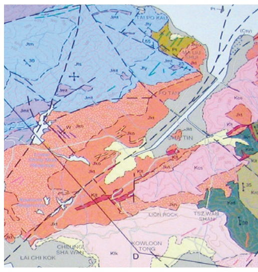
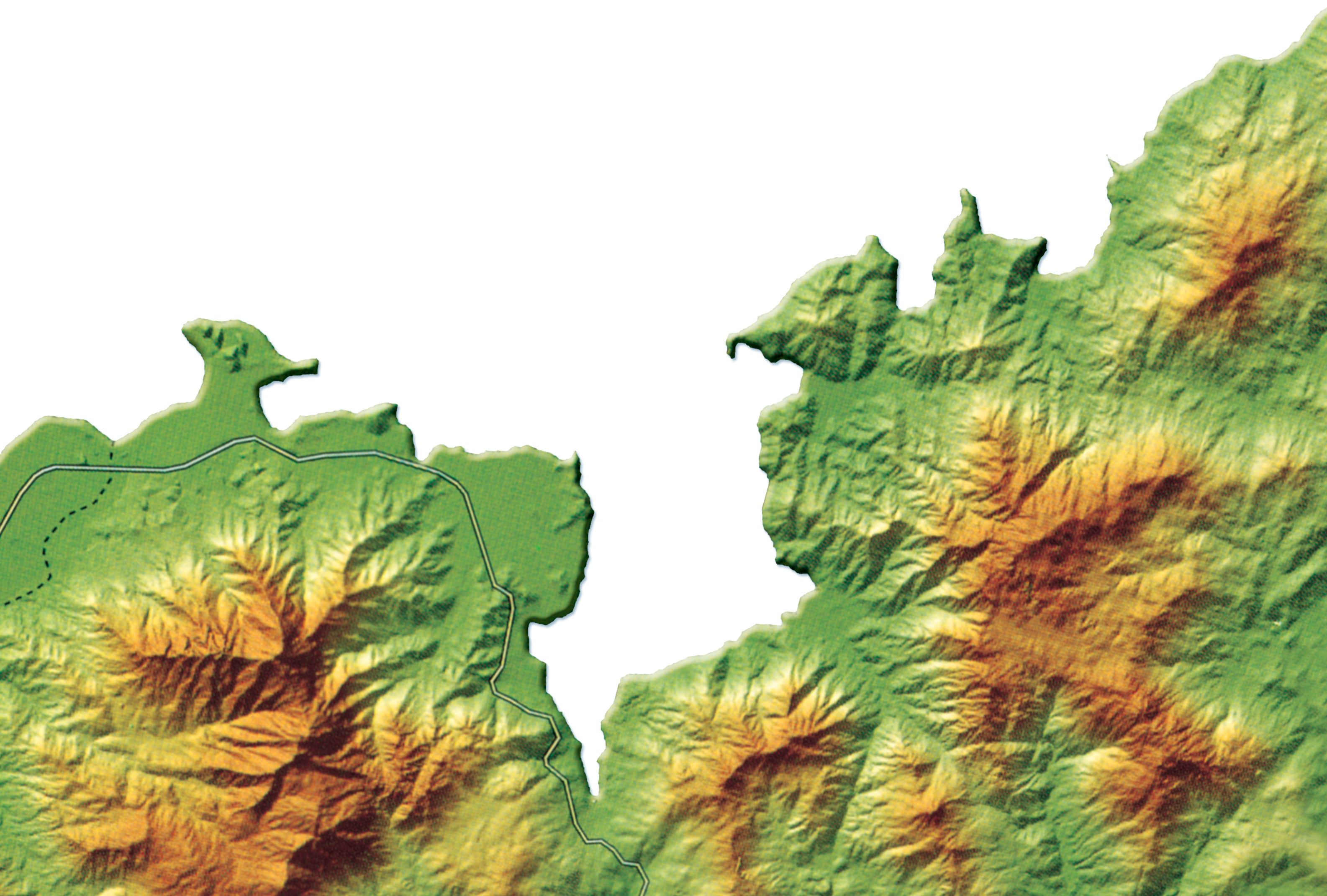
土木工程拓展署
土力工程處
Geotechnical Engineering Office
Civil Engineering and Development Department

閱讀地質圖
GEOLOGICAL MAP READING

地質圖 GEOLOGICAL MAPS 2



前言

教育局於2005年公布，三年新高中學制將於2009年9月在中四級實施。地理科是其中一個重點的選修科目。

新高中地理科課程是根據2005年教育局出版的一份文件和課程發展議會《高中課程指引》(2007)的建議而制訂。在此課程中，地理被視為一門學科讓學生可以從空間的角度了解自身所處的地球。

土木工程拓展署轄下的土力工程處應教育局的請求，在天然災害及地球科學兩個新高中地理科課程內容上製備了一份「教學支援教材套」。其中有關香港岩石及礦物的資料亦適用於部份化學科的課程。

「教學支援教材套」包括了14本小書冊、4張海報、3片光碟及其他一些補充資料。此教材套在香港的斜坡安全、山泥傾瀉、地質及地貌等課題上提供了合適及最新的資料並同時符合新高中地理科課程的水平。

土力工程處的「香港地質調查組」負責編寫有關香港地質及地貌方面的內容，而「斜坡安全部」則負責香港斜坡安全及山泥傾瀉的部份，「斜坡安全部」的同事亦負責整個項目的策劃與安排。我謹向各位參與這項工作的同事致謝。

我相信這教材套對各位負責新高中地理科目的老師在擬備教材時能提供合適的參考。此教材套亦給予有興趣於這些課題的廣大讀者一些有用的資料。

陳健碩
土木工程拓展署
土力工程處處長
2008年12月

Foreword

In 2005, the Education Bureau (EDB) announced that a three-year New Senior Secondary (NSS) curriculum would be implemented at Secondary 4 in September 2009. Geography is one of the elective subjects under the NSS curriculum.

