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In Memory of Clay T. Smith

1917–2003

A student's commentary

The definition of “professor” may be found in any dictionary; however, those of us at the New Mexico School of Mines who were fortunate enough to be students of Clay Taylor Smith (most of us called him either “Dr. Smith,” sometimes “Doc,” or, more commonly, “Clay T.”) know that his professional and personal life really defined “professor.” We had no need of a dictionary to understand the meaning of that term.

Having received a Ph.D. in geology from Cal Tech in 1939, Clay T. Smith began a life-long field-based career teaching geology by first working for the U.S. Geological Survey and at Cal Tech. By 1943 he was involved with minerals exploration efforts on the Colorado Plateau, with a dedication to field work that he shared with his students for the next sixty years.

Dr. Smith began teaching at the New Mexico School of Mines in 1947, coming in from the field to have a desk from which to teach, and eventually from which to serve as department chair and dean. For forty years he emphasized field-based studies in School of Mines students. Even after his retirement in 1987, he continued to perform field work and to teach young geologists the essentials of field geology, petrography, and economic geology, until mid-autumn of this year.

We also learned about personal aspects of this professor, those things in which he believed—especially good, solid field mapping and essential rock and mineral identification skills—and those aspects of academia in which he did not believe—perhaps most notably grade inflation, which was reflected on each of our academic records. The rigor with which Dr. Smith graded his students served us well. Those in other academic institutions or within industry recognized that if one fared well enough to receive a “B” from a Smith course, then that student must be pretty good. This respect from other geoscientists is reflected in the fact that his students have gone on to become exploration managers, long-

term field geologists, mine managers, and professors.

To us, his students, he stressed professional involvement, and he set an example for us through his local and international participation in educational activities. He served as the Society of Economic Geologists’ Secretary for the Thayer Lindsley lecturer committee for more than twenty years. Those of us at the New Mexico School of Mines enjoyed more than our share of visits from Thayer Lindsley lecturers, thanks to Dr. Smith’s continual requests that the distinguished geoscientists include Socorro on their lecture circuits. Because of his insistence that students become involved in a variety of geoscience issues, and because he offered so much of his time to the Society of Economic Geologists, Dr. Smith was honored by that organization in 1995 with the prestigious Marsden Medal, awarded to that person who serves the society—as a volunteer—with distinction and merit.

Involvement in teaching and excellence in science were not restricted to the School of Mines campus; Smith was also director of the New Mexico State Science and Engineering Fair for a generation, overseeing the coordination and financing of the premier science and engineering event for students. He also participated in the Masters of Science Teaching graduate program from its inception in the early 1970s, a program designed to help elementary and high school teachers upgrade their science teaching skills and backgrounds. Because of his involvement participants learned the basics of geoscience, and the program became known for the practical field content provided on the abundant outcrops in the Socorro region, and for the worn boots of hundreds of teachers.

Because of his background in minerals exploration, Dr. Smith encouraged us to employ the practical aspects of our education, especially mapping skills and the ability to recognize what makes a prospect an orebody, and what makes an orebody a mine. This emphasis on applied field skills was evident throughout his career. We particularly remember this emphasis when field geologist Smith was in the field with us, usually with one of his faithful

dogs. Although most of the time those dogs were quiet (probably because they were busy eating the lunch of some unfortunate student who had stashed their sack meal under some creosote bush), we often heard Dr. Smith barking at us to take another strike and dip, to plot a survey point correctly, and/or to identify that rock unit in some impossible-to-reach outcrop. Dr. Smith loved field work, and he was in the field encouraging (yes, "barking at" may be a better phrase) students until late October of this year.

Former students of Dr. Smith have similar comments concerning their advisor and professor. Among them: No matter what the circumstances, no matter what the terrain, no matter what the weather, Clay T. could outpace any of his students in the field, arriving at an outcrop with Brunton compass in hand, ready to

take a strike and dip. Another comment: Of all the classes and all the instructors at the New Mexico School of Mines, it was Dr. Smith who provided the most essential real-world skills and who most prepared his students for work or for further academic study in economic geology.

Clay T. lives on in the attitudes, polish, and professional contributions of his students to geology, to exploration, and to education, launched as we were by the fire of our professor, mentor, and friend.

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Selected bibliography

Books

- Smith, C. T., 1954, Geology of the Thoreau quadrangle, McKinley and Valencia [now Cibola] Counties, New Mexico: New Mexico State Bureau of Mines and Mineral Resources, Bulletin 31, 36 pp., 1 oversize sheet, scale 1:48,000.
- Smith, C. T., Budding, A. J., and Pitrat, C. W., 1961, Geology of the southeastern part of the Chama Basin: New Mexico State Bureau of Mines and Mineral Resources, Bulletin 75, 57 pp., 8 oversize sheets, scale 1:24,000.
- Smith, C. T., 1964, Reconnaissance geology of the Little Black Peak quadrangle, Lincoln and Socorro Counties, New Mexico: New Mexico State Bureau of Mines and Mineral Resources, Circular 75, 8 pp., 1 oversize sheet, scale 1:62,500.
- Smith, C. T., editor, 1970, Guidebook to Four Corners, Colorado Plateau, and central Rocky Mountain region: National Association of Geology Teachers, Southwest Section, Guidebook, 183 pp.

