GEOELEC
Prospective for Geothermal Electricity in Europe

Regional Workshop-UK-Ireland -Iceland

Burkhard SANNER

European Geothermal Energy Council

London, 26/09/2011

Regional compilation of prospective areas and resource assessment

Geoelec Geothermal resource assessment protocol

Data compilation

Critical review of bibliographic compilation from:

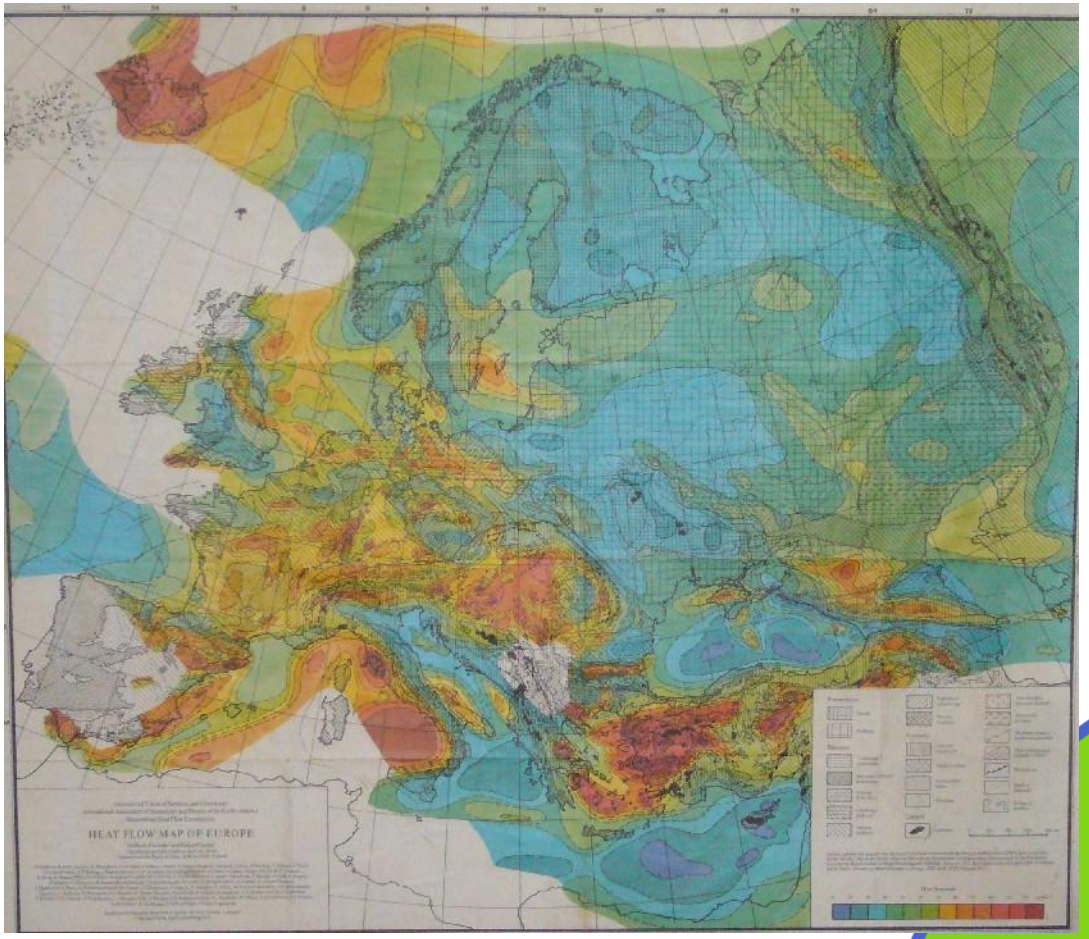
- Geological surveys
- Oil & Gas company public reports
- Direct contacts with underground ‘explorators’
- 7 regional workshops to complete data compilation

Early geothermal data compilations

CERMAK, V. & RYBACH, L. (eds.) (1979): Terrestrial Heat Flow in Europe

Book with different papers from a Workshop

A map of heat flow density was included in that book



Similar book:
CERMAK, V. & HÄNEL, R. (eds.) (1980): Geothermics and Geothermal Energy, Symposium EGS/ESC Budapest

