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REPORTS AND PUBLICATIONS by David Banks.

Publications in refereed journals or conference proceedings 2000-2009

2000

- Frengstad, B., Midtgård Skrede, Aa., K., Banks, D., Krog, J.R. & Siewers, U. 2000.** The chemistry of Norwegian groundwaters. III. The distribution of trace elements in 476 crystalline bedrock groundwaters, as analysed by ICP-MS techniques. **The Science of the Total Environment**, 246, 21-40. doi: [10.1016/S0048-9697\(99\)00413-1](https://doi.org/10.1016/S0048-9697(99)00413-1)
- Reimann, C., Banks, D. & Kashulina, G. 2000.** Processes influencing the chemical composition of the O-horizon of podzols along a 500 km north-south profile from the coast of the Barents Sea to the Arctic Circle. **Geoderma**, 95, 113-139. doi: [10.1016/S0016-7061\(99\)00088-9](https://doi.org/10.1016/S0016-7061(99)00088-9)
- Banks, D., Frengstad, B., Makarenko, N.A., Parnachev, V.P., Vishnevetskii, I.I. & Bulatov, A.A. 2000.** Ekogeokhimiicheskie oboobnennosti podzemnykh vod tsentral'noi chasti respubliki Khakassia [*Ecogeochemical aspects of groundwaters of the central part of the Republic of Khakassia*]. **Proc. Conference FPV 2000** (Fundamentalnye problemi vodi i vodnykh resursov na rubezhe 3. tisyacheletiya [*Fundamental issues of water and water resources at the beginning of the 3rd Millennium*]), 3rd-7th September 2000, Tomsk, Russia.
- Banks, D., Adam, A.M., Bayliss, V., Bleuten, W., Dees, M., Hogg, G.M., Karnachuk, O., Le Blansch, K. & Marquand, J. 2000.** The management of environmental protection in the Russian Federation; an example from Tomsk region. **Environmental Management**, 26, 35-46. doi: [10.1007/s002670010069](https://doi.org/10.1007/s002670010069)
- Reimann, C., Banks, D. & de Caritat, C. 2000.** Impacts of airborne contamination on regional soil and water quality: the Kola Peninsula, Russia. **Environmental Science and Technology**, 34, 2727-2732. doi: [10.1021/es9912933](https://doi.org/10.1021/es9912933)
- Bårdsen, A., Bjorvatn, K., Sand, K. & Banks, D. 2000.** [Seasonal variations in fluoride content in groundwater from wells drilled in bedrock](#). **Norges geologiske undersøkelse Bulletin**, 435, 53-58.
- Haldorsen, S., Heim, M., Dale, B., Banks, D., Sletten, R., Swensen, B. & Salvigsen, O. 2000.** Arctic groundwater systems and their dependence on climatic change: examples from Svalbard (abstract). **Quaternary International**, 63/64. doi: [10.1016/S1040-6182\(99\)00031-2](https://doi.org/10.1016/S1040-6182(99)00031-2)
- Banks, D., Frengstad, B., Skrede, Aa.K., Krog, J.R., Strand, T., Siewers, U. & Lind, B. 2000.** [Grunnvann - ikke bare vann](#) [*Groundwater - not just water ! - in Norwegian*]. **Gråsteinen**, 6, 60 pp.
- Frengstad, B. & Banks, D. 2000.** Evolution of high-pH Na-HCO₃ groundwaters in anorthosites: silicate weathering or cation exchange? In: Sililo et al. (eds): "*Groundwater: Past Achievements and Future Challenges*", **Proc. XXXIInd Congress of the International Association of Hydrogeologists**. Cape Town, South Africa. Balkema, Rotterdam, 493-498.

