**Exploration Geophysics G405**

**Lab No 5 Magnetic Method**

1. Induced magnetic anomalies is defined in the following equation:

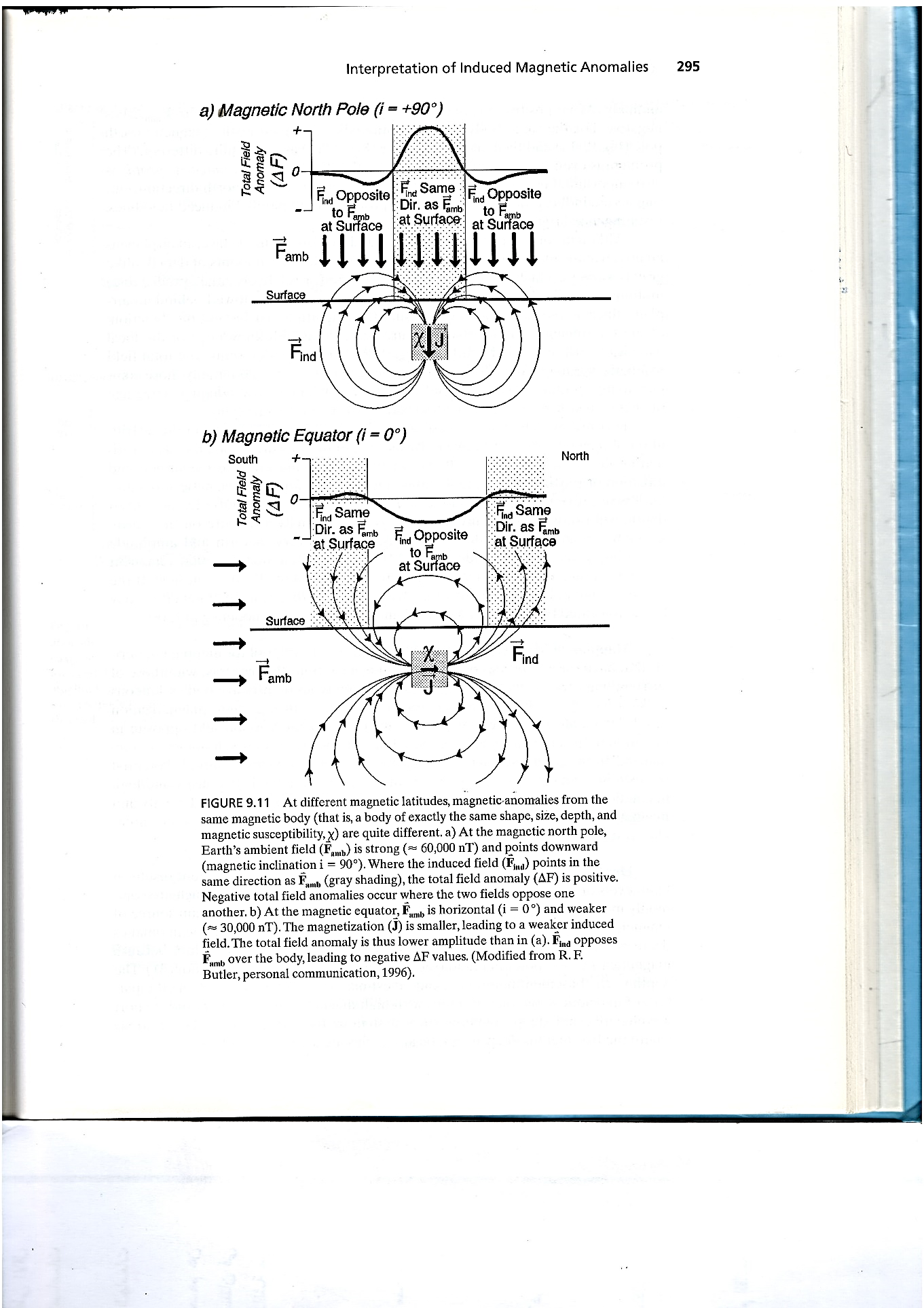
F = Famp + Find

Where: F= total magnetic field.

