

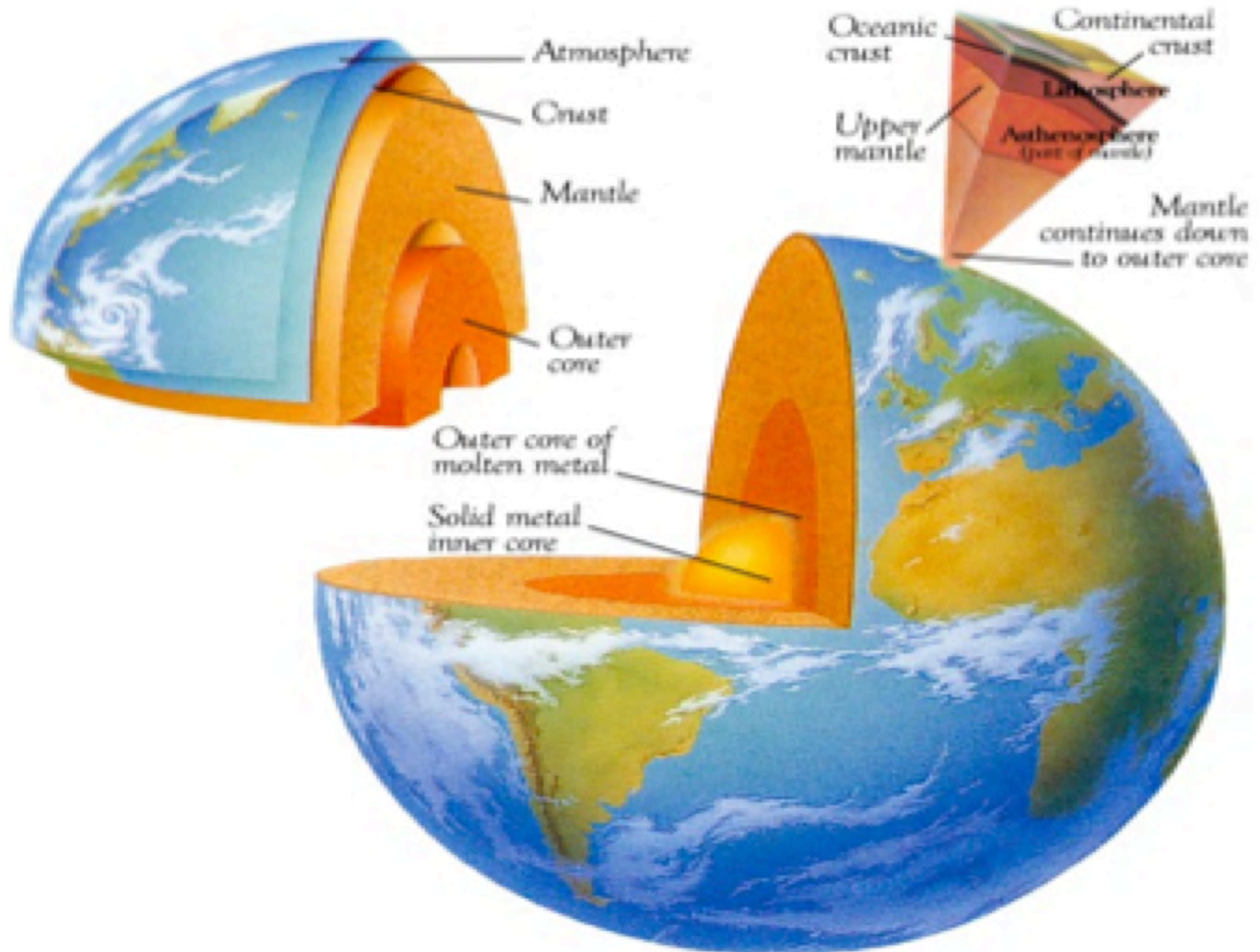
# Who is a Geophysicist

**A geophysicist is someone, with a strong maths and physics background, who