

## NOTES

"THE IMPACT OF HORIZONTAL STACKING ON  
STRUCTURAL EXPLORATION."Abstract

The terms Horizontal Stacking, Common Reflection Point, Roll Along, Drop Along, Common Depth Point, etc. refer to the same basic seismic technique. The term Common Depth Point, or CDP, is used throughout this presentation.

The Common Depth Point technique is a dramatic development in seismic exploration which allows the geophysicists to confidently map subsurface structures which previously have been masked or obscured by multiple reflections or a poor signal-to-noise ratio. The principle stacking objective has been the attenuation of multiple reflections in Gulf Coast Province which includes the East Texas Basin, the Lower Cretaceous areas of Mississippi, the lower coast areas of Louisiana and Texas, including bays, and the Gulf of Mexico. The CDP operations in West Texas, Wyoming, Montana, and the Dakotas generally are being used for signal-to-noise ratio enhancement rather than multiple reflection attenuation as a result of the subsurface velocity distribution.

The application of the CDP technique is simply the selection of a number of shot point and geophone locations so that they have a common depth point, but with a number of different offset distances. The field procedure in CDP surveys for the attenuation of multiple reflections must be designed on the basis of the subsurface velocity distribution in each individual area in order to obtain the most efficient results. A field configuration that may resolve the problem in one area will not necessarily be adequate in another area.

Numerous illustrations depicting the comparison of conventional seismic data versus the CDP data over the same subsurface in various geological provinces are discussed in detail. These comparisons include both data enhancement by multiple reflection attenuation and by increase of signal-to-noise ratio.