

IMPOSSIBLE JOURNEY: THE STORY OF THE VICTORIA LAND TRAVERSE 1959–1960, ANTARCTICA.

By JOHN C. WEIHAUPT, ALFRED W. STUART, FRANS G. VAN DER HOEVEN, CLAUDE LORIUS, and WILLIAM M. SMITH. Boulder, Colorado: The Geological Society of America, 2012. ISBN 978-0-8137-2488-1. xx + 136 p., map, b&w and colour illus., appendices, glossary, references, index. Softbound. US\$45.00; GSA Members, US\$30.00.

In 2011, I wrote a book chapter entitled “United States Contribution to Antarctic Glaciology: A Personal Perspective” (Hughes, 2012). At the end of the opening paragraph, regarding these early explorer scientists, I wrote, “The old hands, affectionately called Old Antarctic Explorers (OAEs), are a vanishing breed, so it is important for an account to be made before the Dying of the Light.”

Impossible Journey is one such account, and a most valuable account it is. The Victoria Land Traverse (VLT) of 1959–60 inaugurated a decade of tractor-train traverses over the Antarctic Ice Sheet. There were earlier shorter traverses, notably a circuit of the Ross Ice Shelf by Bert Crary and colleagues from 1957 to 1960. But for sheer boldness into unknown lands far from regular airborne logistical support, fraught with unknown dangers, and spanning a full Antarctic summer from sunup in September to sundown in February, the VLT stands alone. The expedition began by following the Crary traverse up Skelton Glacier, near McMurdo Station, the logistical and scientific hub of American Antarctic research. From there it began a 1500 km V-shaped traverse, with the tip of the V meeting the end of the 1958–59 French Adelie Land Traverse (ALT) inland from the Dumont d’Urville station on the coast, and then continuing eastward into the mountains of northern Victoria Land, all unknown territory. Evacuation by ship was planned after descending Tucker Glacier, but was replaced with evacuation by air to McMurdo.

The VLT was led by Frans Van der Hoeven, a seismologist from the Netherlands. He was paired with John Weihaupt, an American seismologist, in conducting seismology research. Claude Lorius, a VLT scientist specializing in recovering climate records from isotopes in ice cores, had also been on the ALT. Alfred Stuart, an American glaciologist, recorded temperatures and stratigraphy in snow pits 2 m deep and also in ice cores down core holes some 20 m below the snow surface. These core holes, which had been hand-drilled for detonating seismic shots, contained climate records needed by Lorius. Stuart was paired with Arnold Heine, a glaciologist from New Zealand. Alfred Taylor, an American geologist, was airlifted out for medical reasons soon after ascending Skelton Glacier. William Smith was included to observe group dynamics during the long, arduous traverse. All of these men shared in research done by the specialists. Louis Roberts, an American topographic engineer with the U.S. Geological Survey, was in charge of navigation and surveying.

The real “hero” of the VLT, as the authors make very clear, was U.S. Navy Seabee mechanic Thomas Baldwin.

“Tommy” kept the snow caterpillars, research laboratories, and living/sleeping quarters mobile and operating week after week as the traverse passed through vast crevasse fields, concrete-hard, wind-sculptured barriers of sastrugi (ridges of drifting snow), and wide fluctuations of temperature. These conditions combined to cause constant damage to the vehicles, cracking their chassis, freezing fuel lines, draining batteries, fracturing tow bars, derailing wheel tracks, burning ball bearings, and stalling engines. Tommy radioed McMurdo for spare parts when jury-rigged repairs failed. A unique feature of the VLT was a Rolligon towed behind one of the two seismic vehicles. It was a pair of high, broad tires filled with fuel that was able to cross snow-bridged crevasses without falling in.

In addition to the anticipated climate and glaciological records recovered from snow pits and ice cores, the VLT made some striking unanticipated discoveries: (1) a vast subglacial basin below sea level, to be named Wilkes Subglacial Basin; (2) a circular formation mapped using surface gravity and basal topographic data, which was interpreted as perhaps the largest meteor-impact crater on Earth; and (3) previously unknown mountain ranges. Gravity data along the VLT were tied to the global gravity grid. Research following the VLT led Weihaupt to discover the 1531 Orontius Finaeus map of Antarctica, 300 years older than the earliest historical sightings of the continent. These results are in appendices. *Impossible Journey* is profusely illustrated with color photos, sketches, and maps. It has a list of publications resulting from the VLT and a “where they are now” epilogue.

A foreword by Peter-Noel Webb offers the lure of deteriorating human interactions under stress, Smith’s specialty. There was plenty of stress, but few if any accounts of adverse effects among team members. Lorius shines as the most upbeat, optimistic member, and only Lou Roberts is presented as being occasionally contrary. This account contrasts with the one by John Behrendt in *Innocents on the Ice* (1998). Behrendt relates establishing Ellsworth Station on the Filchner Ice Shelf and wintering-over from 1956 to 1958 under the Queeg-like petty tyrannies of Finn Ronne. Behrendt also participated in a traverse over both the Filchner and the Ronne ice shelves, which also encountered deep crevasses (the Grand Chasms of Filchner Ice Shelf were the largest on earth until they released enormous icebergs several years ago). Reading Behrendt’s book, I concluded that the traverse had as a secondary goal escaping temporarily from Ronne.

No such impulse to escape is found in the pages of *Impossible Journey*. It is a tale of camaraderie among young men who were on a great once-in-a-lifetime adventure and knew it.

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