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**Thrust Faulting in the Laramie Range from Reanalysis of COCORP Seismic Data**

The eastern flank of the Laramie Range, in the area of the COCORP seismic lines, is characterized by nearly vertical to strongly overturned Phanerozoic rocks in fault contact with Precambrian anorthosite and granite. Original COCORP Line 3 exhibits a strong event dipping west from the frontal fault below Precambrian rocks which could be interpreted as the continuation of upright west-dipping Paleozoic rocks below a Precambrian rock overthrust. If true, the attitude of the fault could be interpreted to dip  $50^{\circ}$  —  $60^{\circ}$  W. However, geologic data, model studies, and analysis of field records and reprocessed data demonstrate this strong event to be stacked refraction arrivals. Reprocessed COCORP seismic data shows a west-dipping event which can be projected to the surface fault trace and can be interpreted as a reflection from the fault boundary between Precambrian and overturned Phanerozoic rocks; true dip of this event is  $30^{\circ}$  —  $40^{\circ}$ . Lack of continuous fault zone reflections extendable to depth on the sections

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suggests probable mylonites associated with the Wind River Thrust are better reflectors than brittle fault zones associated with the Laramie Range. Although fault zone reflectivity depends on the specific nature of individual fault zones, the Wind River Thrust and Laramie Range frontal fault zone may represent approximate maximum and minimum end-members of fault zone reflectivity.