The NSS curriculum has been developed on the basis of the recommendations made by an EDB document in 2005 and a Senior Secondary Curriculum Guide of 2007. Within the curriculum, geography is seen as a key educational discipline that provides students with a spatial understanding of the Earth on which we live and work.

At the request of the EDB, the Geotechnical Engineering Office (GEO) of the Civil Engineering and Development Department have prepared support teaching materials for the NSS Geography curriculum under the topics of Natural Hazards and Earth Science. The materials written on rocks, minerals and ores in Hong Kong are also suitable for part of the Chemistry curriculum.

The "Teaching Support Materials Kit" consists of 14 booklets, 4 posters, 3 CDs and other supplementary information sheets. This teaching kit contains pertinent and up-to-date information on slope safety, landslides, geology and geomorphology in Hong Kong, written at a level that is suitable for the NSS Geography curriculum.

Hong Kong Geological Survey of GEO have compiled the teaching materials that describe the geology and geomorphology of Hong Kong. The Slope Safety Division of GEO have prepared the teaching materials on Hong Kong slope safety and landslides. Colleagues in the Slope Safety Division are also responsible for the overall planning and coordination of this project. Their contributions are gratefully acknowledged.

I am confident that, for years to come, secondary school geography teachers will find the kit invaluable for preparing their classroom teaching materials. The contents will also be of interest to the more general readers who may wish to learn more about these topics.

Raymond K S Chan
Head, Geotechnical Engineering Office
Civil Engineering and Development Department
December 2008

引言
Introduction

我們的地球是一個由大氣圈、水文圈、生物圈及岩石圈四個主要部份組成的動力體系。這四個部份在漫長的地球歷史中，持續互相影響。地質學為一門研究岩石圈的科學，並且包含岩石圈與其他三個部份相互作用的研究。

簡單而言，地質圖展示岩石在某地區的分佈形勢。然而，要全面了解地質圖，就必須熟悉一些地質學的基本原則，包括地層學定律、地質年代(**地質圖之一**)及地質構造。對於具經驗的人來説，地質圖反映區內岩石三維分佈的情況，同時，亦能展現該區的地質發展史(**地質圖之二**)。香港備有一系列地質及相關地圖(**地質圖之三**)，為市區規劃、地質資源分佈及地質災害的確認提供有用的資訊。

Our Earth is a dynamic system that comprises four main components: the atmosphere, the hydrosphere,the biosphere and the geosphere. These four components have been continuously interacting throughout the Earth's long history. Geology is the science that studies the geosphere, and encompasses the interactions between the geosphere and the other three components.

In simple terms, a geological map shows the surface distribution of rocks in an area. However, in order to fully understand a geological map, it is necessary to be familiar with several basic geological principles, including the laws of stratigraphy, geological age **(Geological Maps 1)**, and geological structures. To the experienced eye, a geological map reflects the three-dimensional distribution of rocks in an area, and also serves as a visual guide to the geological history of that area **(Geological Maps 2)**. A range of geological and related maps is available in Hong Kong **(Geological Maps 3)**. These maps provide useful information for urban planning, locating resources, and identifying geohazards.

內容
Contents

- 前言 Foreword — i-ii
- 引言 Introduction — 2
- 岩群、岩組、岩套 Groups, Formations and Suites — 4-5
- 地質圖顯示甚麼？ What is shown on a Geological Map? — 6-11
  - 顏色範圍 Coloured Areas — 8-9
  - 地質線 Geological Lines — 8-9
  - 地質符號 Geological Symbols — 10-11
  - 圖例 Map Legends — 10-11
- 了解露頭出現方式 Understanding Outcrop Patterns — 12-13
  - 平板狀岩石單位 Slab-shaped Rock Units — 12-13
  - 褶皺岩石單位 Folded Rock Units — 12-13
- 解讀地質歷史 Interpretation of Geological History — 14-15

地質圖的用途廣泛，包括土地規劃用途、評估天然災害、探測礦物資源、評估水源及建築工程項目等等。

地質圖是將各種不同的地質資料，包括岩石及沉積物的分佈、指定地區的岩石種類、其年代關係、以及區內的地質構造特點，透過圖像展示出來。地質圖以地形圖作基礎，輔以特定的符號來描述地質詳情，為評估地圖範圍內三維地質構造，提供所需的全部資料。

地質圖是簡明的文件，用以解釋區內的地質歷史。但須注意地質圖僅表達了地質學家於製圖時，對所得的地質資料的詮釋。地圖勘察的範圍及搜集數據的時間，對地質圖的準確度有很大影響。隨著更多的實地考察及來自探孔及挖掘的數據的增加，地質圖可進一步得以修訂及改進。

