

PRACTICALS

Practical No	Name of the Exercise
1	Study of Physical Properties of Minerals. (Colour, streak, lustre, form, fracture, cleavage, hardness, specific gravity)
2	Study of Ore Minerals
3	Study of Industrial Minerals
4	Study of Textures and Structures of Igneous Rocks
5	Study of Textures and Structures of Sedimentary Rocks
6	Study of Textures and Structures of Metamorphic Rocks
7	Study of Horizontal series of Geological Map
8	Study of Inclined series of Geological Map
9	Study of Seismic Zones of India
10	Identification of Geological Features from Satellite/Aerial photos
11	Calculation of the groundwater available for recharge
12	Calculation of Epicentre
13	Field work/ viva voce
14	Certified Journal

General instructions for Teachers

- 1) Mineral specimens which show required Physical properties should be used.
- 2) Rock specimens should clearly show the textures, structures and engineering properties clearly.
- 3) For section drawing use Geological map no.1 to map no. 9 from this textbook.
- 4) Use the outline map of India for marking seismic zones of India.
- 5) Use Landsat image or Aerial photograph for identification of geological features.
- 6) Use given data for location of Epicentre.
- 7) Use given data for calculation of availability of water for groundwater recharge.
- 8) Teachers should strictly follow the rules for educational visit, given by concerned authorities.

General instructions for Students :

- 1) Make the best use of time available for performing experiments.
- 2) Bring geometrical instruments, colour pencils and journals.
- 3) Handle the specimen carefully. Do not mark or write on specimens.
- 4) Draw neatly labelled diagrams wherever necessary in the journal.
- 5) Use Geological maps from this textbook for drawing sections.

Practical No.1

Study of Physical properties of Minerals

Practical No.2

Study of Ore minerals

(Hematite, Magnetite, Pyrite, Pyrolusite, Psilomelane, Chalcopyrite, Malachite, Galena, Sphalerite, Bauxite)

(Refer to Chapter no.5)

Practical No.3

Study of Industrial Minerals

(Coal, Gypsum, Kaolinite, Feldspar, Quartz, Garnet, Corundum, Kyanite, Zircon, Diamond, Muscovite, Biotite, Sulphur and Cinnabar)
(Refer to Chapter no. 5)

Practical No.4

Study of Texture and Structures of Igneous Rocks

(Phaneritic, Porphyritic, Vesicular, Amygdaloidal, Ropy and Pillow)

(Refer to Chapter no. 2)

Practical No.5

Study of Textures and structures of Sedimentary Rocks

(Clastic, Lamination, Stratification, Cross bedding, Graded bedding, Ripple marks)

(Refer to Chapter no. 2)

Practical No.6

Study of Structures of Metamorphic Rocks.

(Schistose, Granulose, Gneissose)

(Refer to Chapter no. 2)

Practical No.7 and 8

Study of Geological Map and section drawing

(Use Map no. 1 to 9 for this textbook)

Practical No.9

Study of Seismic Zones of India

(Refer to Chapter no. 7)

Practical No.10

Identification of Geological features from Satellite image/Aerial Photograph.

(Refer to Chapter no. 8 - Plate 1, 2, 3 and 4)

Practical No.11

Calculate the water available for Groundwater Recharge.

(Refer to Chapter no. 6)

Practical No.12

Calculate Epicentre

(Refer to Chapter no. 7)

Practical Question paper pattern

Practical Question paper pattern

Marks = 30

Time = 3 Hrs.

Q. 1. A) Identify and describe ore minerals from table no. 1 to table no. 3.

B) Identify and describe industrial minerals from table no. 4 to table no. 7.

Q. 2. Identify rock specimens from table no. 8 to table no. 11 and describe their colour, texture, Structures and classification.

