

Memorial of Kenneth DePencier Watson 1915–1986

W. G. ERNST

Department of Earth and Space Sciences, University of California, Los Angeles, California 90024-1567, U.S.A.

Kenneth DePencier Watson, one of North America's most respected economic geologists, passed away unexpectedly at his home in Pacific Palisades, California, on February 23, 1986, at the age of 70. Professor emeritus of geology, Department of Earth and Space Sciences, University of California, Los Angeles (UCLA), and a principal officer and geological consultant for Dome Mines Limited, he was actively continuing teaching, research, and applied geological investigations, chiefly in Canada.

Ken, as he was affectionately known throughout the academic and mining communities, was born in Vancouver, B.C., on July 19, 1915. He received his bachelor's degree in geological engineering at the University of British Columbia (UBC) in 1937, and his Ph.D. in geology from Princeton in 1940. Before joining the UCLA faculty in 1950, he served as an instructor in geology at Princeton for three years and as an associate professor, then professor, of geology at UBC for four years.

Prior to 1943, Ken carried out mapping projects for the Geological Survey of Canada in the northern Cordillera and for the Geological Survey of Newfoundland in various parts of that island. During 1941, he was employed by Dupont as a field geologist in the Dominican Republic. From 1943 to 1946, he served as an associate mining engineer for the British Columbia Department of Mines.

In 1947, Ken began a long association as a geological consultant to—and member of the Board of Directors of—the Dome Mines Group. Although his consulting work for Dome included the evaluation of many different ventures, especially gold deposits, he was particularly involved with the developments of Campbell Red Lake Mines Limited and Sigma Mines (Quebec) Limited. During this period, he made significant contributions to operations at the Mindamar Mine in Nova Scotia. He also took part on Dome's behalf in the Mattagami Syndicate and the MacKenzie Syndicate, which resulted in the discovery of the Mattagami and the Canada Tungsten Mines, respectively. At the time of his death, he was an active director of Sigma Mines (Quebec) Limited.

Appointed as associate professor in the UCLA geology department in 1950, Watson was promoted to the full professorship in 1952. He directed the department as chairman during the important formative period 1960–1963. He was always a positive force in the geology department and on the campus, and he took part in numerous committee deliberations, as well as serving for several years in the 1970s as departmental graduate ad-



visor. He became emeritus professor in 1983 after 33 years at UCLA.

A specialist in ore deposits and in the mineralogy and petrology of ultramafic and alkaline rocks, Ken's professional work is characterized by careful attention to details, scientific rigor, and meticulous adherence to only those conclusions fully supported by the data. Not given to speculative interpretations, his papers are models of clarity, precision, and conciseness. In aggregate, his research exhibits a wide range of topics in descriptive and genetic mineralogy, especially dealing with sulfide parageneses, and with prehnite (optical properties, chemistry, and field occurrences), ophiolite petrology and geologic occurrences, carbonatites, eclogites, and the kimberlites of eastern North America and of the American Southwest. Watson was the first to draw attention to the similarity of phase assemblages and mineral chemistries of eclogites from the Four Corners area with Franciscan eclogites of the California Coast Ranges. (Publications exclusive of abstracts are listed at the end of this memorial.)

An effective, popular, and warmly regarded teacher, Ken was at home in the lecture room, the microscope lab, and on the outcrop, with students at all levels. He was admired within the department for nearly perfect organization and lecture notes, a relaxed, measured pace—yet a fact-filled delivery, and an extraordinarily clear chalkboard style. As important as these attributes were Ken's droll, wry, irrepressible sense of humor and con-

stant good nature that characterized his dealings with associates, students, and the lay public. He invariably treated everyone with honesty, tactfulness, and genuine consideration; in a word, he was a true and absolute gentleman. During his teaching career, he was the formal and informal advisor of many M.S. and Ph.D. students. Among them are Bob Castle, Perry Ehlig, Warren Hamilton, Ken Hsü, Dale Jackson, Gordon Medaris, Kitty and Al Barrows, Calvin Miller, and Doug Morton. Ken had been recalled from retirement and was scheduled to have taught the introductory petrology course in the UCLA Earth and Space Sciences Department during spring quarter, 1986; he was eagerly looking forward to this service inasmuch as it was one of his favorite subjects.

A devoted family man, Ken married Mary Rita Crotta on December 23, 1941. They have three children, Douglas, Rita, and Marcia. Ever a closely bonded family, Ken and Mary's pleasure in the companionship of their children has only been exceeded, perhaps, in the joy they have found in six delightful grandchildren.