岩群、岩組、岩套

地層單位是指分立並可明確劃定的地層或岩體。具有獨特岩性、物質及化學特徵的地層單位，以**岩組**顯示於地質圖上。兩個或以上地理相近及具有類似特質的岩組，被分配為同一**岩群**，亦即岩組以上的一個級別。香港的火山岩岩組通常被編排至一個岩群，以表示特定的**岩漿活動時期**(即火山活躍期)。未經固結的表土沉積物是最年輕的地層單位，覆蓋了大部分堅固的基岩。香港的表土沉積物包括陸上的沖積物(河流沉積)及坡積物(山坡沉積)，海泥、海沙以及更新世的離岸沖積。

較大而獨立的侵入岩在地質圖上顯示為**深成岩體**或花崗岩岩體，並按其出現的地區而定名。這些花崗岩岩體的地位等同於與岩組。多個化學及礦物特徵有密切關係的花崗岩岩體，則會組合為**岩套**。在香港，岩套相等於火山岩岩群，兩者皆代表特定的岩漿活動時期。

Geological maps are used for a wide variety of purposes including land use planning, natural hazard assessments, mineral resource investigations, water resources evaluations, and engineering construction projects.

Geological maps are a visual representation of a wide variety of geological data, including the distribution of rocks and sediments in a particular area, the types of rocks, their age relationships, and the structural features in that area. Using an underlying topographical base map and special symbols to depict geological details, geological maps provide all the information necessary for the user to assess the three-dimensional geological structure of the rocks in the map area.

A geological map is a summary document from which the geological history of an area can be deciphered. However, it should be realised that a geological map is an interpretation, by a geologist, of the geological facts that were available at the time that the map was prepared. The accuracy of a geological map is largely a function of the time spent walking over the area, and time available for data collection. Geological maps can be revised and improved as more field work is carried out, and as more data from boreholes and excavations becomes available.

Groups, Formations and Suites

A **stratigraphical unit** is a discrete stratum or body of rock that occurs as a definable and mappable feature. Stratigraphical units with distinctive lithological, physical and chemical characteristics are shown as **formations** on geological maps. Two or more geographically associated formations with similar characteristics may be assigned to a **group**, which is the next order above a formation. In Hong Kong, the volcanic formations are commonly assigned to a group that represents a particular **magmatic episode**, a phase or period of volcanic activity. The unconsolidated superficial sediments are the youngest stratigraphical units, which form a cover over most of the solid (consolidated) bedrock. In Hong Kong, superficial deposits comprise alluvium (river deposits) and colluvium (hillslope deposits) onshore, and marine mud, sand, and Pleistocene alluvium offshore.

Large, single intrusive units are shown on geological maps as **plutons** or granite bodies, named after the particular geographical locality in which they occur. The stratigraphical status of these features is equivalent to a formation. Closely associated plutons or granite bodies with a characteristic chemistry and mineralogy are grouped as **suites**. In Hong Kong, suites are the plutonic (intrusive) equivalent of volcanic (extrusive) groups, and represent a particular magmatic episode.

地質圖顯示甚麼?

地質圖通常包括一張地形圖，在此之上利用顏色顯示地層單位(岩石及沉積物)的分佈；又以特別符號來標示地質結構及其他地質資料。地圖上的顏色、線條及符號代表了大量由地質學家從實地考察搜集得來的資訊。地質圖包括圖例，用以解釋符號的意義、地層單位的年齡，以及地層單位的關鍵。有時，地質圖上的圖例亦會顯示地層關係。地質圖一般都包括一個或以上的剖面圖，以幫助使用者理解該區的地質情況(圖1)。

What is shown on a Geological Map?

A geological map normally comprises a topographical base map, overlain by areas of colour, to show the distribution of stratigraphical units (rocks and sediments), and special symbols, to show structural and other geological information. The colours, lines and symbols on a geological map represent a large amount of detailed information that has been gathered by geologists during fieldwork. Geological maps include a legend that explains the meaning of the symbols, the ages of the stratigraphical units, and provides a key to the units. In some cases, the geological legend may also show stratigraphical relationships. To assist the user with an interpretation of the geology, geological maps usually include one or more representative cross-sections (Figure 1).

