

Surname	Centre Number	Candidate Number
Other Names		2



GCE A level

1215/02

**GEOLOGY - GL5
THEMATIC UNIT 2
GEOLOGY OF NATURAL RESOURCES**

P.M. FRIDAY, 10 June 2011

ONE of TWO units to be completed in 2 hours

			Examiner only
Section A	1.	15	
Section B	2.	25	
	3.		
	4.		
Total		40	

ADDITIONAL MATERIALS

In addition to this and one other examination paper, you may require a calculator.

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen.

Write your name, centre number and candidate number in the spaces at the top of this page.

Answer **question 1** in Section A (15 marks) and **one** question from Section B (25 marks).

INFORMATION FOR CANDIDATES

The number of marks is given in brackets at the end of each question or part-question.

You are reminded of the necessity for good English and orderly presentation in your answers.

SECTION A

1. **Figure 1a** is a map showing the results of a soil survey to establish the concentration of copper present in the soil at the surface in parts per million (ppm).

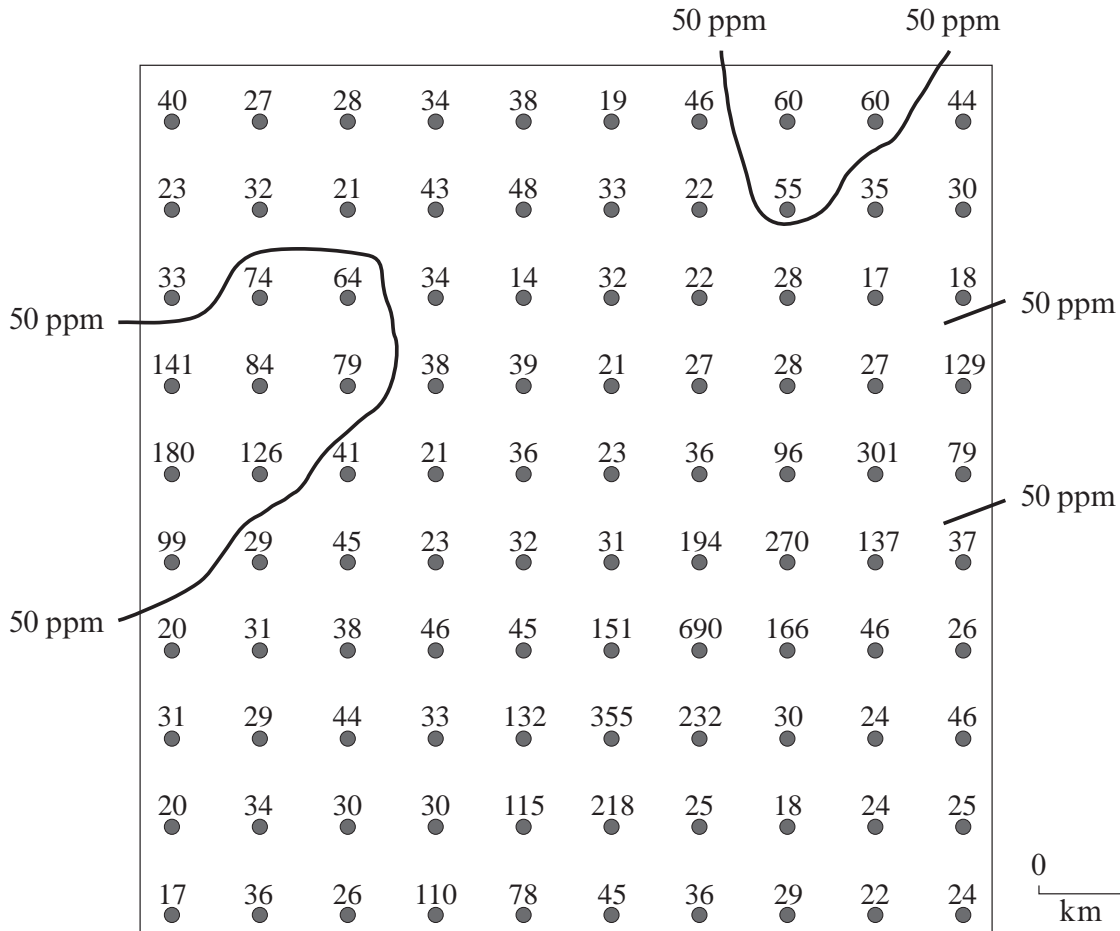


Figure 1a

- (a) (i) Describe the pattern of data collection points (sampling method) in **Figure 1a**. [2]

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- (ii) Draw onto **Figure 1a** where copper concentrations exceed 50 parts per million and 200 parts per million respectively. Label the lines plotted. Two areas where concentrations exceed 50 ppm have been plotted as a guide. [3]

- (iii) Describe **one** disadvantage in using geochemical soil analyses in prospecting for mineral deposits. [2]

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Figure 1b shows the results of a geochemical stream sediment survey. The values plotted on the map refer to concentrations of copper in parts per million (ppm) present in the stream sediments.

