



## **GEOLOGISTS IN HONG KONG – OUR WORTH & ARE WE WORTHY**

KEVIN STYLES – 25.2.15

# Geologists – 140 Years Later

## Young Teams Professional Approaches





# **MOTIVATION - DESIRE - AMBITION**

- To be Professional**
- To Train in a Professional Environment**
  - To be Recognised as Professional**
  - To Succeed in Professional Careers**

# **AIM THIS EVENING**

**To encourage  
ever increasing enthusiasm, zeal and passion  
for  
more active participation in our future**

## **CHALLENGE 1 – KNOWING OURSELVES**

(HERITAGE & SENSE OF “**WORTH**”)

## **CHALLENGE 2 – MAKING THE PAST RELEVANT**

(PAST DEEDS, CONTINUOUS IMPROVEMENT & LESSONS LEARNT  
CONTRIBUTE TO SENSE OF “**WORTH**”)

## **CHALLENGE 3 – FUTURE GOVERNANCE OF OUR PROFESSION**

(AS GEOLOGISTS ARE WE “**WORTHY**” TO LEAD OR WILL WE BE  
LED BY OTHERS)

# **SITREP**

**Regional Group HK**

**291 Fellows**

**85 Chartered Geologists (CGeol) – 30%**

**9 Newly admitted in 2014**

**Probably 25 in Accredited Training Schemes**

**Geol Soc - Worldwide**

**11,000 Fellows**

**2500 Chartered – 22%**

# SITREP 2

**85 Chartered Geologists (CGeol) – 30% of HK RegGeol**  
**9 Newly admitted in 2014**  
**Probably 25 in Accredited Training Schemes**

## **C GEOL Validation** **A “Hurdle” or a “High Jump”**

**Standard – need to calibrate**  
**Competent to Practice given “mentored” experience or “Elitist Club?”**



# SITREP 3

## Where are the Geologists?

- Regional Group HK – 291
- Geological Society of HK – 150
- IOM3 – 300 (50 Geols?)
- AUS IMMM (?)
- IOQ (?)
- HKIE (<10)

# **SITREP 4**

## **Academic Training**

**After a decade of lobbying – Francis Report – 1990**

**Earth Science Degree HKU – 1995**

**MSc – HKU – 1998**

**Accredited Pathway - 2011**

**Prior to 1995 - Department of Geography & Geology - HKU**

# **SITREP 5**

## **Training in Employment**

**GCO – Eng Geol Grad (EGG) Programme in the Mid  
1980s**

**GEO from HKU grads - 1998-99 intake**

**Industry – CGeol Accredited Training Programmes  
2010 onwards**

First challenge – Knowing Ourselves – Our Worth

Who are we ?

What do we do?

What makes us different?

Who are we?

**WE ARE GEOLOGISTS**

(Quite Diverse – but in this room mostly- Eng Geol, Mapping Geols)

What do we do?

What do we do?

**WE MAKE THE PAST RELEVANT**



**THINK ABOUT IT**



**THE WAY WE ARE TRAINED TO  
OBSERVE & THINK**

**TO MAKE THE PAST RELEVANT!**



What makes us different?

What makes us different?

**THE WAY WE “THINK”**

**Oxford Def – “to exercise the mind other than by passive reception of anothers ideas”**

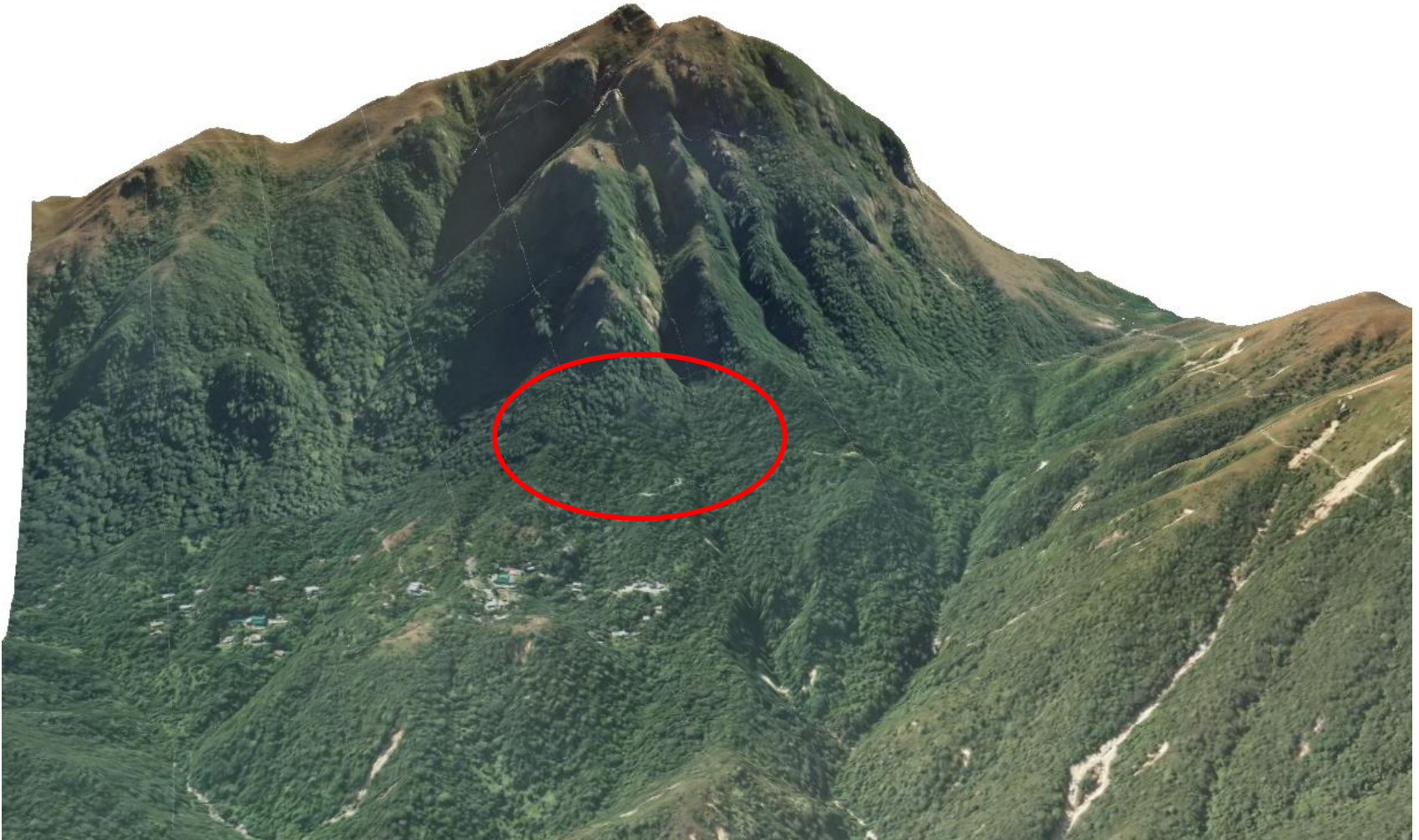
What makes us different?