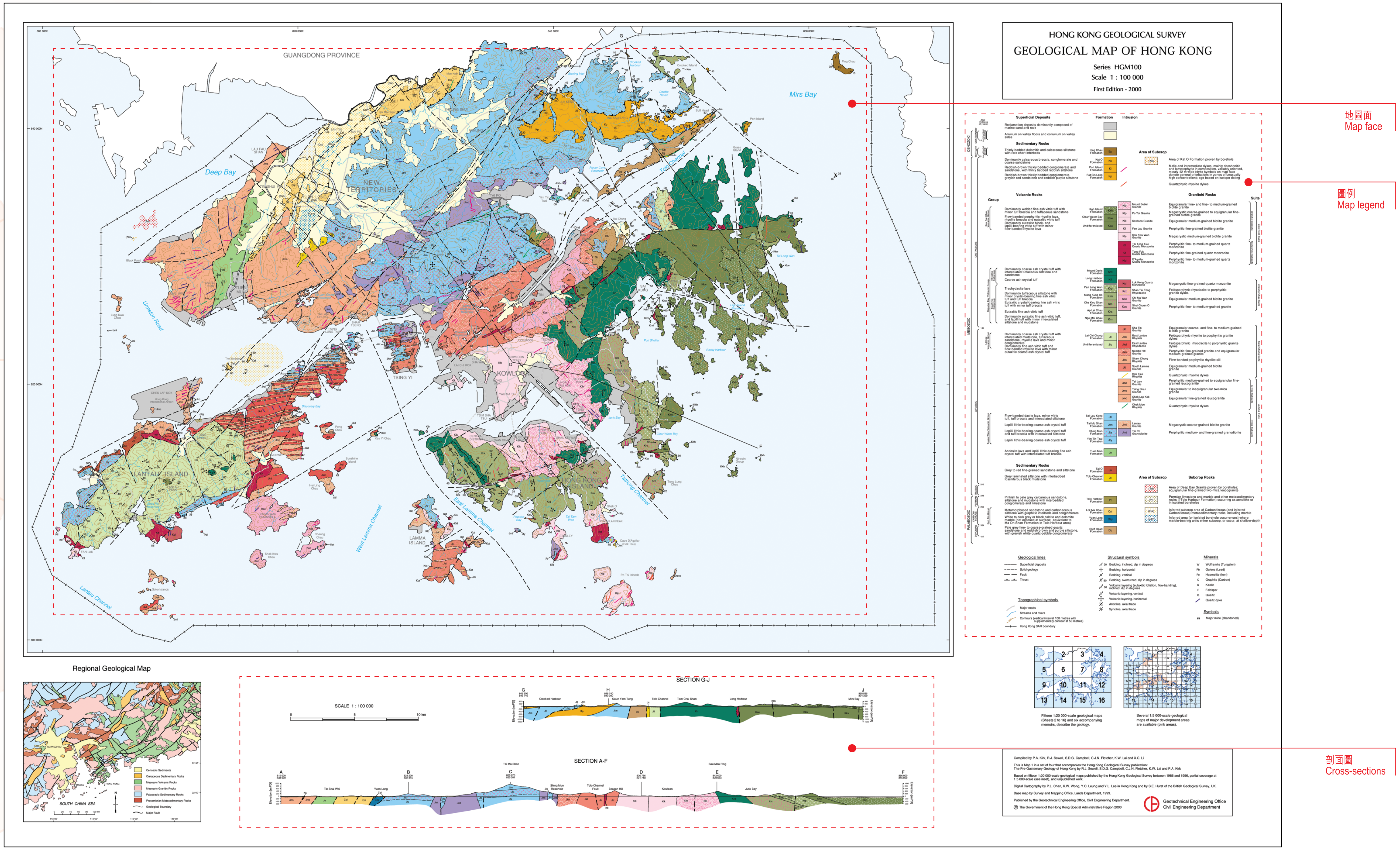


圖1. 香港地質調查1:100,000比例香港地質圖。
Figure 1. Hong Kong Geological Survey 1:100,000-scale Hong Kong Geological Map.

顏色範圍

在地質圖上，每個地層單位(非指每類岩石)都會被分配一個專用顏色，顏色的選擇通常視乎地層單位的年齡而定。國際上有數個認可的顏色標準系統，給特定的地層單位及地質時期。然而某程度上，為了配合地圖的獨特用途，差不多所有的地質圖上採用的顏色都跟標準的系統有所不同。

除個別專用顏色外，文字符號亦經常被用來識別特定地方的地層單位。首個字母為大楷，通常代表地質年代，例如：J是指侏羅紀(二億至一億四千五百萬年前)，P則表示二疊紀(二億九千九百萬至二億五千一百萬年前)，及D代表泥盆紀(四億一千六百萬至三億五千九百萬年前)，隨後的字母(小楷)則代表其岩組的名字或主要的岩石種類。

有關地質時代表之討論，見地質圖之一。

地質線

觀察不同岩石單位的接觸方式是閱讀地質圖的重要元素，而三種主要的地質接觸類型為：侵入接觸、沉積接觸及斷層接觸。在地質圖上，侵入及沉積接觸一般以幼線表達，至於斷層接觸則以粗線顯示(圖2)。

顯示在地質圖上的斷層並非都是活躍斷層(即與地震有關)。長時間不再活躍的斷層的紀錄，仍可能保留於岩石中。因此，地質圖上的斷層線只代表保留在岩石內的斷層位置。

在地質圖上，地質邊界可以是實線或虛線，這反映其在地圖上的確定性及準確程度。通常植被、土壤或市區建設會遮藏了地質接觸邊界。如果地質邊界可觀察得到，於地質圖上便會以實線顯示。但如地質邊界不確定或僅憑推斷，該地質線便會以虛線表達。一般而言，虛線越短，則表示該界線的位置越不確定。

地質圖上的線條可以用符號來補充說明，如有：填色三角形、小剔號、箭號等。這些符號為地質線提供補充資料，例如斷層(粗線)加上三角形表示該斷層屬於逆斷層，而斷層線附有三角形的一方(即是斷層上盤)，被推覆至線的另一方(即是斷層下盤)。這些地質線和其他的線上符號皆於圖例中闡釋。

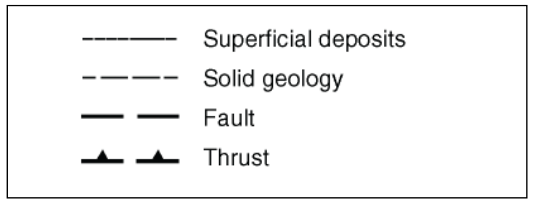


圖2. 地質線的例子。
Figure 2. Examples of some geological lines.

