

on the south, and the Cordilleran geosyncline on the west during much of Paleozoic time. Subsequent to the widespread pre-Cambrian erosion, the San Luis platform oscillated downward episodically sufficiently to allow the deposition of Cambrian, Ordovician, Devonian, and Mississippian carbonate and sorted clastic strata as shelf sediments grading and thickening westward into basinal equivalents. A major positive oscillation resulted in the stripping-off of virtually all of the Ordovician shelf sediments during Silurian time.

2. Shelf conditions succeeded a widespread erosion interval during which the Molas shale was formed as a complex soil profile of early Pennsylvanian age. The earliest Pennsylvanian marine sediments thus are shelf carbonates which contain a vast pre-Des Moines intraformational discontinuity that preceded the basination of the Paradox geosyncline.

3. Localized subsidence of a major part of the former widespread San Luis platform occurred to form the Paradox evaporite basin, which was a southeast-projecting arm of the Cordilleran geosyncline. Local shelves to the Paradox geosyncline, in which shelf carbonates and clastics were Kaiparowits basins. Marine access-ways to the Paradox basin existed on the northwest and on the southeast, with the San Rafael, Kaibab, Uncompahgre-San Luis-Nacimiento, and Zuni uplifts providing localized positive barriers tectonically accentuated during Pennsylvanian time.

4. Rapid rise of the Uncompahgre and Nacimiento uplifts caused coarse clastic arkosic sediments to be dumped into Hermosa seas from the northeast and east and Kaibab-Supai fine clastics from the south and west. Bodily uplift of the entire Four Corners region to continental conditions which existed from latest Pennsylvanian to latest Jurassic time.

3. WM. LEE STOKES, University of Utah, Salt Lake City, Utah, "Western Margin of the Rocky Mountain Geosyncline in the Great Basin."

The concept of an inner (miogeosynclinal) belt and an outer (eugeosynclinal) belt in the Paleozoic of the Great Basin is useful in a broad general way. It is impossible, however, to draw a well marked dividing line between the two troughs not only for the Paleozoic as a whole but also for the individual systems. It seems certain that no sharp uplift or even linear group of uplifts ever separated the troughs and that it is fruitless to search for sharply defined edges for either trough.

The miogeosynclinal sediments are chiefly carbonates with minor shales and sandstones, the eugeosynclinal sediments are highly siliceous types such as chert, arkose, argillite, tuff, and black shale. Tongues of carbonate rock extend westward into the eugeosyncline, and, conversely, beds of black shale and chert are found in the miogeosyncline.

On the basis of aggregate lithologic aspect the western edge of the Rocky Mountain geosyncline has roughly the following course through the Great Basin: commencing near Burley, Idaho, thence to the northwestern corner of Utah, continuing successively through Wells, Cortez, Manhattan, and Goldfield, Nevada, and ending near Owens Lake, California.

Cover of Tertiary sediments and volcanic derivatives is thick and extensive over much of the eugeosyncline and unless deep wells are drilled there the exact nature of the older rocks may never be known.

4. J. STEWART WILLIAMS, Utah State Agricultural College, Logan, Utah, "Carboniferous and Permian Stratigraphy of the Oquirrh Basin, Northwestern Utah."

The Oquirrh basin, the dominant element in the late Paleozoic history of northwestern Utah and adjacent areas, first developed near the eastern margin of the Cordilleran miogeosyncline in medial Mississippian time. From then until the medial Permian, it existed continuously with alternate times of extension and contraction, the extensions being generally northwestward toward central Idaho and southwestward toward northeastern Nevada. Times of increased tectonism, which appear to be represented in accentuation of subsidiary basins and rise of marginal positive areas, with attendant contraction of the sea, were Meramecian and early Chesterian, Morrowan-Lampasan, Missourian-Virgilian, and early Wolfcampian. Times of decreased tectonism with less rapid depression and wider spreading of the marine waters were Desmoinesian and Leonardian-early Guadalupian. Particularly noteworthy are the Logan-Milligen sub-basin of early Chesterian time, the main basin in Wolfcampian time, and the Diamond Creek and Lower Park City sub-basins of late Wolfcampian and early Leonardian time. In the latter, dolomite, red and buff sandstone, and anhydrite were deposited to notable thicknesses.

The eastern margin of the Oquirrh basin was exceptionally abrupt and the remarkable change of facies exhibited there is accentuated by overthrusting which has moved the basin facies tens of miles eastward on to the shelf facies.

5. E. C. REED, Nebraska Geological Survey, Lincoln, Nebraska, "Present Knowledge of Paleozoic Geologic History of the Denver Basin and Adjacent Parts of Western Nebraska and Northwestern Kansas."

The general lithologic character of the Paleozoic rocks of the Northern Mid-Continent region