THE WAY WE THINK

Good Geologists “observe”

Usually “observe” in 3D

# Fung Wong Shan – Lantau Peak – 2010

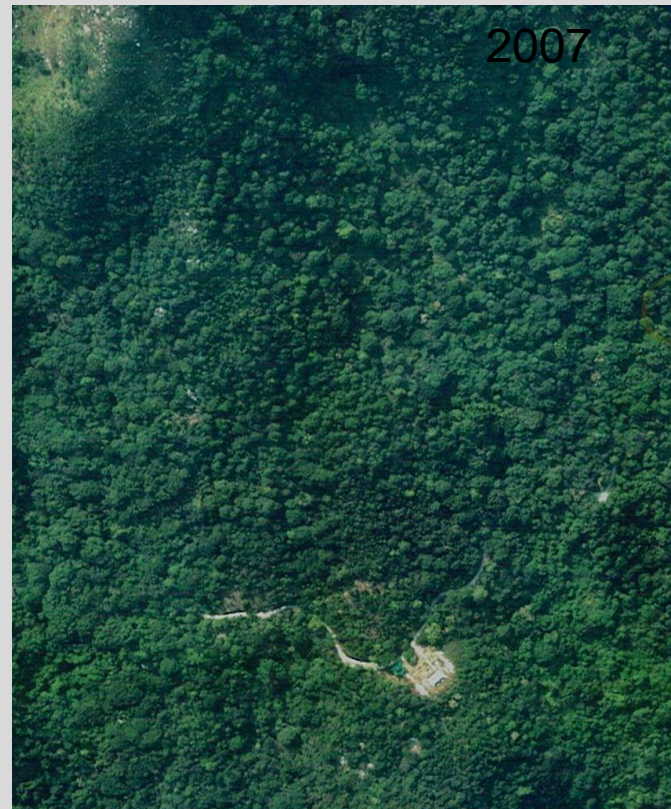


# Fung Wong Shan – Lantau Peak – 1963 - (Tei Tong Tsai)



# Ngong Ping - Comparison - 1963 & 2007

Northern slopes – Fung Wong Shan – Lantau Peak



What makes us different?

THE WAY WE THINK

Good Geologists “observe”

Good Geologists “think in 4D”

WE observe in 3D & Apply Time 4D

(Time = Form & Process)

- 
- **Every Field Observation**
  - or Photographic Image
  - **Captures Change**
- A static situation is alive if we are alert & perceptive