Coloured Areas

A unique colour is assigned to each stratigraphical unit (but not to each lithological type) on a geological map. The selection of colours usually depends on the age of the stratigraphical units, with several internationally recognised colour schemes adopted for specific stratigraphical units and geological periods. However, to a greater or lesser extent, almost all geological maps depart from the standard colour schemes, depending upon the specific purposes of the map.

In addition to a unique colour, a letter symbol is commonly used to identify the stratigraphical unit in a particular area. The first letter, a capital, usually refers to the geological age of the unit. For example, J designates the Jurassic (about 200 to 145 million years ago), P the Permian (about 299 to 251 million years ago), and D the Devonian (about 416 to 359 million years ago). Subsequent (lower case) letters identify the formation name or the principle lithological type.

Refer to Geological Maps 1 for a discussion of the Geological Time Scale.

Geological Lines

The type of contact between different rock units is a critical factor to observe on a geological map. There are three main types of geological contact: an intrusive contact, a depositional contact, and a fault contact. On geological maps, intrusive and depositional contacts are generally shown by fine lines, whereas a fault contact is represented by a heavy line (Figure 2).

Not all the faults shown on a geological map are active (*i.e.* earthquake-related) at present. Rocks can preserve a record of faults that have been inactive for a very long period. Thus, the fault lines shown on a geological map simply represent the traces (locations) of faults that are preserved in the rocks.

Geological boundaries are shown as either solid or dashed lines on a geological map. This reflects the degree of certainty, and hence accuracy, of the geological contact represented on the map. Usually, in the field, geological contacts are obscured by vegetation, soil, or urban construction. Wherever a geological boundary is observable, it is shown as a solid line on the map, but where a boundary is uncertain, or is inferred, the line is dashed. Generally, the shorter the dash, the more uncertain is the location of the boundary.

The lines on a geological map may be modified using symbols (for example, filled triangles, small tick marks, arrows, *etc.*). These symbols provide additional information about the nature of the geological line. For example, faults (heavy lines) with triangle symbols show that the fault is a thrust fault, and that the side of the line with the triangles has been pushed over the side without the triangles. Other line symbols are explained on the map legend.

地質符號

地質面(如岩層、節理、斷層或紋理等)的三維方向，以走向及傾角符號表達。當地質學家覓得合適岩石露頭(並非鬆散的巨石)，便會使用地質羅盤及傾斜儀來量度這些構造的方向，以走向及傾角記錄下來(圖3)。每個在地質圖的走向及傾角符號，一般採用經多次量度所得的平均數值。

走向：走向是指傾斜的地質面與虛擬的水平面相交而成的線所指的方向(圖4)。好像將一塊玻璃放入一碗水內，由於水面處於水平，玻璃上的水位線是水平線，即走向線，而水位線所指的方向便是走向。

傾角：傾角一般是指**傾斜角度**，即地質面與水平之間的角度，指地質面於傾斜方向的傾斜度。**傾斜方向**與走向成垂直方向。水平的平面的傾角為0°，垂直的平面的傾角則為90°。

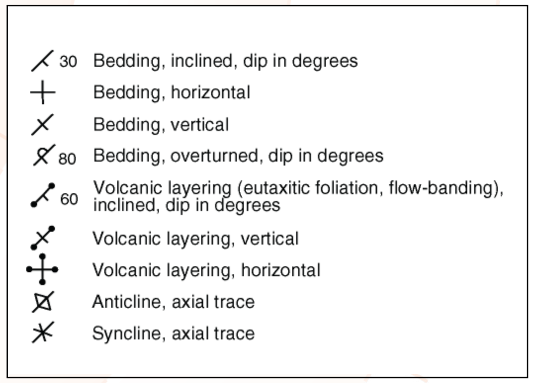


圖3. 地質符號的例子。
Figure 3. Examples of some geological symbols.

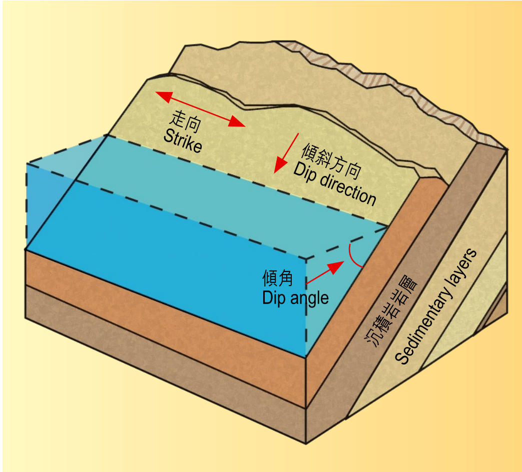


圖4. 傾斜沉積岩岩層的走向及傾角。
Figure 4. Strike and dip of inclined sedimentary layers.

