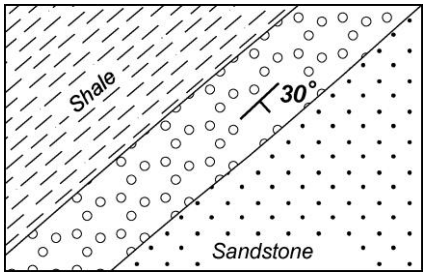
Geological Mapping Exercise 5

1. The diagram below shows an outcrop of conglomerate dipping at 30 degrees.

The conglomerate is bounded by shale to the NW and sandstone to the SE.

Scale is 1cm = 1 metre



a) In what direction is the dip of the conglomerate? _____

b) What is the direction of strike? _____

c) With the help of a diagram work out the true thickness of the conglomerate.

2. The next page shows an incomplete geological map.

a) Complete the boundaries and outcrops of the rock strata.

b) What is the dip of the strata? _____

c) What is the thickness of

(i) the limestone? _____

(ii) the sandstone? _____

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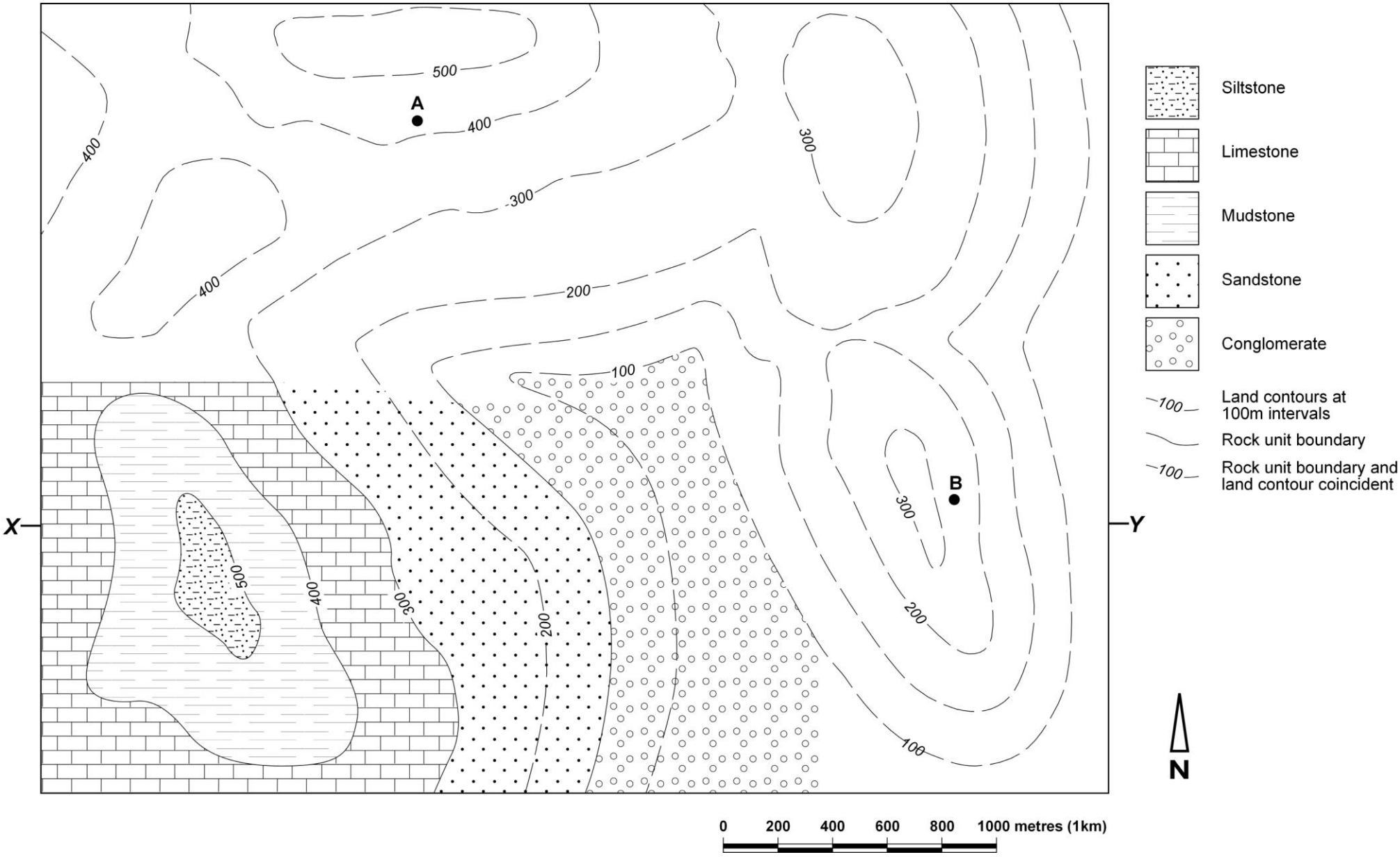

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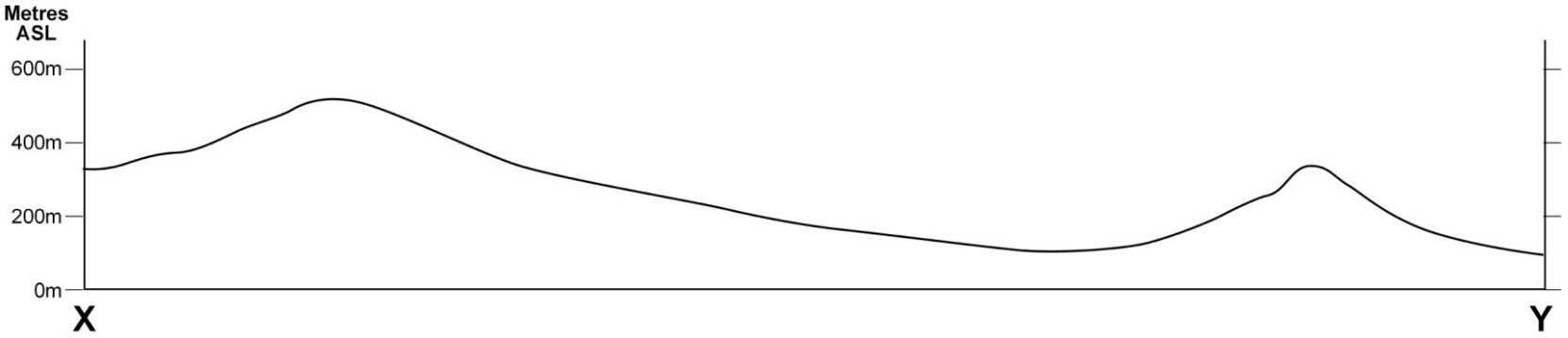
d) Using the map on the previous page draw a cross section from X to Y.



e) (i) If a vertical borehole were drilled at A, at what depth would the sandstone be first intersected? _____

(ii) If a vertical borehole were drilled at B, at what depth would the conglomerate be first intersected? _____