks and mineral resources hundreds to tens of thousands of feet below the surface.

As a state resource, the survey mapping would be funded by the state, Yellich said.

There have been estimates done on the cost, but Yellich declined to reveal them.

Through the U.S. Geological Survey, there will be a test geophysical survey north of Menominee to south of Ishpeming to demonstrate the capabilities of geophysical surveys.

"The money that's being spent by the USGS is going to be a model for what we should be doing," Yellich said. "And today, the prices are much better than they were five years ago to get that same type of work, because there just isn't enough activity out there to use all the equipment that these companies have."

Yellich also called for the creation of a core laboratory in the Upper Peninsula with samples from previous operations. Those repositories, which exist downstate, enabled research on geologic information at the surface and subsurface. Once core samples are examined and geophysical data is published, it can attract exploration companies, as well as shorten the time frame for exploration, Yellich said.

"They start pulling the geologic pieces together, and they can target where they would start looking more," he said.