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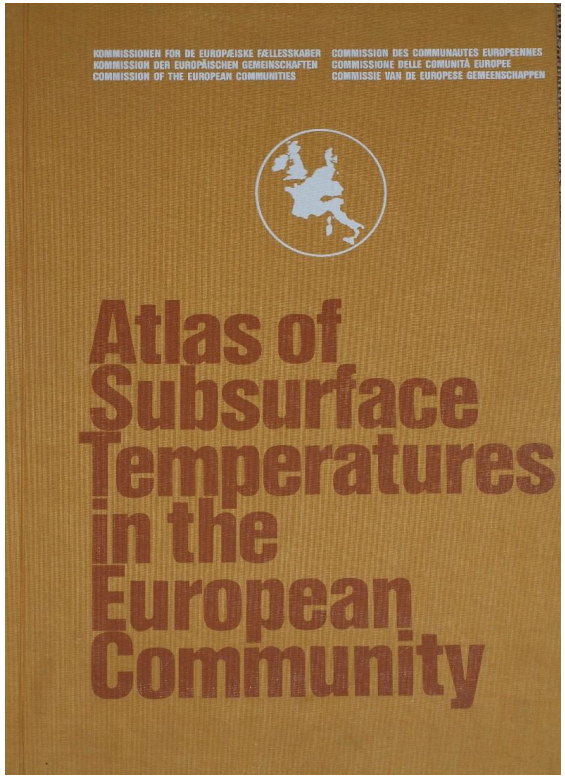
Early geothermal data compilations

EC 'Atlas of Subsurface Temperatures in the EC' (1980)

Coordinated by BGR, Hannover (Ralph Hänel)

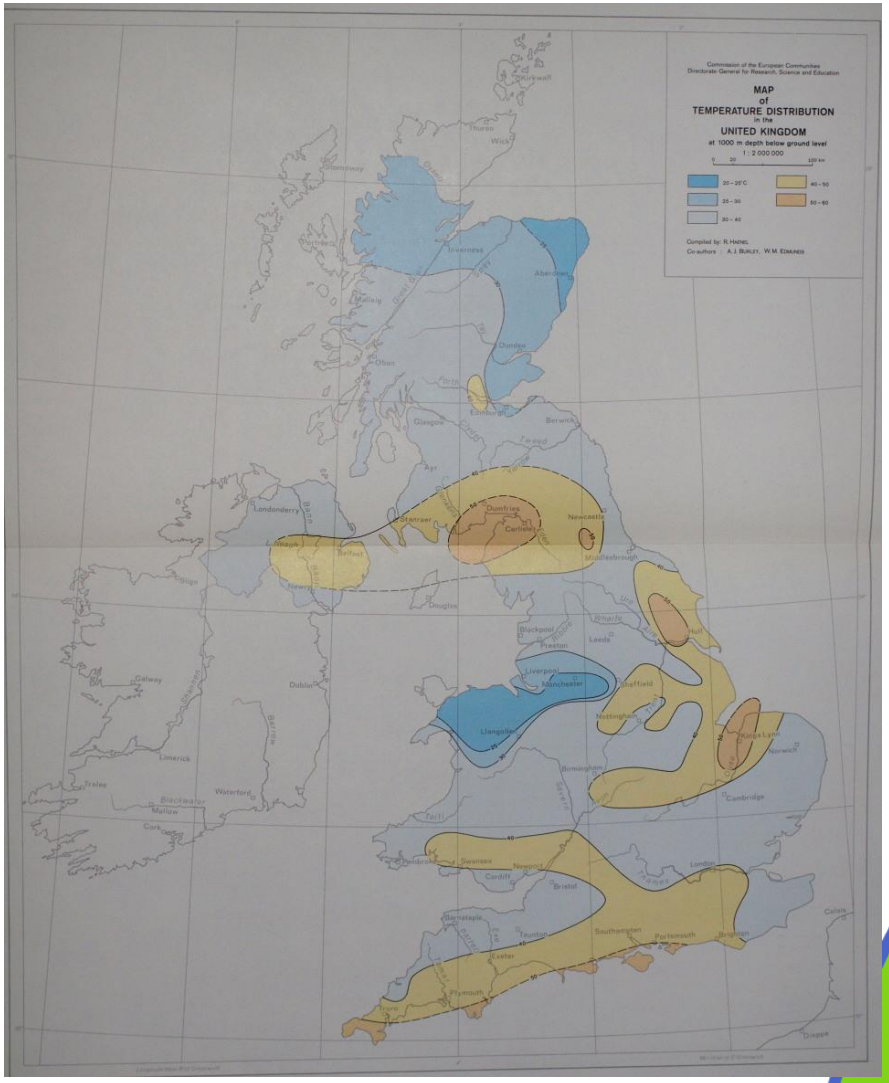
Only heat flow and temperatures at depths between 500 and 5000, for countries and regions (e.g. Soultz-Landau)



