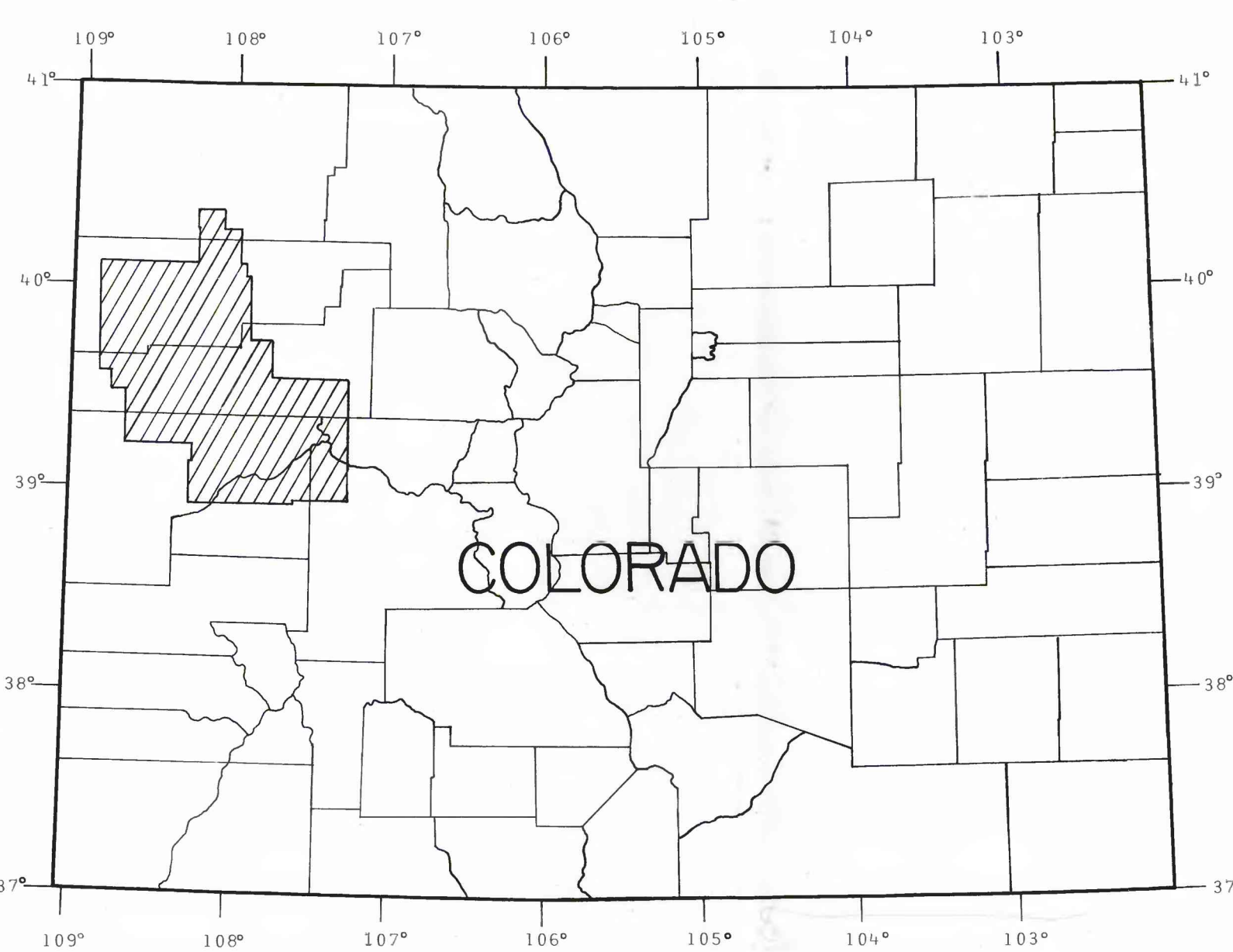
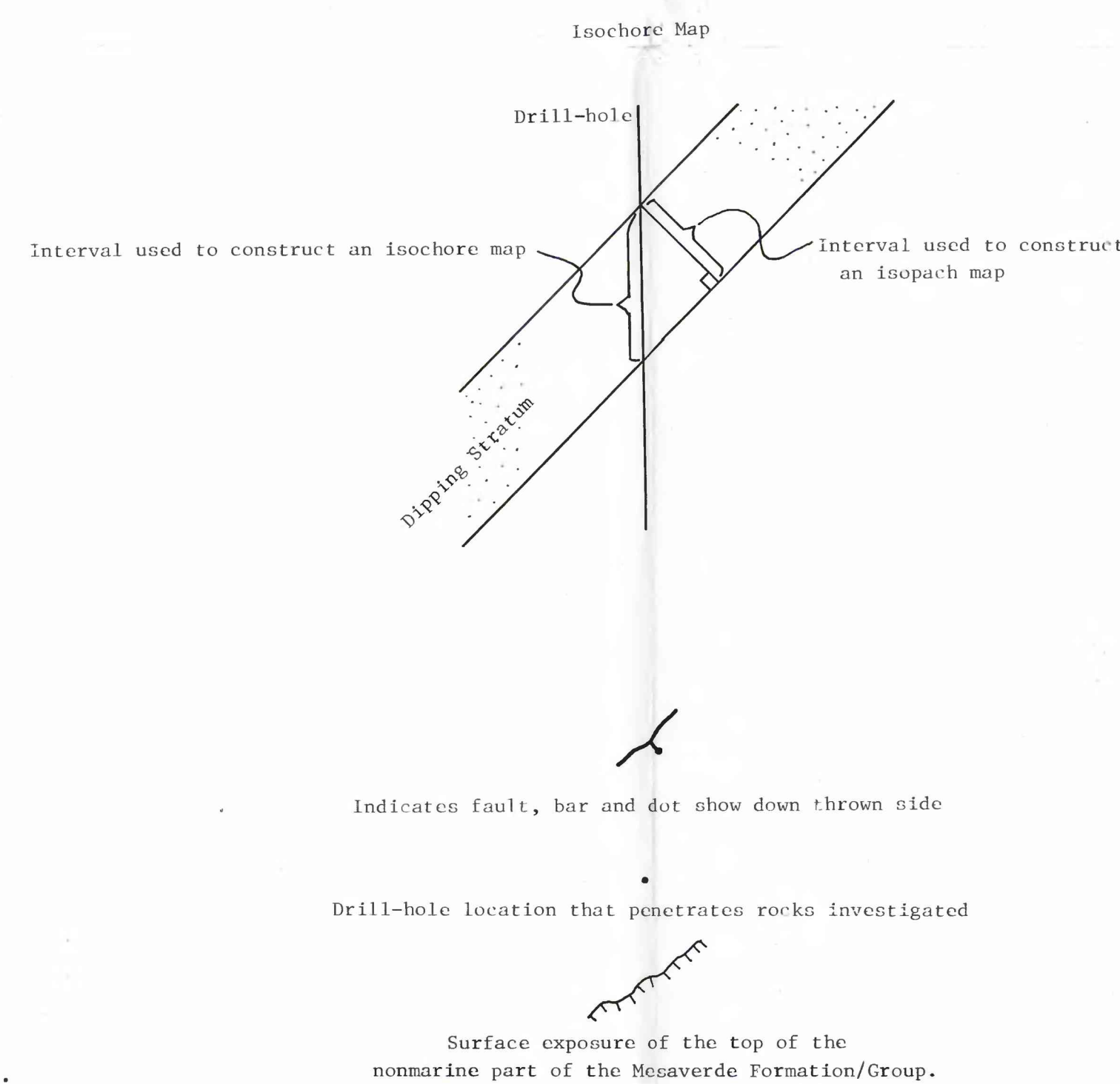


