MAFIC AND GRANITIC HYPABYSSAL INTRUSIVES, EAST-CENTRAL WET MOUNTAINS; NEWLY REORGANIZED UNITS FROM THE MID-PROTEROZOIC ANOROGENIC SILVER PLUME EVENT, COLORADO

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Mapping along South Hardscrabble Creek in the Wet Mountains has revealed the existence of two formerly unrecognized intrusive bodies of the mid-Proterozoic anorogenic Silver Plume event. Granite sill-like intrusions were dated at 1441 $\pm$ 23 Ma (M. E. Bickford, U-Pb). These sills are in turn cut by mafic dikes which themselves are intruded by pegmatites related to the 1360 Ma San Isabel batholith. Though Proterozoic dikes are known in Colorado, these dikes are unique in being proven part of the Colorado Anorogenic suite.

The granitic sills lie approximately parallel to the foliation of amphibolite-grade metamorphic rocks of the Wet Mountains (approximately 1700 Ma). The intrusives contained phenocrysts of quartz and feldspar with glomeroporphyritic clots of biotite, magnetite, and epidote in a granitic groundmass. Chemical analyses (XRF, INAA) show that the liquid was rhyodacitic. Trace element values support a crustal origin involving sedimentary material, though not simply from partial melting at the granite minima. High K, high FeO/FeO + MgO, the age place these rocks in the mid-Proterozoic anorogenic belt.

Based on cross-cutting field relationships, we also propose that the mafic dikes in this vicinity are a previously unrecognized part, in Colorado, of this anorogenic belt. The dikes are basaltic in composition with preliminary chemical analyses suggesting they may be part of a plate-separation suite (after Hammond). Complete chemical analysis (XRF, INAA) will be available at the meeting. The association of these dikes with pegmatites of the San Isabel batholith may constrain models of origin of the very-low-initial Sr/Sr ratios (.7030) of that batholith.