2001

- Banks, D., Sæther, O.M., Ryghaug, P. & Reimann, C. 2001.** Hydrochemical distribution patterns in stream waters, Trøndelag, Central Norway. **The Science of the Total Environment**, 267, 1-21. doi: [10.1016/S0048-9697\(00\)00605-7](https://doi.org/10.1016/S0048-9697(00)00605-7)
- Banks, S.B. & Banks, D. 2001.** Abandoned mines drainage: impact assessment and mitigation of discharges from coal mines in the UK. **Engineering Geology**, 60, 31-37. doi: [10.1016/S0013-7952\(00\)00086-7](https://doi.org/10.1016/S0013-7952(00)00086-7)
- Banks, D. 2001.** A variable-volume, head dependent mine water filling model. **Ground Water**, 39(3), 362-365. doi: [10.1111/j.1745-6584.2001.tb02319.x](https://doi.org/10.1111/j.1745-6584.2001.tb02319.x)
- Banks, D., Haldorsen, S., Sletten, R.J., Heim, M., Swensen, B. & Dale, B. 2001.** The world's northernmost thermal springs: Bockfjorden, Svalbard. Geological setting and hydrogeochemistry. In Seiler, K.P. & Wohnlich, S. (eds.) "*New Approaches: Characterizing Groundwater Flow*", **Proc. International Association of Hydrogeologists' (IAH) XXXIst Annual Congress**, Munich, 10-14 Sept. 2001, Balkema, 897-901.

- Frengstad, B., Banks, D. & Siewers, U. 2001.** The chemistry of Norwegian groundwaters: IV. The pH-dependence of element concentrations in crystalline bedrock groundwaters. **The Science of the Total Environment**, 277, 101-117. doi: [10.1016/S0048-9697\(00\)00867-6](https://doi.org/10.1016/S0048-9697(00)00867-6).

2002

Banks, D., Karnachuk, O.V., Parnachev, V.P., Holden, W., Frengstad, B. 2002. Rural pit latrines as a source of groundwater contamination; examples from Siberia and Kosova. **Journal of the Chartered Institution of Water and Environmental Management** 16, 147-152. doi: [10.1111/j.1747-6593.2002.tb00386.x](https://doi.org/10.1111/j.1747-6593.2002.tb00386.x).

Banks, D. & Soldal, O. 2002. Towards a policy for sustainable use of groundwater by non-governmental organisations in Afghanistan. **Hydrogeology Journal** 10, 377-392. doi: [10.1007/s10040-002-0203-y](https://doi.org/10.1007/s10040-002-0203-y)

Banks, D., Holden, W., Aguilar, E., Mendez, C., Koller, D., Andia, Z., Rodriguez, J., Sæther, O.M., Torrico, A., Veneros, R. & Flores, J. 2002. Contaminant source characterisation of the San José mine, Oruro, Bolivia. In Younger P.L. & Robins, N.S. (eds.), *"Mine Water Hydrogeology and Geochemistry"*; **Geological Society Special Publication** 198, 215-239. doi: [10.1144/GSL.SP.2002.198.01.14](https://doi.org/10.1144/GSL.SP.2002.198.01.14).

Banks, D., Parnachev, V.P., Frengstad, B., Holden, W., Vedernikov, A.A. & Karnachuk, O.V. 2002. Alkaline mine drainage from metal sulphide and coal mines: examples from Svalbard and Siberia. In Younger P.L. & Robins, N.S. (eds.), *"Mine Water Hydrogeology and Geochemistry"*; **Geological Society Special Publication** 198, 287-296. doi: [10.1144/GSL.SP.2002.198.01.19](https://doi.org/10.1144/GSL.SP.2002.198.01.19).

Banks, D., Skarphagen, H., Wiltshire, R. & Jessop, C. 2002. Mine water as a resource: space heating and cooling via use of heat pumps. **Proc. Conference "Mine water treatment: a decade of progress"**, Newcastle, Nov. 11-13 2002 (reprinted in *Land Contamination and Reclamation*, 2003, see below).

Frengstad, B., Banks, D., Midtgård Skrede AA., Krog, J.R., Siewers, U. & Strand, T. 2002. [The hydrochemistry of crystalline bedrock groundwater in Norway](#). **Norges Geologiske Undersøkelse Bulletin** 439: 87-98.

2003

Kashulina, G., Reimann, C. & Banks D. 2003. Sulphur in the arctic environment (3): environmental impact. **Environmental Pollution** 124(1), 151-171. doi: [10.1016/S0269-7491\(02\)00401-3](https://doi.org/10.1016/S0269-7491(02)00401-3).

Banks, D. 2003. [The role of hydrogeology in rebuilding Afghanistan](#). In: **Proc. Internl. Assoc. Hydrogeol. Irish Chapter Annual Conference "Groundwater and its Stakeholders"**, April 29th-30th 2003, Tullamore, Ireland.