**THINK ABOUT IT !!!**

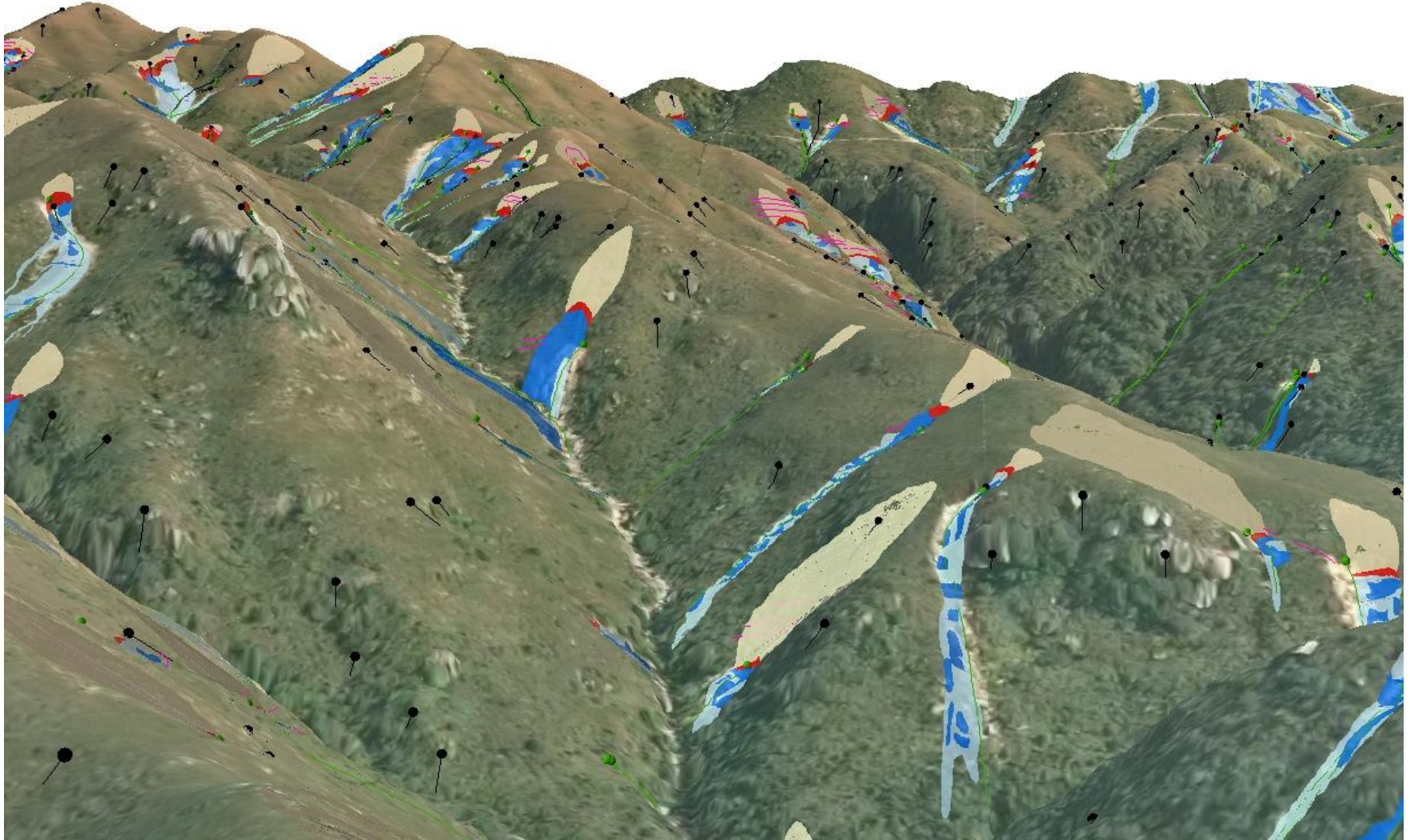


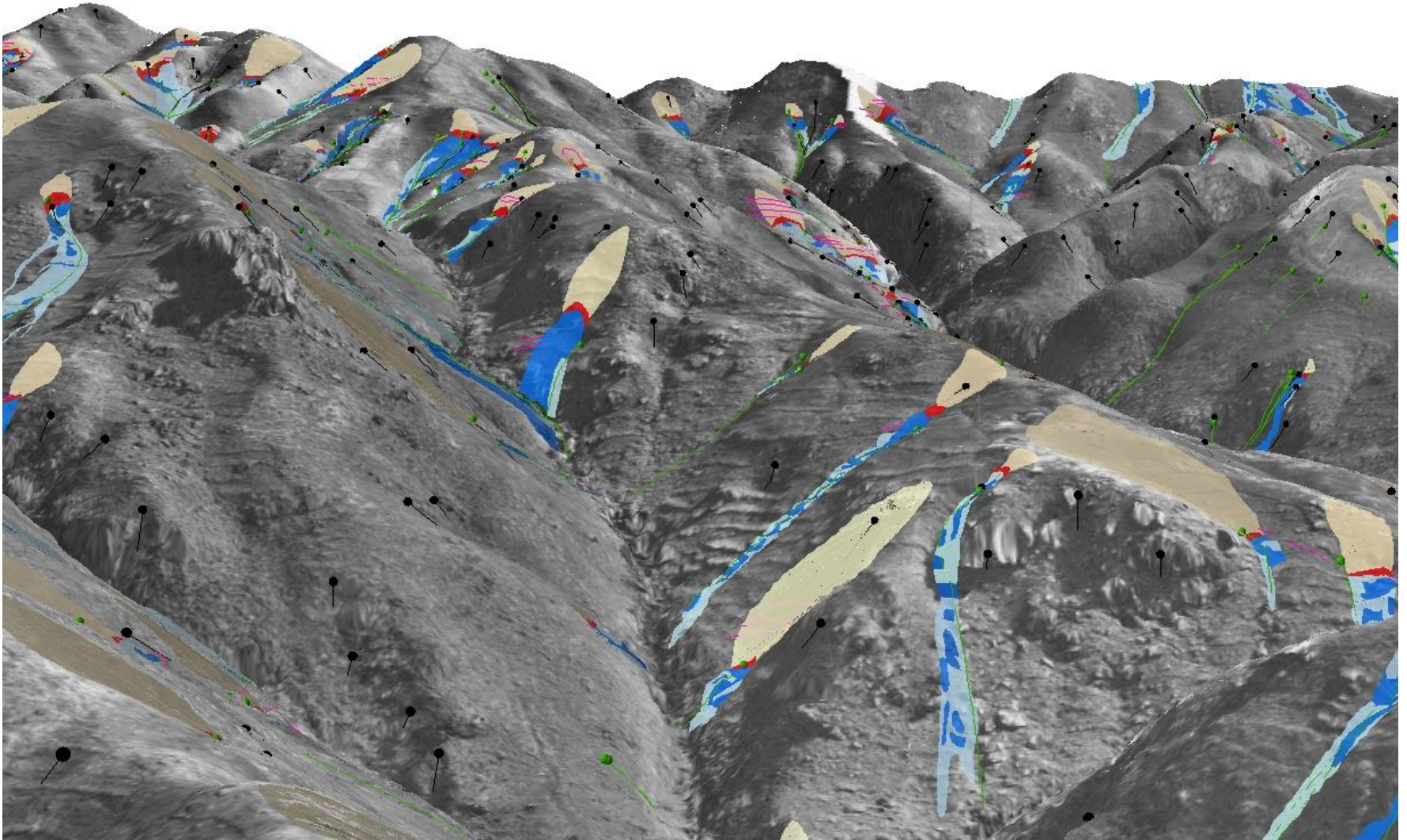
# Vertical Aerial Photograph – 25 July 2008 – 6000ft



Yi O – August 2008







16 Jan 1945



What makes us different?

THE WAY WE THINK

Good Geologists “observe”

Good Geologists “think in 4D”

Good Geologists “question” & “challenge”  
their own ideas

What makes us different?

THE WAY WE THINK

Good Geologists “observe”

Good Geologists “think in 4D”

Good Geologists “question” & “challenge” their own  
ideas

**Good Geologists “anticipate”**

What makes us different?

THE WAY WE THINK

Good Geologists “observe”

Good Geologists “think in 4D”

Good Geologists “question” & “challenge” their own ideas

Good Geologists “anticipate”

Good Geologists “communicate” & DON’T  
“alienate”



What makes us different?

## THE WAY WE THINK

Good Geologists “observe”

Good Geologists “think in 4D”

Good Geologists “question” & “challenge” their own ideas

Good Geologists “anticipate”

Good Geologists “communicate” & DON'T “alienate”

**Good Geologists have “Vision” & “Focus”**

What makes us different?

## THE WAY WE THINK

Good Geologists “observe”

Good Geologists “think in 4D”

Good Geologists “question” & “challenge” their own ideas

Good Geologists “anticipate”

Good Geologists “communicate” & DON'T “alienate”

Good Geologists have “Vision” & “Focus”

**VISION – a bold statement of direction**

**&**

**FOCUS - the scale of attack**

What makes us different?

THE WAY WE THINK – KEYS?

**Good Geologists “observe in 3D”**

**Good Geologists “think in 4D”**

**Good Geologists “question” & “challenge”  
their own ideas**



**GIVE YOURSELF MORE CREDIT  
FOR BEING GEOLOGISTS!!!**

## Second Challenge –

What can we learn from the Past?

**DO NOT OVERLOOK the PAST**

**WORD, DEED & HERITAGE - MAKE THEM  
RELEVANT TO TODAY**

**THEY ARE PLATFORMS FOR CONTINUOUS  
IMPROVEMENT**

# SITREP 6

## Some Heritage – Helps Make the Past Relevant

How do we fit in today?

