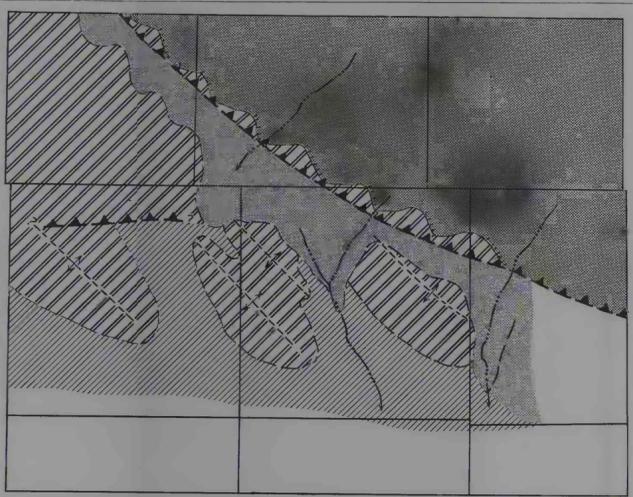


A. PALEOCENE TIME

Fort Union Formation deposited on erosional surface carved on folded Mesozoic rocks; locally rocks as old as the Cloverly Formation were exposed, and debris derived therefrom was incorporated in the Fort Union. At Crooks Gap the Fort Union lies unconformably on the Cody Shale; 3 miles south of the area, Fort Union rocks rest on Upper Cretaceous rocks at least 1,500 feet stratigraphically above the Cody Shale



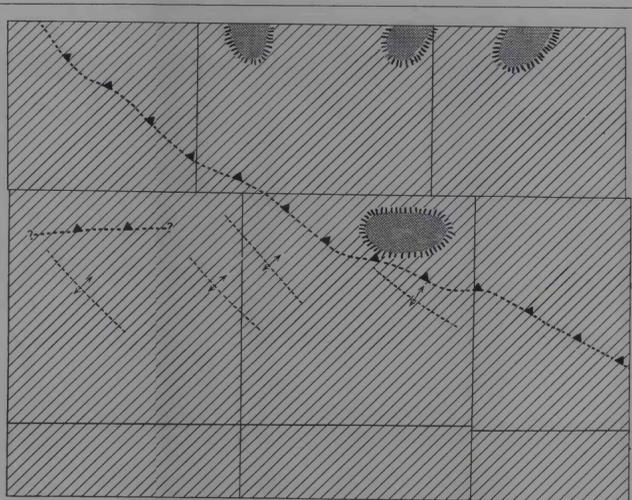
B. BEGINNING(?) OF EARLY EOCENE TIME

Southward- and southwestward-moving thrust blocks formed, and rapid erosion of Mesozoic and Paleozoic rocks resulted. Granite overrode sedimentary rocks north of Crooks Gap, and erosion of the granite sheet produced a flood of arkose (member A of Battle Spring Formation) that concealed pre-Eocene structure. Possible penecontemporaneous compression occurred, as the sediments were deposited in front of the thrust sheets; northwest-trending anticlines may have been produced by this compression. Fort Union rocks may have been eroded by streams that later deposited the Battle Spring Formation



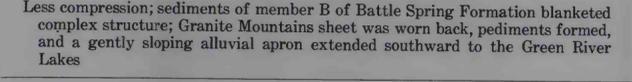
C. DURING EARLY EOCENE TIME

Compression intensified folds, with formation of high-angle reverse faults on southwest anticlinal flanks and additional folding of member A; additional thrusting or monoclinial folding may have occurred in southern part of the area



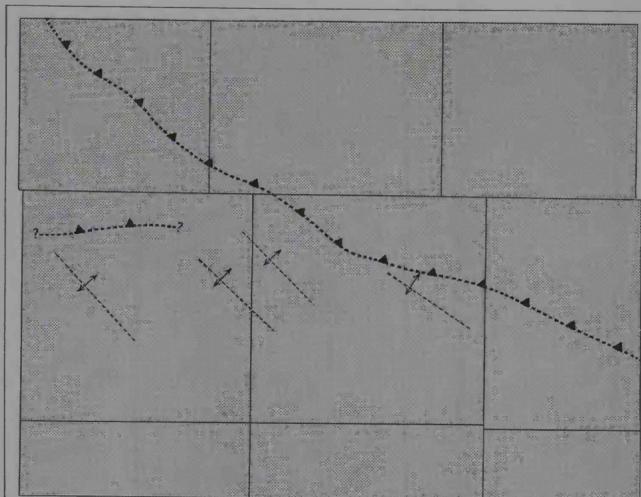
D. LATER EARLY EOCENE TIME

Less compression; sediments of member B of Battle Spring Formation blanketed complex structure; Granite Mountains sheet was worn back, pediments formed, and a gently sloping alluvial apron extended southward to the Green River Lakes