In both academic and consulting careers, Ken was widely known, universally admired, and warmly respected. He will be remembered fondly and deeply missed by all those who knew him. His friends, colleagues, students, and family have established the Ken Watson Scholarship fund in order to support the studies of outstanding UCLA Earth science students. This seems to be a most appropriate memorial, for Ken was above all an objective scholar, a dedicated teacher, and a loyal member of the department and the UCLA community.

SELECTED BIBLIOGRAPHY OF K. D. WATSON

- (with H.V. Warren) A pyrrhotite-ruby silver occurrence in British Columbia. *Econ. Geol.*, 32, 826-831 (1937).
- (with G.V. Douglas, D. Williams, O.N. Rove, and others) Copper deposits of Newfoundland. *Geol. Surv., Newfoundland, Bull.* 20, 1-176 (1940).
- Zoisite-prehnite alteration of gabbro. *Amer. Mineral.*, 27, 638-645 (1942).
- Mafic and ultramafic rocks of the Baie Verte area, Newfoundland. *Jour. Geol.*, 51, 116-130 (1943).
- Colloform sulphide veins of Port au Port Peninsula, Newfoundland. *Econ. Geol.*, 38, 621-647 (1943).
- (and W.H. Mathews) The Tuya-Teslin area. *British Columbia Department of Mines, Bull.* 19, 1-52, Map (1944).
- (and W.H. Mathews) Prospecting possibilities of the Tuya-Teslin area. *Western Mineral.*, 96-102 (1944).
- (with M.S. Hedley) Lode-gold deposits of central southern British Columbia. *British Columbia Dept. of Mines, Bull.* 20, 1-27 (1945).
- Beryllium in pegmatites. *Amer. Mineral.*, 32, 94 (1947).
- Cretaceous rocks of southern Vancouver Island. *Victoria Naturalist*, 3, 111-113 (1947).
- Geology and mineral deposits of the Baie Verte-Mings Bight area. *Geol. Surv. Newfoundland, Bull.* 21, 1-48 (1947).
- The Squaw Creek-Rainy Hollow area. *British Columbia Dept. of Mines, Bull.* 25, 1-74 (1948).
- (and W.H. Mathews) Partly vitrified xenoliths in pillow basalt. *Amer. Jour. Science*, 246, 601-614 (1948).
- Hydrocarbon with cinnabar in British Columbia. *Amer. Mineral.*, 35, 457-459 (1950).
- (with W.H. Mathews) Spherulitic alkali rhyolite dikes in the Atsuta Range, Northern British Columbia. *Amer. Mineral.*, 38, 432-447 (1953).
- Prehnitization of albite: *Amer. Mineral.*, 38, 197-206 (1953).
- Paragenesis of the zinc-lead-copper deposits at the Mindamar mine, Nova Scotia. *Econ. Geol.*, 49, 389-412 (1954).
- Kimberlite at Bachelor Lake, Quebec. *Amer. Mineral.*, 40, 565-579 (1955).
- Hornblende lamprophyre dykes in southwestern Lesuer Township, Quebec. *Canadian Mineral.*, 6, 15-30 (1957).
- Mindamar mine. In *Structural geology of Canadian ore deposits*, 11, 495-502. Canadian Institute of Mining and Metallurgy (1957).
- (with E.R.W. Neale and D.M. Baird) Baie Verte, White Bay and Green Bay districts, Newfoundland. *Geol. Surv. Canada, Map* (1958).
- Origin of banded structure in some massive sulphide deposits. *Canadian Inst. of Min. and Met. Trans.*, 62, 349-352 (1959).
- (with E.R.W. Neale and J.O. Fuller) Fleur de Lys, Newfoundland. *Geol. Surv. Canada, Map* (1959).
- Kimberlites of eastern North America. In P.J. Wyllie, Ed., *Ultramafic and related rocks*, p. 312-323. Wiley, New York (1967).
- Kimberlite pipes of northeastern Arizona. In P.J. Wyllie, Ed., *Ultramafic and related rocks*, p. 261-269. Wiley, New York (1967).
- (with H. Gabrielse and W.H. Mathews) Jennings River, British Columbia. *Geol. Surv. Canada, Map* (1968).
- (and D.M. Morton) Eclogite inclusions in kimberlite pipes at Garnet Ridge, northeastern Arizona. *Amer. Mineral.*, 54, 267-285 (1969).
- (with D.G. Brookins) The strontium geochemistry of calcite associated with kimberlite at Bachelor Lake, Quebec. *Jour. Geol.*, 77, 367-371 (1969).
- Kimberlites of the Superior Province, Canadian Shield. In L.H. Ahrens, A.R. Duncan, and A.J. Erlank, Eds., *International Conference on Kimberlites*, p. 305-308. Cape Town, South Africa (1973).
- Kimberlitic dyke in Keith Township, Ontario. *Canadian Mineral.*, 16, 97-102 (1978).