- 1807 – Geol Soc – now 11,500
- 1818 – Inst Civ Eng – 80,000
- 1830 – Geographical Soc – 16,500
- 1888 – Geol Soc Am – 26,000
- 1892 – IMMM (now IOM3) – 18,000
- 1947 – HKIE – 20,000 (Geotech Div mid 80s - >4000)
- 1952 – Geol Soc Aus – 8,000

# SITREP 7

## The More Recent Past – Any Relevance?

- 1972 – Geol Soc established “Working Party” for a “Register of Professional Geologists” (43 years ago)
- 1975 – AIPG – Assoc for Promotion of an Institution of Prof Geologists formed by WP
  - 1977 – Institution of Geologists from AIPG
  - 1985 – Recognition of Prof IG Fellows
- 1991 – IG unified with Geol Soc – Royal Charter – CGeol (24years ago)

# **SITREP 8**

## **HK Geologists – Recent Past**

**Mid 1978 – GCO (3), GCB (2), Industry (4-5)**

**Mid 1982 – GCO (20), BGS (2), GCB (4), Industry (10), Academia (4-5)**

### **1982 - Geological Society of HK**

Prime Movers – Alister Burnett (GCO), David Workman (HKU – Geog & Geol, Maurice Atherton (Poly)

### **2001- Regional Group of Geol Soc**

(Peter Whiteside – facilitator)

GEO recognition of CGeol Chartered Status for GE in geological stream

### **2002 – Regional Group – Subgroup on Professional Status**

Mathew Free

### **2006 – GSHK – formed Professional Branch**

Paul Cheung during period as Chairman of both GSHK & Reg Group

Register of Certified Prof Geologists

### **2012 – Working Group – Local Registration System for Geologists in HK**

**(GSHK, Reg Group, IoM3, HKIE)**



## Second Challenge (cont)

What can we learn from the Past?

**CONSIDER THE PAST IN TERMS OF POSITIVE  
“LESSONS LEARNT”**

Who are we?

**WE ARE GEOLOGISTS**

What did we do?

## *Some Historical Context*

Kingsmill – 1862, 1865

Guppy – 1880 – first map

Skertchley – 1893 – spoke of “rotten rocks”

Heanley (1906) - 1923, 1924

Schofield – 1920, 1924, 1943

Brock – UBC – 1923 – Invited by HKG for Geol Survey -

Team included SJ Scholfield in 1923, Williams in 1924, Uglow in 1925 & Brock in 1926 & 1932. Williams submitted report in 1948.

Brock - 1943

Davis 1953 – *The Geology of Hong Kong*

Brian Ruxton & Len Berry – 1956 – 60

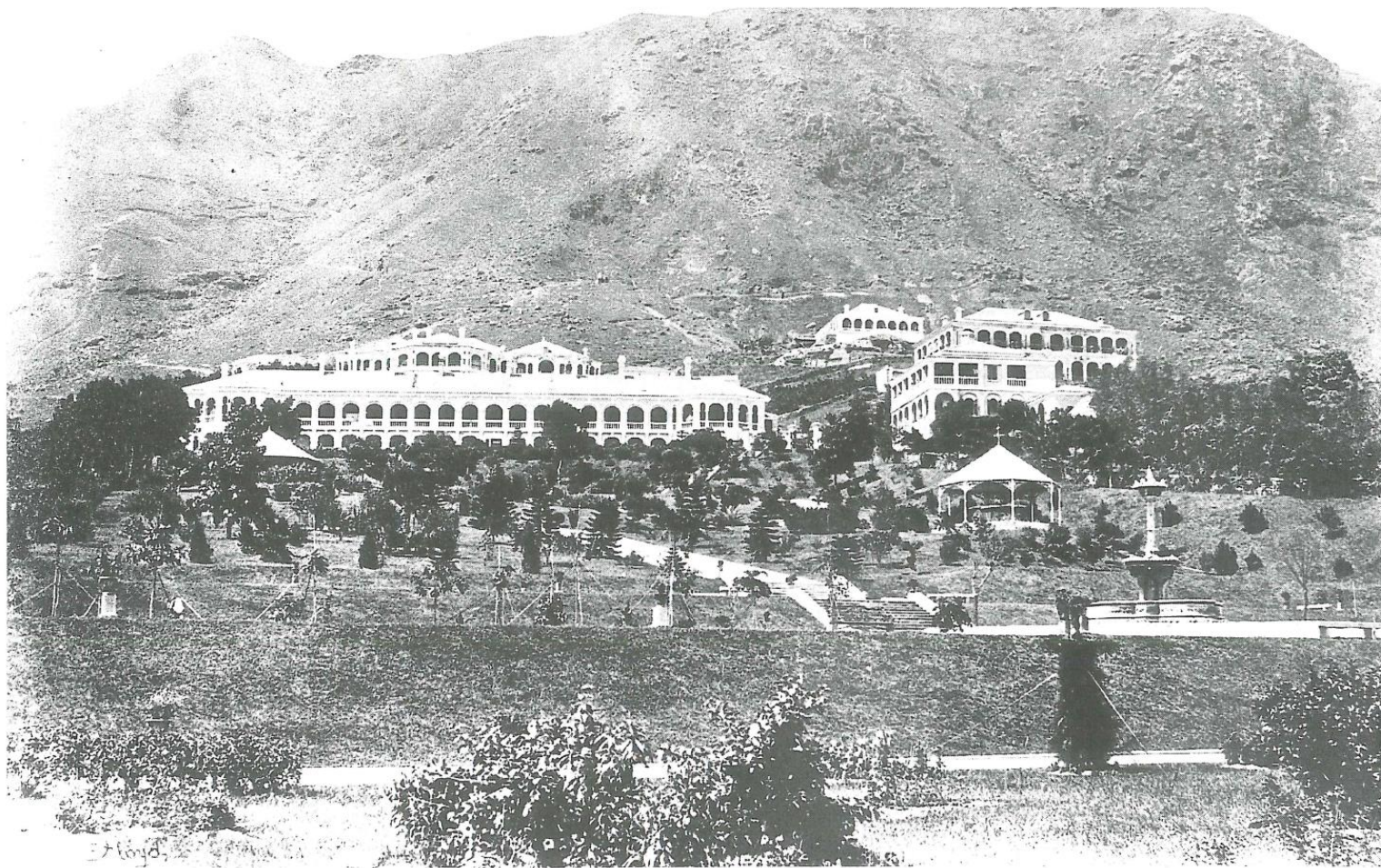
Allen & Stephens – IGS – 1971 - 1967-1969

Circa 1865



## THE HK OF KINGSMILL – 1860s

*Plate 12. Victoria Waterfront Looking West towards the Central District, circa 1865. The barren, bouldery slopes below Victoria Peak are clearly evident. (PRO 1/5/128).*

