

Rock revision exercise using drawings of thin sections

Look at the drawings of thin sections of rocks shown on pages 3 and 4..

Answer the following questions. Write your answers in the spaces provided.

a) For each rock give the grain size & texture and name the rock.

Section	Grain size	Texture	Rock name
1			
2			
3			
4			
5			
6			
7			
8			

b) Read the following rock description.

The rock is made of grains; it is not crystalline. It is coarse grained. The minerals in the rock are quartz, feldspar and clay minerals. Quartz and feldspar grains make up 78% and 16% respectively of the rock. The matrix is less than 7% of the rock and is composed of clay minerals. Grains are poorly sorted, varying in size from less than 0.1mm to over 4mm. Most of the grains are matrix supported, have a low sphericity and are angular to sub-rounded in shape.

(i) Match this rock description with one of the thin section drawings.
The drawing of thin section _____ matches the rock description.

(ii) What conclusion(s) can you draw about the transport history of this rock?

c) State the link or connection between the rocks shown in the following pairs of drawings of thin sections:

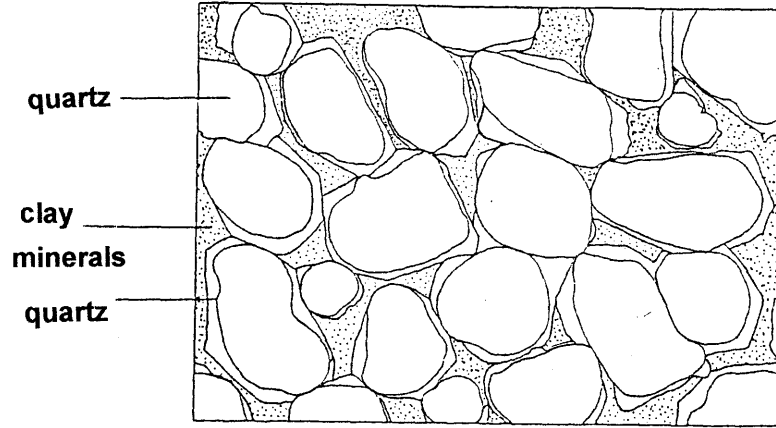
Thin sections 1 and 2

Thin sections 3 and 4

Thin sections 5 and 6

Thin sections 7 and 8

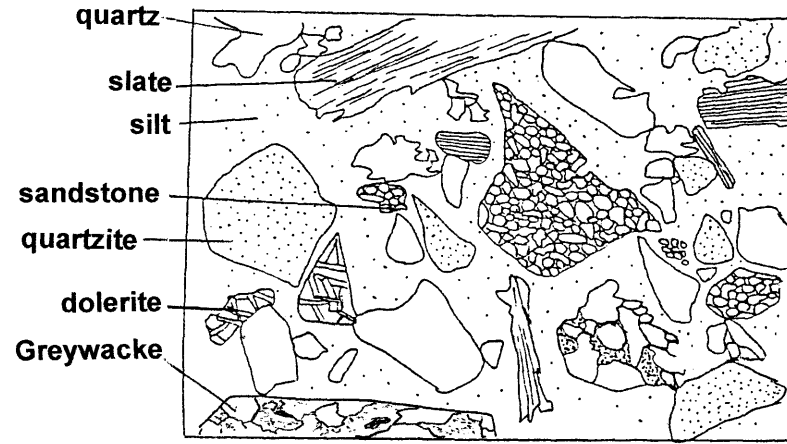
Thin section 1



quartz
clay
minerals
quartz

0.5mm Plane polarised light

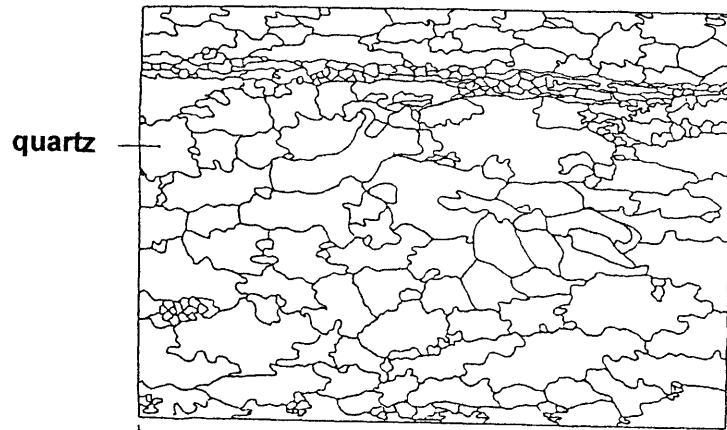
Thin section 3



quartz
slate
silt
sandstone
quartzite
dolerite
Greywacke

5mm Plane polarised light

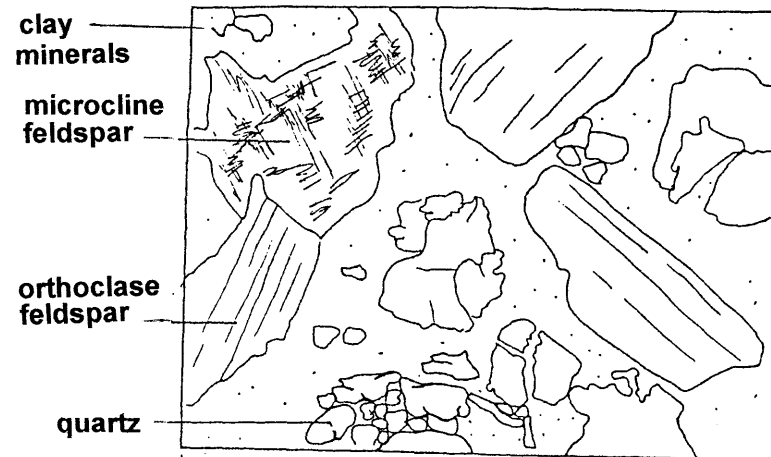
Thin section 2



quartz

0.5mm Plane polarised light

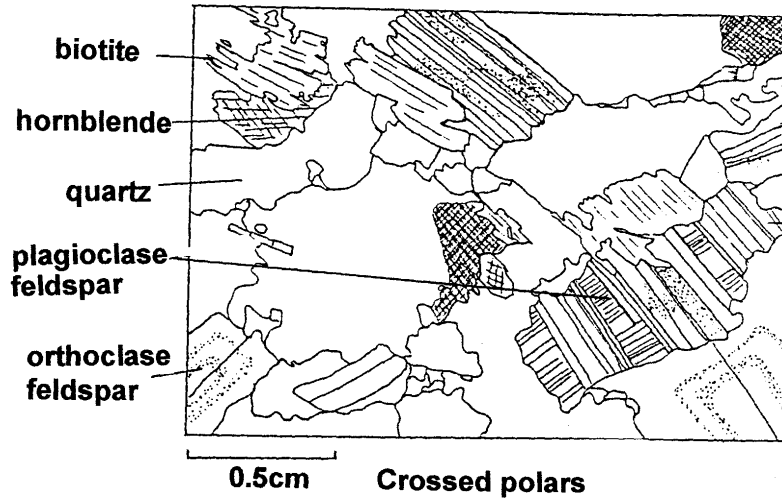
Thin section 4



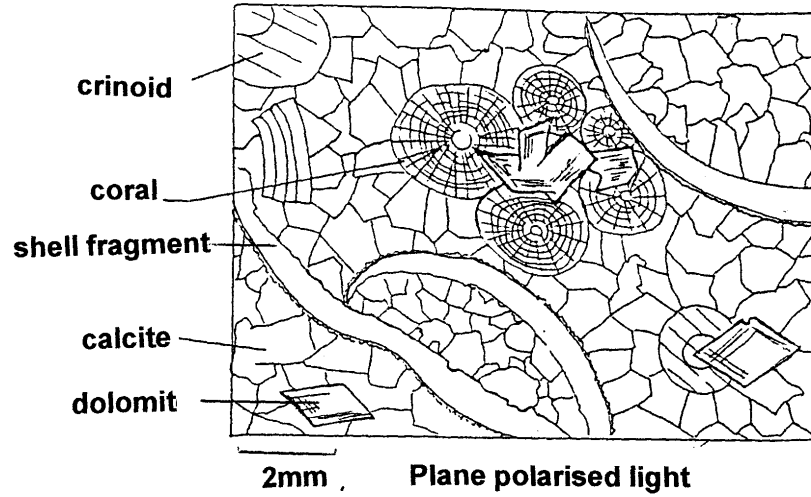
clay
minerals
microcline
feldspar
orthoclase
feldspar
quartz

1.5mm Plane polarised light

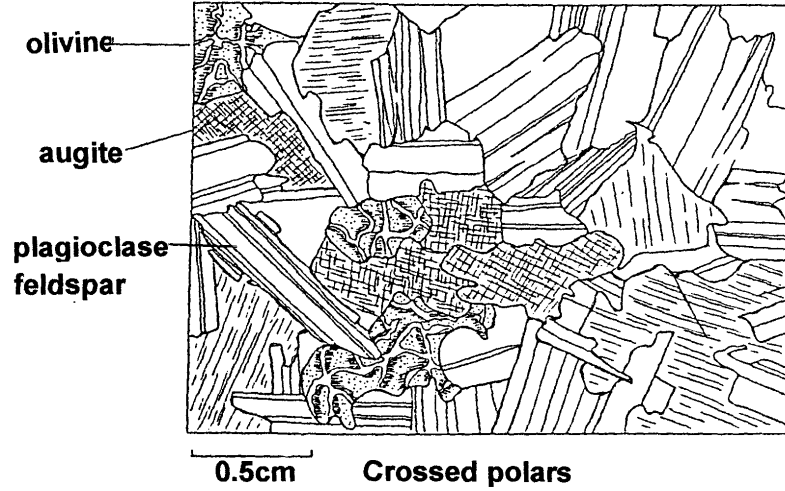
Thin section 5



Thin section 7



Thin section 6



Thin section 8

