

Draft Minutes for the 1618th meeting of the Geological Society of Washington

March 4, 2026

John Wesley Powell Auditorium, Cosmos Club, DC

President Ackerson called the meeting to order at 8:05 ET.

Attendance

There were 38 attendees in-person.

Minutes

The meeting began with announcements, then moved on to the approval of the minutes from the previous meeting (1617th). The minutes of the 1617th meeting had been posted online and a Minute's Minute was read aloud at the 1617th meeting.

Guests and New Members

2 guests were announced, including Naoko Takahashi (Tohoku University) and Dan Hummer (University of Southern Illinois). 10 new members were announced: Devan Solanki, Katherine Turk, Terri Zak, Jonathan Arthur, Conor Hulse, Mariliis Eensalu, Jillian Singleton, Erika Carter, Rob Klein, and Brian Huber.

Obituaries

None

Announcements

Introduction of new members: We are now up to 166 total members

Science fair volunteering: MD schools will be looking for judges, more details forthcoming

Informal Communication

Larry Meinert gave an overview on the geology of Egypt as experienced on recent travel.

Formal Program

The formal program commenced at 8:21 ET and consisted of three speakers: Elizabeth Tomaszewski (USGS), Josh Rosera (USGS), and Oded Elazar (Carnegie Earth and Planets Laboratory).

1st formal talk: Coal Mine Waste as a Resource: How Fundamental Geochemistry Informs Critical Mineral Recovery Potential

Beth gave a talk about coal mine drainages as sources of critical minerals. Coal mine drainage environments have diverse appearances and impacts, and dissolved minerals vary on a site basis with significant differences between anthracite and bituminous sites. There are also correlations between certain dissolved minerals and terrestrial carbon, with lessons for mineral extraction

8:22-8:39

Questions summary

Linda Rowan (CRS): did you use the USGS coal database?

Jane Hammerstrom, (USGS, ret): how did you collect samples in the field? Were sites sampled separately?

Mong-Han Huang (UMD): pond lining & treatment?

[Unknown]: what are the minerals that these elements are adsorbed onto?

Jake Harball, (USGS, ret): if metals are precipitating downstream, can they be extracted from those solids?

2nd formal talk: What's the point? Tracking regional orientations of magmatism through time in the Rocky Mountains

Josh gave a talk about how magmatism changed in the western US from Cretaceous felsic rocks to Miocene mafic rocks related to the subduction of the Farallon Plate transitioning to extension. New U-Pb zircon geochronology shows a unique belt of intrusive rocks indicating a possible shift in magmatic trends, and Fry point pattern analysis reveals changing magmatism orientation from Laramide compression 70-65 Ma, transition from 40-35 Ma, and rifting from 25-20 Ma.

8:49-9:10

Mike Ackerson (Smithsonian): why is the Colorado Mineral Belt perpendicular to the orientation of northern belts?

Mon-Han Huang (UMD): how does the fry technique account for area and change in surface elevation change?

Dan [last name unknown]: what's the role of water content?

3rd formal talk: Metasomatic Fluids from Subducted Oceanic Crust Recorded by Potassium Isotopes in Sierra Leone Diamonds

Oded gave a talk on records of cratonic volatiles from Proterozoic diamonds and their inclusions. Potassium isotope analysis was used to track melt fluid reservoirs and processes, revealing large dehydration prior to high-density fluid formation, an indicator of subduction.

9:18-9:37

Ross Salerno (USGS): how is the material from laser ablation collected?

Mike Walter (CSL): do very negative values indicate deeper dehydration? Are there any other trace element ratios that would correlate well with the deeper samples?

Mike Ackerson (Smithsonian): what are the fluids?

President Ackerson adjourned the meeting at 9:41.
Submitted by Karin Lehnigk, GSW meeting secretary