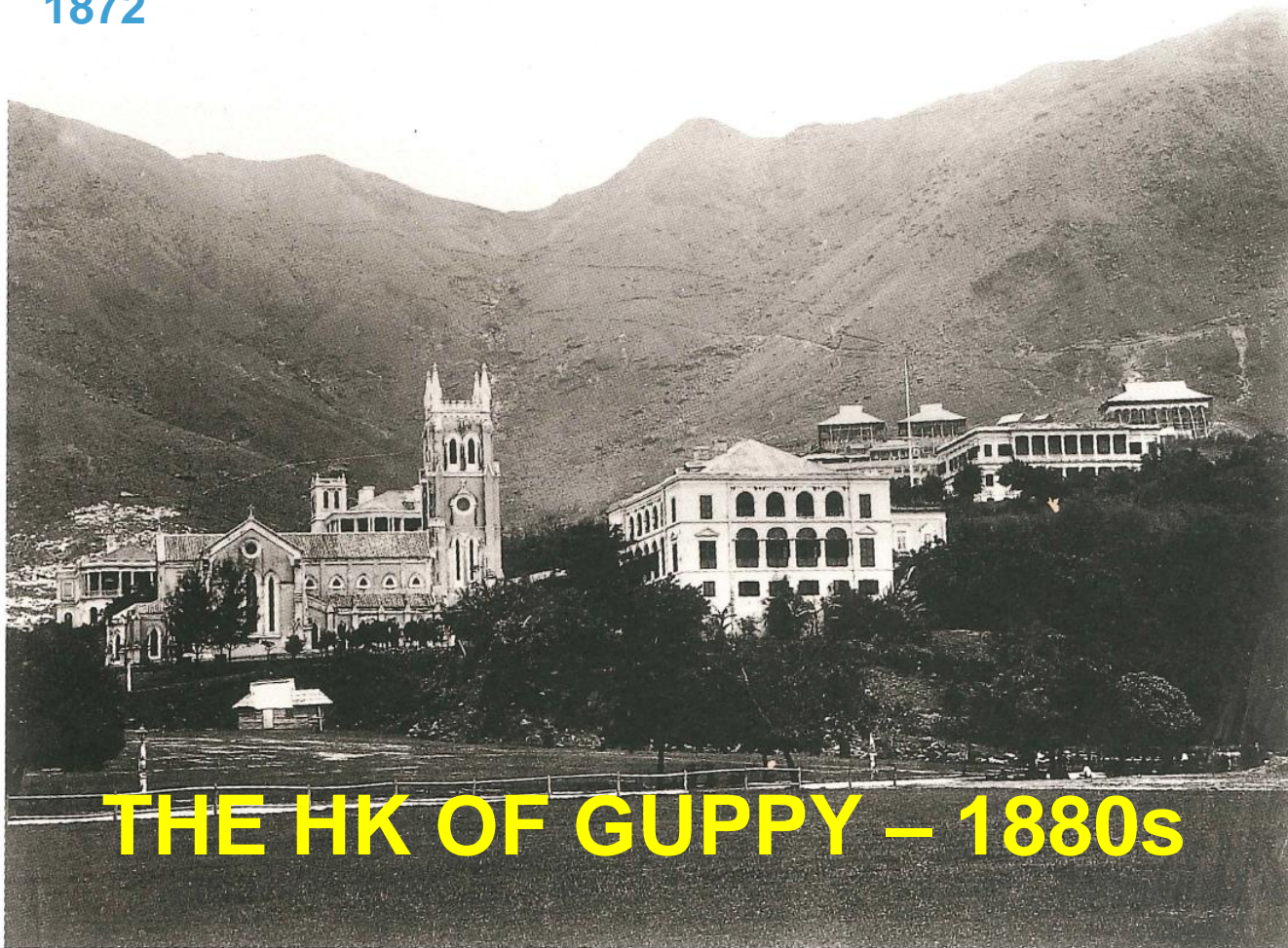


*Plate 18. Botanical Gardens Looking South towards the Albany, circa 1868. The steep mid-slopes and footslopes of Victoria Peak are bouldery, eroded and possess only a sporadic grassy vegetation cover. (PRO 1/7/189).*



**Guppy – 1880 – first Geological Map of HK**  
**An amateur Geologist**  
**- Surgeon**

1872



Above and opposite: Views before and after the new chancel was added to St John's Cathedral in 1872 rendering the somewhat small "cathedral" more worthy of the name.



**THE HK OF BROCK, SCHOFIELD, UGLOW & WILLIAMS - 1920s**

A

B

C

D



香港地質

CE/API(1)  
STYLES

Kowloon.

Francis Wa.



THE GEOLOGY  
OF  
HONG KONG

**GEOLOGY  
OF  
HONG KONG**

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BY

**S. G. DAVIS**

Ph.D., M.Sc. (London) F.G.S., F.R.G.S.

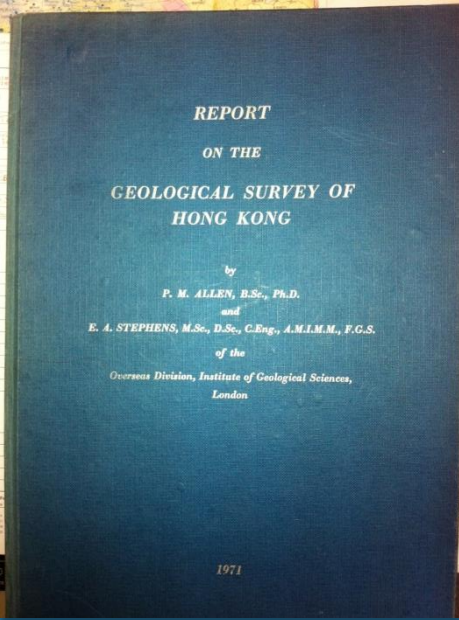
FROM THE BASIC WORK OF —

- R. W. Brock, M.A., LL.D. (Queen's Can.), LL.D. (Hong Kong), F.G.S., F.R.S.C.  
S. G. Davis, Ph.D., M.Sc. (London), F.G.S., F.R.G.S.  
T. C. Phemister, Sc.M. (Chicago), Ph.D., D.Sc. (Glasgow), F.G.S.  
S. J. Schofield, M.A., B.Sc. (Queen's Can.), Ph.D. (M.I.T.), F.G.S.A., F.R.S.C.  
W. L. Uglow, M.A., B.Sc. (Queen's Can.), Ph.D. (Wisconsin), F.G.S.A., F.R.S.C.  
M. Y. Williams, B.Sc. (Queen's Can.), Ph.D. (Yale), F.G.S.A., F.R.S.C.

