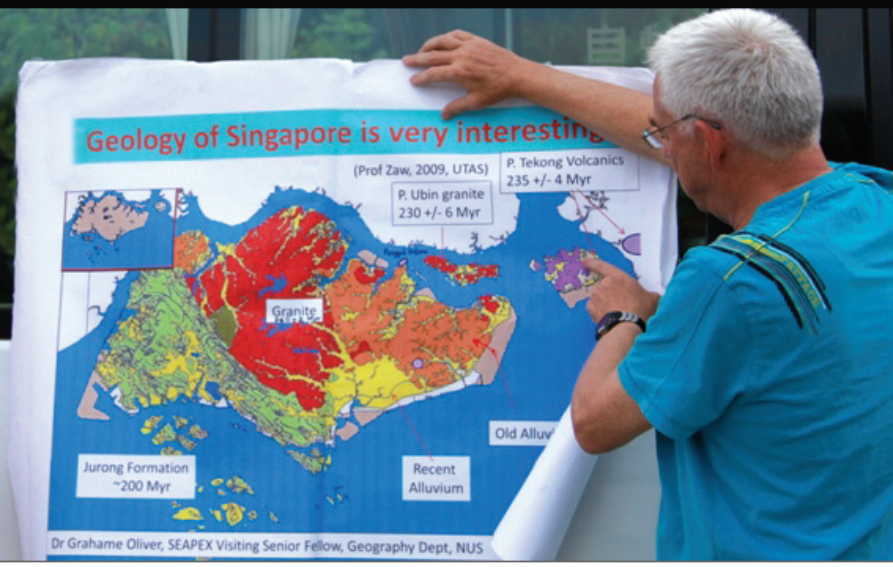
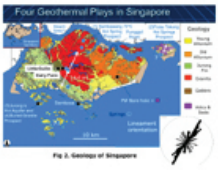
SEAPEX Field Excursion IS BACK AGAIN !
Saturday April 2017
Geothermal Energy Concept for Singapore



SEAPEX

Post SEC 2017 Conference
Field Excursion
SATURDAY 29 APRIL 2017



Geothermal Energy Concept for Singapore

Dr Grahame J.H. Oliver
gjholiver@ntu.edu.sg
Senior Lecturer, Asian School of the Environment Nanyang Technological University, Singapore.

Price **SGD125** (inclusive GST) per person.

Registration : Please provide your credit card details and email Judy Foong at judy.foong@seapex.org / seapex@seapex.org.

ITINERARY

8.00 am	Board transport.
9.00 am	Jurong Formation, Sentosa Island coast. Hot sedimentary aquifer? Malay Basin half-graben analogue. Come prepared to wade in the sea up to your knees!!
12.00 pm	Dairy Farm Quarry: granite hydrogeology: granite jointing and granite permeability, potential hot rock heat exchanger. Cuu Long analogue.
1.00 pm	Lunch provided (Bukit Timah)
2.00 pm	Singapore Quarry: late faulting in granite.
3.00 pm	Little Guilin Quarry: gabbro hydrogeology: potential hot rock heat exchanger.
4.30 pm	Sembawang 70°C hot spring.
6.30 pm	Arrive back.

INTRODUCTION

The geology of Singapore shows: i) potential for geothermal power, ii) analogues for petroleum systems in SE Asia

i) Singapore is said to have no natural resources. However, Singapore has high heat flow (~120 mW/m2, estimated), hot springs (70 o C, measured) with a ~150 o C geothermal reservoir (estimated) to be at 2 km depth. This heat source could be used for i) generating electricity, ii) district cooling, iii) desalination, iv) industrial processing.

ii) Singapore is an analogue for Cuu Long-type (Vietnam) basement high and Malay Basin-type stretched basin petroleum plays. Fractured, Permo-Triassic granite and gabbro basement hills in the centre of the island are mantled by Upper Triassic continental red beds (fluvials and lacustrine) and shallow marine (deltaic) sediments to the south-west.

The excursion will examine the geological evidence for these claims.