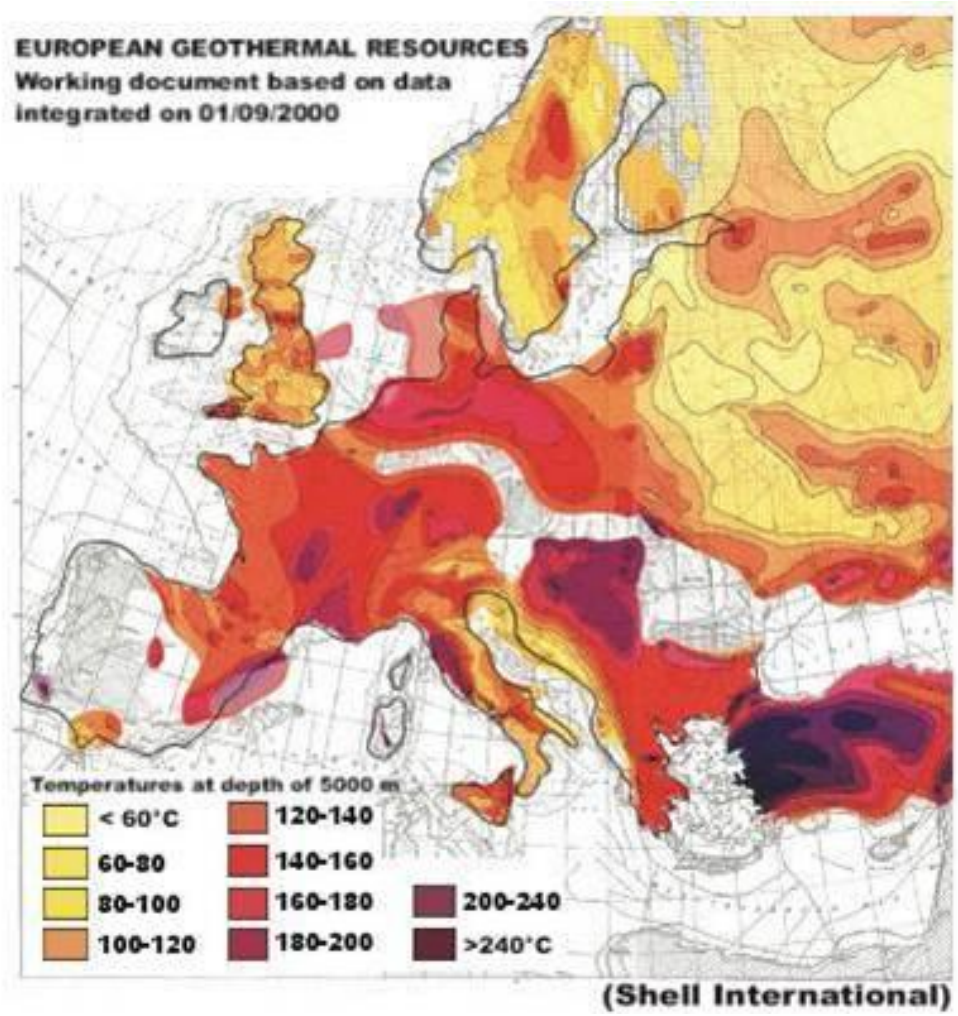
Early geothermal data compilations

EC 'Atlas of Subsurface Temperatures in the EC' (1980)

Temperature at 1000 m depth in the UK



SHELL Map (2000)



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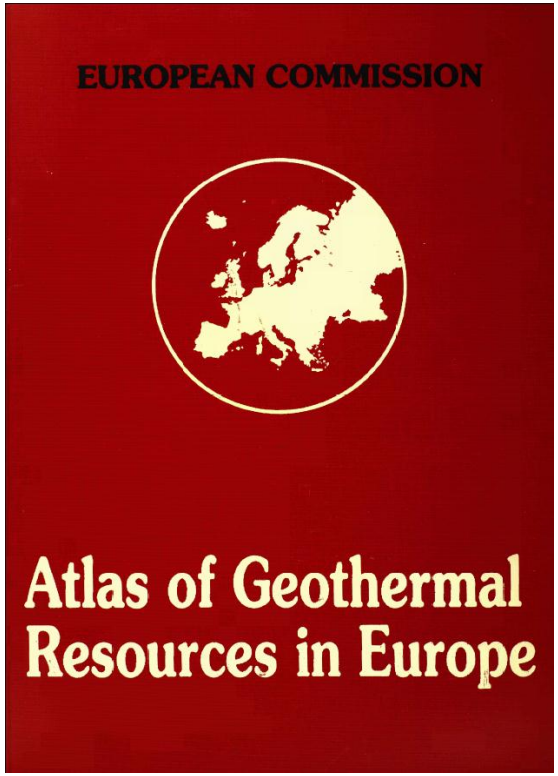
EC 'Atlas of geothermal resources in Europe' (2002)