1946 - Fei Ngo Shan Footslopes - Diamond Hill -

THE H K OF S.G DAVIS – late 40s-50s





# Allen & Stephens – 1971

(mapping Jan 1967- March 1969)

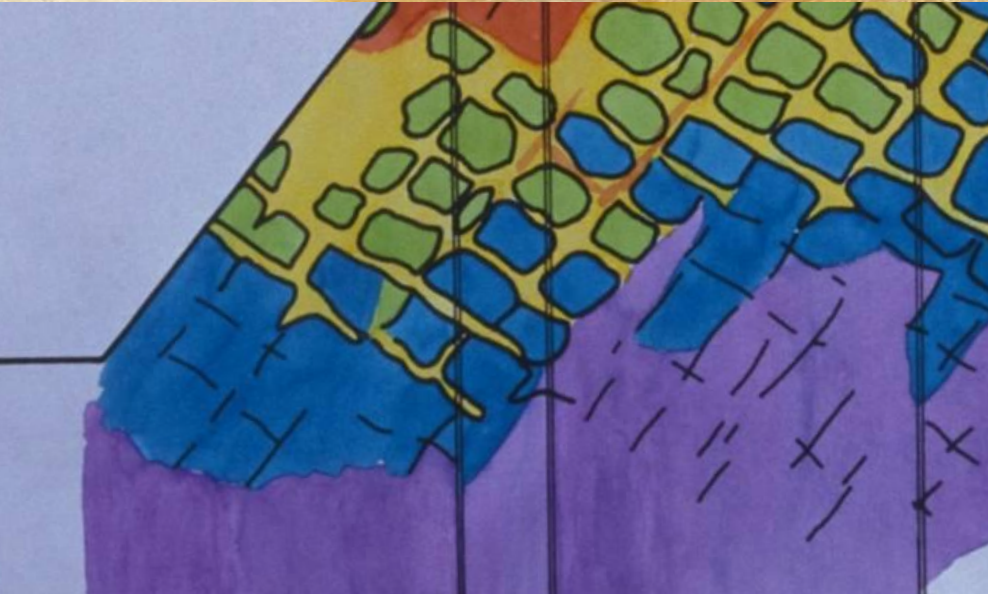
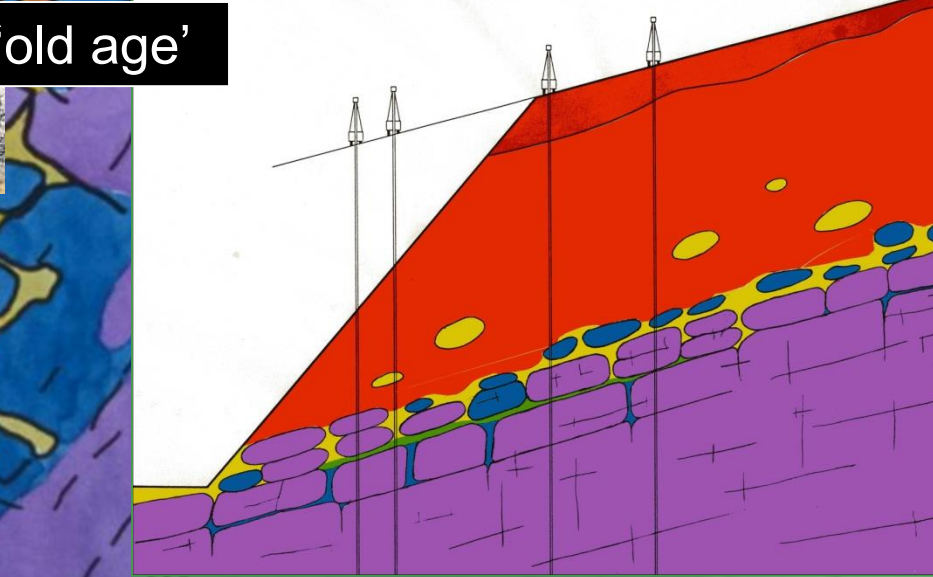
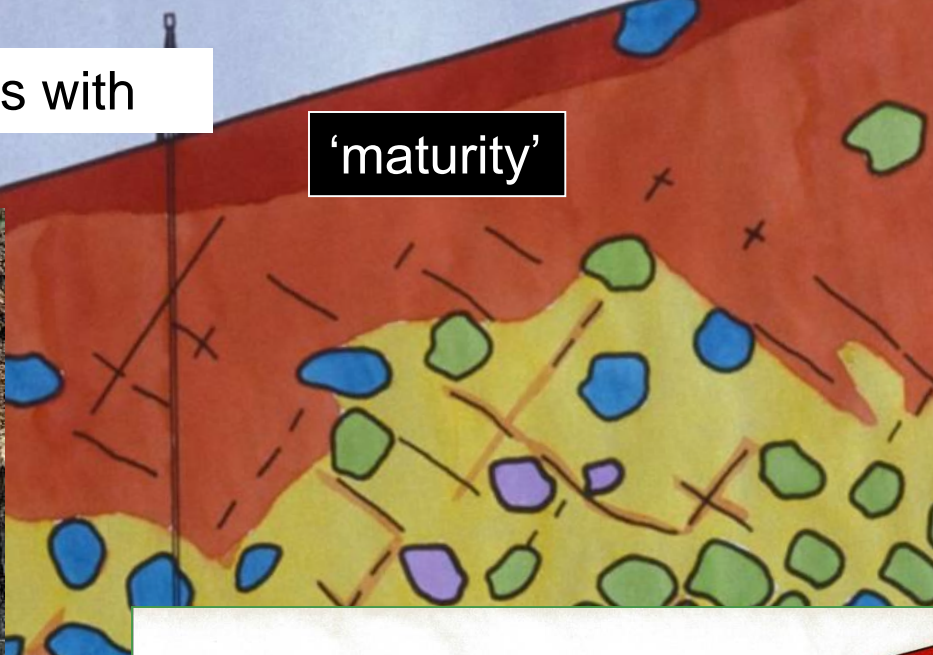
## The Terms of Reference

- a) advice on geological aspects of civil engineering problems for Government Departments
- b) advice on storage and retrieval of geological data from borehole records
- c) the revision of the Geological Map of Hong Kong and the preparation of a new large scale map

# Some Major Decisions affecting Geologists (Mostly by Enlightened Engineers)

- Decision in late 1977 to include Geologists in recruitment of GEs for GCO
- GCO recommend New Geological Maps & Terrain Classification (API Unit & Library)– Nov 1978
- GCO launch Terrain Classification Mapping of HK arising from Mid-levels Moratorium announcement (GASP) – June 1979
  - GCO – Slope manual, Geoguides.....from 1980 to present
  - GCO launch a New Geological Survey of HK in 1981
    - GCO establish a notional number of geologists
- GCO house the “Geological Survey of HK” in 1983– staffed by Mapping Geologists
  - Qualified Supervision for GI
  - Some Geologists – HKIE – Geotechnical Discipline - circa1990
- Fill Management Committee – seabed, marine fill, mud disposal – circa 1992
- Specification of Chartered Status (CGeol) for Employment as GE (Geological Stream In Govt) – about 2001
  - Natural terrain hazard studies – 2003
    - ENTLI – 2004 to 2007
    - Rock Cavern development
  - Specification of CGeol for Some Govt Consultancies
  - Inclusion of Resident Geologists on Major Projects