STRUCTURE CONTOUR MAP DRAWN ON THE TOP OF THE NONMARINE PART OF THE MESAVERDE FORMATION/GROUP



INDEX MAP SHOWING LOCATION OF STUDY AREA



EXPLANATION

These maps were prepared to aid in estimating the natural gas resources of the nonmarine part of the Mesaverde Formation/Group, serve as a guide in picking the top and bottom of that sequence on drill-hole logs, and illustrate the general structural configuration of the top of the Mesaverde in the Piceance Creek Basin.

The nonmarine part of the Mesaverde, as named here, extends downward from the Cretaceous-Tertiary unconformity (Johnson and May, 1968) to the top of the Hutton Sandstone Member of the Mesaverde Formation or to the top of its equivalent to the north, the Trout Creek Sandstone Member of the Iles Formation of the Mesaverde Group. This sandstone is generally the uppermost marine sandstone in the Mesaverde Group in the area of this report. In the northwestern part of the basin where the Trout Creek grades laterally into noncontinuous fluvial sandstones, the base of a continuous coal zone which overlies the Trout Creek or Hutton Sandstone Member in most of the basin is used for the bottom of the interval. A marine sandstone occurs above the Trout Creek in the southeastern corner of the basin, but it is included in the nonmarine Mesaverde for the sake of simplicity.

The character of the top and bottom of the nonmarine part of the Mesaverde sequence on drill-hole logs, lithologies, and interpreted depositional environments are illustrated in cross sections of the Piceance Creek Basin by Johnson (1979a, 1979b, 1979c) and Johnson, Granica, and Dessenberger (1979a, 1979b, 1979c).

Control for these maps was obtained from analysis of drill-hole logs and surface maps. A drill-hole, which does not have a listed top for the nonmarine part of the Mesaverde Formation/Group, was probably spudded in the Mesaverde, and the elevation of top used in the structure contour map was obtained from nearby outcrops. In the "zone of very steep dip" along the Grand Inland, strata of the Mesaverde has been tilted to near vertical and could not be contoured because of space limitations on this map scale.

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STRUCTURE CONTOUR MAP AND ISOCHORE MAP OF THE NONMARINE PART OF THE MESAVERDE GROUP,
PICEANCE CREEK BASIN, COLORADO

By
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