Q. 3. Draw the Geological section of given map and describe topography, history and order of superposition.

a) Inclined series - 1 map

b) Horizontal series - 1 map

Q. 5. Name the sites/zones in given outline map of India.

a) Seismic zones

Q. 6. Calculate the

a) Epicentre

b) Ground water available for recharge

Q. 7. Identify and name features from given satellite image.

Q. 8. Field work/project and Viva voce.

Q. 9. Certified journals.



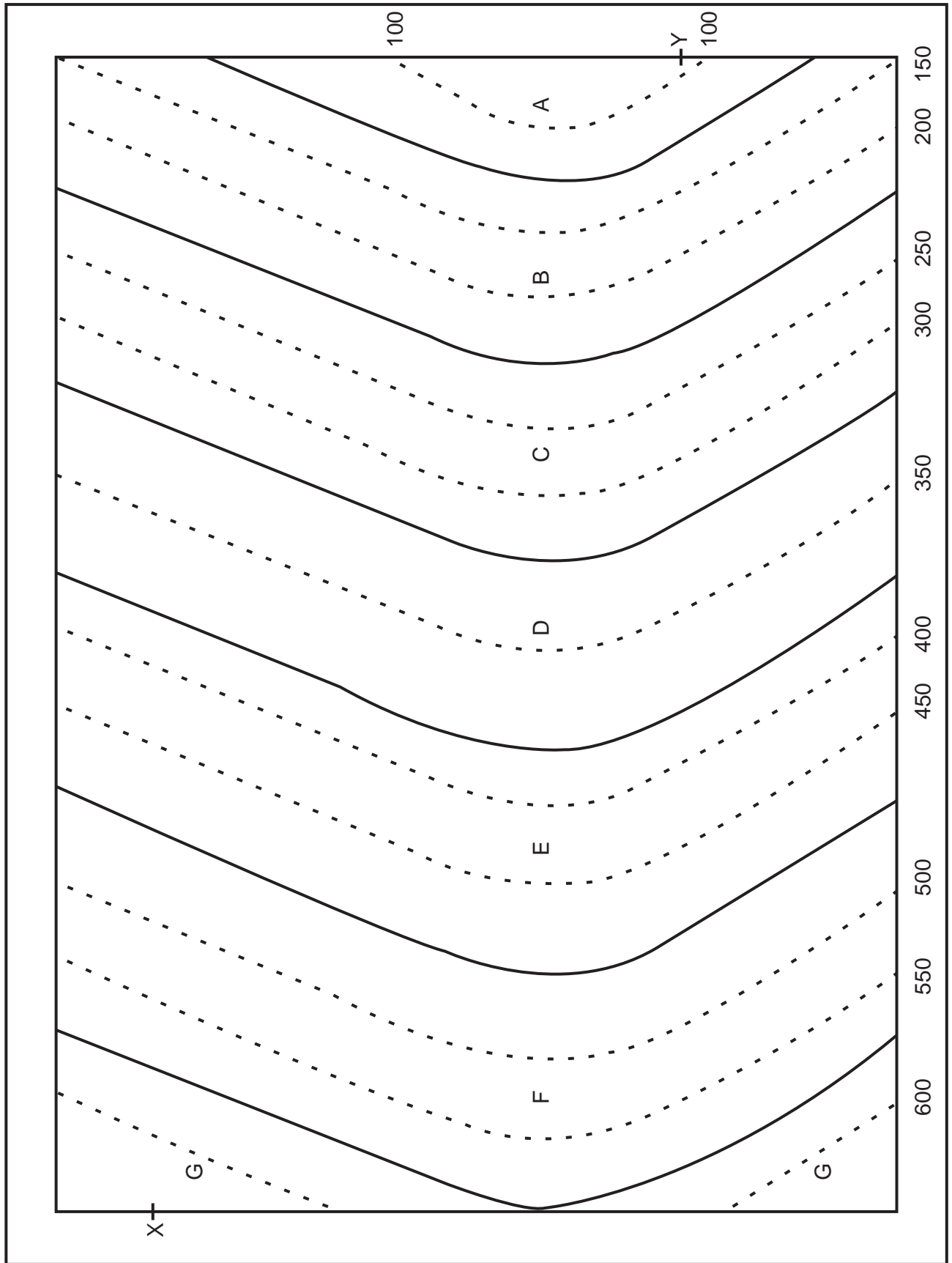
MAP NO. 1

Order of
superposition
and thickness
of beds

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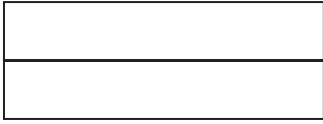


