



# The Colorado Professional Geologist



American Institute of Professional Geologists—Colorado Section  
Colorado Section email: [Colorado-aipg@outlook.com](mailto:Colorado-aipg@outlook.com)

Geology News, Events, and More



## Student Photo Contest!

- Submit your photo along with a brief description (2 to 3 paragraphs) of the location and geologic setting to the Colorado Executive Committee. Entries will be showcased in the Colorado Section newsletter and the winner will be featured on the front page!
- Photos should be submitted in .jpg or .tiff format and accompanying text in MS Word.
- Send your entries to the Colorado Section: [colorado-aipg@outlook.com](mailto:colorado-aipg@outlook.com)
- Entries must be received by July 31, 2021 to be considered.



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# 2021 SECTION OFFICERS

The Board usually meets the first Tuesday of each month at 7:00 AM; all members are invited to attend. Please contact a Board Member to confirm time and location.

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## Call for Articles

The Colorado Section of AIPG newsletter welcomes submission of technical or informational articles for publication. Articles may be submitted via e-mail to the editor at:

summitdatasvcs@msn.com  
(Microsoft Word format is preferred.)

James Russell  
1909 Sage Circle, Golden, CO 80401

Contact James at 303-278-4456  
for additional information.

## Change of email:

Change of email notices and other contact information changes for the CPG should be sent directly to:

AIPG National Headquarters  
1333 West 120<sup>th</sup> Ave, Suite 211  
Westminster, CO 80234  
303-412-6205  
Email: aipg@aipg.org

(The National Office maintains the address list for all.)

Letters, articles, announcements, ads, etc. must be received by the Editor by the **end of the fourth full week of the month preceding publication**. Letters, articles, ads, announcements, etc. accepted on a space available basis. Submission of articles, etc. via e-mail is the preferred method. Copy can be accepted in most PC formats, but DOC or DOCX are preferred. Call or e-mail James Russell for details on submission of copy or advertising at 303-815-3901, summitdatasvcs@msn.com.

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The opinions expressed are those of the authors and not the Colorado Section officers unless clearly stated otherwise.

## President's Message

It's springtime in the Rockies!

I just spent yesterday digging out from the two feet of snow I received at my home in Denver, and I am appreciative of the moisture this storm brought to our state (even though I am stiff and sore today!).

The Colorado Section Executive Committee has been busy working on some fun activities. We have a Student Photo Contest, an Early Career Professional Spotlight, and some virtual field trip options for the summer. Our Annual Dinner and Student Mentoring Event will take place in the fall, so please stay tuned for information on how to register and get involved in the student mentoring session. This annual event is so important for staying in touch with our friends and colleagues and face-to-face networking, and I am happy that we can start planning it, even though it will be a few months behind schedule.

The Colorado Section Executive Committee would like to hear from you! If you have any suggestions for events or ideas for field trips, we would love to hear them. As we are slowly able to transition to in-person events, we want to make sure the events we plan are meeting your needs as an AIPG member.

I hope you are all doing well, and I look forward to seeing you in person soon!

Yours truly,  
Jessica Davey

## **Editor's Remarks**

### **James Russell**

The newsletter is a bit low on substance this quarter. A combination of COVID, time of year, and other unforeseen events have resulted in a drop of activity in the geology related news or activities. I am in the process of writing an article about the state of the oil, gas, and coal business in Colorado and will be including it in the next issue. A combination of fluctuating prices, new oil and gas rules, corporate acquisitions, and general economic uncertainty has resulted in cloudy employment conditions for those working in the energy industry.

After some delay I will also have the new online central Colorado geology log available for use in the next month. If you have anything you feel the Colorado section should know, please send to me for the next newsletter.

**If you have received the email announcement to vote for 2022 national officers, please do so before June 30!**

**Send in Your Articles!**



## AIPG Purposes

The purposes of the Institute shall include:

- advance the geological sciences and the profession of geology;
- establish qualifications for professional geologists;
- certify the qualifications of specific individual Member geologists to the public;
- promote high standards of ethical conduct among its Members and Adjuncts, and within the profession of geology; and represent, and advocate for, the geological profession before government and the general public.

