Source-Rock Evaluation

Introduction

The lower Eastern View Coal Measures contain Late Cretaceous, Paleocene and Early Eocene sediments. On the basin margin the sequence is unconformable on the Early Cretaceous, the mid-Cretaceous unconformity, or on Paleozoic basement. Relationship with older units are unknown over large areas of the basin. The Durroon #1 well is the only well to have penetrated a significant thickness of Late Cretaceous sediments. It comprises a sequence of coarse grained sandstone with thin shale intervals unconformably overlying a massive carbonaceous shale. The Early Cretaceous sequence also consists of interbedded sandstone and shale. The Paleocene to Early Eocene section comprises a sequence of interbedded sandstone, siltstone, shale and thin coal seams, which exhibit a broad facies change, being dominantly arenaceous in the south and southeast, and becoming more argillaceous towards the north. Results of the Squid #1 studies have been reported and discussed in the previous quarterly report.

Types of Organic Matter

Figure 19 contains descriptions of organic types in samples from the Bass Basin that were submitted for microscopic examination. For each well, the stratigraphic unit has been interpreted as gas-prone or oil-prone, depending on whether the dominant organic types are of the humic vitrinite type, or the exinite type. There are too few samples from which to draw definite conclusion about each unit. Figures 20, 21, 22, 23.

Source-Rock Chemistry

Core samples have been analyzed for total organic carbon (TOC) and total extractable organic matter (EOM). The EOM was subdivided by liquid chromatography into three fractions: saturated hydrocarbons (SATS); aromatic