圖例

圖例是地質圖的重要部分，解釋在地質圖上的顏色、線條及符號的意義。要充分了解地質圖，圖例是不可或缺的。圖例將每個地層單位的顏色及字母代號分類，並按年齡排列，在最上先列出最年輕，或新近形成的地層單位(例如人為沉積物)，而最古老的則放在最下。另外，圖例亦同時列出岩石或沉積物的名稱、簡介及年齡。

圖例亦用作解釋採用的地質線、走向及傾角等地質符號，亦可能包括礦藏、化石位置以及區內其他的重要特徵的符號。

Geological Symbols

Strike and dip symbols provide information about the three-dimensional orientation of geological surfaces such as bedding, joints, faults or foliations. Using a compass and clinometer, geologists measure the orientation of these structures wherever they can find suitable solid rock exposures (as opposed to loose boulders). The orientation and angle are recorded as a strike and a dip respectively (Figure 3). Each dip and strike symbol on a geological map usually represents the average of several measurements.

Strike : The strike of an inclined geological plane is the direction of an imaginary horizontal line projected across the surface (Figure 4). Strike may be visualised by immersing a sheet of glass into a bowl of water. Because the water surface is horizontal, the waterline on the glass is a horizontal line, or a strike line. The direction (azimuth) of the waterline is the strike.

Dip : Dip generally refers to the **dip angle**, which is the angle between a geological plane and the horizontal, *i.e.* the angle at which the plane slopes downwards, as measured in the dip direction. The **dip direction** is always perpendicular to the strike, and is the direction of maximum slope of an inclined plane. Thus, an horizontal plane has dip of 0°, and a vertical plane has a dip of 90°.

Map Legends

An important component of geological maps is the legend (or key), on which examples of all the colours, lines and symbols are reproduced and explained. A legend is necessary for a full understanding of a geological map. The legend itemises the colour and the letter symbol of each stratigraphical unit as a column, with the youngest, or most recently formed, units (*e.g.* the man-made deposits) at the top, and the oldest units in the area at the bottom. The name of the stratigraphical unit, a short description of the types of rocks or sediments present, and their age, are also included.

Legends also explain the types of geological lines used, the strike and dip symbols, and the other kinds of geological symbols shown. These may include mineral occurrences, fossil locations, and other geological features that might be important in the area.

了解露頭出現方式

平板狀岩石單位

- 當岩石以平板狀出現時，例如沉積岩岩層或板狀岩牆，其露出地面的闊度，會視乎岩石與地面的交角關係。即是說，如果岩石垂直於地面，岩石的真正厚度便可直接量度得到。另一個極端的情況，如果岩石與地面平行，則岩石會形成連續不斷的露頭。而在垂直到平行之間，當岩石相對於地面傾斜，岩石表面所見部分為其表觀厚度。露頭的闊度則視乎岩石與地面之間的角度而定，表觀厚度會較真正厚度大(圖5)。

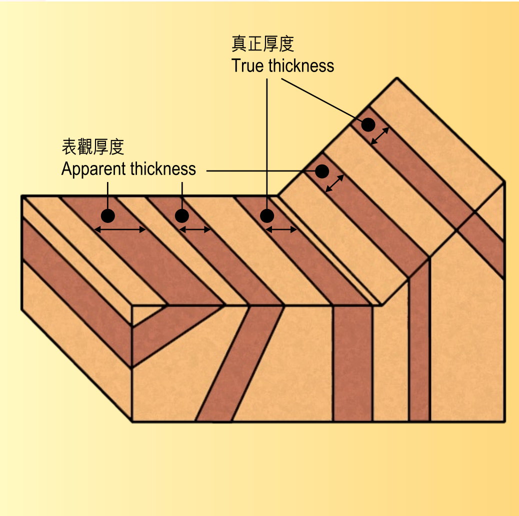


圖5. 在水平或傾斜的地面上，平板狀岩層的表觀和真正厚度的關係。
Figure 5. Relationship between apparent thickness and true thickness of a planar bed on a horizontal or sloping surface.

- 遇上平的地面，不管是水平或傾斜，平板狀岩石的露頭都呈直帶狀(圖5)。當地勢不規則，只有垂直的平板狀岩石保持板直帶狀的露頭圖案。傾斜的平板狀岩石則彎曲繞過山谷一帶。

- 在山谷，傾斜的平板狀岩石(或其他地質接觸界線)會形成“v”字形的露頭圖案，而“v”字的尖端指向岩石傾斜方向(圖6)。這定律適用於所有山谷，除非小溪的斜度與平板狀岩石的傾斜度相等或較大，又或是小溪與岩石向同一方向傾斜(圖6)。

褶皺岩石單位

褶皺是指在岩石中彎曲了的平面構造，如層理面。

要在地質圖上描述褶皺地層，須先了解有關岩石的褶皺歷史。這須連帶一起研讀褶皺的幾何學，以確定褶皺脊線的方向、褶皺軸的走向和傾伏角、以及褶皺的形狀。

在許多地質圖中，褶皺軸是用以符號描述該褶皺屬背斜或向斜。

有關褶皺之討論，見板塊運動之二。

Understanding Outcrop Patterns

Slab-shaped Rock Units

- In the case of a rock unit with a slab-shaped geometry, for example a sedimentary rock bed or a sheet-like dyke, the width of the rock band exposed at the surface depends upon the angular relationship between the rock unit and the land surface. Thus, if the rock unit is perpendicular to a horizontal ground surface, then the true thickness of the rock unit can be measured directly. At the other extreme, a planar rock unit that lies parallel to the land surface has continuous outcrop. For intermediate cases, where the rock unit is inclined at an angle to a horizontal ground surface, then only the apparent width of the rock unit is observed on the surface. The width of the outcrop depends upon the angle of dip, but it is always greater than the true thickness (Figure 5).