## What AIPG does . . .

- Professional Certification - Certifies geologists based on their Competence, Integrity, and Ethics.
- Categories of Membership - Certified Professional Geologist, Professional, Young Professional, Associate, and Student.

Ombudsman - Intervenes with regulatory boards and agencies on behalf of individual geologists, at the geologist's request. Information also is disseminated in cooperation with the Association of State Boards of Geologists.

## Geo Events and Other Useful Links

### Important References!

[Colorado Professional Geologist](#) digital files all the way back to 1993 are posted to the CO AIPG dropbox site: **Thank you David Abbott** for creating and preserving this valuable record of AIPG Colorado ideas.

AND

[Field Trip Files](#) from 1974

### **Job Opening: Project Geologist**

Westwater Resources, Inc., a well-funded U.S.-based battery-grade graphite development company, is seeking to fill a contract position Project Geologist for its forthcoming core drilling program at its central Alabama graphite project. The planned drilling program will be comprised of 70 to 100 shallow angle and vertical core holes (less than 200 feet in length) within and adjoining a currently defined mineral resource hosted in graphitic schist and other target areas adjoining the known resource. It is expected that the 2021 drilling program will be 4 -6 months in duration.

The position responsibilities will include core logging, supervision of sampling of core (including the inclusion of QA/QC samples), transmittal of samples to the analytical laboratory, recording of relevant data, supervision of drilling and dirt work contractors, mapping and rock chip sampling and reporting of project progress to the Company's Denver-based management. Field technician support will be provided by the Company. Interested candidates should hold a degree in geology, have several years of drilling project supervision (experience with core drilling is essential), be proficient in the geology of metamorphic rocks, and have excellent written and spoken communication skills. Interested candidates should submit a copy of their C. V., references, and salary requirements to:

[jobs@westwaterresources.net](mailto:jobs@westwaterresources.net). No telephone calls please. Information about the Company is available on our website: [www.westwaterresources.net/home](http://www.westwaterresources.net/home).

## Geo Events and Other Useful Links (Continued)

### Entry Level Hydrologist/Geologist Position Available

Jehn Water Consultants, Inc. is an independent water resource consulting firm based in Englewood, Colorado. Since 1991, Jehn Water Consultants has provided its clients cost-effective and technically innovative solutions to a wide variety of complex water resource, water supply and development, and water rights problems. For more information, please visit our website at: [www.jehnwater.com](http://www.jehnwater.com).

The Entry Level Hydrologist/Geologist Position is a combination of field and office work. The position requires field work throughout Colorado, which includes collection of water level data, water quality sampling, drilling supervision, site inspections, stream flow measurements, GPS measurements, and other field duties that may be required. Office tasks include research, review of water court documents and water rights accounting.

Please do not apply if you do not want to do field work.

This position reports directly to the project manager. The ideal job applicant should have a bachelor's degree in hydrogeology, geology, hydrology, watershed science, geological engineering, or related sciences.

The following are the minimum computer software proficiencies:

Familiarity with aerial imagery and USGS topo maps

Microsoft Office suite of products with advanced knowledge of Excel

Compensation: Competitive and commensurate with experience

Please forward your resume with a cover letter to: [gburke@jehnwater.com](mailto:gburke@jehnwater.com) with subject line heading "Entry Level Position"

Position is available immediately.

### Four Corners Geological Society March Meeting

March 18, 2021; 5:30 PM Mountain Time; Zoom meeting hosted by Fort Lewis College

Title: "Utah's Ancient Mega-Landslides"

Speaker: Mr. Robert F. Biek, Utah Geological Survey (Co-authors are David B. Hacker, Kent State University, and Peter D. Rowley, Geologic Mapping Inc.)

