

coming from the same sources it is coming from today.

Shortly after the turn of the 21st Century, various presently undeveloped sources of energy will have begun to supply an increasing portion of total energy demand, which will, by then, be seven or more times that of today. These new sources of energy will be both organic and inorganic. The first will include shale oil and coal-derived petroleum. The inorganic will include nuclear, solar, geothermal, tidal, and other sources of energy. These new sources will supply perhaps over half of world energy demands by the year 2059.

Eventually the petroleum industry will become, in large degree, a chemical industry. It will provide the raw materials and fashion the building blocks for hundreds of products useful to man. The petroleum industry will need to accelerate its research to keep abreast of intra- and inter-industry competition. In few other industries are the rewards to be anticipated as great as they are in that of petroleum.

Industry will, as in the past, have to meet many difficult problems. One of the most difficult for management in the future will be to find the cash requirements. In this respect the problems of the present are modest indeed. Availability of capital will depend, more than ever, on a satisfactory return on investment.

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Simpson Group of South-Central Kansas

The Simpson group of central Oklahoma has long been recognized as including five formations: the Joins, Oil Creek, McLish, Tulip Creek, and Bromide. However, as they are traced northward into Kansas, formations become less clearly defined and their relationships more vague. The stratigraphic interval between the Viola limestone and Arbuckle group in south-central Kansas is referred to as "The Simpson" and is considered erratic and unpredictable.

Detailed study of the Simpson rocks in south-central Kansas has revealed a normal sequence of deposition, and any anomalous or erratic characteristics that may be present were acquired as the result of local tectonic movements, rather than as a result of a change in deposition. A correlation of Simpson units in south-central Kansas and central Oklahoma has been made by electric-log cross sections. It is concluded that the Bromide and McLish formations are the only representatives of the Simpson group in south-central Kansas. The thin Simpson section is due to intraformational thinning and onlap, rather than regional truncation.

#### ROCKY MOUNTAIN SECTION ANNUAL MEETING, BILLINGS, MONTANA, FEBRUARY 7-10

"Future Exploration after a Decade of Progress" will be foremost in the minds of the 1,000 geologists from the Rocky Mountain Empire as they convene for the 10th annual meeting of the Rocky Mountain Section of The American Association of Petroleum Geologists in Billings, Montana, February 7-10. General chairman for the convention will be James O. Staggs, division geologist for McAlester Fuel Oil Company in Billings.

Keynote speaker for the three-day program will be Milward K. Simpson, former Governor of Wyoming, who will address the delegates at Monday's luncheon at the Northern Hotel.

One of the non-technical highlights of the meeting will be a panel discussion on the Hebgen Lake, Montana, earthquake which occurred August 17, 1959, in the Yellowstone Park area. This session scheduled for Tuesday afternoon will be open to the public.

Among the 28 papers to be presented during the convention, abstracts have been received from the following.

Allen F. Agnew and John Paul Gries, South Dakota State Geological Survey, Vermillion, and South Dakota School of Mines and Technology, Rapid City, "South Dakota Oil—Past, Present, and Future."

Arden Blair, consultant, Billings, "New Look at Richer Field."

Kenneth F. Cummings, Hondo Oil and Gas Company, Denver, "Buck Peak Oil Field, Moffat County, Colorado."

A. L. Evans, Sun Oil Company, Calgary, Alberta, "The Red River Formation: Structural and Stratigraphic Interpretation."

A. J. Gosar, district geologist, Belco Petroleum Com-

pany, Big Piney, Wyoming, "Stratigraphic and Structural Traps in Big Piney-La Barge Area."

John R. Fanshawe, Northern Consultants, Billings, "New Interpretation for Wolf Springs Field, Montana."

C. W. Hendel, independent geologist, Salt Lake City, "Search for Gas and Its Effect on Future Oil Exploration in Uinta Basin, Utah."

Daniel Lum, South Dakota State Geological Survey, Vermillion, "Regional Gravity Studies in South Dakota, 1959."

D. N. Miller, Jr., Pan American Petroleum Corporation, "Uses of the Petrographic Microscope in Petroleum Exploration."

Charles A. Sandburg, U. S. Geological Survey, Denver, "Thickness and Distribution of Devonian Formations in Relation to Buried Pre-Madison Structural Features in Williston Basin."

John F. Trotter, Mobil Oil Company, Casper, "Coyote Creek Field—Its Character and Significance."

Irving J. Witkind, U. S. Geological Survey, Denver, "Hebgen Lake, Montana, Earthquake of August 17, 1959."

Special programs for the ladies attending the event are being prepared under the chairmanship of Mrs. George Ely, Billings, and will include a rim-view of the city with a tour of the oil refineries on Monday morning to be followed by luncheon at the Yellowstone Country Club at noon where a style show featuring convention wardrobes will be presented. Tuesday morning these delegates will be guests at a series of hostess coffees given by the Billings Geologists' Wives Association in the homes of members, and that afternoon they will be honored at a sherry party at the Starlite Terrace, Billings.