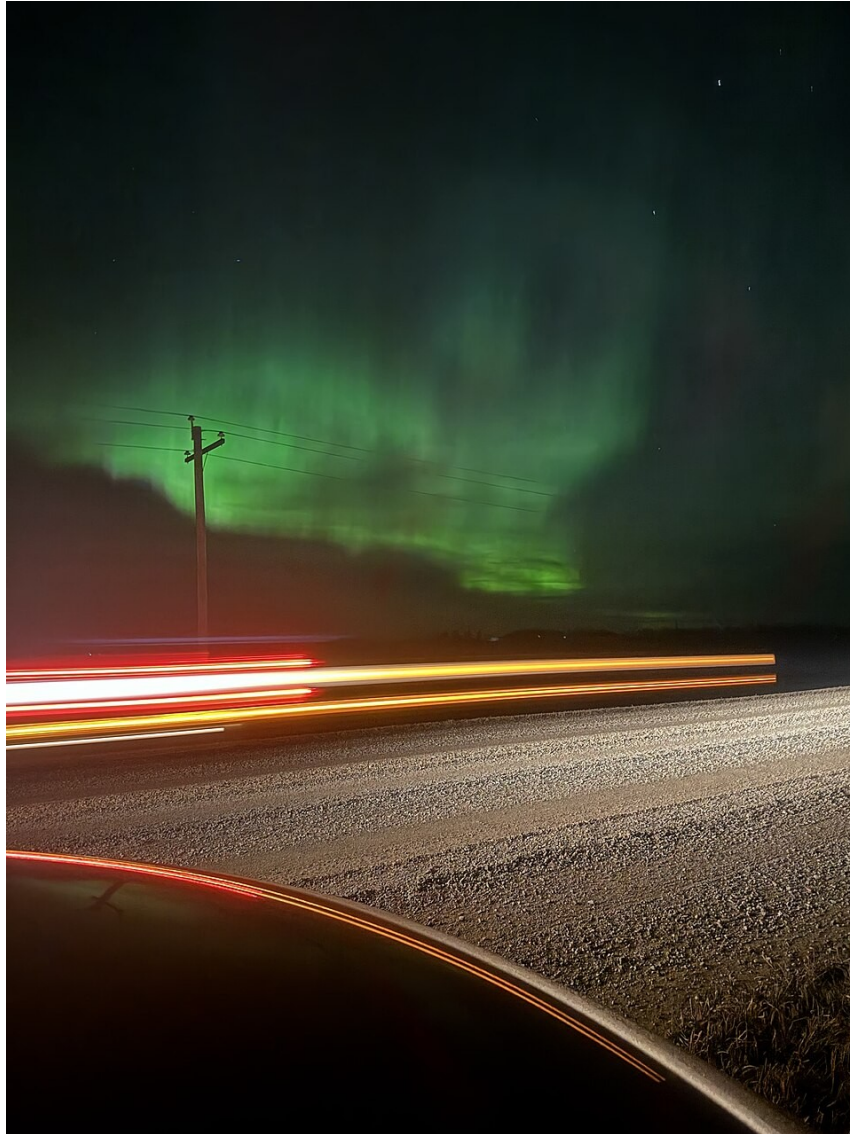


November 17, 2025

News and notes



Northern lights in the skyline north of Regina, Saskatchewan Canada - November 14, 2025

Credit: Bikerchik68, [Creative Commons Attribution 4.0 International](#) license

Related stories: [here](#), [here](#), and [here](#).

I am busy this week with various responsibilities, so we'll only look at some news items that I thought were interesting. If you enjoy my blogs, bookmark the site and check on Monday afternoon rather than relying on social media postings which can get lost in the shuffle.

Comments

If anyone has comments on any of my postings, please leave a comment on the LinkedIn page for the posting or email me at raymondreichelt@gmail.com.

