# 1. INTRODUCTION

SAGASCO Resources submitted 12 core plugs and chips from King #1 in the Bass Basin for brief petrographic description. Samples were selected from the Upper Eastern View Coal Measure (Eocene) to represent the whole spectrum of lithological variations in the core. The aim of the study was to identify the mineralogy and sedimentological characteristics of the samples.

The following samples were examined and services provided:

| Core Plug | Depth (m) | Thin section | Clay XRD |
|---|---|---|---|
| 2 | 1398.60 | * | - |
| 5 | 1399.40 | * | * |
| 6 | 1400.05 | * | - |
| 8 | 1404.40 | * | - |
| 9A | 1405.90 | * | - |
| Chip | 1406.60 | * | - |
| 12 | 1424.38 | * | - |
| 17 | 1426.70 | * | * |
| 23 | 1430.00 | * | - |
| 24 | 1431.23 | * | * |
| 26 | 1431.73 | * | - |
| 27 | 1432.15 | * | - |

# 2. METHODS

Core plugs were impregnated with araldite prior to thin section preparation. Blue dye was used in the araldite to facilitate description of porosity and permeability. Thin sections were systematically scanned to determine lithology, composition, porosity and textural relationships. All percentages given in thin section descriptions are based on visual estimates, not point counts. Rock classifications are based on the work of Folk (1974) for clastics and Dunham (1962) for carbonates.

To determine clay mineralogy a less than 5 micron size fraction was separated. This was done by hand crushing, addition of dispersion solution, mechanical shaking for 10 minutes and settling of the dispersed material in a water column according to Stokes' Law. The less than 5 micron fraction was pipetted off and prepared as an oriented sample on ceramic plates held under vacuum. Samples were saturated with Mg solution and treated with glycerol. Continuous scans of oriented clay samples were run from 3° to 35° 2 theta at 1°/minute using Co K alpha radiation, 50kV and 35mA, on a Philips PW1050 diffractometer. Peaks were identified by comparison with JCPDS files stored in a computer program called XPLOT.