2026 Publications – Geological Sciences Department

1. **Quiros, D.** and Brown, L., 2025. Retrieval of body waves with seismic interferometry of vehicle traffic: A case study from upstate New York, USA. *Seismica*, *4*(2).
2. **Harris, C., Finlayson, R., Daws, W., Halenyane, K., Grobbelaar, C., le Roux, P**., Sealy, J. and **Adams, S.,** 2025. The O-, H-, and Sr-isotope composition of Cape Town groundwater; implications for recharge and sustainability. *Journal of Hydrology: Regional Studies*, *62*, p.102985.
3. **Howarth, G.H.,** Giuliani, A., Bussweiler, Y., **Tau, M., Hashibi, S., Janney, P.E.** and Nowicki, T.E., 2025. Kimberlite pre-conditioning of the lithospheric mantle and implications for diamond survival: a case study of olivine and mantle xenocrysts from the Koidu mine (Sierra Leone). *Mineralium Deposita*, *60*(4), pp.677-695.
4. Grantham, G.H., Spell, T., Knoper, M.W. and **le Roux, P.,** 2025. The Geology, Chemistry and Age of the Straumsvola Alkaline Complex, western Dronning Maud Land, Antarctica. The role of liquid immiscibility. *Polar Science*, p.101305.
5. Nwaila, G.T., Durrheim, R.J., **Frimmel, H.E.** and Carranza, E.J.M., 2026. Robust Uncertainty Analysis in Mineral Prospectivity Mapping: A Prototype for Fe–Mn Exploration in South Africa. *Natural Resources Research*, *35*(2), pp.901-931.
6. **Tostevin, R., Nke, A.,** Rickaby, R., Tsikos, H., Mason, P. and Mhlanga, X., 2025. A window into transition metal availability in Early Palaeoproterozoic seawater.
7. Scicchitano, M.R., **Harris, C., Luyt, J.,** Pack, A., di Rocco, T., Vennemann, T., Wilke, F.D., Schleicher, A.M., Glodny, J., Tait, K.T. and Philippo, S., 2026. Six Ca-Mg-Fe Carbonate Reference Materials for In Situ Measurement of Oxygen and Carbon Isotope Ratios. *Geostandards and Geoanalytical Research*, *50*(1), pp.155-179.
8. Raible, K., **Diamond, R.E.** and Dippenaar, M.A., 2025. Hydrochemistry, stable isotopes, and radon in waters of the Greater Timbavati catchment, South Africa. *Hydrogeology Journal*, *33*(8), pp.2003-2021.
9. **Peel, C.J., Howarth, G.H.,** Costin, G., Alard, O. and Foley, S., 2025. Open-versus closed-system magmatism on Mars revealed by shergottites. *Communications Earth & Environment*.
10. Benoit, J., Helm, C. and **Bordy, E.M.,** 2025. Paleontological Knowledge among the Basotho and San of Lesotho: A Review Including Insights from Paul Ellenberger's Archives. *Geoheritage*, *17*(4), p.166.
11. Terhorst, A. and **Rogers, J.,** 2025. The seafloor character of the Roman Rock area in False Bay, South Africa. *Marine and Freshwater Research*, *76*(13), pp.NULL-NULL.
12. **Frimmel, H.E., Minter, W.E., Le Roex, A.P.** and Kirk, J., 2026. Gold potential of the Roraima Supergroup in Guyana. *Mineralium Deposita*, *61*(3), pp.645-666.
13. Humphries, M., Hunter, G., Pillay, L. and **Le Roux, P.,** 2025. Lead Exposure in South African Waterfowl: Implications for Conservation and Human Health. *Archives of Environmental Contamination and Toxicology*, pp.1-12.
14. Scott, J.M., Palmer, M.C., **le Roux, P.J., Harris, C**. and Craw, D., 2025. Possible Pliocene loess formation caused by tectonic uplift and aridification in Central Otago, New Zealand. *New Zealand journal of geology and geophysics*, *68*(5), pp.1232-1248.