Banks, D., Skarphagen, H., Wiltshire, R. & Jessop, C. 2003. Mine water as a resource: space heating and cooling via use of heat pumps. **Land Contamination and Reclamation** 11(2), 191-198. doi: [10.2462/09670513.814](https://doi.org/10.2462/09670513.814)

Frengstad, B. & Banks, D. 2003. Groundwater chemistry related to depth of shallow crystalline bedrock boreholes in Norway. In Krásný et al. (eds.) [Proceedings of the International Association of Hydrogeologists' Conference on Groundwater in Fractured Rocks](#), September 15-19 2003, Prague, Czech Republic. **Extended abstracts / IHP-VI, Series on groundwater** No. 7, 203-204.

Frengstad, B., Skrede, A.K., Krog, J.R., Strand, T., Lind, B. & Banks, D. (2003). Radon in potable groundwater: examples from Norway. In: Bølviken, B. (ed.) ["Natural Ionizing Radiation and Health"](#). Proceedings from a symposium held at the Norwegian Academy of Science and Letters, Oslo 6-7 June 2001. *Det Norske Videnskaps-Akademi*, 27-38.

2004

Karnachuk, O.V. & Banks, D. (2004). [Recent trends in water abstraction and usage in the former Soviet Union and Eastern Europe](#). **Vann**, 39(2), 99-115.

Banks, D. (2004). Geochemical processes controlling minewater pollution. In Prokop, G., Younger, P. & Roehl, K.E. (eds) *"Groundwater Management in Mining Areas"*, Proc. 2nd IMAGE-TRAIN Advanced Study Course, Pécs, Hungary, 23rd-27th June 2003. Conference Papers CP-035, Umweltbundesamt, Vienna, 17-44.

Banks, D. (2004). [Monitoring of fresh and brackish water resources](#). Topic Level Contribution E4.18.03, 364-400. Encyclopaedia of Life Support Systems (EOLSS), UNESCO, Paris. More recently (2009) redesignated Contribution E6-38A-07 (pages 364-400) in Inyang, H.I. & Daniels, J.L. (2009) *Environmental Monitoring*, Vol. II (ISBN: 978-1-905839-76-6 (ebook), 978-1-84826-976-7 (print)), within "Environmental and Ecological Sciences, Engineering and Technology Resources" section of Encyclopaedia of Life Support Systems (EOLSS), UNESCO, Paris.

Banks, D., Parnachev, V.P., Frengstad, B., Holden, W., Karnachuk, O.V. & Vedernikov A.A. (2004). The evolution of alkaline, saline ground- and surface waters in the southern Siberian steppes. **Applied Geochemistry**, 19, 1905-1926. doi: [10.1016/j.apgeochem.2004.05.009](https://doi.org/10.1016/j.apgeochem.2004.05.009)

Reimann, C. & Banks, D. (2004). Setting action levels for drinking water: Are we protecting our health or our economy (or our backs!)? **Science of the Total Environment**, 332, 13-21. doi: [10.1016/j.scitotenv.2004.04.007](https://doi.org/10.1016/j.scitotenv.2004.04.007)

Sæther, O.M., Banks, D., Kirso, U., Bityukova, L. & Sørli, J.E. (2004). The chemistry and mineralogy of waste from retorting and combustion of oil shale. In Gieré, R. & Stille, P. (eds.), *"Energy, Waste and the Environment: a Geochemical Perspective"*; **Geological Society Special Publication** 236, 263-284. doi: [10.1144/GSL.SP.2004.236.01.16](https://doi.org/10.1144/GSL.SP.2004.236.01.16).

Banks, D., Skarphagen, H., Wiltshire, R. & Jessop, C. (2004). Heat pumps as a tool for energy recovery from mining wastes. In Gieré, R. & Stille, P. (eds.), *"Energy, Waste and the Environment: a Geochemical Perspective"*; **Geological Society Special Publication** 236, 499-513. doi: [10.1144/GSL.SP.2004.236.01.27](https://doi.org/10.1144/GSL.SP.2004.236.01.27).