Cost: Free

Abstract:

During the late Oligocene to early Miocene, the Marysvale volcanic field of southwestern Utah experienced three consecutive, catastrophic, mega-scale collapse events: the Sevier, Markagunt, and Black Mountains gravity slides, which we refer to collectively as the Marysvale gravity slide complex (MGSC). Each collapse is newly discovered and ranks among Earth's largest terrestrial landslides; collectively they span more than 8000 km<sup>2</sup> with runout distances that exceed 35 km over the < 3° dipping former land surface. The allochthonous stratigraphic sequence, kinematic indicators, and basal structures including clastic dikes, pervasive fragmentation and pseudotachylyte collectively suggest emplacement of each gravity slide occurred at high velocity during a single event. These gravity slides exhibit the full range of structural features commonly seen in modern landslides, but on a gigantic scale. (Continued on next page)

## Geo Events and Other Useful Links (Continued)

Each consists of four distinct structural segments: (1) a high-angle breakaway segment, (2) a bedding-plane segment, (3) a ramp segment, and (4) a former land-surface segment where the upper plate moved over the landscape. The gravity slide complex remained undiscovered for so long precisely because of its gigantic size and an initially confusing mix of extensional, translational, and compressional structures overprinted by post-MGSC basin-range tectonism. Each slide is a large contiguous sheet of andesitic lava flows, mudflow breccias, source intrusions, and intertonguing ash-flow tuffs that record southward, gravitationally induced catastrophic failure of the southern flank of the Marysvale volcanic field. Failure was preceded by slow gravitational spreading on the Paunsaugunt thrust fault system. Triggering mechanisms are poorly understood, but the principal zone of failure was in mechanically weak, clay-rich volcanoclastic strata at the base of the volcanic section.

In September 2017 we convened a 6-day GSA-sponsored Thompson Field Forum on the characteristics and implications of the MGSC. New collaborative research now underway includes geologic mapping, further age control, characterization and implications of pseudotachylytes and injectites, and modelling of mobility mechanisms that allowed extraordinary long runouts.

Link to Join Zoom Meeting: <https://fortlewis.zoom.us/j/94286084881>  
Join by phone: +1-346-248-7799

### **AAPG Carbon Capture, Utilization, and Storage Conference**

An Emerging Field for Petroleum Geologists  
23–24 March 2021

Plan now to attend AAPG's Carbon Capture, Utilization, and Storage (CCUS) Conference in Sugar Land, Texas, at the Sugar Land Marriott Town Square. Themed “An Emerging Field for Petroleum Geologists,” the conference will highlight current CCUS work and tackle related challenges including subsurface storage in saline reservoirs, storage associated with CO<sub>2</sub> enhanced oil recovery, reservoir monitoring and risk assessment, case studies, industry applications, economics, incentives, policies and regulations, and more.

Speakers will represent research institutions, universities, and industry. The work presented at the conference will demonstrate the ongoing need for skilled petroleum geologists and engineers to help define the future of carbon management.

### **Colorado Scientific Society March Talk**

March 25. Time: 7:00 p.m., monthly meeting via Zoom

Marieke Duschene (USGS), “North and Middle Park, CO”.

This will again be an online Zoom presentation; see <http://coloscisoc.org/> for the abstract and speaker biography, and that is where the link to the Zoom presentation will be posted.

### **NGWA's Hydrogeology of States Webinar Series: Michigan**

March 30, 2021; Online 11 a.m.-12 p.m. ET

As hydrogeology varies widely across the United States — and as primary jurisdiction over groundwater development rests with the states — each is unique. This webinar series explores the issues encountered in each of the 50 states — one at a time. The Michigan hydrogeology webinar, presented by John A. Yellich, CPG, director of the Michigan Geological Survey, focuses on the state's:

(Continued on next page)

## Geo Events and Other Useful Links (Continued)

- Major aquifers
- Physical and geologic properties
- Groundwater use and availability
- Groundwater quality and contamination
- Surface water/groundwater interactions
- Groundwater management issues

Cost: On/before March 19 - NGWA member: \$29; Nonmember: \$49  
Starting March 20 - NGWA member: \$39; Nonmember: \$59

To register, go to [https://my.ngwa.org/NC\\_Event?id=a0k2J00000A7Y7aQAF](https://my.ngwa.org/NC_Event?id=a0k2J00000A7Y7aQAF)

After registering for this event, you will receive a confirmation email acknowledging your registration that also contains instructions for accessing the event.

