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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 ocbennosti podzemnikh vod tsentral'noi chasti respubliki Khakassia [*Ecogeochemical aspects of groundwaters of the central part of the Republic of Khakassia*]. **Proc. Conference FPV 2000** (Fundamentalnie problemi vodi i vodnikh 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 Copasa 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.

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. Newzeve / 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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