Banks, D., Markland, H., Smith, P.V., Mendez, C., Rodriguez, J., Huerta, A. & Sæther, O.M. (2004). Distribution, salinity and pH-dependence of elements in surface waters of the catchment areas of the Salars of Coipasa and Uyuni, Bolivian Altiplano. **Journal of Geochemical Exploration**, 84, 141-166. doi: [10.1016/j.gexplo.2004.07.001](https://doi.org/10.1016/j.gexplo.2004.07.001)

2005

Banks, D., Morland, G. & Frengstad, B. (2005). Use of non-parametric statistics as a tool for the hydraulic and hydrogeochemical characterization of hard rock aquifers. *Scottish Journal of Geology*, 41(1), 69-79. doi: [10.1144/sjg41010069](https://doi.org/10.1144/sjg41010069)

Banks, D., Markland, H., Smith, P.V., Mendez, C., Rodriguez, J., Huerta, A. & Sæther, O.M. (2005). The effect of filtration on analyses of surface water samples. A study from the Salars of Coipasa and Uyuni, Bolivian Altiplano. *Journal of Geochemical Exploration*, 86, 104-118. doi: [10.1016/j.gexplo.2005.04.003](https://doi.org/10.1016/j.gexplo.2005.04.003)

2006

Banks, D. & Frengstad, B. (2006). Evolution of groundwater chemical composition by plagioclase hydrolysis in Norwegian anorthosites. *Geochimica et Cosmochimica Acta*, 70, 1337-1355. doi: [10.1016/j.gca.2005.11.025](https://doi.org/10.1016/j.gca.2005.11.025)

Missteart, B. & Banks, D. (2006). [Groundwater monitoring: the importance of setting clear monitoring objectives based on an appreciation of the hydrogeology](#). Proc. International Association of Hydrogeologists (Irish Chapter), Irish National Meeting, Tullamore, Ireland, April 2006.

2007

Frengstad, B. and D. Banks (2007). Universal controls on the evolution of groundwater chemistry in crystalline bedrock: The evidence from empirical and theoretical studies. In: Krasny, J. & Sharp, J.M. "[Groundwater in Fractured Rocks](#)", Taylor & Francis/Balkema: 275-289. doi: [10.1201/9780203945650.ch18](https://doi.org/10.1201/9780203945650.ch18)

Banks, D., Gzyl, G., Frolik A. & Rogoż, M. (2007). Modelling and monitoring of mine water rebound in an abandoned coal mine complex: Siersza mine, Upper Silesian Coal Basin, Poland. Proc. conference "[Minewater Pollution and Remediation](#)". Newcastle University. Newzeye / Brownfield Briefing: 19 pp

Banks, D. (2007). [Thermogeological assessment of open loop well doublet schemes - an analytical approach](#). 27th Proc. Annual Conference of the Irish Group of the International Association of Hydrogeologists. Tullamore, County Offaly, Ireland.

Gzyl, G. & Banks, D. (2007). Verification of the "first flush" phenomenon in mine water from coal mines in the Upper Silesian Coal Basin, Poland. *Journal of Contaminant Hydrology*, 92, 66-86. doi: [10.1016/j.jconhyd.2006.12.001](https://doi.org/10.1016/j.jconhyd.2006.12.001)

2008

Frengstad, B. & Banks, D. (2008). The Natural Inorganic Chemical Quality of Crystalline Bedrock Groundwaters of Norway. Chapter 20 in: Edmunds, W.M. & Shand, P. "[Natural Groundwater Quality](#)", Blackwell, Oxon, 421-440. ISBN: 9781405156752. doi: [10.1002/9781444300345.ch20](https://doi.org/10.1002/9781444300345.ch20)

Banks, D. (2008). Potable water strategies in southern Mudug, Somalia, with special reference to the local economics of motorised borehole systems for watering nomadic livestock. *Hydrogeology Journal*, 16, 765-777. doi: [10.1007/s10040-007-0253-2](https://doi.org/10.1007/s10040-007-0253-2)

Middtømme, K., Banks, D., Ramstad, R.K., Sæther, O.M. & Skarphagen, H. (2008). [Ground source heat pumps and underground thermal energy storage - energy for the future](#). In Slagstad, T. (ed.) *Geology for Society, Geological Survey of Norway Special Publication*, 11, pp. 93-98.

