



BellGeospace

June 26, 2026

The Honorable Pete Stauber
Chairman
Subcommittee on Energy and Mineral Resources
U.S. House of Representatives

RE: Earth MRI Reauthorization and Advanced Geophysical Mapping Technologies

Dear Chairman Stauber:

On behalf of Bell Geospace, I appreciate your leadership on issues affecting America's critical mineral supply chains and your attention to the future of the Earth Mapping Resources Initiative (Earth MRI). We also appreciate the Subcommittee's recent oversight hearing, which reinforced the growing bipartisan recognition that high-quality geologic data is foundational to accelerating domestic critical mineral development, reducing exploration risk, and strengthening America's mineral security.

Earth MRI has played an important role in expanding our understanding of domestic mineral resources and supporting efforts to reduce U.S. dependence on foreign sources of critical minerals. As Congress considers reauthorization of the program, we believe there is an opportunity to further strengthen its effectiveness by ensuring that it continues to incorporate the most advanced geophysical mapping technologies available.

During the hearing, you highlighted the extraordinary resource potential of Minnesota's Duluth Complex and asked what additional mapping and higher-resolution technologies, such as Full Tensor Gravity Gradiometry (FTG), could further improve our understanding of these nationally significant deposits. We appreciated Dr. Colin Williams' response that while Earth MRI has established an excellent foundation, the program should continue evaluating "innovative technologies" that can "advance our subsurface understanding." That observation captures exactly the opportunity before Congress. Earth MRI has built an outstanding baseline, and the next phase should focus on complementing those foundational datasets with higher-resolution technologies capable of identifying and characterizing mineral-bearing formations in greater detail.

As Congress considers the future of Earth MRI, there is also an opportunity to align the program with the Administration's broader efforts to accelerate domestic critical mineral development. As USGS Director Dr. Ned Mamula recently stated, "Map Baby Map," recognizing that geologic mapping is the essential first step toward resource discovery and development. Likewise, Secretary of Energy Chris Wright has emphasized the need to accelerate domestic energy and critical mineral production through better data, faster permitting, and strategic investment.

The challenge facing the United States today is no longer simply producing more geological maps. It is producing the right data, at the right resolution, over the right targets to accelerate responsible domestic resource development.

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The hearing repeatedly reinforced this point. Witnesses emphasized that publicly available geologic data reduces exploration risk for private industry, shortens development timelines, and allows companies to make more informed investment decisions before significant capital is deployed. Dr. Williams noted that expanding the diversity of geophysical datasets, developing new data products, and leveraging artificial intelligence to better analyze and deliver information to stakeholders can significantly increase the value of Earth MRI. Dr. Holley of the Colorado School of Mines similarly emphasized that the nation needs more of the country mapped, and mapped at higher resolutions, to fully realize America's critical mineral potential. As Dr. Graham Lederer observed, artificial intelligence has the potential to dramatically accelerate mineral discovery and compress exploration timelines, but only if it is built upon robust, high-quality geophysical data. Simply put, AI is only as powerful as the data that underpins it, and FTG provides that level of data.

Advances in airborne geophysics, including FTG, provide an opportunity to support these objectives by delivering higher-resolution subsurface data capable of imaging deeper geologic structures and helping identify and characterize critical mineral-bearing formations with greater precision. Rather than replacing existing Earth MRI datasets, these technologies complement the program's foundational mapping by providing additional resolution in high-priority areas where greater certainty is needed to guide exploration and development. As several witnesses noted during the hearing, the future of Earth MRI is not simply mapping more of the country, it is strategically combining broader national coverage with increasingly higher-resolution surveys in areas of greatest resource potential.

Representative Nick Begich highlighted this opportunity by discussing the value of conducting higher-resolution surveys over priority targets after initial regional mapping has been completed. Dr. Williams agreed that, as resources allow, more focused surveys can provide the additional resolution necessary to better understand the subsurface. This layered approach, combining broad regional datasets with advanced, targeted geophysical technologies, is precisely where technologies such as FTG can provide significant value to Earth MRI.

Representative Jeff Crank also appropriately raised the importance of prioritizing trusted U.S. companies and maintaining the integrity of geologic data collected through federally funded programs. As the United States works to reduce strategic dependence on foreign adversaries, incorporating advanced capabilities from trusted American technology providers helps strengthen both our domestic industrial base and the security of critical geoscience information. Bell Geospace is proud to be a U.S.-based company with decades of experience supporting both commercial and government customers through advanced airborne geophysical technologies.

We also appreciated testimony emphasizing that Earth MRI should continue embracing a diverse portfolio of geophysical technologies rather than relying on any single methodology. Different geophysical techniques measure different physical properties of the subsurface, including gravity, magnetics, radiometrics, electromagnetics, and resistivity, and together provide a far more complete understanding of mineral systems than any individual dataset alone. Advanced technologies such as FTG should therefore be viewed as complementary enhancements to the existing Earth MRI framework rather than replacements for current approaches.



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Particularly in regions such as Minnesota's Duluth Complex, one of the nation's most significant concentrations of critical minerals, as well as emerging geothermal resources, groundwater assessments, and other strategic mineral districts, higher-resolution subsurface mapping offers an opportunity to better define resource potential, reduce exploration risk, improve taxpayer return on investment, and accelerate responsible domestic resource development.

The hearing made clear that the next evolution of Earth MRI is not choosing between foundational mapping and advanced technologies, but rather integrating both approaches to produce more complete, higher-resolution, and actionable geologic intelligence for the Nation.

We respectfully encourage Congress, USGS, and the Earth MRI program to continue building upon the strong foundation already established by incorporating advanced airborne geophysical technologies such as Full Tensor Gravity Gradiometry into future mapping activities where appropriate. Doing so will improve the quality and usefulness of publicly available geologic information, accelerate responsible domestic resource development, strengthen America's critical mineral supply chains, and ensure that federal mapping efforts continue to leverage the most innovative technologies available.

Thank you again for your leadership on this important issue and for your continued commitment to strengthening America's critical mineral future.

Sincerely,

Scott Hammond
President & CEO