15. Dziggel, A., Bramm, L., Kokfelt, T.F., Grocott, J. and **Diener, J.F.A.,** 2025. Preservation of igneous and metamorphic charnockites in the paleoproterozoic Prøven igneous

Complex, Rinkian Orogen, central West Greenland. *Precambrian Research*, *417*, p.107634.

16. **Howarth, G.H.,** Casetta, F. and Abersteiner, A., 2025. A review of olivine as a tool for understanding kimberlite petrogenesis and diamond potential. *Mineralogy & Petrology*, *119*(4), p.883.
17. Dai, H.K., Zheng, J.P., Xiong, Q., Griffin, W.L., **Janney, P.E.** and O'Reilly, S.Y., 2025. Kimberlite segregation from an uppermost asthenospheric thermal boundary and the longevity of cold craton roots. *Chemical Geology*, *676*, p.122621.
18. Centeno, R.V., Pezo-Lanfranco, L., **le Roux, P.** and Colonese, A.C., 2025. Identifying communal interaction and mobility in the peruvian central coast through strontium isotope analysis of human individuals in Huaca 20. *Journal of archaeological science: reports*, *61*, p.104889.
19. **Chiwara-Maenzanise, P.,** 2025. Unearthed potential: Reflecting on the past and shaping the future of Middle Stone Age research in Zimbabwe. *Southern African Field Archaeology*, *20*, pp.1-13.
20. **Ndimande, N., Howarth, G.H.,** Giuliani, A., **Janney, P.E., Le Roux, P.,** Guillong, M., Charbonnier, Q. and Haggerty, S.E., 2025. Neoproterozoic kimberlite and lamproite magmatism of the Man Craton, Liberia, from a common sub-lithospheric source: N. Ndimande et al. *Mineralogy and Petrology*, *119*(4), pp.965-985.
21. **Chiwara-Maenzanise, P.,** Schoville, B.J., Sahle, Y. and Wilkins, J., 2025. The Marine Isotope Stage 5 (~ 105 ka) lithic assemblage from Ga-Mohana Hill North Rockshelter and insights into social transmission across the Kalahari Basin and its environs. *Journal of Human Evolution*, *202*, p.103654.
22. **van Blerk, J., Howarth, G.H., Harris, C. and Janney, P.E.**, 2025. Oxygen isotope constraints on proto-kimberlite melt modification through assimilation of low δ18O recycled crust in the deep lithosphere. *Geochimica et Cosmochimica Acta*, *391*, pp.191-202.
23. Bachari, M., Louw, D., Walsh, J.T**., le Roux, P.,** Fietz, S. and Bergh, E.W., 2025. Late Cenozoic updated foraminiferal stratigraphic and palaeoenvironmental framework for the southwestern shelf of Africa. *Journal of African Earth Sciences*, *227*, p.105632.
24. **Gray, K., le Roux, P.** and Sealy, J., 2025. Diet and landscape use at Faraoskop from C, N and Sr isotopes in multiple skeletal tissues. *Archaeological and Anthropological Sciences*, *17*(2), p.34.
25. Heddell-Stevens, P., Barakat, S., Pastoors, A., Lucas, M., Scott, E., **Le Roux, P**. and Roberts, P., 2024. Spatial palaeoecology of large-herbivore hominin prey-species at Salzgitter-Lebenstedt, Lower Saxony, Germany: multi-isotope analysis of sequentially-sampled tooth enamel from Rangifer tarandus and Equus sp. *Frontiers in Environmental Archaeology*, *3*, p.1458040.
26. Dziggel, A., Bramm, L., Kokfelt, T.F., Grocott, J. and **Diener, J.F.A.,** 2025. Preservation of igneous and metamorphic charnockites in the paleoproterozoic Prøven igneous Complex, Rinkian Orogen, central West Greenland. *Precambrian Research*, *417*, p.107634.