Scale:
1 cm = 100 m

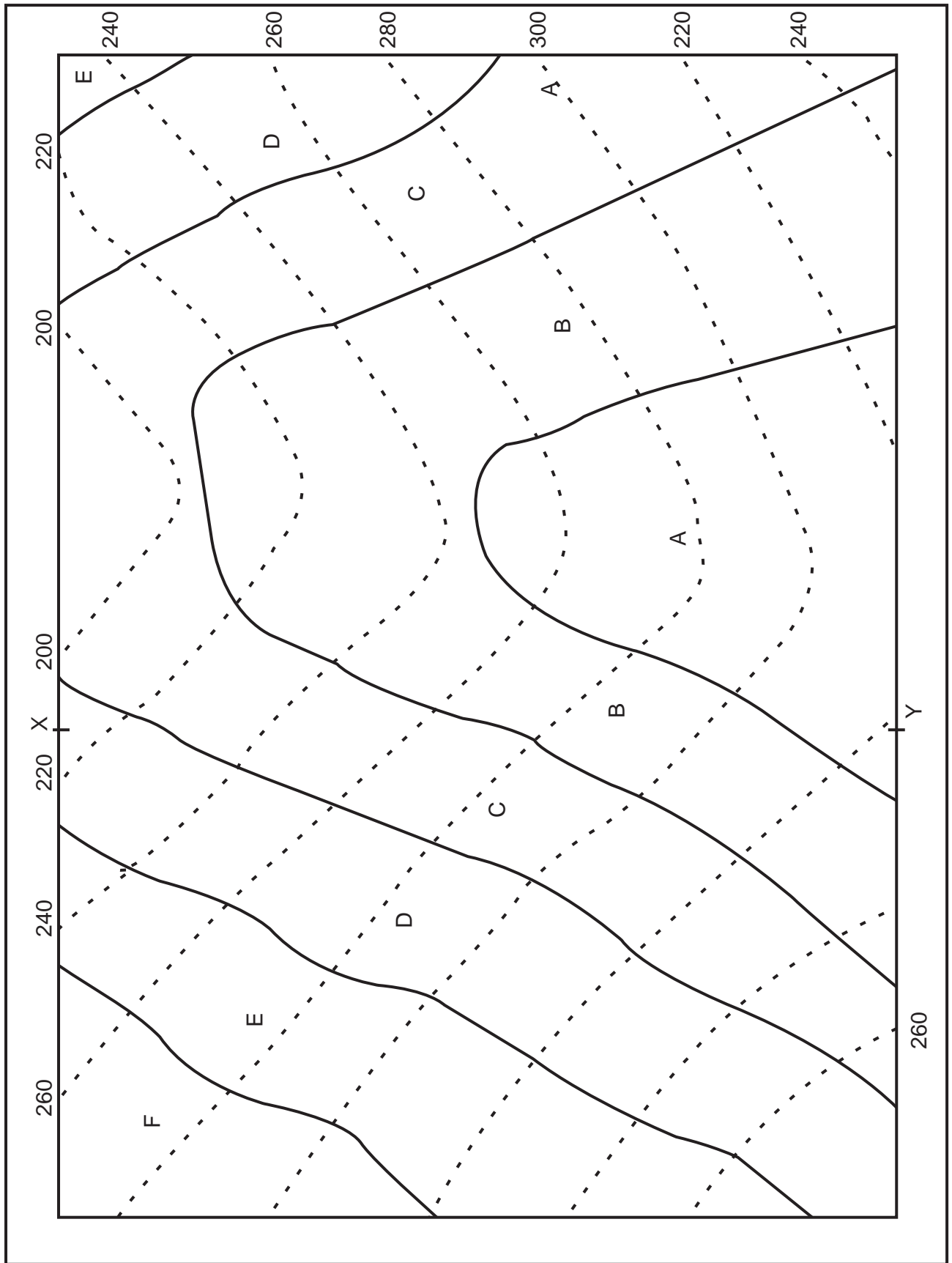


MAP NO. 3

Order of
superposition
