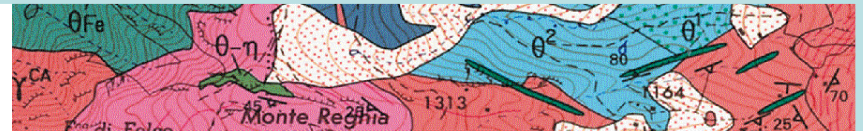


## Location of anomalously hot temperatures due to heat refraction

L. Guillou-Frottier, BRGM, France

*Heat refraction effects occur in a number of geological systems,  
but they may lead to distinct signatures....*

*....one consequence is that anomalously hot underground temperatures  
can be missed if we rely only upon heat flow and conductivity data....*

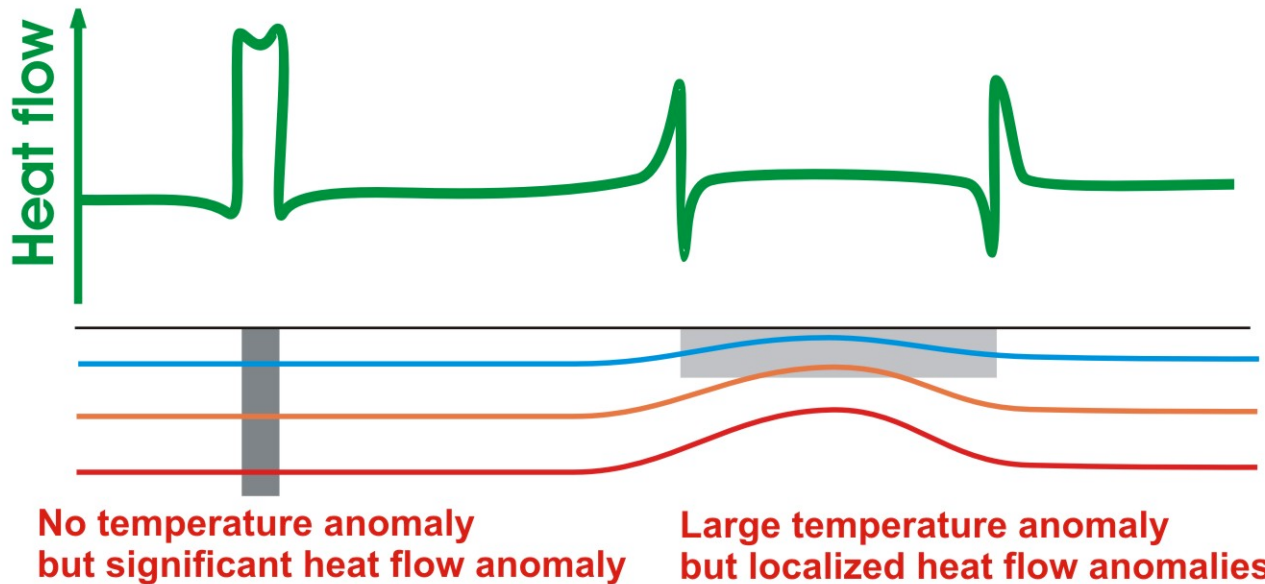


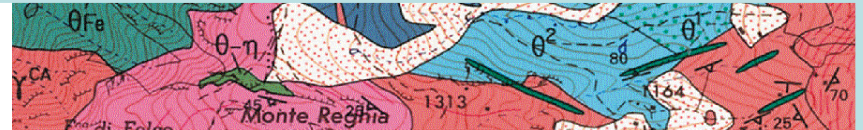
Actually, geometry of the anomalous body must be considered....

### *In other words...*

*Thin vertical conducting body  
(e.g. volcanic massive sulfides)*

*Large horizontal insulating body  
(e.g. ash-flow caldera)*



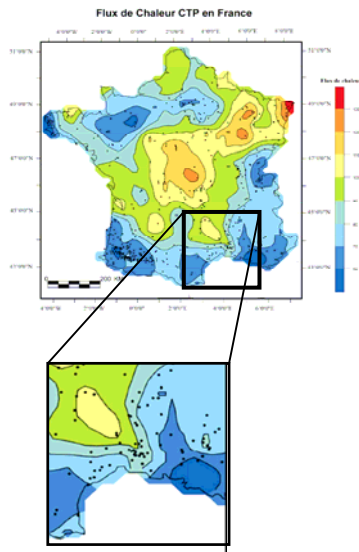


On the poster :

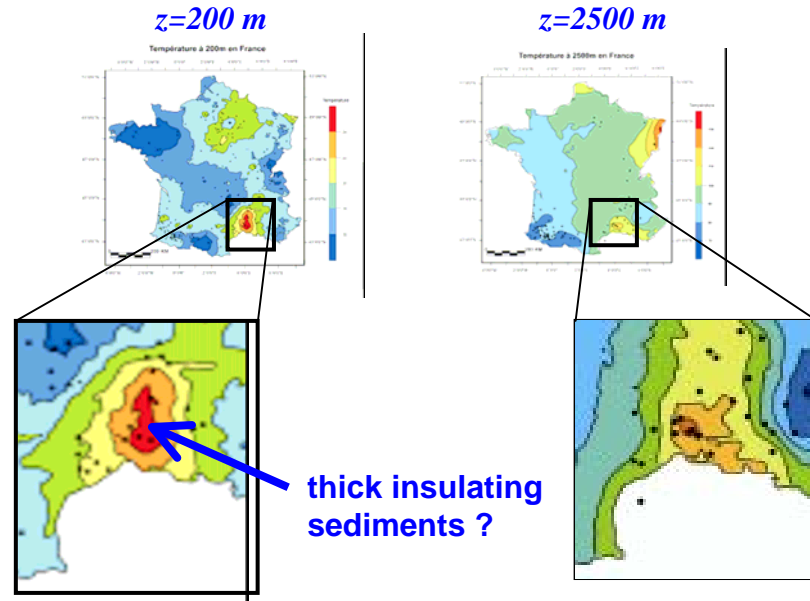
- one example of heat refraction around quartzites
- one example of heat refraction near ash-flow calderas
- analytical and numerical models of heat refraction

an also :

### Surface Heat Flow



### Subsurface temperatures



« Potential zones » must be defined...

.... either by « heat flow » terms, or by « temperature » terms