Geopolitics

- [Clashes erupt in Mexico City anti-crime protests, injuring 120.](#)
- [China rare earths deal 'hopefully' done by Thanksgiving, Bessent says.](#)
- [Zelensky vows energy sector overhaul after \\$100m corruption scandal](#)
- [How American and Chinese Drone Arsenal Stack Up.](#)
- [Ukraine Intensifies Campaign Targeting Russia's Vital Oil Lifeline.](#)
- [Iran seizes tanker in Strait of Hormuz, US official says, as tensions remain high in region.](#)
- Venezuela: [Trump Escalates Pressure on Venezuela, but Endgame Is Unclear](#); related: [Oil reserves in Venezuela.](#)

Research and News

- [Neon isotopes in individual vesicles of Icelandic basaltic glasses: Insights into the origin of light volatile elements on earth.](#)
- [Ab initio simulations on metal-silicate partitioning of phosphorus during Earth's core formation.](#)
- Sedimentology: [Refining gravity flow and snow avalanche signatures in lacustrine sediments-a novel facies model](#); behind a paywall.
- [Basement Domains Recorded in the Zircon Geochemistry of the Northern Sierra Nevada Batholith.](#)
- [Graphitization of hydrogen-rich organic matter under high temperature and pressure.](#)
- [Magmatic and thermally produced reactive phosphorus 3.2 billion years ago and its implications for early life.](#)
- [Pyrite: an authigenic host phase for tungsten in sulfidic sediments.](#)
- [Copper isotope fractionation during lower crustal sulfide accumulation.](#)
- [Natural hydrocarbon seepage at the Northeast Greenland continental shelf.](#)
- Pilbara Craton: [Siderite precipitation in Paleoproterozoic oceans during hydrothermal venting.](#)
- [Rare earth elements \(REE\) as indicators of geochemical processes in permafrost systems of the Arctic Foothills, Northern Alaska.](#)
- [A Photomicrographic Dataset of Rocks for the Accurate Classification of Minerals.](#)
- [Aluminum control on viscosity and structure of haplogranitic melts: Implications for rhyolitic melt viscosity determination.](#)

- [Life cycle of a giant A-type batholith in the Proterozoic and its link to mineral resources: The Pikes Peak system, Colorado.](#)
- [Piggyback imbrications, duplex stacking and sequential superimposed deformation in the Fanø Bugt Glaciotectonic Complex, Danish North Sea.](#)

Lunar Geology

- [Discovery of crystalline Fe₂O₃ in returned lunar soils.](#)
- [Final differentiation of the lunar magma ocean: genesis of KREEP and the limited role of silicate liquid immiscibility.](#)

Plate Tectonics

- [Insights Into the Archean to Phanerozoic Evolution of Southwest Australia From Seismic Ambient Noise Tomography.](#)
- [Emergent Feedbacks Between Progressive Serpentinization, Interface Weakening, and Subduction Rates.](#)
- [Locating Tarim on the periphery of the Columbia supercontinent: New evidence from Mesoproterozoic amphibolites from the Central Tianshan block.](#)
- [Necessary Core-Mantle Boundary Heat Flux Patterns for Recovering the Latitude of the South Atlantic Anomaly.](#)
- [Contrasting topography of continental large igneous provinces: Crucial role of crustal flow and intrusion dynamics.](#)
- [Magma source and tectonic setting of gabbro-norite–anorthosite massifs: geochemical and isotopic evidence from the 1.5 Ga Sejny Intrusion \(Mazury Complex, NE Poland\).](#)
- [Millennial-Scale Hydrothermal Variability at the Carlsberg Ridge Driven by Sea-Level Change and Transient Magmatism.](#)
- [Density and viscosity variations due to plume melting of a bilithologic mantle: Implications for asthenosphere and hotspot swell root dynamics.](#)
- Subduction and exhumation processes: [Dislocation Density as a Differential Stress Indicator in Coesite and Quartz: TEM Constraints from Shear Experiments.](#)
- [Sulfate-dominant apatite in the deep arc crust indicates that high oxidation state promotes copper fluxing in arcs.](#)
- [Enriched mantle generated through persistent convective erosion of continental roots;](#) Science Daily summary [here](#).
- Subduction-related magmatic arcs: [Tracking the Growth of Arc Batholiths: a Zircon O-Hf Isotope Approach from the Bega Batholith, Southeastern Australia.](#)