and thickness
of beds



Scale:
1 cm = 100 m



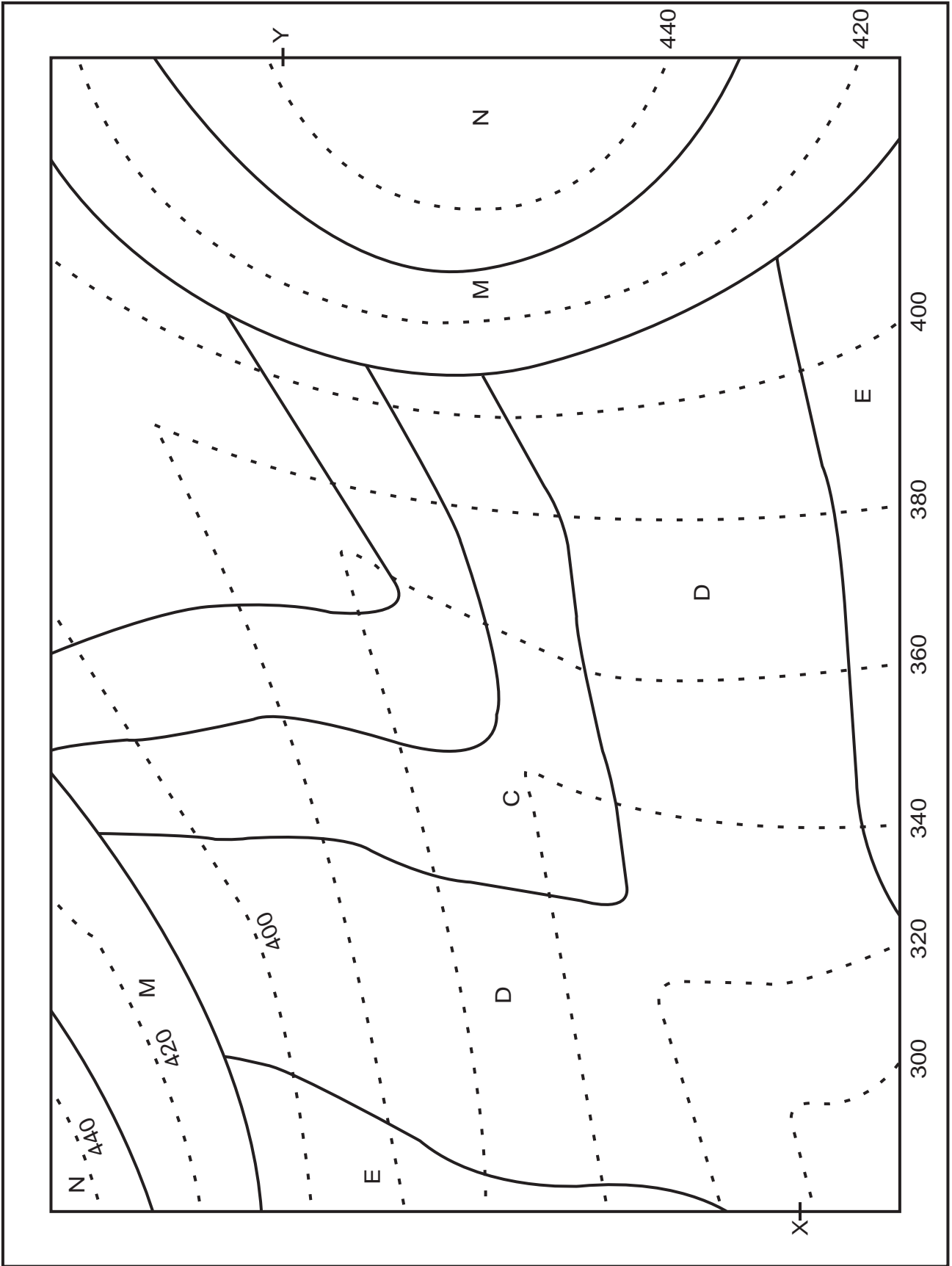
