## Peter Alexander Manning (1960-2013)

Pete Manning died following a fall near Mt Stace in the Seaward Kaikoura Range on 5 November 2013. He was a widely respected, well liked and influential geologist who worked in the engineering and mining sectors in New Zealand and many other parts of the world. Originally from Auckland, Pete ('Metric') graduated from University of Auckland with a BSc majoring in Geology in 1981, then completed his MSc in 1983 with a thesis "Engineering geology of a section along the northern coast of the Manukau Harbour, Auckland".

Pete began work for Hancock Consultants overseeing geotechnical aspects of the Kawerau to Gisborne Gas Pipeline, co-ordinating contractors, surveyors and landowners. His willingness to take responsibility saw him rapidly progress to group leader.

In the mid-late 1980s, Pete worked on the Clyde Power Project for Ministry of Works & Development, providing engineering geology input for the state highway realignment above the proposed reservoir. This work helped determine the presence of schist mega-landslides in Cromwell Gorge that beset reservoir filling. During this time, Pete suffered a serious climbing injury to his ankle that would keep him more office bound and so he moved to the Ministry's Wellington office.

In 1988, Pete approached Ian Brown & Associates about a role in computer geological modelling. From 1988 to 1996, Pete became an accomplished modeler, applying this skill to several significant projects. The landslide stabilisation for the Clyde Dam required frequent site visits, dragging those huge Silicon Graphics CRT monitors and CPUs with him. He was integral to developing early resource models for Solid Energy's Stockton coal mine, Glencoal's Kopako opencast and the Macraes Flat opencast gold mine. He was involved with overseas projects too, including the Inland Feeder tunnels for Metropolitan Water, Southern California. Pete became one of the leaders at Ian Brown's consultancy, developing new staff and was in demand training engineering and mining clients. As a result of providing assistance to Freeport McMoRan, Pete moved with Jo and his young family to the isolated Irian Jaya (West Papua).

From 1996 to 2003 Pete worked at Freeport's giant Grasberg porphyry copper-gold mine, developing resource models and managing the mine's large databases. He was highly regarded for mentoring both national and expat geologists.

In 2004, Pete and family returned to New Zealand settling in Kaikoura where, replete with experience and skills to develop sophisticated resource models, he launched his Southern GeoLogic consultancy. As exemplified by his work for Solid Energy. His forte was scripting complex macros that transformed convoluted stand-alone processes into a series of logical steps that site geologists and engineers could readily understand and use. Combining this understanding of coding and computer modelling with practical resource geology was rare and special, and greatly eased client geologists' step-up into resource modelling.

Pete's mentorship was greatly valued, not only in resource geology but general life skills. His exemplary work ethic, unassuming nature and wry sense of humour ensured he was in demand. Typical of his character, Pete

never claimed to be an expert and was always furthering his understanding of the work he completed. His deliverable was of the highest standard, often a step change improvement. His legacy to our industry will remain coded and organised in those macros, modelling scripts and resource models throughout Australasia.

Pete was not one to boast, but was a well-known and highly accomplished alpine and rock climber. His notable ascents included Aoraki-Mount Cook (twice) and Mt Tasman in the Southern Alps, the highest peak between the Andes and the Himalaya, Puncak Jaya and Mt McKinley in Alaska. He contributed much to the New Zealand climbing scene over many years, ultimately authoring a guidebook on central North Island rock climbs. Despite his ankle problem, he maintained his passion for the mountains to his last day.

He was an expert modeller and model geologist who inspired those fortunate to work with and be mentored by him. For many experienced modellers in New Zealand he was the "go to" man. Pete had "summited" in all spheres of his life, yet, and perhaps most importantly, was just a really good person to be around. He will be sorely missed by his many work friends and colleagues.

He is survived by his wife Jo and children Hugh, Robbie and Elise.

Dean Fergusson, Member AusIMM (CP)