# The development of weathering profiles with time



# What Else from the Past?

## Some Major Contributions by Geologists

- High Island Reservoir & Plover Cove
- The Mid Levels Moratorium “Line” in 1979 – Development stopped for geol /geotech study
  - Slope safety – Building regulations, manuals, geoguides
  - Geotechnical input in Government Planning Process
- Terrain Classification & Physical Land Resource Inventory of HK – 1981
  - Quarries – sources of aggregate
- Creation of the Geological Survey of HK in 1982 – new maps & memoirs
  - MTR construction on-going since late 1970s
  - Requirements for Qualified Supervision on GI
  - Non Development Clearance of Squatters in 1983
  - New Town Development & Associated Infrastructure
    - Floodplain mapping in 1987 – creation of DSD
- Impact of Marble Caverns – Yuen Long, Tung Chung & Ma On Shan
  - GASP XII – Territory of HK - 1989
  - Rock cavern usage 1989- present
  - SIFT & SIRST Identification of Man-made slopes
- FMC - Sources of Marine Sand & Mud Disposal for CLK Airport & 27 Core Projects
  - Natural Terrain Hazard Studies
- “Engineering Geological Practice in HK” – GEO1/2007
- Requirement & Specification for CGeol Employment/Agreements



# Insurance Alleged

Chan was further charged with obtaining property by deception and three counts of accepting an advantage.

It is alleged that on December 24 last year he dishonestly obtained for Lee, trading as Hip Lung Industrial Manufactory, from China Insurance Co Ltd the sum of \$195,000 by falsely representing the amount of losses sustained by Lee as a result of a fire on December 6 last year.

It is also alleged that between December last year and June 27 this year, he accepted a total of \$30,000 from Lee to show favour to Lee in relation to the business of Nielsen and Malcolm (Hongkong).

Lee was charged with two counts of offering an advantage.

It is alleged that between December last year and January 30 this year, he offered a total of \$20,000 to Chan as a reward for Chan showing favour to him in relation to the business of Nielsen and Malcolm (Hongkong).

# He accused of conspiracy

China Insurance Co Ltd by false representations as to the losses sustained by Ma and Liu Wing-fuk, trading as the Man Luen Corp, as a result of a fire on November 12, 1979, with intent to obtain for the company a sum greater than that to which it was legally entitled.

Chan was further charged with accepting an advantage.

It is alleged that between December 15 last year he accepted \$15,120 from Ma and Lam as a reward for showing favour to its principal affairs.

Ma and Lam were further charged with offering an advantage.

# with deception

and \$7,700 from Mr Bechtel the following day by falsely representing that Chan was the owner of a flat at Nassau Road, Kowloon.

Chan and Tam pleaded guilty and trial was set for January 12 next year.

They were granted bail of \$3,000 and \$1,000 respectively.

# Stall to be auctioned

A vegetable stall at Taipo market will be put up for public auction at 10 am on Friday.

The auction will be held in the conference room of the hawkers and markets section of the Taipo Urban Services Office at Mei Tak Building, first floor, Kwong Fuk Road, Taipo.

The successful bidder can start operating from October 1, for a contract period of three years.

# Were you on the Mark?

The six drawn numbers in the Mark Six lottery yesterday were 5, 10, 23, 24, 26, 35.

The extra number was 1. There were 95 winning units for the third prize of \$10,900 per \$2 unit.

The \$100 red prizes were won by 459 units and the \$50 blue prizes by 4,756.5 units.

The prize fund totalled \$2,872,861.80.

First and second prizes will

we had some 60,000 boat people coming in during an 18-month period from 1979-80.

He said Canada is prepared to accept another 16,000 refugees from around the world, about half of whom will again be boat-people.

"That's one of the reasons why I was anxious to come here to get a better understanding of the situation before I make recommendations to the Cabinet for consideration."

He said the new refugee programme will be officially tabled in the Cabinet in early November.

Asked if Hongkong will get a bigger share in view of the fact that it has the largest number of boat people in the region, he said:

"I accept this as a sort of problem here, but at the same time you have to be equally careful to balance out against the level of acceptance in other countries."

"We're flexible in our programme. We can respond if there is an increasing demand from Hongkong, or we can make a transfer as far as next year is concerned."

"But I certainly can't de-

He was referring to orphans, refugees with mental or physical handicaps and those who have been living in the camps for a long time.

"We are now prepared to focus more carefully on some more difficult cases," he said.

But he declined to comment on whether refugees who have turned down resettlement offers by other countries, or those with criminal records would be considered as well.

"When the boat-people issue arose, there was a kind of spontaneous programme. Now there is some 18 to 24 months experience, and it's time to refine it more carefully," he said.

He said he will have to work with various provinces in Canada, because under its constitution, health and social services come under various jurisdictions.

"It will take a while to negotiate those agreements."

He disclosed that he had just signed an agreement in Newfoundland and had asked other provinces to follow suit to make it easier to accept refugees who are difficult to resettle.

Mr Axworthy will leave

# Govt to decide soon on new geological chart

By FRANK CHOI

The Government is to take a decision by the end of this year on plans for a massive-scale land survey to revise the out-dated geological map of the Colony presently used by engineers and architects, official sources say.

The sources also indicated that a firm recommendation is hoped for soon, and that work will begin on the new geological survey during the next financial year.

A spokesman for the Public Works Department's Geotechnical Control Office yesterday admitted that there is a need to update the existing geological map.

"However, a decision has still to be taken on such matters as the scale of a new survey and the mechanism by which the survey is to be carried out," he said.

The existing geological map was made in 1965. It has not been revised since then.

"The aim of the new survey is to produce a more detailed and accurate geological map than presently exists."

"This will, of course, be of great use in land planning and development of the territory, the spokesman said.

The public will also have access to the large amount of "raw" geological data collected during the course of the survey, he said.

However, the spokesman denied speculation that the plan for a new survey was the result of a number of mud slides and road collapses on Hongkong Island and in Kowloon earlier this year.

A spokesman for the PWD said the plan for a new survey was drafted "much earlier than the times when these mud slides and road collapses occurred."

The PWD spokesman said the department

realises the need to revise and update the existing geological map in the light of the boom in real estate development in the Colony.

Sources said a number of architects' firms and civil engineering contractors have to carry out their own geological surveys at construction sites because of inaccurate geological information.

The survey, if approved, will be headed by the principal Government geotechnical engineer, Mr E. W. Brand, according to sources.

Sources noted that with the rapid growth in real estate development, including the construction of a large number of buildings at the foot of or halfway up a hill, the soil structure and geological component of slopes could be greatly affected.

In 1977, the Geotechnical Control Office inspected some 2,350 filled slopes and another 8,000 cut slopes in the Colony.

The sources said a slope inspected in 1977 might not have been dangerous then, but if buildings were constructed on the slope since then, it might have affected the soil structure and the drainage system, thereby endangering the slope.

"Since a lot of buildings were built at mid-slopes and foothills where only scrub and trees were found in 1965 when the existing geological map was made, there is a need to update the information," sources said.