- [Electrical Conductivity During Controlled Deformation at Upper-Mantle Conditions: First Experimental Achievements in a Griggs-Type Apparatus.](#)
- [Accelerated rifting in response to regional climate change in the East African Rift System; New Scientist summary \[here\]\(#\).](#)
- [Zircon U-Pb ages and Lu-Hf isotopic systematics in granites from Mt Isa Inlier – evidence of prolonged reworking of an active continental margin during the final assembly of the Nuna \(Columbia\) supercontinent.](#)
- [Crustal Architecture and Low-Temperature Geochronology of an Apparent Cycladic Tectonic Window \(NE Attica, Greece\): Insights Into Imbrication in Subduction Settings.](#)

Paleontology

- [Experimental modelling of Carboniferous *Cordaites* and *Calamites* casts; behind a paywall.](#)
- Ireland: [How dinosaur fossils were found on an island with 'the wrong rocks'.](#)
- [Soft tissue of 40,000-year-old Siberian mammoth offers astonishing glimpse into final moments of its life.](#)
- Evolution: [ppgm: an R package for integrating neontological, palaeontological, and climate data in a phylogenetic comparative framework.](#)
- [Overview of Fossil Barracudas \(Sphyracnidae\) from the Cenozoic Strata in Japan, and Associated Global Climate Events.](#)
- [Earliest oceanic tetrapod ecosystem reveals rapid complexification of Triassic marine communities; Phys.org summary \[here\]\(#\).](#)
- [A new Silurian synziphosurine arthropod from Ukraine.](#)
- [Guzhangian \(late middle Cambrian\) agnostoids and trilobites from Riana, northwestern Tasmania, Australia.](#)
- [An ancient recombination desert is a speciation supergene in placental mammals.](#)
- [Osteology, taxonomy and phylogenetic affinities of a new pseudosuchian archosaur from the Middle Triassic of southern Brazil; Phys.org summary \[here\]\(#\).](#)
- Jewelry from fossil ammonites: [How a Sea Creature's Fossils Show All the Colors of the Rainbow.](#)
- Crabs: [Decoding the bare necessities of decapod crustacean nomenclature through the ages.](#)
- [Neuroanatomy of *Kayentachelys aprix* and *Eileanchelys waldmani* provide insights into the early evolution of the turtle brain.](#)

- [A new anguine lizard \(Squamata, Anguidae, Anguinae\) from the Late Miocene \(Vallesian\) of the Vallès-Penedès Basin \(NE Iberian Peninsula\).](#)
- [The evolution and biological role of the neomorphic ossification of the nasal cartilage in Neosclerocalyptini glyptodonts.](#)
- [A regurgitalite reveals a new filter-feeding pterosaur from the Santana Group.](#)
- [A new twist in the evolution of chameleons uncovers an extremely specialized optic nerve morphology.](#)

