2022 MGPV Division Distinguished Geological Career Award to Jane Selverstone: Citation

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It is a pleasure to introduce Jane Selverstone for the MGPV Distinguished Geologic Career Award. Jane is a pioneer in the field of metamorphic petrology. Bringing together careful field work, detailed petrography, structural geology and sophisticated use of thermodynamics, she defines how research should be conducted. Her published works are beautifully written with superb illustrations, presenting creative and cutting-edge ideas that expand the research possibilities in petrology. She was instrumental in developing the thermodynamics for extracting quantitative P–T paths from chemical zoning in garnet with colleague Frank Spear. Her work in the Tauern Window was the first published P–T path based on these methods and was the seminal contribution in support of clockwise P–T evolution of orogenic metamorphic rocks. She has also worked on feedback effects between deformational and metamorphic processes, used fluid inclusions to test hypotheses regarding the mechanical behavior of the crust, studied fluid- rock interactions in high-pressure rocks (inadvertently leading to the discovery of diamonds in the Alps), and most recently, and as she would say 'unexpectedly', technically challenging isotope geochemistry.

When Jane started her research with Frank Spear, metamorphic petrologists were primarily concerned with determining the peak temperatures and pressures of a metamorphic event. She realized that there was a wealth of kinetic data preserved in metamorphic rocks and combined petrology, phase equilibria, fluid inclusion and structural information to determine how P and T evolved during a metamorphic event. She then combined the P-T path data with her knowledge of tectonics to constrain the orogenic conditions responsible for the metamorphism. Her work transformed the way metamorphic petrologists conduct their research.

A common theme in all of Jane's research and her activities in general is consistent high quality. Whether playing violin in the Albuquerque Philharmonic, or winning awards for her black and white photography, or using chlorine isotopes to assess scales of fluid equilibration throughout a prograde metamorphic sequence, there can be no doubt that she does it superbly. Jane has served on over a dozen committees for MSA, GSA, and AGU. A subset includes numerous technical program chairs and awards committees for both MSA and GSA. These committees consume a large amount of time, and Jane's involvement demonstrates her commitment to our profession.

Jane received several university-wide teaching awards and was a wonderful mentor to numerous undergraduates, graduates and postdocs. She has also tangentially helped the next generation of young women and minority professionals. When she started her career, the geological community was not particularly welcoming towards women

scientists. Jane spent her career smashing glass ceilings and has left a community that is far more accepting towards women and minority scientists. For those of us who know and have worked with Jane, we have had the great fortune of calling an outstanding scientist and kind person a true friend.