

A. Easton Wren: A review of contemporary A.V.O., it's problems and suggestions for an enhanced approach.

Laporan (Report)

Dr. A. Easton Wren (Consultant, Calgary, Alberta, Canada) gave the above talk on Wednesday 3rd October 1990 at 6.00 p.m. at Raya Room, Equatorial Hotel, Kuala Lumpur. The talk was in collaboration with Span Corporation (M) Sdn. Bhd.

A. EASTON WREN



Abstract

Since Ostrander (1983) presented his results of A.V.O. analyses the exploration community has gradually accepted his thesis and put it to the test in numerous areas of exploration interest, particularly those where the fluid content of the reservoir was in question.

While the theory is indeed legitimate and the methodology can be applied successfully in many areas there have been numerous instances where the "method" has "failed". In the author's experience, most of these failures are human errors in several key areas; inadequate or incorrect modeling of the A.V.O. response; failure to model the top and bottom response of a reservoir and acknowledge the offset tuning effect; failure to compensate for the insidious yet significant effect of the array, particularly at far offset; insufficient spread to reach critical offset for an observable response; the constructive/destructive effect of multiples; the gas effect of Domenico (1976) where it is difficult to distinguish between 5% and 95% gas saturation.

This paper reviews A.V.O. theory, addresses these problems and attempts to provide some solutions and suggestions for further strategies.