Mining and Energy

- Contract delays, bribery, and cost overruns: [Kazakhstan Drags Big Oil to Swiss Court in \\$166 Billion Lawsuit.](#)
- [The UK Is Transforming Coal Mines Into Geothermal Hubs.](#)
- [Canada has the critical minerals the world needs, but there isn't a 'cookie cutter' approach to getting them out: Hodgson.](#)
- Ore deposit geology: [Resolving the syn-genetic mineralization age of a metamorphosed Archean VHMS deposit using multiple geochronological approaches.](#)
- [Graphite One uncovers rare earths in Alaska.](#)
- [Tripling of nuclear capacity is achievable, says World Nuclear Association.](#)
- [Brazil Shatters Crude Export Records in October: A Short Note.](#)
- Ore deposit geology: [Shallow emplacement of silver-rich rhyolitic magma enhancing enrichment and mineralization of silver.](#)
- [IEA sees global oil supply growth driving larger market glut.](#)
- [Maritime Resources pours first gold at Newfoundland mine.](#)
- [Pakistan's First National REE Map Reveals Untapped Potential-And a Strategic Crossroads With China.](#)
- [Argentina's Vaca Muerta Shale Is Smashing Oil Production Records in 2025.](#)
- [Operations begin at Simandou.](#)
- South America: [Welcome to the planet's newest oil frontier.](#)
- [China's \\$468 Billion Energy Drive Sparks Global Oil Market Shakeup.](#)
- [Critical minerals in oil and produced water, Manson oil field, southwestern Manitoba \(parts of NTS 62F14, 15, K2, 3\); the author is a friend of mine.](#)

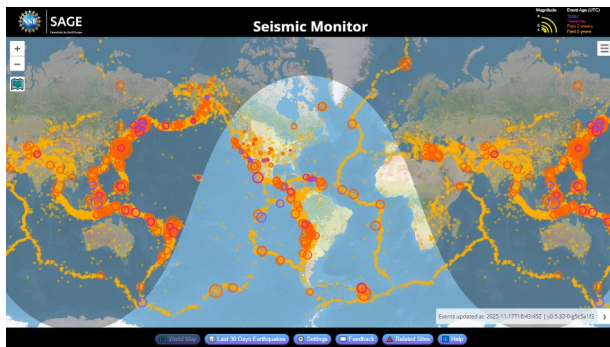
Environmental Geology and Hydrogeology

- Whiskey's for drinking, water's for fighting: [Facing the facts on water: New lawsuit challenges 'exempt wells law'](#).
- [BHP liable for 2015 Brazil dam collapse, UK court rules in mammoth lawsuit.](#)
- Groundwater extraction: [The Land Is Sinking Fast in Arizona's Willcox Basin](#); Live Science summary [here](#).
- Significant for bioremediation: [Nitrite accumulation in marine oxygen minimum zones induced by microbial nitrite consumers.](#)
- ['Drinking Water at Risk'—State Sued Over Expired Safety Rules.](#)
- [Testing selenite gypsum crystals from caves for reconstructing the stable isotope composition of paleo-aquifers.](#)
- [EPA Proposes Changes to Make PFAS Reporting Requirements More Practical and Implementable, Reducing Regulatory Burden.](#)

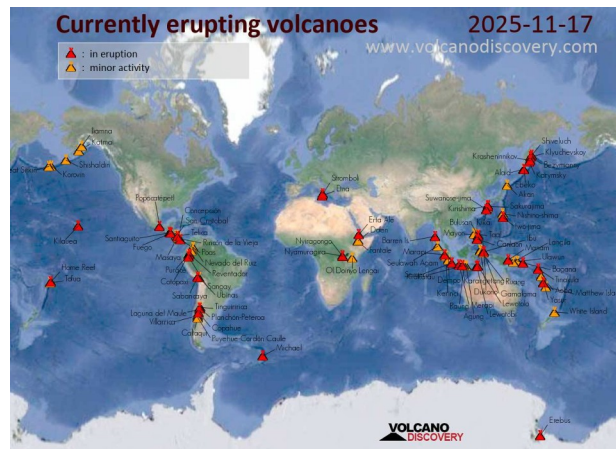
Glaciers and Climate Change

- [High-resolution U-Pb dating of the Croles Hill Diamictite, Tasmania: Near-synchronicity of widely separated mid-Ediacaran glacial deposits.](#)
- [Volcanically driven Hg–C–S cycling and climate change across the Early Permian Artinskian warming.](#)

Volcanoes, Earthquakes and Geohazards



[Seismic Monitor](#)