27. **Khosa, R.,** Mbele, V., **Kirsten, K. and Pickering, R.,** 2025. The ground beneath our feet: A critical reflection on 135 years of landscape evolution models for southern Africa. *South African Journal of Science*, *121*(1-2), pp.1-8.
28. **Weij, R.,** Baker, S.E., **Edwards, T.R.,** Kibii, J**., Luti, G. and Pickering**, R., 2025. Taung and beyond: The mining history, geology and taphonomy of Australopithecus in South Africa. *South African journal of science*, *121*(1-2), pp.1-11.
29. Ackermann, R.R., **Pickering, R.,** Sahle, Y. and Schroeder, L., 2025. The Taung Child then and now: Commemorating its centenary in a postcolonial age. *South African Journal of Science*, *121*(1-2), pp.1-3.
30. Salomon, G., Nissen, E., Tan, F., Bergman, E., **Sloan, A.** and Pousse-Beltran, L., 2025. The 2020 M w 6.4 Koryak Highlands earthquake illustrates hidden seismic hazards in the northern Pacific Cordillera. *Geophysical Journal International*, *240*(3), pp.2111-2124.
31. Cortes-Calderon, E.A., Ellis, B.S., Tavazzani, L., Magna, T., **Harris, C.** and Benson, T.R., 2025. Lithium inventory of the Cerro Galán volcanic system (Argentina): the role of magmatism as a source for Li-bearing brine deposits. *Economic Geology*, *120*(5), pp.1141-1165.
32. Sevgen, S., Retzmann, A., Nightingale, M., de Obeso, J.C., Zhang, Q., Fleming, I., **Tostevin, R.,** Tosca, N.J. and Tutolo, B.M., 2025. Near-equilibrium kinetics in the Fe (II)-silicate system and the significance of nanoparticle greenalite in Archaean Iron Formations. *Geochimica et Cosmochimica Acta*, *395*, pp.135-148.
33. **Howarth, G.H., Kahle, B., Janney, P.E., Kahle, R.,** Du Plessis, A., **Richardson, S.H. and Gurney, J.J.**, 2025. Diamond-silicate-sulphide-oxide textural relationships in diamondiferous eclogites from the Kalahari craton revealed by 3D X-ray computed tomography. *Journal of Petrology*, *66*(7), p.egaf062.
34. Diphofe, K., **Diamond, R.** and Kotze, F., 2025. Quantifying baseflow with Radon, H and O isotopes and field parameters in the urbanized catchment of the little Jukskei River, Johannesburg. *Hydrology*, *12*(8), p.203.
35. Spies, M.J., Alblas, A., Ambrose, S.H., Barakat, S., Barberena, R., Bataille, C., Bowen, G.J., Britton, K., Cawthra, H., **Diamond, R.** and Dosseto, A., 2025. Strontium isoscapes for provenance, mobility and migration: the way forward. *Royal Society Open Science*, *12*(6).
36. **Tau, M.M., Howarth, G.H.,** Giuliani, A. and **Hashibi, S.,** 2025. Composition and sampling depth of olivine in carbonate-rich olivine lamproites of the Kaapvaal craton: Tau et al. *Mineralogy and Petrology*, *119*(4), pp.907-933.
37. Spaggiari, R.I. and **Bordy, E.M.,** 2025. Diamondiferous gravel barrier beach placer: Morpho-sedimentary dynamics and diamond distribution connectivity, SW Namibia. *Earth Surface Processes and Landforms*, *50*(11), p.e70140.
38. Ben Arous, E., Blinkhorn, J.A., Elliott, S., Kiahtipes, C.A., N'zi, C.D., Bateman, M.D., Duval, M., Roberts, P., Patalano, R., **Blackwood, A.F.** and Niang, K., 2025. Humans in Africa's wet tropical forests 150 thousand years ago. *Nature*, *640*(8058), pp.402-407.