- In the case of a planar ground surface, be it horizontal or inclined, the outcrop patterns of slab-shaped rock units appear as straight bands (Figure 5). When irregularities are introduced into the topography, only vertical beds retain straight outcrop patterns. Dipping beds appear to bend around hills and valleys.

- In a valley, an inclined slab-shaped rock unit (or other geological contact) forms a V-shaped outcrop pattern, such that the apex of the V points in the direction of the dip (Figure 6). This rule applies in all valleys, except where the stream gradient is equal to or greater than the dip angle, and is in the same direction as the dip (Figure 6).

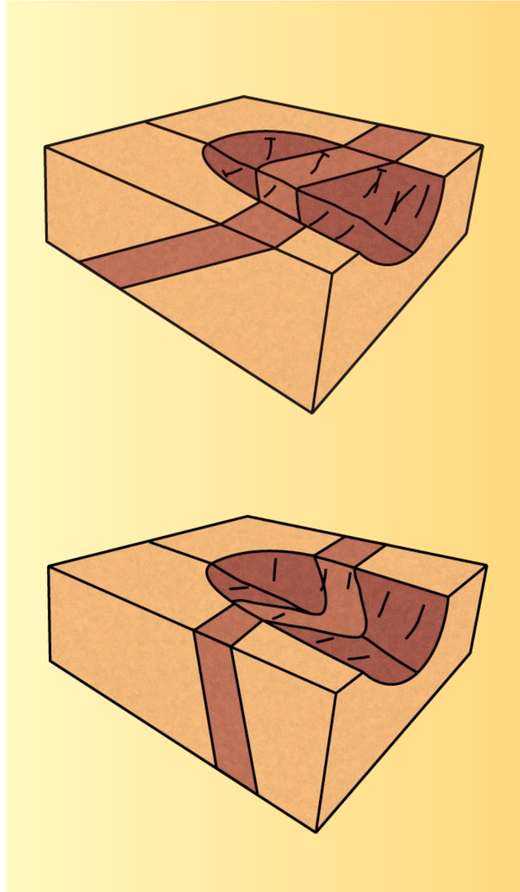


圖6. 傾斜的平板狀岩層形成“v”字形的露頭圖案。
Figure 6. Planar dipping beds showing a V-shaped outcrop pattern across a valley.

Folded Rock Units

A **fold** is a bend of a planar structure, such as a bedding plane, in a rock.

In order to depict folded strata on a geological map, the folding history of the rocks has to be understood. This is accomplished by studying the geometry of the folds to determine the orientation of the hinge line of the fold, the trend and plunge of the fold axis, and the shape of the fold.

On many geological maps, so-called "fold axes" are depicted using symbols that define whether the fold is an anticline or syncline.

Refer to Plate Tectonics 2 for a discussion of folds.