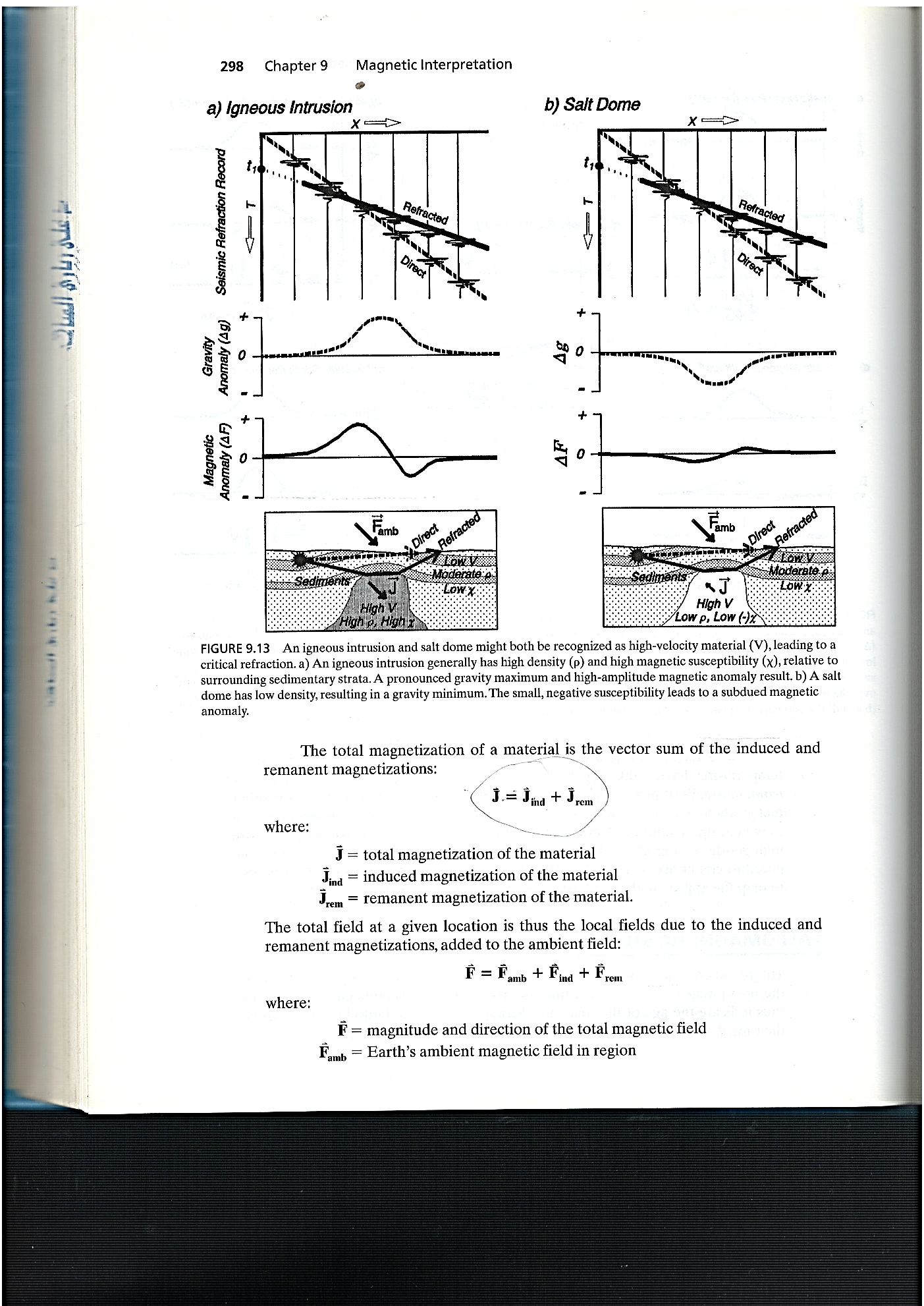
Famp = Earth’s ambient magnetic field in region.

Find = induced magnetic field.

