The pervasive brown colour of the matrix clay is generally homogeneous and hence is derived from an original muddy matrix. The material is dark between crossed Nicols and commonly more or less obscured by ferruginous staining.

Given that core analysis shows a high porosity for this part of the geological section, it is thought likely that the pores seen in thin section are an integral part of the rocks (and not the result of the preparation of the sectins). In general, porosity has a patchy distribution and is inversely related to the clay matrix. It appears that the pores are either primary (original intergranular space never filled with matrix) or are derived from the selective, patchy dissolution of some of the clay matrix. It is likely that at least some of the pores are secondary in origin; especially the somewhat larger ones. In general, the pores are less than 0.05 mm in size and are probably interconnected via narrow channelways restricted by the clay matrix.

Two samples were examined by X-ray diffraction analysis on both the bulk material (in the case of that from 1846.8 m) and the -2 um sedimented portion. The results are as follows:

X-ray diffraction analyses:

	1846.8 m		1845.7 m	
Bulk Mineralogy	Quartz	D		
	Siderite	A-SD		
	Kaolinite	A		
	Halite	Tr		
	Pyrite	Tr		
	%	8		6
-2 um fraction	Kaolinite	D	Kaolinite	D
	Quartz	A	Quartz	A
	Mica/Illite	Tr-A	Mica/Illite	Tr-A
	Smectite	Tr	Smectite	Tr

The kaolinite is very well crystallised.

IGNEOUS ROCKS

Introduction

Four samples of drilling cuttings from Yolla No. 1 were received for evaluation of suitability for isotopic dating and any suitable material was to be dated urgently.

Procedures

The samples were washed to remove drilling mud and wet screened on 200 BS mesh (75 micron aperture). Thin sections were prepared from composite grain mounts of the dried samples.