Committee on Natural Resources
Subcommittee on Energy and Mineral Resources
Legislative Hearing
1324 Longworth House Office Building
July 21, 2026
10:15AM

- **H.R. 8003 (Rep. Deluzio)**, *"Expanding the Fast Track Act of 2026"*
- **H.R. 9640 (Rep. Wittman)**, *"Earth MRI Reauthorization Act of 2026"*
- **H.R. 9646 (Rep. Hurd)**, "*Quantum-Enhanced Critical Minerals Mapping Act of 2026"*

Questions from Rep. Fulcher for Dr. Ruarri Day-Stirrat, President, Association of American State Geologists

1. How has the Earth MRI program allowed collaboration with states on projects that were previously difficult or impractical?

Earth MRI has made previously difficult projects possible by creating a national framework through which the U.S. Geological Survey (USGS) and State Geological Surveys can combine their respective capabilities. USGS provides national coordination, common technical standards, research capacity, and the ability to undertake large-scale data acquisition. State Geological Surveys contribute detailed knowledge of local geology, historical records, sample collections, field capability, relationships with universities and land managers. Earth MRI brings those capabilities together around shared national and regional priorities. Regarding standards, most State Geological Surveys work in partnership with the USGS under the National Cooperative Geologic Mapping Program (NCGMP). Over many years geologic mapping standards and databasing have become well refined and represent the national standard for maps produced via field mapping. Any geologic map produced by State Geological Survey field under Earth MRI conforms to this standard and is, therefore, incorporated into the National Geologic Map Database (NGMDB) which serves as the National Archive for geologic maps.

Before Earth MRI, many State Geological Surveys lacked the staffing or financial resources to initiate large, multiyear, or multi-state mineral investigations. A project might be scientifically compelling but still be impractical because its geographic scope exceeded one state's jurisdiction, because airborne geophysical acquisition was too expensive for an individual state, or because neighboring states could not readily align their work schedules or contracting. Earth MRI cooperative agreements provide the resources and organizational structure needed to overcome those administrative obstacles.

This is particularly important because geology does not follow political boundaries. Mineral systems, geologic provinces, faults, watersheds, and groundwater systems commonly

extend across several states. Earth MRI allows projects to be designed around those geological systems rather than stopping at state lines.

One example is a multi-state investigation of regolith-hosted rare earth element resources in North Carolina, South Carolina, and Virginia. Similar granitic rocks occur throughout the Piedmont province in all three states. It would be difficult for any one State Geological Survey to evaluate the mineral potential of the entire region independently, and separate state projects could leave important gaps at state boundaries. Under the Earth MRI framework, the North Carolina Geological Survey developed the principal proposal with input from South Carolina and Virginia, with the South Carolina and Virginia surveys participating as subcontractors. The project combines personnel, geological knowledge, sampling, laboratory analysis, and interpretation across the region.

For a State Geological Survey with limited staff, the practical importance of that support is substantial. Earth MRI funding allowed the participating surveys to bring people, ideas, and priorities together under a common framework and to undertake a coordinated regional investigation that would otherwise have been difficult to initiate. The resulting work is stronger than three isolated projects because it evaluates the geologic system consistently across the entire region.

Earth MRI has similarly allowed airborne geophysical surveys to be planned around geologic boundaries rather than jurisdictional ones. Surveys have extended from North Carolina into Virginia, from Virginia into West Virginia, and from Maryland and Pennsylvania into West Virginia and Virginia. Coordinating adjoining surveys and using compatible acquisition and processing standards produces maps of the same fidelity across state lines.

In the western United States, Earth MRI has also created opportunities for states facing common geological and mineral-resource questions to exchange information and coordinate priorities. California, Oregon, Arizona, and Nevada, for example, have convened to discuss lithium resources in the American West and to share experience concerning different deposit types, mapping approaches, analytical methods, and emerging resource issues. These relationships help states learn from one another and identify where regional coordination can reduce duplication and improve the usefulness of future work.

The Nevada Bureau of Mines and Geology possess extensive local knowledge of one of the Nation's most significant mining jurisdictions. Through Earth MRI, those capabilities can be applied to the critical-mineral potential of historical mine waste and to the mapping and investigation of mineral systems throughout the state. Nevada has more than 200,000 identified mine sites, making comprehensive assessment impractical for the state to undertake alone. Without the Earth MRI partnership, potentially important critical minerals contained in historical waste could remain uncharacterized, while the geological indicators needed to guide private exploration could be developed much more slowly.

State Geological Surveys hold maps, drill records, mine files, physical samples, geochemical databases, and institutional knowledge that may not exist anywhere else. Earth MRI gives USGS access to that expertise and ensures that nationally acquired data are interpreted and field-verified by geologists who understand the local geology. As stated in my written testimony, modern sensing technologies provide their greatest value when integrated with geological mapping, field verification, geochemistry, historical records, and other information needed to interpret the observations.

The public nature of Earth MRI data is also central to successful collaboration. The program produces precompetitive information rather than directing public investment toward a particular company or individual project. Governments, Tribal Nations, communities, universities, land managers, and businesses can work from the same foundational information. This reduces duplicated data collection, lowers exploration cost and uncertainty, and allows private investment to concentrate on project-specific evaluation. Geological information therefore functions much like topographic mapping, weather observations, or stream-gauge records: it is public infrastructure that supports many users and remains valuable for decades.

Earth MRI is also unusual in its sustained emphasis on the upstream portion of the mineral-development process. Many federal programs appropriately focus on mineral processing, separation technologies, manufacturing, or deployment. Earth MRI addresses the earlier and indispensable question of where resources may occur and how the relevant geological systems operate. That foundational understanding is necessary before exploration capital can be deployed effectively, processing technologies can be matched to actual resources or permitting and land-management decisions can be made efficiently. Essentially, Earth MRI seeks to fill the funnel of mineral opportunities that could have investment decisions today or in many years' time.

In summary, Earth MRI has allowed states to undertake work that was previously impractical by providing funding, national coordination, common standards, access to advanced acquisition technologies, and a durable mechanism for Federal-State and multi-state collaboration. It enables projects to follow geology rather than political boundaries, combines national capabilities with state expertise, and ensures that the resulting information is publicly available.