解讀地質歷史

從地質圖去了解該地區的地質歷史，必須對地質原理有透徹的理解，並需要相關的經驗、技巧和訓練。圖7是個例子說明如何從地質圖解讀地質歷史。

步驟一：檢查區內的地勢，確認出現的岩石種類(火成、沉積及變質岩)，岩石年齡及它們的地層關係。

步驟二：檢查地圖上的構造符號，這些符號提供有關岩層的傾斜角度，並提示可能對岩石造成影響的褶皺及斷層的資料。

步驟三：檢查侵入岩與周邊的岩石、斷層及表土沉積物之間的關係，例如斷層較表土沉積年長或年輕。

步驟四：注意表土沉積物的覆蓋層，這是第四紀山泥傾瀉及河流作用所產生鬆散的沉積物。

步驟五：概述現今所見的地質事件及發展過程，並製造地質模型以形象化地描述地質歷史。

例子中的地質圖(圖7)表示曾發生的地質事件順序大致如下：

1. 中粒花崗岩侵入
2. 流紋岩岩牆侵入
3. 火山爆發，火山岩形成
4. 由北向南伸展的斷層活動及火山岩褶皺
5. 上升及侵蝕
6. 表土沉積物堆積

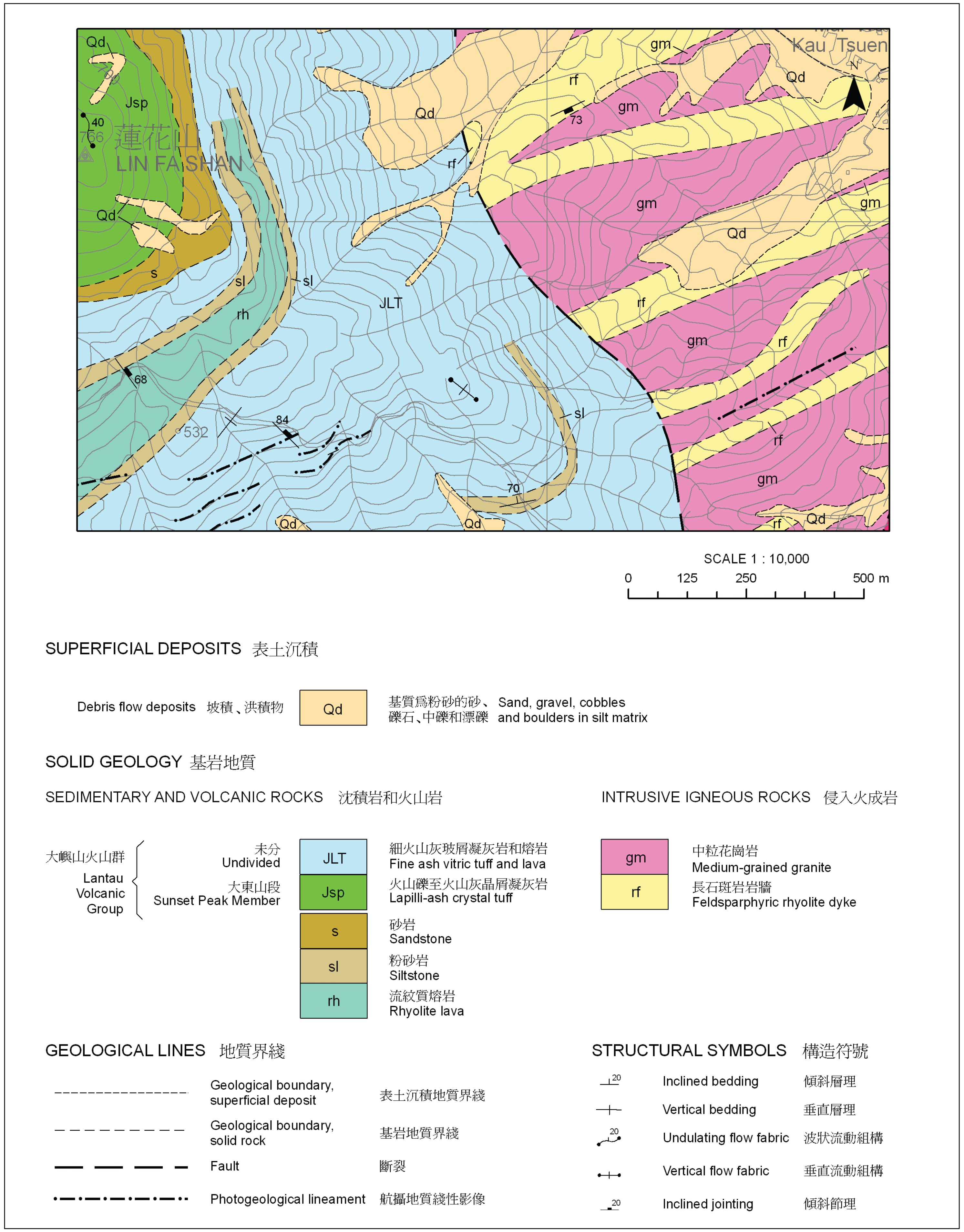


圖7. 從地質圖解讀地質歷史的例子(摘錄自香港地質調查圖幅十1:20,000比例香港地質圖)。
Figure 7. Example for interpretation of geological history from a geological map (Extract from Hong Kong Geological Survey 1:20,000-scale map sheet 10).

Interpretation of Geological History

Interpreting the geological history of an area from a geological map requires a thorough understanding of geological principles, experience, acquired skills, and practice. An example of how to interpret the geological history of an area from a geological map is given in Figure 7.

Step 1. Examine the topography of the area, identify the range of rock types present, (igneous, sedimentary, and metamorphic), the ages of the rocks, and their stratigraphical relationships.

Step 2. Examine the structural symbols on the map. These provide information about the dips of the beds, and of folds and faults that may have affected the rocks.

Step 3. Examine the relationship between igneous intrusions, the surrounding rocks, faulting, and superficial deposits. For example, is faulting older or younger than the superficial deposits.

Step 4. Consider the cover of superficial deposits. These are unconsolidated (loose) sediments that were deposited during the Quaternary by processes such as landslides and rivers.

Step 5. Summarise the sequence of events that have produced the geology seen today, and construct a geological model to visually describe the geological history.

The sequence of geological events that can be inferred from the geological map (Figure 7) is probably:

1. Intrusion of medium-grained granite
2. Intrusion of rhyolite dykes
3. Eruption of volcanic rocks
4. Faulting (N-S-trending) and folding of volcanic rocks
5. Uplift and erosion
6. Deposition of superficial deposits

首刊，2008年

香港九龍公主道一零一號
土木工程拓展署大樓
土木工程拓展署 土力工程處

網址 : http://www.cedd.gov.hk
香港斜坡安全網頁: http://hkss.cedd.gov.hk

First Published, 2008

Geotechnical Engineering Office, Civil Engineering and Development Department,
Civil Engineering and Development Building, 101 Princess Margaret Road,
Homantin, Kowloon, Hong Kong

Internet homepage : http://www.cedd.gov.hk
Hong Kong Slope Safety Website : http://hkss.cedd.gov.hk