

*Resume*  
**PAUL R. FERGUSON, Ph.D.**

**EDUCATION**

University of Ottawa, Ottawa, ON, Canada: Ph.D. (Earth Sciences), 2007  
University of Victoria, Victoria, B.C., Canada, B.Sc. (Earth Sciences), 2002

**EXPERIENCE**

**SUMMARY**

Paul Ferguson recently completed his doctoral research on the hydrology of the Fly River watershed in central New Guinea. A focus of his research was the geochemistry of groundwater and surface waters near the Ok Tedi copper-porphyry mine of the Star Mountains region. He has six years of experience in the fields of environmental and isotope geochemistry, hydrology, and hydrogeology. His project experience includes:

- ***Groundwater Quality Assessment*** – collection and interpretation of geochemical data in order to evaluate the potential influence of mining activities on local groundwater quality.
- ***Field Hydrogeology*** – interpretation of pump test and slug test data for determination of aquifer permeability and hydraulic connectivity and the supervision of monitoring well installations.
- ***Numerical Modeling*** – some experience with the development and calibration of groundwater models.
- ***Regulatory Interface*** – interface with regulators and prepare reports and designs for submission to federal, state, and local agency regulators.

**PROFESSIONAL HISTORY**

Robertson Geoconsultants Inc., Hydrogeochemist, *2008-Present*  
Post-doctoral Fellow, University of Ottawa, *2007 - 2008*

**MINES AND WASTE DISPOSAL FACILITIES**

Dr. Ferguson has worked on mines and waste management projects in northern Canada, Chile, and Australia. He has designed and supervised the installation of groundwater monitoring networks and overseen the monitoring of groundwater quality. Mine projects he has recently worked on include:

*Prairie Creek Mine, NWT, Canada*

*Faro Mine, YT, Canada.*

*The Granites and DBS mines, NT, Australia.*

*Woodcutters Mine, Australia.*

*Las Tortolas Mill Site, Chile.*

## **PUBLICATIONS**

Ferguson, P.R. and J. Veizer (in prep.), Differentiating sources of rainfall and dissolved carbon in the Fly River watershed of New Guinea based on the interpretation of stable carbon and water isotope data, *Chemical Geology*.

Ferguson, P.R. and J. Veizer (2007), Inferred coupling of water vapor and carbon dioxide fluxes between the terrestrial biosphere and atmosphere based on regional-scale estimates of plant transpiration, *Journal of Geophysical Research-Atmospheres*, 2007JD008431

Ferguson, P.R., Weinrauch, N., Wassenaar, L., Mayer, B. and J. Veizer (2007), Isotope constraints on water, carbon, and heat fluxes from the northern Great Plains region, North America, *Global Biogeochemical Cycles*, GB2023, doi:10.1029/2006GB002702

Freitag, H., Ferguson, P.R., Dubois, K., Hayford, E.K., von Vordzogbe, V. and J. Veizer (2007), Water and carbon dioxide fluxes from a savanna-dominated ecosystem: the Volta River watershed, West Africa, *Global and Planetary Change*, 61(1), 3 – 14.

Telmer, K., Desjardins, M. and P.R. Ferguson (2005), Mercury in lake sediments and porewaters, In: *A Multidisciplinary Study of Mercury Cycling in a Wetland-Dominated Ecosystem: Kejimikujik National Park, Nova Scotia*, Rencz, A. and N. O'Driscoll (Eds.), *Society of Environmental Toxicology and Chemistry*

## **ABSTRACTS**

Veizer, J. and P.R Ferguson (2008), Biospheric coupling of terrestrial water and carbon fluxes: implications for the climate system, Contributed presentation, Goldschmidt Conference, Abstracts, Vancouver.

Veizer, J. and P.R Ferguson (2008), Biospheric coupling of terrestrial water and carbon fluxes: implications for the climate system, Invited presentation, 33<sup>rd</sup> International Geological Congress, Abstracts, Oslo.

Veizer, J. and P.R Ferguson (2008), Coupling of terrestrial water and carbon fluxes: implications for the climate system, Invited presentation, 8<sup>th</sup> Annual Meeting of the European Meteorological Society, Amsterdam.

Veizer, J. and P.R Ferguson (2007), Coupling of water vapour and carbon dioxide fluxes via the terrestrial biosphere: regional-scale estimates of evaporation and plant transpiration, Contributed presentation, 7<sup>th</sup> Annual Meeting of the European Meteorological Society, San Lorenzo de El Escorial.

Veizer, J. and P.R. Ferguson (2006), Climate, water, and carbon cycles: records over a hierarchy of time scales, Invited presentation, American Geophysical Union (AGU) Fall Meeting Special Session PP08, San Francisco, California, U.S.A.

Veizer, J. and P.R. Ferguson (2006), Coupling of carbon and water cycles in terrestrial ecosystems, Keynote address, BIOGEOMON, Santa Cruz, California, U.S.A.

Ferguson, P.R. and J. Veizer (2006), Dissolved organic and inorganic carbon cycling in the Fly River, Papua New Guinea, Contributed presentation, 6<sup>th</sup> Annual Symposium of Applied Isotope Geochemistry (AIG6), Prague, Czech Republic.

Ferguson, P.R. and K. Telmer (2003), Quantifying the magnitude and rate of carbon accumulation in eastern Canadian lake sediments: the Holocene, Contributed presentation, American Society of Limnology and Oceanography (ASLO) Annual Meeting 2003, Victoria, British Columbia, Canada.

Ferguson, P.R. and K. Telmer (2003), A high-precision estimate of carbon sequestration in eastern Canadian lake sediments, Contributed presentation, Canadian Geophysical Union – Hydrology Section, Annual Meeting 2003, Banff, Alberta, Canada.