Maps

- Smith, C. T., 1958, Geologic map of Inscription Rock 15-min quadrangle: New Mexico State Bureau of Mines and Mineral Resources, Geologic Map 4, 1 oversize sheet, scale 1:48,000.
- Smith, C. T., and others, 1959, Geologic map of Foster Canyon quadrangle, Valencia [now Cibola] and McKinley Counties, New Mexico: New Mexico State Bureau of Mines and Mineral Resources, Geologic Map 9, 1 oversize sheet, scale 1:48,000.
- Smith, C. T., and Budding, A. J., 1959, Little Black Peak 15-min quadrangle, east half: New Mexico State Bureau of Mines and Mineral Resources, Geologic Map 11, 1 oversize sheet, scale 1:62,500.

Papers

- Smith, C. T., and Griggs, A. B., 1944, Chromite deposits near San Luis Obispo, San Luis Obispo County, California: U.S. Geological Survey, Bulletin 945-B, pp. 23-44.
- Smith, C. T., 1945, The biostratigraphy of *Glycymeris veatchii* in California: Journal of Paleontology, v. 19, no. 1, pp. 35-44.
- Wells, F. G., Smith, C. T., Rynearson, G. H., and Livermore, J. S., 1949, Chromite deposits near Seiad and McGuffy Creeks, Siskiyou County, California: U.S. Geological Survey, Bulletin 948-B, pp. 19-62.
- Smith, C. T., 1951, Problems of Jurassic stratigraphy of the Colorado Plateau and adjoining region; in South and west sides of the San Juan Basin, New Mexico and Arizona: New Mexico Geological Society, Guidebook 2, pp. 99-103.
- Smith, C. T., 1955, Uranium occurrences on the Colorado Plateau; in Geology of parts of Paradox, Black Mesa, and San Juan Basins: Four Corners Geological Society, Guidebook, pp. 169-176.
- Smith, C. T., 1957, Geology of the Zuni Mountains, Valencia [now Cibola] and McKinley Counties, New Mexico; in Geology of southwestern San Juan Basin: Four Corners Geological Society, Guidebook 2, pp. 53-61.
- Smith, C. T., 1959, Jurassic rocks of the Zuni Mountains; in West-central New Mexico, J. E. Weir, Jr., and E. H. Baltz, editors: New Mexico Geological Society, Guidebook 10, pp. 74-80.
- Smith, C. T., 1959, From x-rays to fission, a metamorphosis in mining; in Geology of the Paradox Basin fold and fault belt: Four Corners Geological Society, Guidebook 3, pp. 109-114.
- Budding, A. J., Pitrat, C. W., and Smith, C. T., 1960, Geology of the southeastern part of the Chama Basin; in Rio Chama country, E. C. Beaumont and C. B. Read, editors: New Mexico Geological Society, Guidebook 11, pp. 78-92.

- Smith, C. T., 1961, Triassic and Jurassic rocks of the Albuquerque area; in Albuquerque country, S. A. Northrop, editor: New Mexico Geological Society, Guidebook 12, pp. 121-128.
- Smith, C. T., 1963, Preliminary notes on the geology of part of the Socorro Mountains, Socorro County, New Mexico; in Socorro region, F. J. Kuellmer, editor: New Mexico Geological Society, Guidebook 14, pp. 185-196.
- Smith, C. T., 1967, Jurassic stratigraphy of the north flank of the Zuni Mountains; in Defiance-Zuni-Mt. Taylor region, Arizona and New Mexico, F. D. Trauger, editor: New Mexico Geological Society, Guidebook 18, pp. 132-137.
- Smith, C. T., and Colpitts, R. M., Jr., 1980, Geology of Cieneguilla Creek drainage basin in southwest Colfax County, New Mexico: New Mexico Geology, v. 2, no. 1, pp. 1-3, 13-15.
- Smith, C. T., 1983, Structural problems along the east side of the Socorro constriction, Rio Grande rift; in Socorro region II, C. E. Chapin, editor: New Mexico Geological Society, Guidebook 34, pp. 103-109.
- Kues, B. S., Smith, C. T., North, R. M., Lucas, S. G., Northrop, S. A., Balk, C. L., and Eveleth, R. W., 1986, New Mexico's geological panorama; in From sundaggers to space exploration—significant scientific contributions to science and technology in New Mexico, D. Hsi and J. Panitz, editors: New Mexico Journal of Science, v. 26, no. 1, pp. 209-260.

Abstracts

- Smith, C. T., 1957, General stratigraphy of the Gallup-Grants area (abs.); in Southwestern San Juan Mountains, Colorado: New Mexico Geological Society, Guidebook 8, p. 254.
- Smith, C. T., 1975, Carthage coal field, New Mexico—future energy source? (abs.): New Mexico Academy of Science, Bulletin, v. 15, no. 2, pp. 17-18.