

THE GEOLOGY OF NEVADA - AN EXPLORATION FRONTIER (ABSTRACT)

(R. M. A. G. Evening Meeting, March 24, 1965)

JOHN C. OSMOND: Consultant, Salt Lake City, Utah

ABSTRACT: The Eagle Springs oil field, in east central Nevada, was discovered in 1954 and remains the only oil field in the state. The nearest oil or gas production is over 200 miles to the east, in Utah, and over 300 miles to the southwest, in California. Useful information is available from less than 50 wells which have been drilled in the state. Geologic evaluations are based primarily on outcrops in the mountains.

Is there only one accumulation of oil in this large area? Why have the other wells been unsuccessful? What are the prospects for future exploration? As aids in formulating opinions on these questions, this paper outlines the geologic history of the region and reviews the ideas which have been presented on the major geologic problems.


During Paleozoic time Nevada was part of the Cordilleran geosyncline. The eastern part was in the miogeosynclinal belt, and the western part was in the eugeosynclinal belt. Petroleum exploration has been concentrated in the eastern part of the state where Paleozoic sedimentation and tectonics were similar to those which created accumulations of oil and gas elsewhere in North America. In Mississippian time a northerly trending orogenic belt rose in the middle of the state separating the two parts of the geosyncline.

In Mesozoic time western Nevada was the site of deposition of thick marine and volcanic deposits. The eastern part of the state received little or no deposition.

Cretaceous and Tertiary times were critical in the creation of new traps for hydrocarbons and the relocation or destruction of earlier ones. During this period the area was subjected to one or more phases of regional uplift, overthrusting, intrusion, normal faulting, vulcanism, mountain building, erosion and sedimentation ranging from thick conglomerates to lacustrine oil shale.


Full reconstruction of the sequence of these events is made difficult because much is still unknown. Many facets of this history are covered solely by divergent working hypotheses. This is the challenge to geologists, to fill in more of the basic geologic data, formulate new geologic interpretations and test the old ones to lead to the discovery of new oil and gas fields.

The Mountain Geologist, v. 3, no 1, p. 47



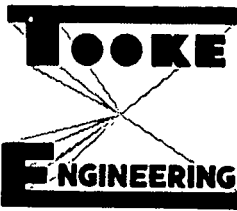
**ROCKY MOUNTAIN
LABORATORIES**

Don R. Boden.....798-0750



Petrographic Thin Sections ... Palynological Preparations
Prompt Service ... Satisfaction Guaranteed

6689 S. Pennsylvania, Littleton, Colorado



*Complete Hydrocarbon
Logging Service*

Automatic Chromatography

Hydraulic Drill Swivel

J. M. TOOKE
JOHN McCLELLAND
R. C. (Bob) FOLWELL
D. A. WILLIAMS

PHONE 234-5002
P. O. BOX 74
CASPER, WYOMING