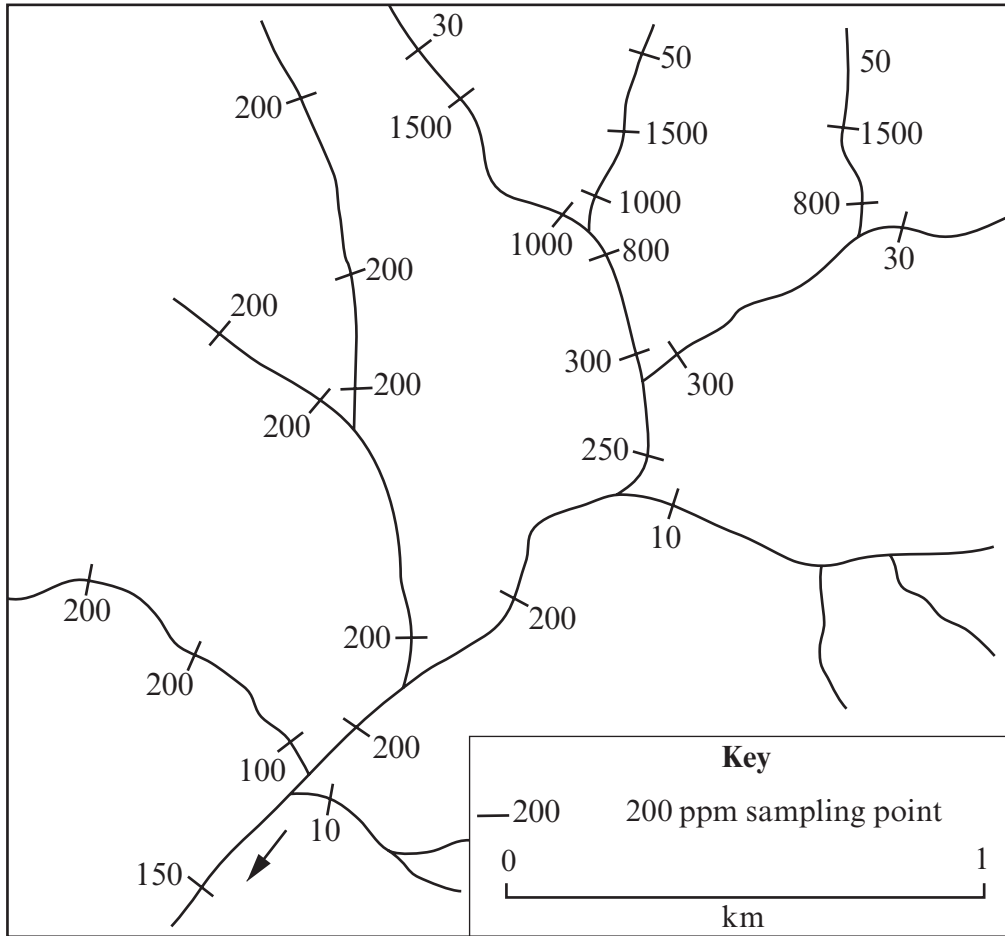


Figure 1b

- (b) (i) Draw on to **Figure 1b** the most likely location of a copper ore body. [2]
- (ii) Suggest why concentrations of copper in parts per million (ppm) generally decrease with increasing distance downstream in **Figure 1b** above. [2]

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- (iii) Describe and evaluate the use of **one** other appropriate technique that would confirm the presence of the copper ore body. [4]

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Total 15 marks

Turn over.

SECTION B

*Answer **one** question only.*

Write your answer in the remaining pages of this booklet.

2. With reference to igneous and sedimentary processes within the rock cycle, evaluate the importance of water in the formation of mineral deposits. [25]

3. Evaluate the effect of geological factors in controlling the formation, migration and accumulation of oil and gas resources. [25]

4.
 - (a) Describe the method of extraction of **one named** geological raw material.
 - (b) Evaluate the extent to which the impact of extraction on a nearby community may be reduced or controlled. [25]

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Horizontal dashed lines for writing or marking.