EVALUATION OF NEW GEOPHYSICAL METHODS

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INTRODUCTION

Last March when you did me the honor of selecting me as president, I hoped I would have the privilege in my presidential address of telling part of the story of the contributions of geophysicists to the war effort, and of attempting some prophecies concerning the contributions of the war to geophysicists' future prospecting efforts. For a time last fall, official optimism reached the point where it seemed that it would be possible to secure the release of some of the story; however, in December, I realized that someone else would have that pleasure. But, in looking forward to the day when we can turn away from our wartime activities, I have had my interest rekindled in an old problem, a problem which, with our present prospecting organizations, is the mutual responsibility of geophysicists, geologists, and management. It is the problem of evaluating proposed new geophysical prospecting procedures and the somewhat simpler but still extremely difficult problem of evaluating modifications of existing methods.

We all remember the anguished cry that only the widespread adoption of new discovery methods could stop the distressing decline of discovery rate. Yet we know what happened when the problem of inadequate discoveries was made more acute by an unprecedented increase in production to oil the war. The number of seismograph crews reached an all-time high. The number of gravity crews reached an all-time high. But what of the crews using new or unconventional methods? Why are they conspicuous for their rarity? You know the answer. Wisely or foolishly, we were afraid to use them when the heat was on.

I wish that my title, "Evaluation of New Geophysical Methods," actually meant that I was offering an evaluation of a number of new geophysical methods. Unfortunately, at the moment, there is a dearth of proposed methods, sound or unsound. The causes of this scarcity are well known and will end with the war. The unparalleled demand for technical men in the development, design, manufacture, and use of instruments of warfare, has not only drawn the time and thought of nearly all of our research men and many of our operating men but has also turned the attention of free-lance inventors, as well as crackpots, away from the ever-alluring problem of getting rich quick by discovering the answer to the problem of finding oil. This is natural. The problems of war have the obvious appeal of patriotism and, equally important, the stimulus of new and exciting approaches, as typified by radar.

But the war has not dried up the stream of oil-finders' dreams; it has only dammed it up. War has emphasized the vital role petroleum plays in modern life.


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