MAP NO. 4

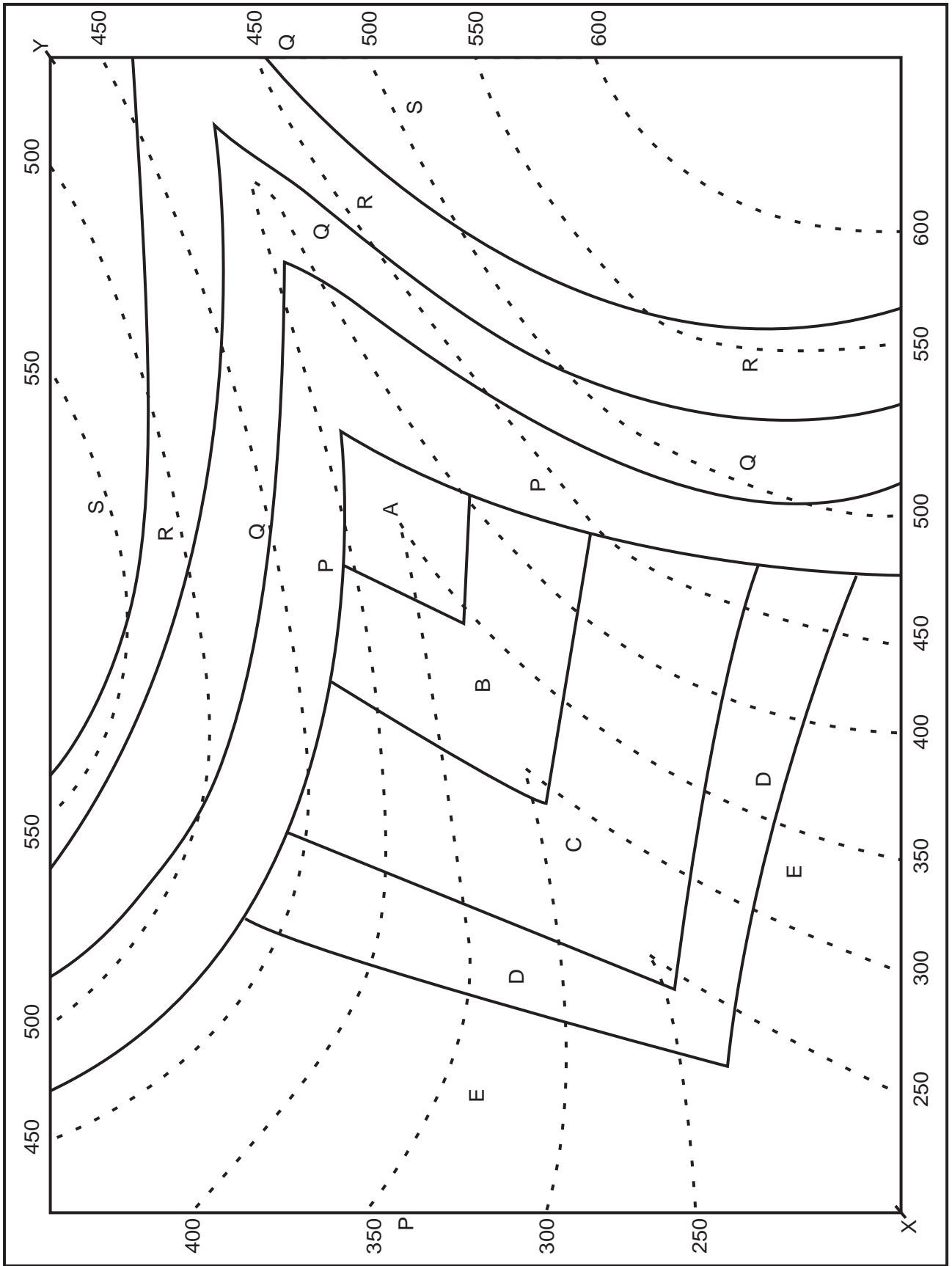
Order of
superposition
and thickness
of beds