studies the Earth using:**

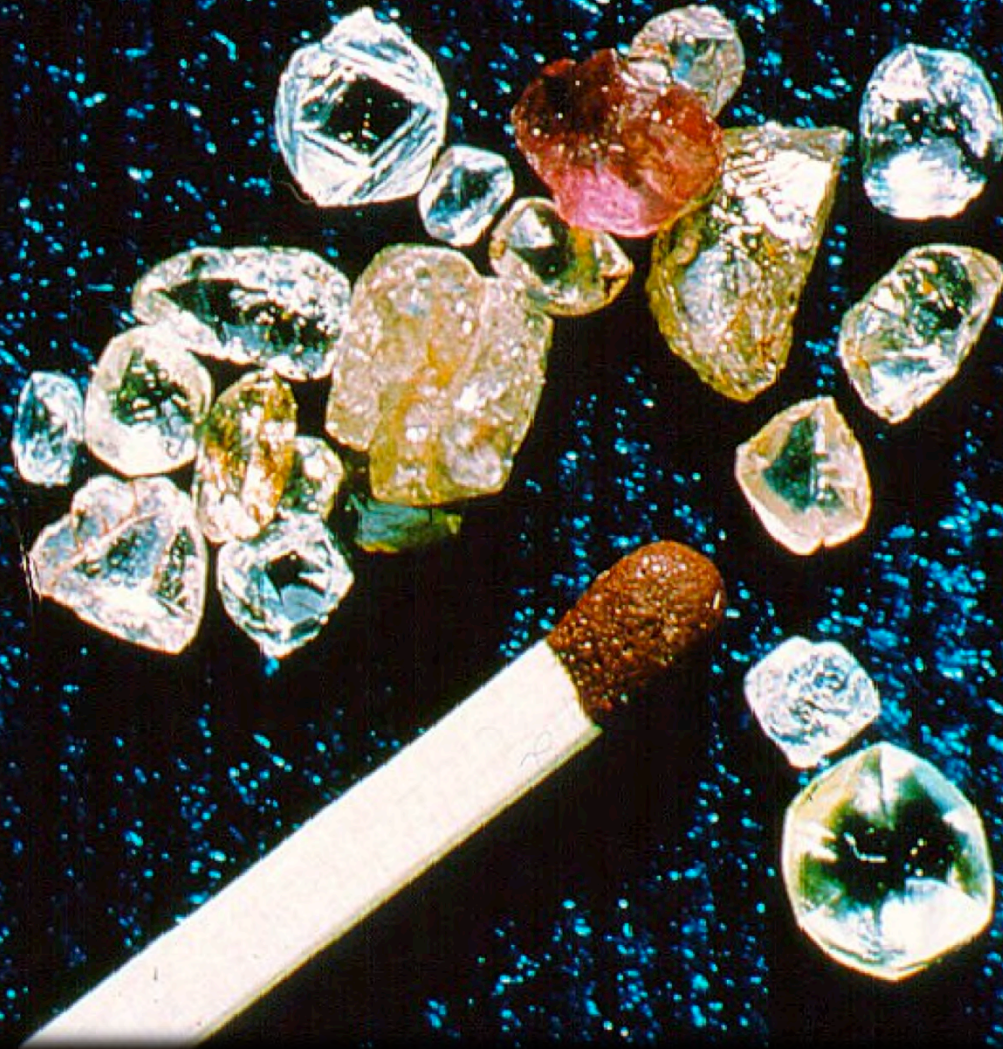
**gravity**  
**Magnetic**  
**Electrical**  
**Seismic methods**

