



Reid T. Polmanteer Hydrogeologist

Education

- M.Sc., Hydrogeology, University of Strathclyde, 2013
- Graduate Studies, Hydrogeochemistry, State University of New York at Buffalo, 2006-2008
- B.A., Geological Sciences, State University of New York at Geneseo, 2006

Registrations/Affiliations

- Certified Well Tester, Colorado
- Geological Society of America
- Rural Water Supply Network
- Colorado Ground Water Association

Contact Information

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Experience Overview

Mr. Polmanteer has two years of hydrogeologic experience with HRS Water Consultants and a further ten years of professional experience. He has extensive field experience in oil & gas, environmental consulting, and water resources. This includes drilling coordination and oversight, aquifer testing, environmental and geologic sampling, well design and construction oversight, and water level surveys.

Mr. Polmanteer has further experience with database management, geologic, hydrologic, and geochemical data interpretation, conceptual modeling and geologic cross-section construction, GIS map construction, Rockware 3D modeling, well-to-well interference, and stream depletion analysis.

Mr. Polmanteer has provided hydrogeologic assessments for ground water supply, ground water –surface water interaction, tributary/non-tributary claims, augmentation plans, well field designs, and conservation projects. His areas of study range from small-scale, individual sized projects to basin-wide studies throughout the state of Colorado. He has modeled stream depletion and well-to-well interference. He is a certified well tester in Colorado.

Representative Experience

- Interpreting and enhancing current conceptual hydrogeologic models in the San Luis Valley for multiple clients, including development of Rockware visualizations and geologic cross-sections in support of the RGDSS (Rio Grande Decision Support System) and modeling stream augmentation as part of a large-scale recharge project in the area.
- Performing and analyzing pumping test data and large-scale drainage impacts in the San Luis Valley area.
- Field oversight and analysis of various alluvial pumping tests for many aquifers in Colorado.
- Developing a conceptual model of the hydrogeology in the Front Range foothills as part of a springflow water supply development feasibility study.
- Developing a conceptual model of the hydrogeology of the Upper Arkansas River near Canon City, Colorado in an effort to determine the merits of a nontributary claim and stream depletion magnitude and timing.
- Water level monitoring of alluvial wells in the Denver area including data logger use and water level indicators (M-scope). Development of monitoring protocols to meet certain EPA standards.
- Developing a geologic and hydrogeologic conceptual model in the Chikhwawa Basin, Malawi. Determining developable aquifers and those aquifers with poor water quality. Collaborating with local government officials and industry personnel to design wells to avoid water quality issues.
- Environmental investigation of former manufactured gas plants involved field oversight, including health and safety, for drilling, test pit, and sampling at former manufactured gas plants. Duties included monitoring air quality, developing geologic logs, well design, soil sampling, water sampling, NAPL sampling, water level monitoring. Job required familiarizing with CPT drilling, geoprobe drilling, hollow-stem auger, rotary, and barge-mounted rotary drilling. Geologic descriptions included ASTM-standard lithologic classifications.

- Oil & Gas work involved exploratory mudlogging and core logging in the Montana Disturbed/Over-thrust belt and the Utica Shale play in Ohio. Duties included microscopic geology sample interpretation, description, and logging; maintenance of and data interpretation from Agilent GC systems; communication of findings to company man and client geologists.
- Graduate work associated with University of Strathclyde involved field studies in Chikhwawa, Malawi. The project involved review of available documentation on Malawi Groundwater Law, a physical review of groundwater drilling, and development of a technical report on means to improve the groundwater drilling industry to international standards.
- Prior graduate work associated with University of Buffalo involved hydrogeology study in the Borden Aquifer. Study focused on defining scalar lithologic facies along a high-density (sub-meter spacing) transect of cores, determining the permeability of each facies, and calculating the spatial correlation of facies and permeability at multiple scales. Duties included drilling using direct-push technology; cutting and scanning cores; using Adobe Illustrator to develop transect of core scans; determining and mapping lithologic facies; using Surfer™ to develop interpretative image of transect facies; using an air-mini-permeameter to determine permeability of each facies; using EXCEL™ and other programs to determine spatial statistics of facies and measured permeabilities.

Presentations and Papers

- Allen-King R.M., Kalinovich I., Dominic D.F., Wang G., Polmanteer R., Divine D. Hydrophobic organic contaminant transport property heterogeneity in the Borden Aquifer. Water Resources Research (accepted, unpublished). DOI. 10.1002/2014WR016161.
- “Hydrogeology and Drilling Practices in Chikhwawa,” presented to First Annual Meeting of Climate Justice Fund Project Outcomes, Blantyre, Malawi, January, 2014.
- M.Sc. Dissertation: A field review of drilling practices and local geology in the Chapananga traditional authority of the Chikhwawa District, Malawi, University of Strathclyde, Glasgow, United Kingdom (2013).
- “The influence of hierarchical sedimentary structure on permeability heterogeneity: a lithofacies-based study of the Borden Aquifer,” presented at Northeastern Section of GSA – 43rd Annual Meeting, Buffalo, NY, USA, March 2008 and at AGU Fall Meeting, San Francisco, CA, USA, December 2007.