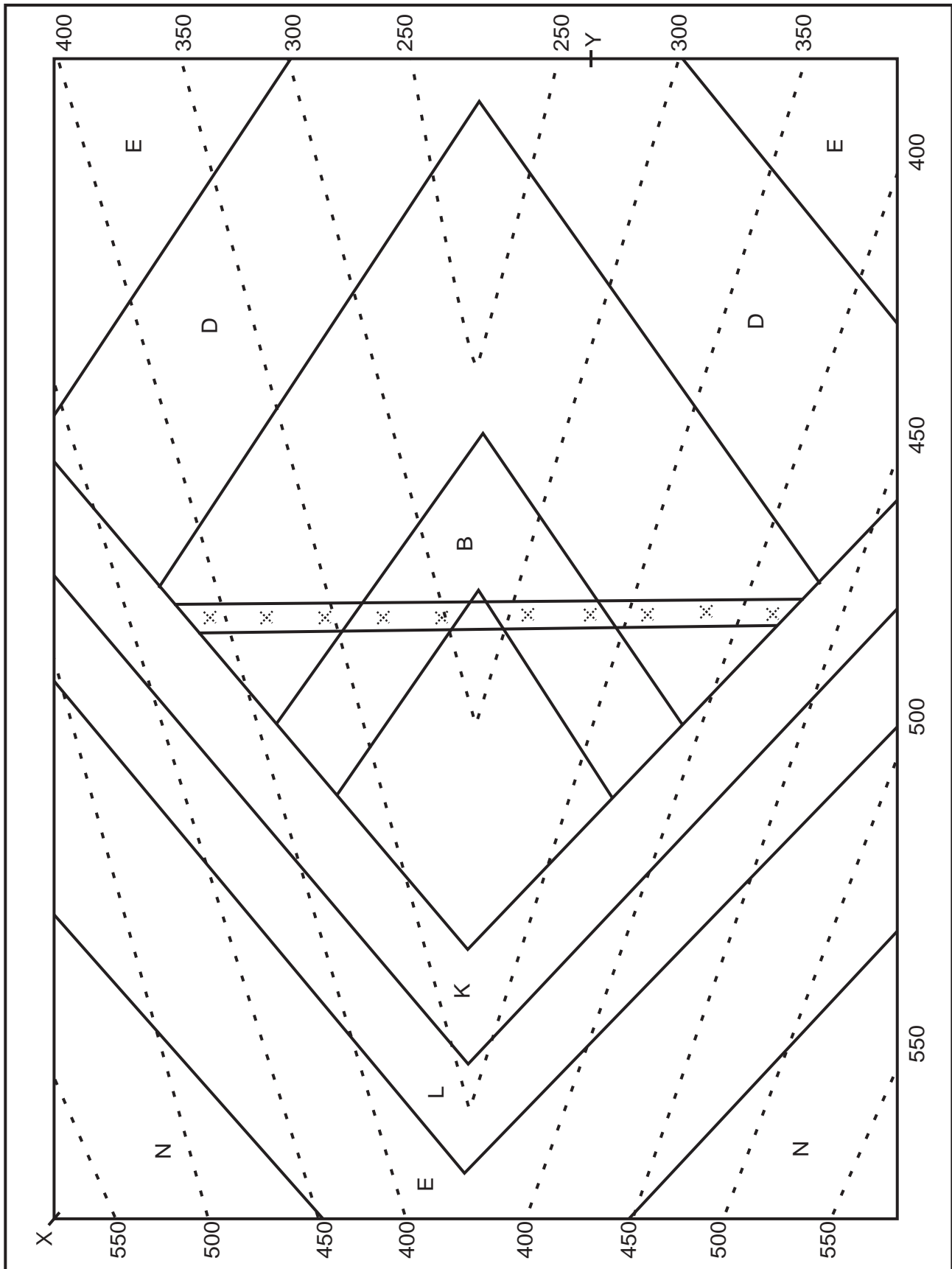
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Scale:
1 cm = 100 m







