INTRODUCTION

Dead Horse Creek Field, discovered in April 1957, is located in Campbell county, Wyoming about 20 miles west of Gillette. This field is the first commercial oil accumulation found in the Mesaverde formation (Upper Cretaceous) in the Powder River Basin. Approximately 30 wells indicate a productive area of 2,300 acres, and the field is still being developed. Proven recoverable reserves are estimated at two to three million barrels of 57 gravity oil.

DISCOVERY AND DEVELOPMENT

Dead Horse Creek Field was discovered by Farmers Union Central Exchange. The discovery well, Government-Ferguson No. 1, is located in the SE/4 SE/4 sec. 13, T. 49 N., R. 76 W. Before the discovery, several tests in the Powder River Basin found shows of oil near the pinchout edge of Mesaverde sandstones and a few recovered free oil. The Farmers Union discovery well was drilled to evaluate acreage favorably situated near the regional updip sandstone pinchout.

Immediately following the discovery, Shell Oil Company and Brazos Oil Company completed three forty-acre offsets.

In September 1957, a successful California Company-Hiawatha extension drilled about two miles to the southeast, greatly enlarged the potential size of the field. Since then rapid development has expanded the field outward from the discovery well and the extension. Development wells are still being drilled at the southern end of the field where the limits of production have not been determined.

California Company is drilling in the Minnelusa on a deep test in the NE¼ of SW¼ sec. 29, T. 49 N., R. 75 W. Available information indicates that significant oil shows have not been encountered in pre-Parkman formations.

TYPE TRAP

The oil accumulation is in a combination structural-stratigraphic trap produced by the updip pinchout of a northwest-trending linear sandstone across two small structural noses. The sandstone lies above the main bench of the Parkman as it is known in most other tests in the Powder River Basin. Cross-section A-A' (Fig. 1) shows the stratigraphic position and the updip and downdip pinchouts of the sand in the Dead Horse Creek area. The origin of the sand is not clear. It is fine- to medium-grained, poorly sorted, calcareous, argillaceous, glauconitic, and it has shale interbeds. The shape