

INTRODUCTION

Two sidewall cores from the Cape Sorell - 1 well, Tasmania were submitted for organic carbon and Rock-Eval pyrolysis analysis. The data was reported and the samples resubmitted for vitrinite reflectance and organic extract analysis. This report covers all the analyses performed on the samples.

DISCUSSION

Both samples are quite high in total organic carbon and are rated as good in source quality. Pyrolysis S_2/S_3 ratios and hydrogen/oxygen indices both suggest the presence of oil-generating organic matter. Fairly low pyrolysis S_2 values, however, indicate only poor to marginal source potential. Visual kerogen analysis, reveals a predominance of gas-generating terrestrial kerogen with an unusually large amounts of inertinite, and moderate to large quantities of solid bitumen. This solid bitumen is probably responsible for the apparent oil-generating capability defined by pyrolysis. Consequently, we do not believe the samples represent oil source beds and should yield only gas.

Pyrolysis T-max indicate fairly low maturities in both samples but this is probably due to the solid bitumen present. Solid bitumen effects are especially severe in the sample from 10,503 feet. Vitrinite reflectance values reveal both samples are in the late stages of oil generation and in the early stages of gas generation. This is supported by high kerogen fluorescence which is greatest in the oil-generation zone. Although one sample contains some oxidized and rough vitrinite, causing a scatter in the data, we believe the reflectance values calculated probably represent the true maturity.