2009

Banks, D. (2009). An introduction to "thermogeology" and the exploitation of ground source heat. *Quarterly Journal of Engineering Geology and Hydrogeology*, 42, 283-293. doi: [10.1144/1470-9236/08-077](https://doi.org/10.1144/1470-9236/08-077)

Banks, D., Gandy, C.J., Younger, P.L., Withers, J. & Underwood, C. (2009). Anthropogenic thermogeological "anomaly" in Gateshead, Tyne and Wear, UK. *Quarterly Journal of Engineering Geology and Hydrogeology*, 42, 307-312. doi: [10.1144/1470-9236/08-024](https://doi.org/10.1144/1470-9236/08-024)

Headon, J., Banks, D., Waters, A. & Robinson, V.K. (2009). Regional distribution of ground temperature in the Chalk aquifer of London, UK. *Quarterly Journal of Engineering Geology and Hydrogeology*, 42, 313-323. doi: [10.1144/1470-9236/08-073](https://doi.org/10.1144/1470-9236/08-073)

Banks, D., Fraga Pumar, A. & Watson, I. (2009). The operational performance of Scottish minewater-based ground source heat pump systems. *Quarterly Journal of Engineering Geology and Hydrogeology*, 42, 347-357. doi: [10.1144/1470-9236/08-081](https://doi.org/10.1144/1470-9236/08-081)

Banks, D. (2009). Thermogeological assessment of open-loop well-doublet schemes: a review and synthesis of analytical approaches. *Hydrogeology Journal*, 17, 1149-1155. doi: [10.1007/s10040-008-0427-6](https://doi.org/10.1007/s10040-008-0427-6)

Karnachuk, O.V., Gerasimchuk, A.L., Banks, D., Frengstad, B., Stykon, G.A., Tikhonova, Z.L., Kaksonen, A., Puhakka, J., Yanenko, A.S. & Pimenov, N.V. (2009). Bacteria of the sulfur cycle in the sediments of gold mine tailings, Kuznetsk Basin, Russia (Бактерий цикла серы в осадках хвостохранилища добычи золота в Кузбассе). *Microbiology*, 78 (4), 483-491. Published in Russian in [Mikrobiologiya](#), 78 (4), 535-544. doi: [10.1134/S0026261709040122](https://doi.org/10.1134/S0026261709040122)

Reimann, C., Finne, T.E., Nordgulen, Ø. Sæther, O.M., Arnoldussen, A., Banks, D. (2009). The influence of geology and land-use on inorganic stream water quality in the Oslo region, Norway. *Applied Geochemistry*, 24, 1862-1874. doi: [10.1016/j.apgeochem.2009.06.007](https://doi.org/10.1016/j.apgeochem.2009.06.007)

Janson, E., Gzyl, G. & Banks, D. (2009). The occurrence and quality of mine water in the Upper Silesian Coal Basin, Poland. *Mine Water and the Environment*, 28, 232-244. doi: [10.1007/s10230-009-0079-3](https://doi.org/10.1007/s10230-009-0079-3)

- Watson, I.A, Taylor, K., Sapsford, D.J. & Banks, D. (2009).** Tracer testing to investigate hydraulic performance of a RAPS treating mine water in South Wales. **Proceedings of the 8th International Conference on Acid Rock Drainage - ICARD ("Securing the Future")**, June 23rd-26th, 2009, Skellefteå, Sweden.
- Banks, D., Withers, J. & Freeborn, R. (2009).** [An overview of the results of in-situ thermal response testing in the UK.](#) **Proceedings Effstock 2009** - The 11th International Conference on Thermal Energy Storage for Efficiency and Sustainability, Stockholm, Sweden, June 14 - 17 2009.
- Todd, F. & Banks, D. (2009).** [Modelling of a thermal plume in the Sherwood Sandstone: a case study in North Yorkshire, UK.](#) **Proceedings Effstock 2009** - The 11th International Conference on Thermal Energy Storage for Efficiency and Sustainability, Stockholm, Sweden, June 14 - 17 2009.
- McAllan, J., Banks, D., Beyer, N. & Watson, I. (2009).** Alkalinity, temporary (CO₂) and permanent acidity: an empirical assessment of the significance of field and laboratory determinations on mine waters. **Geochemistry: Exploration, Environment, Analysis**, 9, 299–312. doi: [10.1144/1467-7873/09-193](https://doi.org/10.1144/1467-7873/09-193)

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