39. Hare, V.J., Yarian, D.A., Faith, J.T., **Harris, C.,** Lee-Thorp, J.A., Passey, B.H., Sokolowski, K.G. and Ségalen, L., 2025. Triple oxygen isotopes in eggshell carbonate as a proxy of late Cenozoic CO2 and primary productivity. *Geochimica et Cosmochimica Acta*, *399*, pp.48-63.

40. Zeigler, S.D., Flowers, R.M., Pearson, D.G., Courtney-Davies, L., Kjarsgaard, B.A., **Richardson, S.H.,** Berkhahn, K., Metcalf, J.R. and Cabral-Neto, I., 2025. Paired megacrystic zircon (UTh)/He and U/Pb dating reveals kimberlite eruption ages, protracted emplacement histories, and insights into megacryst genesis. *Chemical Geology*, p.123033.
41. Foster, J.R., Harris, J.D., Milner, A.R., **Bordy, E.M.,** Sciscio, L., Castanera, D., Belvedere, M., Xing, L. and Lockley, M.G., 2025. Jurassic vertebrate tracks and traces. In *Vertebrate Ichnology* (pp. 265-478). Elsevier.
42. **Luti, G., Edwards, T., Weij, R. and Pickering, R.,** 2025. Petrography and sedimentary sequence relationships of speleothems from the Cradle of Humankind, South Africa. *Results in Earth Sciences*, p.100131.
43. Nwaila, G.T., Manzi, M.S., Carranza, E.J.M., Durrheim, R.J. and **Frimmel, H.E.,** 2025. Pothole Detection and Segmentation in the Bushveld Complex Using Physics-based Data Augmentation and Deep Learning. *Applied Computing and Geosciences*, p.100279.
44. **Head, H.V. and Bordy, E.M.,** 2025. Spatiotemporal evolution of an early Jurassic erg in the southern Africa (Clarens Formation, Karoo Supergroup). *Palaeogeography, Palaeoclimatology, Palaeoecology*, p.113267.
45. Malherbe, M., **Pickering, R.,** Stynder, D. and Haeusler, M., 2025. The large mammal fossil fauna of the Cradle of Humankind, South Africa: a review. *PeerJ*, *13*, p.e18946.
46. Malherbe, M., Haeusler, M., **Pickering, R.** and Stynder, D., 2025. Dental mesowear patterns challenge the hypothesis of a 1.7 Ma transition to open grasslands in South Africa's Cradle of Humankind. *Palaeogeography, Palaeoclimatology, Palaeoecology*, p.113199.
47. Ireland, M.T., Palmer, M.C., Scott, J.M**., le Roux, P.J.**, Reid, M.R. and Stirling, C.H., 2025. Microscale geochemical variations in metamorphic-hydrothermal scheelite and insights into trace element sources (Otago Schist, New Zealand). *New Zealand journal of geology and geophysics*, *68*(4), pp.659-674.
48. **Weij, R. and Edwards**, T.R., 2025. A matter of time: advances in isotope dilution and laser ablation U–Th and U–Pb dating of speleothems and other terrestrial carbonates. *Quaternary Science Reviews*, *370*, p.109666.
49. Toro Vivanco, D.I., Hermann, J., **Janney, P.E.** and Timmerman, S., 2025. Effects of melt depletion and metasomatism on the heat generation in the continental lithospheric mantle below Jagersfontein, South Africa. *Mineralogy and Petrology*, *119*(3), pp.691-714.
50. Wilson, C.G., Caruana, M.V., Bradley, B., **Muir, R.A., Blackwood, A.F**. and Herries, A.I., 2025. An actualistic experimental study of giant quartzite core reduction strategies: implications for large flake blank production and handaxe manufacture at Amanzi Springs, South Africa. *Journal of Field Archaeology*, *50*(6), pp.463-479.