[Active Volcano Map](#)

Volcanoes

- [Smithsonian / USGS Weekly Volcanic Activity Report.](#)

- United States Geological Survey (USGS) Volcano Observatories:
 - [Yellowstone Caldera Chronicles: A mission to repair one of the most interesting GPS monitoring stations in Yellowstone.](#)
 - [Cascades Volcano Observatory Weekly Update.](#)
 - [Volcano Watch – Catching up on Kīlauea: 36 episodes and counting.](#)
- Sakurajima: [Ashfall warning in Japan as volcano erupts.](#)
- [Lava Tube System Development Defined by Multispectral Imaging and InSAR: The Case of the 2024 Eruption of Fernandina Volcano \(Galápagos\).](#)
- Axial Seamount eruption forecasts: [A new physics-based forecasting experiment begins this week.](#)
- France: [A magma reservoir discovered beneath Mayotte.](#)

Earthquakes

- [Euro-Mediterranean Seismological Centre \(EMSC\).](#)
- [Earthquakes Monitoring Live Worldwide.](#)
- [Seismic gap breached by the 2025 Mw 7.7 Mandalay \(Myanmar\) earthquake.](#)
- [The deterministic behaviour of earthquake rupture beginning.](#)

Free Geology Books and Other Stuff

Free geology books can be downloaded from these sites:

- [OreZone Readers and Experts Telegram Channel](#); the Ore Zone channel also shows employment opportunities for geologists.
- [The Groundwater Project](#) has many groundwater geology books for free download; also they now have a [Free Online Learning Module: Pumping Test Analysis](#).
- Free Groundwater Modeling Course – [HydroGeoCenter](#).
- From Western Australia: [Carbonatite, lamprophyre and host rocks in the northern Aileron Province.](#)
- Two volumes of Geology of Indonesia now can be accessed for [FREE/GRATIS](#). The books can be accessed from: vol 1 <https://lnkd.in/eH6Gcka4>; vol 2 <https://lnkd.in/egTYmpjk>.
- Brett Davis' book on veins in a deforming rock mass: "[The Veining Bible](#)"; also at [this site](#).
- From the Mineralogical Society of America: [Handbook of Mineralogy](#).

Upcoming Events

- [Saskatchewan Geological Open House, December 1 to 3, 2025, Delta Bessborough Hotel, Saskatoon](#); Registration for the 2025 conference closes November 24.
- [Groundwater Week 2025, December 9-11, 2025 in New Orleans.](#)
- [Feb. 16-18, 2026, Inaugural Mineralogical Society of America Annual Meeting, Tuscon AZ](#)
- [GAC-MAC 2026 St. John's NL, St. John's Convention Center, May 25-28, 2026.](#)
- [PEG2026: 11th International Symposium on Granitic Pegmatites; 16th–19th August 2026, in Perth, Western Australia.](#)
- [14-18 September 2026, IAH 2026, 53rd Congress of the International Association of Hydrogeologists; Budapest Congress Center.](#)
- [Society of Petroleum Engineers Distinguished Lecturer Schedule.](#)
- [American Geophysical Union List of Upcoming Meetings.](#)
- The Geological Society: [Events & Courses.](#)
- [International Union of Geological Sciences calendar of geoscience events.](#)
- [“Geology Hour” Online](#), evenings on the 3rd Monday of the Month from the Geological Society of the Oregon Country.
- [Canadian Energy Geoscience Association Upcoming Events.](#)

Standard Caveat

[J. Robert Oppenheimer on freedom and scientific inquiry](#)

The purpose of my weblog postings is to spark people's curiosity in geology. Don't entirely believe me until you've done your own research and checked the evidence. If I have sparked your curiosity in the subject of this posting, follow up with some of the links provided here. If you want to, go out into the field and examine some rocks on your own with the help of a good field guide. Follow the evidence and make up your own mind.

In science, the only authority is the evidence.