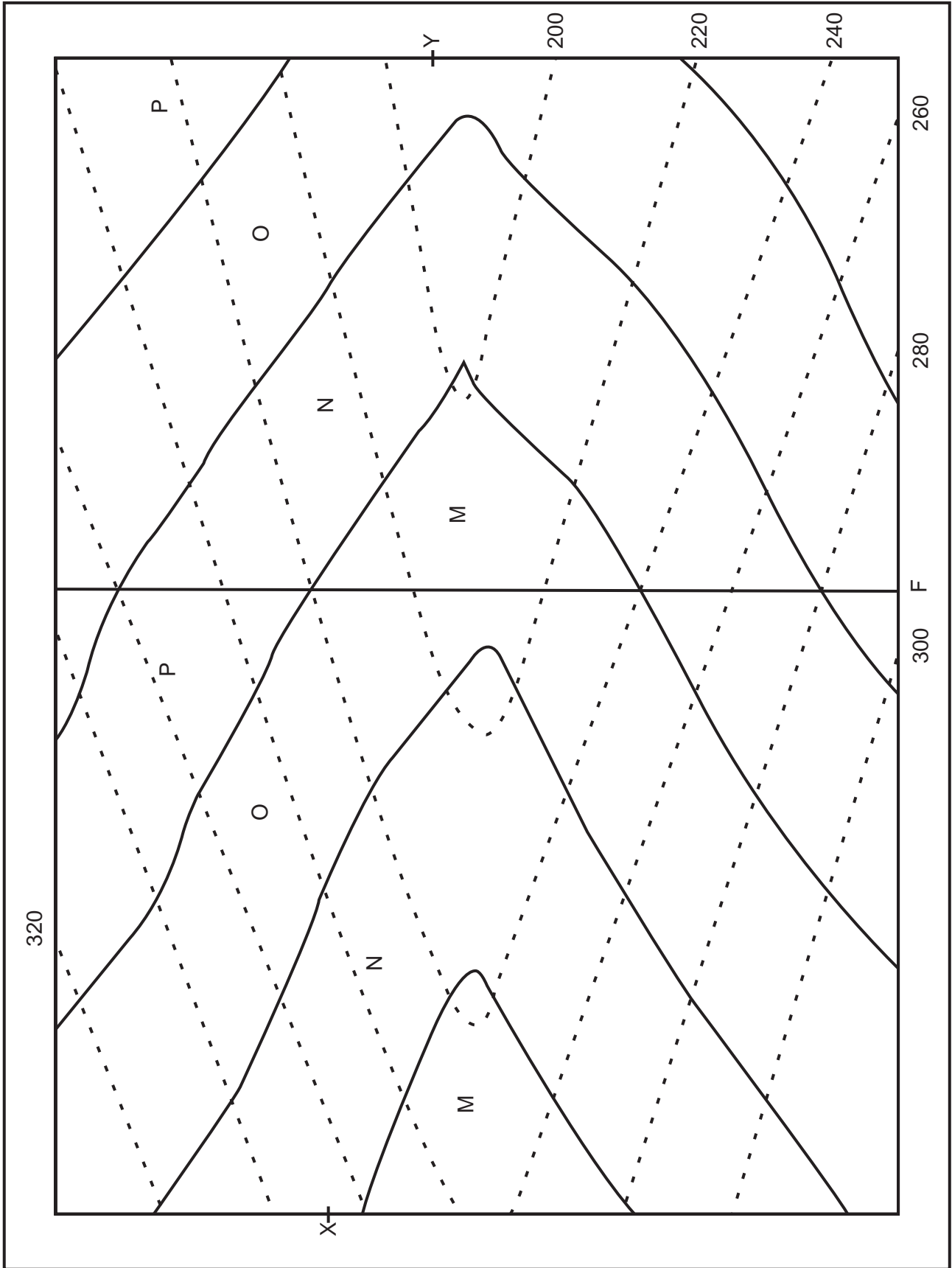
MAP NO. 7

Order of
superposition
and thickness
of beds

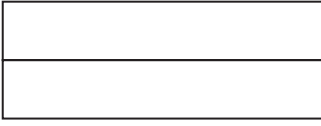
Downthrown
direction is
Amount of
downthrow =



Scale:
1 cm = 100 m



Order of
superposition
and thickness
of beds



Scale:
1 cm = 100 m

