Opening Statement

Chairman, Ranking Member, and members of the panel, thank you for the opportunity to testify.

I am here representing the broader geospatial and mapping industry, including firms that directly support the U.S. Geological Survey's Earth Mapping Resources Initiative, known as Earth MRI. I have three decades of experience in surveying and mapping for a national company called Woolpert, and I currently serve on the board of MAPPS.

USGS has long encouraged a competitive private sector marketplace for mapping services to supplement their own activities and there are a host of companies that have made the investment in the airborne vehicles and sensors to support the USGS mapping mission at the greatest value for the taxpayer. These same partners can bring significant technology, assets, and experience to bear on this issue.

I am here to underscore the critical national importance of this program and to express strong industry support for sustained, and where possible, increased investment.

Earth MRI is foundational because it gives the United States the high-quality geologic, geophysical, geochemical, topographic, and related data needed to better understand our surface and subsurface resources. That matters because we cannot secure domestic critical mineral supply chains, strengthen manufacturing, support infrastructure planning, or advance defense readiness if we do not first know—with confidence—what resources we have, where they are, and how they can be responsibly developed. [usgs.gov], [congress.gov]

If America wants domestic critical mineral security, it first needs domestic mineral intelligence. It also is important that policymakers in Congress utilize all the tools available across proven partners of the USGS to most effectively advance that intelligence.

Earth MRI provides that foundation.

This program is not just about mining. It supports the broader national system that depends on critical minerals: electronics, advanced manufacturing, energy technologies, communications infrastructure, transportation systems, and defense platforms. This is an issue that has transcended political differences, and Congress recognized that importance when it authorized Earth MRI through the Infrastructure Investment and Jobs Act and directed the USGS to accelerate efforts to build a modern understanding of the nation's geology and critical mineral potential. The law provided $320 million to accelerate that

work and set a deadline for an initial comprehensive national modern surface and subsurface map and data integration by November 15, 2031. [congress.gov]

Earth MRI is also a defense-relevant capability.

Critical minerals are not simply an economic issue. They are a strategic issue. They shape supply-chain resilience, industrial competitiveness, and national security. This initiative originated through collaboration between USGS leadership and Congress, including early engagement with the late Senator Thad Cochran, which gave a clear understanding that the United States needed stronger domestic resource intelligence to compete globally and reduce strategic vulnerabilities.

That reality is even more urgent today.

At a time when geopolitical competitors, especially China, have built strategic leverage across critical mineral supply chains, the United States cannot afford to underinvest in the scientific and geospatial foundation needed to understand its own resource base. Our competitors are not waiting for us to get smarter about our own geology. Earth MRI helps ensure the United States is not making 21st-century industrial and defense decisions with 20th-century geologic visibility. [congress.gov], [usgs.gov]

The strategic case is clear. Earth MRI was created to help close a long-standing data gap. According to USGS, before the initiative launched, only a small percentage of the country had high-quality geophysical coverage. Since 2019, Earth MRI has expanded modern mapping through airborne geophysics, geologic and geochemical surveys, lidar, hyperspectral data, mine-waste research, and other advanced datasets, in partnership with state geological surveys, federal and state agencies, academic institutions, and private industry. [usgs.gov], [usgs.gov]

At the operational level, Earth MRI depends on advanced airborne geophysical surveying, including aeromagnetic data collection, lidar-based 3D mapping, and hyperspectral imaging. These technologies are essential for identifying mineral systems and geologic features that cannot be detected from surface observation alone.

A small group of highly specialized firms perform this work today. Many are members of MAPPS, the national association for geospatial firms. These firms represent the backbone of U.S. airborne geophysical capability and are responsible for executing the surveys that make Earth MRI possible.

However, a significant portion of the underlying sensor technology remains sourced internationally. That creates a strategic gap at a time when the United States is actively

working to secure domestic supply chains, not only for minerals, but also for the technologies used to find them.

Industry is responding. Firms are investing in expanding domestic capability, acquiring new technologies, developing U.S.-based expertise, and strengthening the nation's airborne geophysical and advanced sensing capacity. But continued federal support is essential to sustain that momentum.

There is also growing recognition, both in industry and among policymakers, of the need to prioritize U.S.-based firms in executing federally funded critical mineral mapping. Ensuring this work is performed by U.S. companies strengthens domestic capacity, protects strategic capabilities, and keeps critical technical expertise within the country.

From an industry perspective, Earth MRI is one of the most efficient federal investments available. It produces publicly accessible, high-value datasets that multiply value across agencies, states, researchers, communities, and the private sector. These datasets help:

De-risk exploration and infrastructure decisions

- Support responsible resource development
- Guide smarter public and private investment
- Improve state-level resource planning
- Enable cross-sector collaboration
- Strengthen supply-chain visibility
- Support economic growth and national security

USGS explicitly describes Earth MRI as delivering the data needed to find critical and other mineral resources and inform decisions about how the nation will meet evolving needs. [usgs.gov], [sam.gov]

This is not simply about what is underground. It is about better data for resource understanding, land stewardship, hazard awareness, mine-waste evaluation, infrastructure planning, and informed public policy. Earth MRI gives decision-makers the confidence to act with better information at the front end, before far more expensive downstream decisions are made.

That is why the program has such broad industry support. It benefits the full ecosystem, not just one company, one contractor, or one segment of the market. It supports geoscience, mapping, infrastructure, energy, mining, manufacturing, research, and national defense.

Across industry, including firms like Woolpert that support responsible mineral development and critical mineral infrastructure through geospatial, engineering, and analytics capabilities, there is a clear understanding that better national mapping reduces uncertainty and improves decision quality. Firms working in this space help turn complex geologic and geospatial data into actionable intelligence for mining, utilities, infrastructure, resource development, and mission-critical applications.

The return on investment extends far beyond mapping. Earth MRI shapes how the United States competes globally. It helps reduce blind spots in critical mineral supply chains, supports responsible investment, strengthens domestic industrial capacity, and reinforces U.S. leadership in the science and mapping required to secure critical mineral supply chains. [congress.gov], [usgs.gov]

At a time when geopolitical competitors are actively securing access to critical minerals, the United States must invest in understanding its own resource base with equal urgency.

If we want domestic mineral security, we must first invest in domestic mineral intelligence.

Earth MRI provides that foundation.

For these reasons, I respectfully urge continued, stable support for Earth MRI, increased investment where possible, and continued support for the U.S. Geological Survey's leadership in advancing the nation's critical minerals mission.

Congress provided a five-year authorization in IIJA for the Earth MRI mission. Much has been accomplished and learned over the last 5 years, and I would encourage the Committee to consider reauthorizing the program, updating its goals and parameters, and providing the leadership and direction and funding commensurate with the challenge.

Thank you. I welcome your questions.