ABSTRACT

TITLE:	Structural Analysis of the Williams Fork Mountains: Subsurface Analysis Near Craig, Colorado
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ABSTRACT: The Williams Fork Mountains are a large Laramide-age structure south of Craig, Colorado, that has recently received attention for new economic and geologic interests. Structures, including faults and folds, are predominantly oriented northwest-southeast. Mapping of the top of the Cretaceous Dakota Sandstone underground has been performed in a three dimensional analysis to constrain the complicated structure of the range. Two dimensional cross-sections were first completed with use of surface data, seismic data, well data, and interpretational structure contour maps. Findings interpreted major and minor anticline /syncline pairs mapped at the surface to be the product of a reactivated blind thrust fault zone. The range front fault was interpreted to be a reactivated blind thrust fault of opposite orientation of the other thrusts. The amount of offset on the fault decreases to the north. Later normal faulting known as the Craig fault zone mapped on the surface and at depth further deformed the Williams Fork Mountains, providing offset to the pre-existing structures.