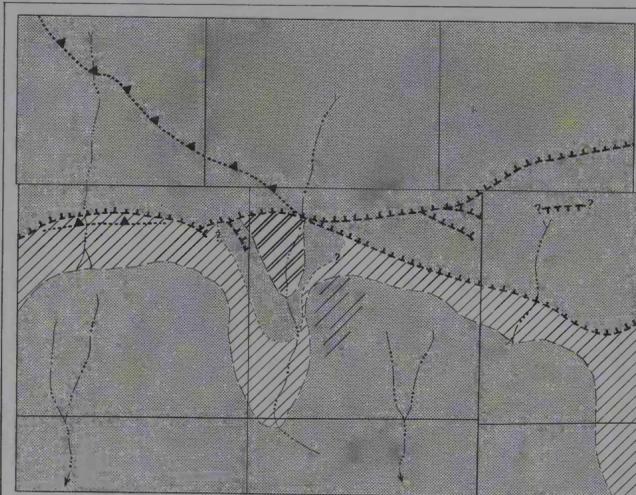
E. MIDDLE AND LATE EOCENE TIME

Strata as much as 550 feet thick containing abundant volcanic debris were deposited to the north of Crooks Gap area (Van Houten, 1955). Principal source of volcanic material was from Rattlesnake volcanic field 35 miles to the northeast. No definite record of these rocks in Crooks Gap area



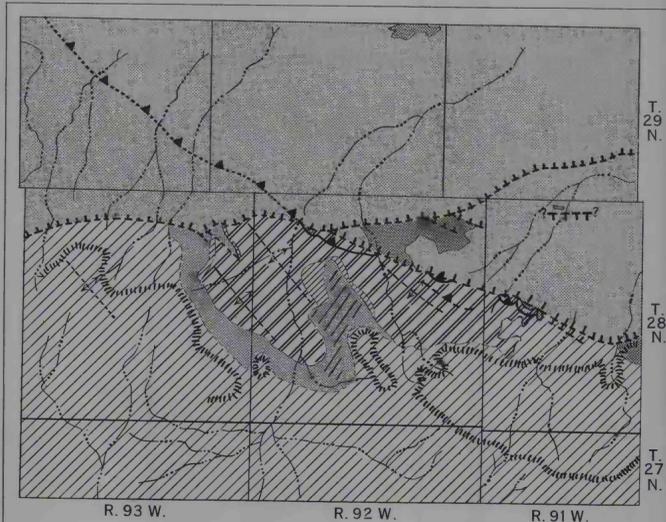
F. OLIGOCENE, MIOCENE, AND PLIOCENE(?) TIME

Area covered by as much as 3,000 feet of sediments rich in volcanic debris. Evidence of eolian (Miocene) and lacustrine (Pliocene) deposits. A few peaks of Granite Mountains sheet protrude above cover north of the map area



G. POST-MIOCENE TO POST-PLIOCENE TIME

Subsidence of Granite Mountains sheet accompanied by large-scale normal faulting. Upper Tertiary rocks eroded from structurally high area to the south. Sweetwater River superimposed on Granite Mountains sheet. Adjustment of groundwater table followed faulting and rapid erosion. Probable time of uranium mineralization

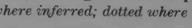
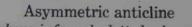
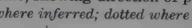
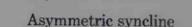


H. RECENT TIME

Little structural modification since Pliocene time although recent adjustment is indicated in T. 28 N., R. 91 W., by an offset pediment surface. Southward erosional retreat of Eocene rocks exposed underlying folded and faulted strata. Granite Mountains partly exhumed to the north of the map area

EXPLANATION

-  Pliocene, Miocene, and Oligocene rocks
-  Member B of Battle Spring Formation (Eocene)
-  Member A of Battle Spring Formation (Eocene)
-  Fort Union Formation (Paleocene)
-  Mesozoic and Paleozoic rocks
-  Granite (Precambrian)

-  Anticline, showing direction of plunge
Dashed where inferred; dotted where concealed
-  Asymmetric anticline
Dashed where inferred; dotted where concealed.
Short arrow indicates steeper limb
-  Syncline, showing direction of plunge
Dashed where inferred; dotted where concealed
-  Asymmetric syncline
Dashed where inferred; dotted where concealed.
Short arrow indicates steeper limb
-  Thrust or high-angle reverse fault
Dashed where inferred; dotted where concealed.
Sawteeth on upper plate
-  Normal fault
Dashed where inferred. Hachures on downthrown side
-  Area of uranium prospects

0 6 MILES