appear like if projected into the rocks of the past geological periods is the main theme of this paper. As an example, the tilting, warping or folding of sizeable atolls and the resultant accumulation and concentration of oil or gas are considered from a theoretical viewpoint. Subsurface contouring of reef surfaces is also discussed on the basis of their growth, evolution and history.

19. "Stratigraphic Significance of Devonian Coral Reefs in Western Canada," by P. S. WARREN and C. R. STELCK, Geological Department, University of Alberta.

Devonian coral reefs occur in both Middle and Upper Devonian in western Canada. They are confined, however, to definite stratigraphic horizons. In order to provide a basis for the study of the reefs, the writers introduce a succession of zones which are applicable to all western Canada and reef horizons are referred to these zones. The stratigraphic significance of the reefs becomes greatly clarified when this is done.

20. "Underground Hunting in the Silurian of Southwestern Ontario," by C. S. EVANS, Geological Association of Canada.

Southwestern Ontario lies between the Appalachian area and the Michigan basin. The area is thus marginal to two oil and gas provinces of the United States; marginal geographically and marginal in yield.

Early drilling (1860) disclosed notable oil in the Middle Devonian (Dundee), and records from these fields and later widely scattered drilling gave thousands of depths to the top of the Dundee from which relatively good contour maps were constructed on this near-surface Devonian formation.

In some parts of the area discussed productive Silurian strata (mostly gas-yielding) are more or less conformable with the Devonian strata, but over most of the area this does not hold, since here between the Silurian productive strata and the Devonian are salt deposits whose thicknesses are locally very variable. The result is that at places low structures on near-surface strata overlie high structures on Silurian formations, and any other combination between that and the normal may occur. In the Silurian, seven productive reefs, or buried hills, as they were first called, have been found. These reefs are small in area. One of 120 acres had 200 feet of pay and yielded close to 10 billion cubic feet of gas.

The result has been to emphasize the importance of isopach maps and sedimentation maps in outlining favorable areas.

Contour maps, isopach maps, and sedimentation maps illustrate the problems, and structure sections illustrate some anomalous structures resulting from salt thickness variations and picture the known reefs.

THURSDAY, SEPTEMBER 7

MORNING

21. Field Excursion—the Bow Valley and the Mountain Front. Leader—D. B. LAYER, Imperial Oil, Ltd., Calgary, Alberta. Lectures by L. M. CLARK, M. B. CROCKFORD, and H. H. BEACH.

AFTERNOON

Special Session of the Society of Exploration Geophysicists.

Presiding, N. J. CHRISTIE and P. P. GABY.

22. (1) "Sample Aeromagnetic Surveys," by N. STEENLAND, Gravity Meter Exploration Company, and J. H. BRIDGEMAN, Aeromagnetic Surveys, Ltd.
 23. (2) Operations Symposium.
 a. "Camp Maintenance and Operation," Northwest Seismic Surveys, Limited.
 b. "Seismograph Operations on Foot."
 c. "Seismograph Operations with Horses," Carter Oil Company.
 d. "Seismograph Operations Using Small Tractors and Trailers."
 e. "Seismograph Operations with Weasels," Geophysical Service Incorporated—Pierson Ralph.
 f. "The Helicopter as Used on Gravity Operations," United Geophysical Company—Wayne Phares.

FRIDAY, SEPTEMBER 8

MORNING

Presiding, T. A. LINK and J. G. GRAY.

24. "The Regional Gravity of Alberta," by L. L. NETTLETON, Gravity Meter Exploration Company. Paper presented by Society of Exploration Geophysicists.
 25. "Major Oil Fields," by K. C. HEALD, vice-president, Gulf Oil Corporation, Pittsburgh. Paper presented by Geological Association of Canada.
 26. "The Gas Fields of Alberta," by S. E. SLIPPER, consulting geologist, Calgary, Alberta.

The paper is a discussion of the natural gas resources of Alberta. The regional stratigraphy is presented as it relates to the various gas zones. The gas fields and gas discoveries are described and classified according to structural types. An estimate of the gas reserves of the Province is offered.