

AUTHOR Larry S. Lane

AFFILIATION Institute of Sedimentary and Petroleum Geology 3303 33rd Street, NW

ADDRESS Calgary, Alberta, T2L 2A7, Canada

TELEPHONE (403) 284-0413

TITLE: The Rapid Fault Array, Arctic Yukon, is a Foldbelt.

ABSTRACT The Rapid Fault Array in the vicinity of Blow River contains no regionally important strike-slip or normal faults and is best characterized as a fold and thrust belt. Albian shales, sandstones and conglomerates are folded into north-south trending, upright, chevron-style structures. Competence contrast between the coarse and fine clastic untis, requires that local thrust faults accommodate the shortening. Shallow fold plunges together with sub-vertical east-west striking extension fractures indicate components of vertical and north-south extension.

Comparison with structures on the Yukon coastal plain and on the continental shelf suggest that the structures are part of an extensive arcuate belt of folds that developed in Paleocene-Eocene time, indicating a correlation with Laramide Cordilleran structures.

The regional geometry of the fold belt suggests that right-lateral strike-slip displacement on the Porcupine - Sharp Mountain zone was transformed into shortening across the fold belt. Such a correlation has important implications for the magnitude and significance of strike-slip.