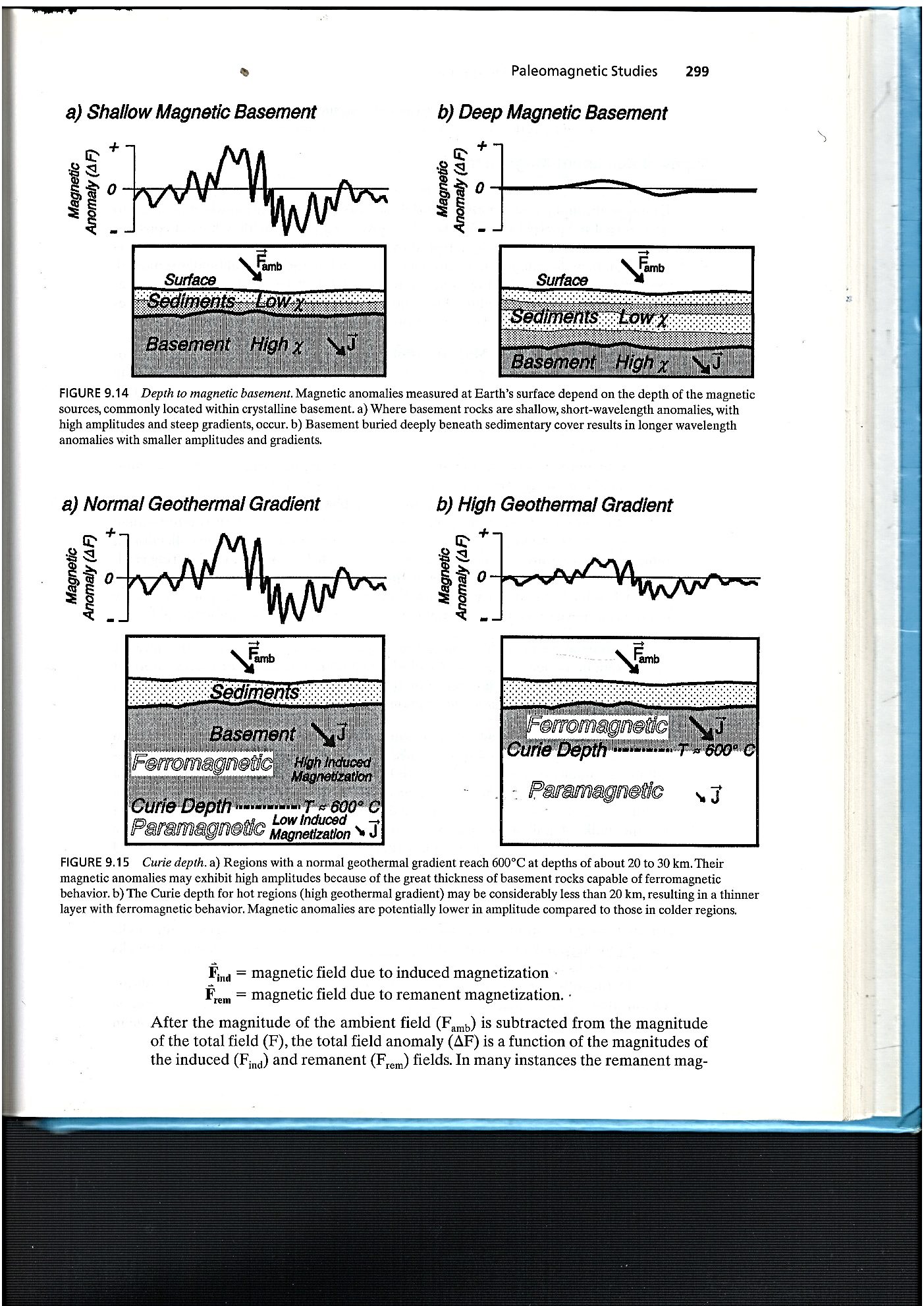
The magnetic anomaly profile in the figure below is drawn in a south-north direction, cutting across induced field lines. Sketch a cross section of the induced field and plot the total field anomaly for an east-west profile.



1. Redraw the magnetic profiles for the two models in the following figure assuming the features occur at;
2. The magnetic equator
3. The magnetic south pole



1. For the model in the following figure, sketch the form of the magnetic anomaly profile, if the magnetic basement is at the surface.



1. For the stratigraphic section below, fill in the magnetic inclination for circles B to F, assuming the rocks were deposited at the following times and orientations:
2. 77 million years ago, 27° S magnetic latitude.
3. 53 million years ago, 12° S magnetic latitude.

Note: tan i= 2 tan ɸ

1. 42 million years ago, magnetic equator.
2. 31 million years ago, 17° N magnetic latitude.
3. 16 million years ago, 25° N magnetic latitude.
4. Today, 45° N magnetic latitude.