**Geophysicists use these methods to find gold, platinum, oil, gas, diamond, copper, and many other minerals.**

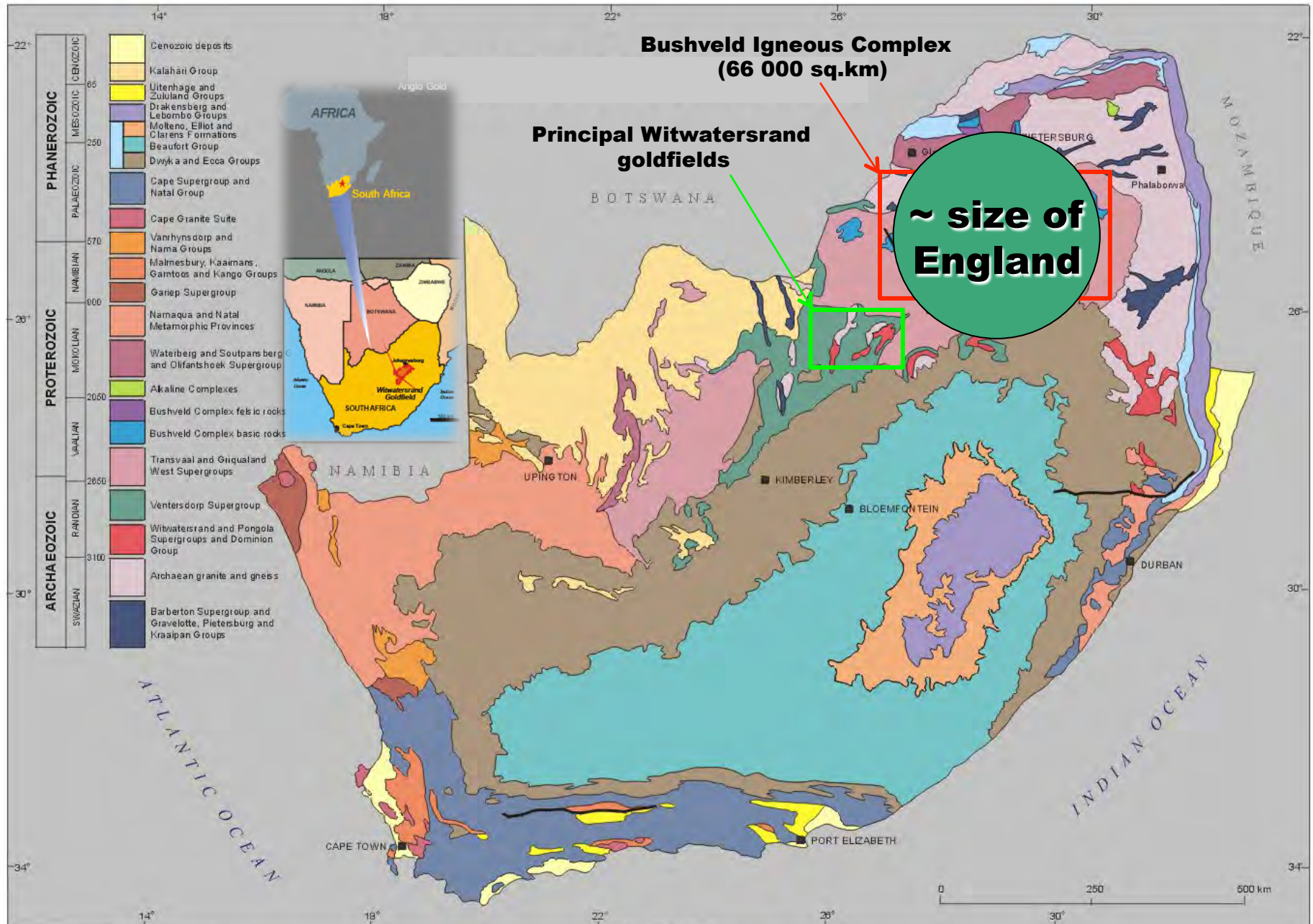
# Exploring the Earth Using Geophysics



# Mineral and Diamond Exploration



# Geological map of South Africa



(Courtesy of Council for Geosciences)