### **-RMAG April Online Lunch Talk**

April 7, 2021; 12:00 pm - 1:00 pm

Location: Online via RingCentral Meetings

Luncheon Speaker: Ali Jaffri, Ph.D., CEO Applied Stratigraphix

Talk Title: "Putting the Sedimentology back into Sediment-Hosted Uranium-Vanadium Exploration"

#### **SUMMARY:**

Geochemistry and basin hydrology are traditionally used for uranium exploration in the US. Predictive models are based on 'old-timer' principles based on sedimentological criteria that were passed from one generation of miners to the next. Unfortunately, these sedimentological models have not been updated since the last uranium boom which happened forty years ago. The goal of this presentation is to integrate our current understanding of sedimentary processes and plant taphonomy to not only explain trends observed by 'old-timers' but to provide predictive models that aid in future exploration efforts.

Free, but open only to RMAG members.

To register, join, or get more info, go to <https://www.rmag.org/index.php?src=events&srctype=detail&refno=149&category=RMAG%20Luncheons>

### **NGWA's Hydrogeology of States Webinar Series: Oklahoma**

April 21, 2021; Online 3-4 p.m. ET

As hydrogeology varies widely across the United States — and as primary jurisdiction over groundwater development rests with the states — each is unique. This webinar series explores the issues encountered in each of the 50 states — one at a time.

The Oklahoma hydrogeology webinar will be presented by Kyle E. Murray, Ph.D., Hydrogeologist, Oklahoma Geological Survey, and focuses on the state's:

- Major aquifers
- Physical and geologic properties
- Groundwater use and availability
- Groundwater quality and contamination
- Surface water/groundwater interactions
- Groundwater management issues

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## Geo Events and Other Useful Links (Continued)

Cost: On/before April 9 - NGWA member: \$29; Nonmember: \$49  
Starting April 10 - NGWA member: \$39; Nonmember: \$59

To register, go to [https://my.ngwa.org/NC\\_Event?id=a0k2J00000A7Y7VQAV](https://my.ngwa.org/NC_Event?id=a0k2J00000A7Y7VQAV)

After registering for this event, you will receive a confirmation email acknowledging your registration

## Geographic Resources for Professional Geologists

ESRI, the leading company in the Geographic Information Systems (GIS) industry has a great resource for geology professionals who want to keep up with current methods in computer modeling, data management, and remote sensing. It is called the ESRI Community; a global community of Esri users where you can find solutions, share ideas, and collaborate to solve problems with GIS. ESRI had subdivided the Community into twelve categories: Products, Industries, Developers, Topics, Worldwide, Service, Learning, Networks, Events, User Groups, Community Basics, and ArcGIS Ideas.

Within the Industries category you will find two subcategories: Water Resources, and Natural Resources. This is where you will find subsets for Petroleum, Mining, and Hydrology. Within each category you can find specific videos, documents, blogs, and Q/A. For those who are not well versed in GIS, it is not CAD. GIS has matured into a huge industry that encompasses database management, sophisticated 2D and 3D data modeling, spatial analysis (including geostatistics), remote sensing, custom applications, and hydrologic modeling.

Below are a set of URLs you can access to see what is available. You will need to create an account, but it is free use.

[All Communities - Esri Community](#)

[GIS for Natural Resources | Improve Management of the Earth's Resources \(esri.com\)](#)

[Water Resources - Esri Community](#)

[Petroleum - Esri Community](#)

[Mining - Esri Community](#)

Below is a link for current and past natural resource webinars:

[Esri Natural Resources GIS Webinar Series](#)



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Are you interested in learning more about  
oil and gas development? Contact us to request  
an informational presentation:

[ambassador@anadarko.com](mailto:ambassador@anadarko.com)



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**Use this email for registering for Section  
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