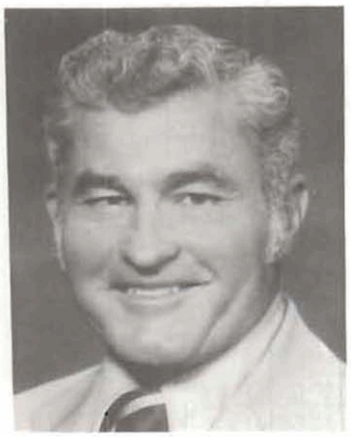
NOON MEETING—OCTOBER 19, 1977

GERALD G. LOUCKS—Biographical Sketch



Mr. Loucks was born in Eckert, Colorado, and received his B.A. in Geology from the University of Colorado in 1950. After graduation, he began his career with Skelly Oil Company, continuing with Murphy Corp., Kerr-McGee, Texas Gulf, Colorado Oil and Gas, and Occidental in the Rockies, Mid-Continent, and Canada before assuming his present position as Vice-President of Sunburst Exploration, Inc., of Denver in 1972. Mr. Loucks is a member of AAPG, Sigma Gamma Epsilon, and the Rocky Mountain Association of Geologists. He was named "Explorer of the Year" in 1976 by the RMAG, and is a Distinguished Lecturer for the AAPG for 1977-78.

THRUST-BELT DISCOVERIES AND HYDROCARBON POTENTIAL OF CORDILLERAN HINGE BELT (Abstract)

by Gerald G. Loucks

Major oil and gas discoveries in the thrust belt of northern Utah and southwestern Wyoming have stimulated industry activity along trend from northwestern Montana to southeastern Nevada. These are the first discoveries in sediments of the 150-mi-wide (240 km) Cordilleran hinge belt extending from northern Canada to southwestern Arizona. The hinge belt consists of a series of immense wedges of shallow marine carbonate and clastic rocks deposited intermittently from Cambrian through Jurassic time on the outer shelf margin of the continent east of the Cordilleran geosyncline.

Hinge-line sediments in Nevada, Utah, Idaho, and western Wyoming are remarkably similar to rocks of the same age productive elsewhere in the western U.S. and Canada. The Ordovician-earliest Devonian compares well with Oklahoma and West Texas equivalents; the thick Upper Devonian-Mississippian shelf carbonates are comparable to Alberta counterparts; Pennsylvanian intraformational unconformities and porosity wedgeouts compare with those of producing fields in southern Oklahoma and the western U.S., respectively; the complex Permian stratigraphic history in Utah and Arizona is similar to that in West Texas and Wyoming; and the Triassic facies change in Utah compares with producing Triassic rocks in northeastern British Columbia.

Recent discoveries at Pineview, Summit County, northeastern Utah, and at Ryckman Creek, 35 mi (56 km) northeast in southwestern Wyoming, found large reserves in unusually thick sections of the Nugget Sandstone and overlying Twin Creek Limestone of the Jurassic, the youngest sedimentary wedge controlled by the Paleozoic hinge line. Both are anticlinal fields complicated by thrusting. At Pineview the oil column is more than 1,000 ft (305 m) thick in an 1,100-ft (335 m) Nugget section; it is more than 900 ft (274 m) thick in the 1,200-ft (366 m) Twin Creek section. The Nugget at Ryckman Creek has an oil and gas column more than 500 ft (152 m) thick in a 600-ft (183 m) section. These prolific fields provide ample incentives for exploration of a major new U.S. oil and gas province—the Cordilleran hinge belt.