# Discovery of gold in the Witwatersrand Goldfields

1886 Central Rand goldfield

1887



# Gold-bearing rocks



- World class gold ore bodies
- thin - aprox. 1m

2005 5 5

# Discovery of platinum in the Bushveld Complex



# Merensky Reef

Hanging wall pyroxenite

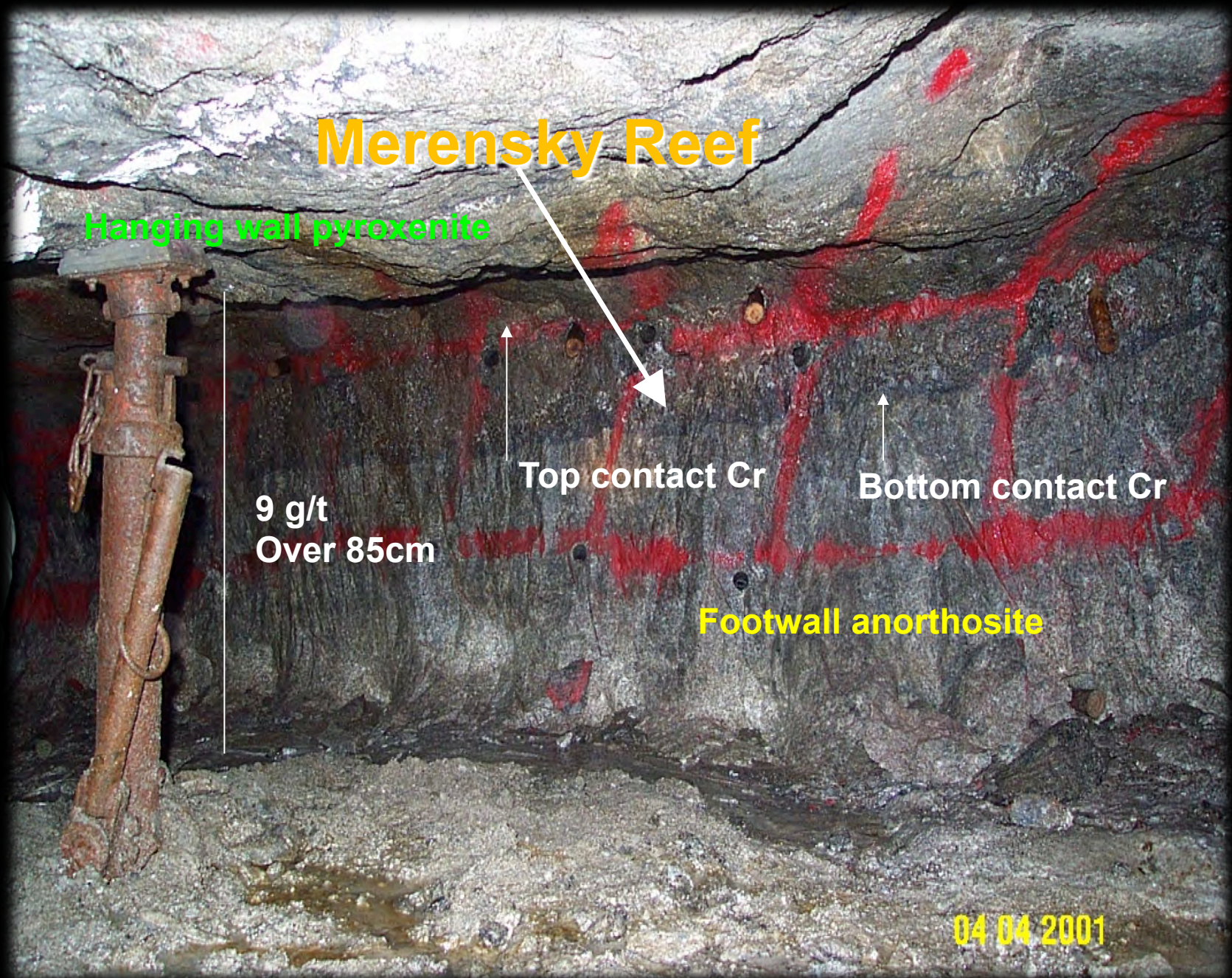
Top contact Cr

Bottom contact Cr

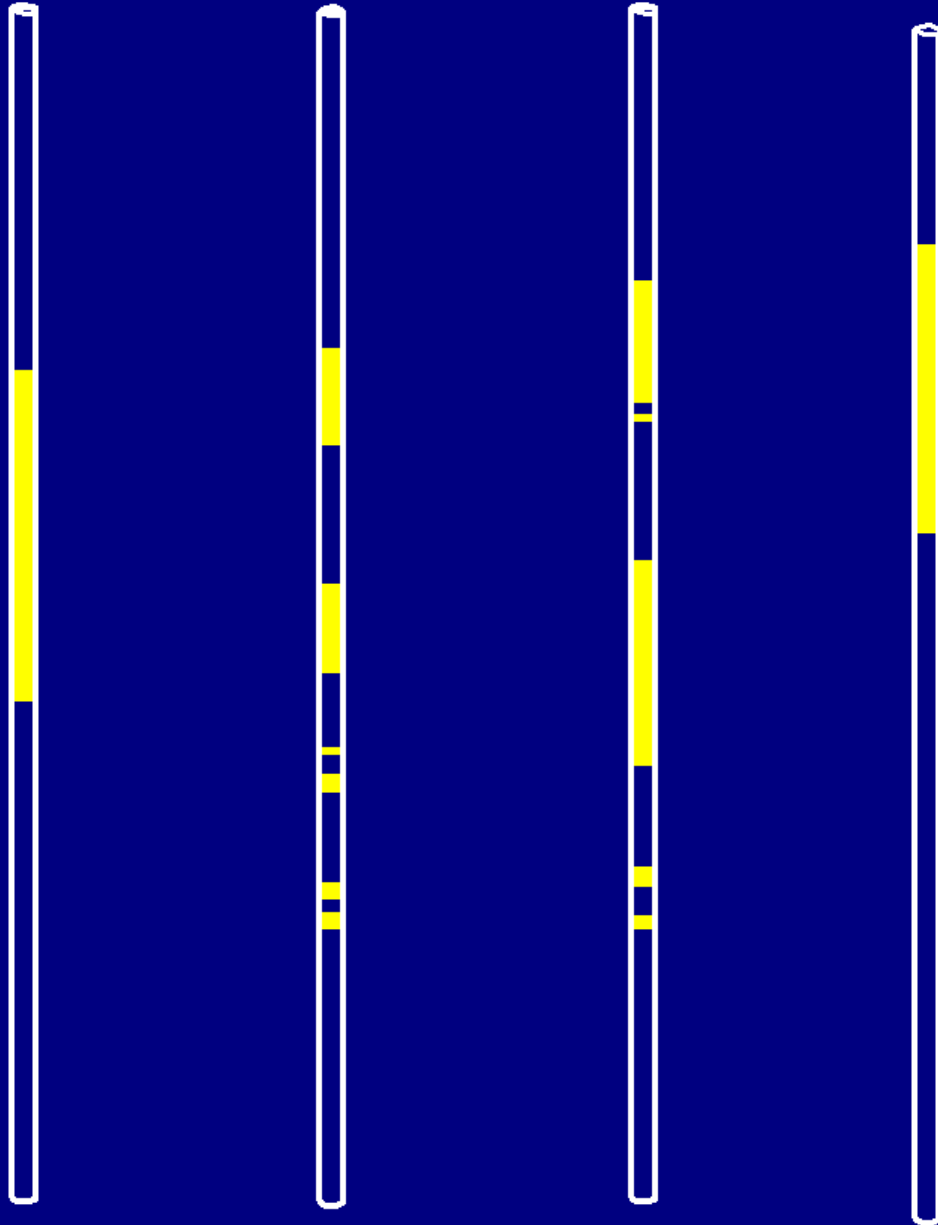
9 g/t  
Over 85cm

Footwall anorthosite

04 04 2001



# Traditional methods for explorations



# Conservative geologist's interpretation