However, they said, the survey has no direct relationship to the Government's massive development plans in the New Territories, outlying islands and urban areas.

"There is simply a need to conduct another survey for the benefit of both the public and the Government," sources said.

scmp 23/10/79



# 500,000 LIVE WITH DEATH

## No remedy to landslide threat

MOST of the 500,000 squatters will have to live with the threat of being buried by mud if they decide to stay in their huts.

Principal Government Geotechnical Engineer Edward Brand yesterday said he saw no remedy to the landslide threat.

Most of the squatter areas are on slopes which have not been shored up and were therefore liable to collapse.

"The situation is more dangerous in the new squatter areas like Lamtin, where no adequate infrastructure has been developed," he said.

"Infrastructures like an adequate drainage system can help to drain away excessive rainfall and preserve the stability of the soil," he said.

Eight lives were lost in the landslide at the Lamtin squatter area during the torrential rain last weekend.

Eleven others were killed in the same period due to landslides in other locations.

"The ultimate remedy to prevent landslides in the squatter areas is to make all constructions there to follow good engineering practice," Dr Brand said.

But it was impossible for the squatters to stick to acceptable building rules, he said.

Preventive measures by the Geotechnical Control Office were limited by the present situation.



DR BRAND . . . n  
remedy

"For any large scale investigation on dangerous slopes we have to clear off all the huts built on the surface," Dr Brand said.

"But where to settle the evacuated residents is a problem to be solved," he said.

Besides, the Geotechnical Control Office is also short of staff to carry out the inspections.

"We have 72 people in our office, which is only two-thirds of the necessary staff," Dr Brand said.

There are 15,000 slopes in the territory and landslide prevention is only part of the office's job, he said.

Dr Brand said the present work done by the office was satisfactory.

"We will start to visit the slopes where landslides have been reported over the past few days," he said.

Recommendations for clearance would be made by the Housing Department where slopes appeared to be unstable after investigation, he said.

# 活在死神陰影下！

## 巨石如累卵·山泥坍塌頻 曹公潭村民·求安置脫困



### 高官議員實地查勘

【本報訊】土木工務署官員、立法局議員陳偉業、李永達、劉石碧日前到曹公潭村實地查勘，對該村山泥坍塌頻仍，村民求安置脫困，表示關注。劉石碧表示，該村山泥坍塌頻仍，村民求安置脫困，表示關注。劉石碧表示，該村山泥坍塌頻仍，村民求安置脫困，表示關注。

### 鞏固大石

而區區安運料自應儘快，拋大石以填補大石下泥土鬆動，防止山泥坍塌。區區安運料自應儘快，拋大石以填補大石下泥土鬆動，防止山泥坍塌。區區安運料自應儘快，拋大石以填補大石下泥土鬆動，防止山泥坍塌。



區區水

高傾泥山

塌崩滿土護

陷下台地



壩堤壩水

(補填已)洞大

92年6月，水庫壩下，出現30呎、20呎大洞

【本報訊】曹公潭村共有二百多戶約一千人，曹公潭村共有二百多戶約一千人，曹公潭村共有二百多戶約一千人。曹公潭村共有二百多戶約一千人，曹公潭村共有二百多戶約一千人。



影除下留民村潭公會令停事石塌村壩回台▲



解程工向民村▲ 介員議局法立及 境險的村該

：文 榮志委 芬文鄧

## 燈射探



·現重史歷處民村▲ ·屋木間三毀堡石巨村壩回台▲

### 新痕創屋毀石巨

【本報訊】位於曹公潭村壩台▲ 高的白田壩村於今年雨季二月時，曾發生兩宗山泥坍塌事故。今年二月的山泥坍塌，造成多間房屋倒塌，村民求安置脫困。



拆不聞一部邊右拆清部全邊左坑水，中其貫橫坑水大，區央中

【本報訊】據初步估計，本港目前尚有一千多幢房屋位於危險斜坡，預計全部可於明年雨季前獲得重建安置。但多幢房屋位於危險斜坡，預計全部可於明年雨季前獲得重建安置。

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## 步牛蝸修·布公不坡險

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# Decisions by HK Geologists affecting HK Geologists

## 1982 - Geological Society of HK (GSHK)

(Prime movers - Alister Burnett, David Workman, Maurice Atherton)

- Publications & Symposia on Surficial Geology, Geological Aspects of GI, Role of Geology in Urban Development, Marine Sand & Gravel Resources of HK

## Local Group of IMMM – Late 1980s

Seminar on Rock Cavern Usage - 1989

(Peter Whiteside & Andrew Malone)

## The GCO led EGG Training Scheme – mid 80s

## 2001 - Regional Group of Geological Society

(Facilitator Peter Whiteside, first Chair Steve Hencher)

- Conferences, Seminars, publications

## 2006 – GSHK – Professional Branch

2007 – GRS (Steve Parry & Jon Hart)

## 2012 – Working Group – Local Registration

## 2012-14 - Accredited Training Schemes in Private Sector

# **INDUSTRY PERCEPTION**

**- WORTH PROVEN**

**(Necessary & Required - GEOLOGISTS always a COST  
DATA has a COST – INFORMATION has VALUE**

# **COMMUNITY PERCEPTION**

**- WORTH LESS?**

**- GEOPARK**

**- GLOBAL WARMING**

**- SLOPE SAFETY – SLOPE MAINTENANCE**

**SHIFTING PERCEPTIONS & CREATING AWARENESS**

**– NATURAL TERRAIN LANDSLIDE IMPACTING MULTI  
STOREY BLOCKS**

**Back to the Challenges**

**CHALLENGE 1 – KNOWING OURSELVES**  
(HERITAGE & SENSE OF “WORTH”)



**CHALLENGE 2 – MAKING THE PAST RELEVANT**

(PAST DEEDS, CONTINUOUS IMPROVEMENT & LESSONS LEARNT  
CONTRIBUTE TO SENSE OF “WORTH”)



**CHALLENGE 3 – FUTURE GOVERNANCE OF OUR  
PROFESSION**

(AS GEOLOGISTS ARE WE “WORTHY” TO LEAD)



**A FEW IDEAS  
IN CLOSING**

# 1. CREATE A **SHARED VISION** FOR WHERE WE WISH TO BE IN 5 YEARS:

**“Professional Geologists Serving Hong Kong People”**

## 2. **FOCUS ON TARGETS**

- Engage Academia - Vocational Training In Degree Courses – More Courses? – Develop the Need
  - Engage the Community - alter Perceptions by more Active Participation
- Embrace the Need for “Professional Registration”- Action Plan

## 3. **THE PATHWAY** **SET ASIDE DIFFERENCES**



**NO LONGER “AMATEURS”**

**THANKS**