Coordinated by BGR, Hannover
(Suzanne Hurter)

Overview:
Heat Flow
Temperature at 1 Km and 2 Km depth
European Geothermal resources



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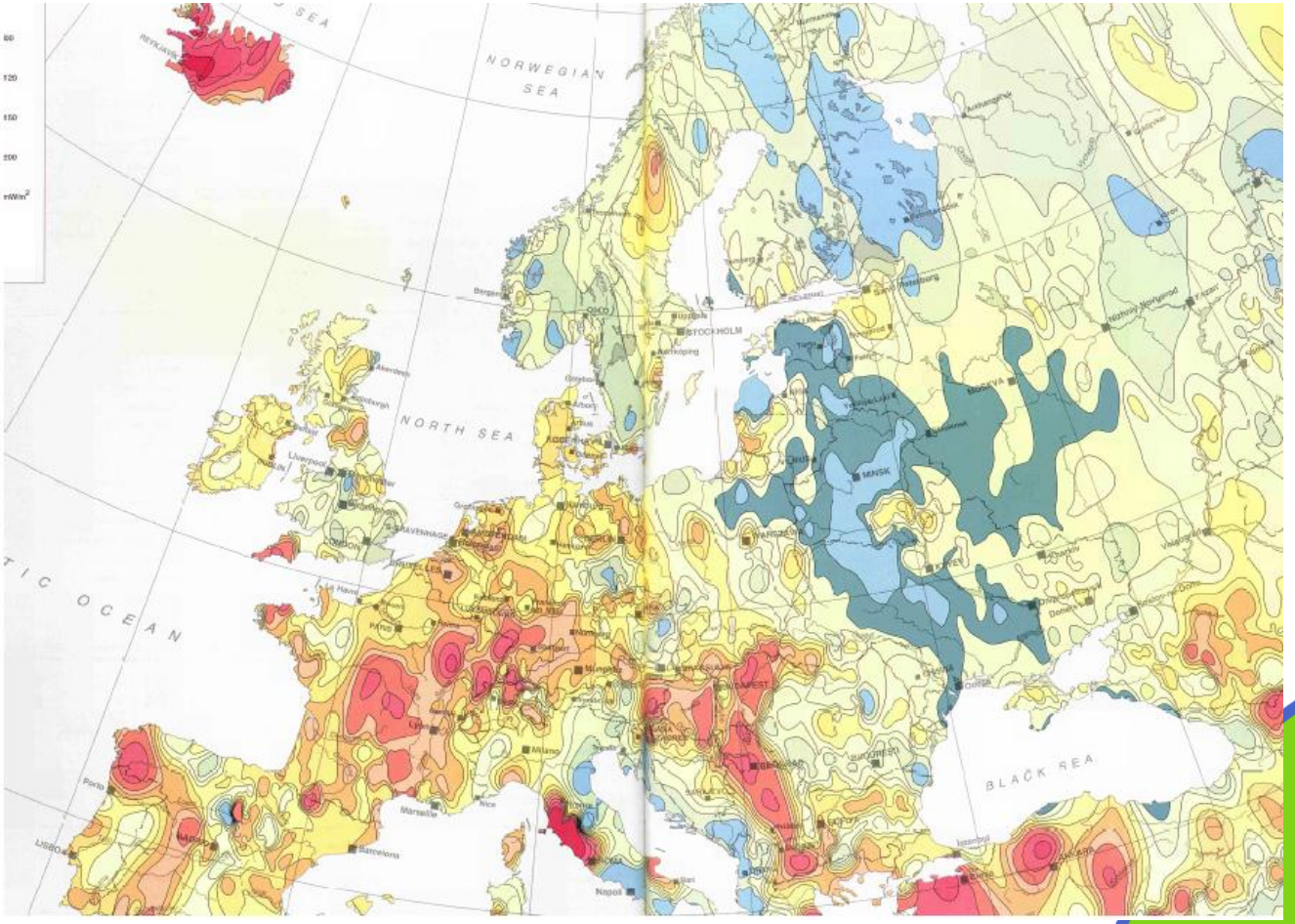
EC 'Atlas of geothermal resources in Europe' (2002)

Heat flow density



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EC 'Atlas of geothermal resources in Europe' (2002)

Resource assessment for UK
(hydrogeothermal resources)

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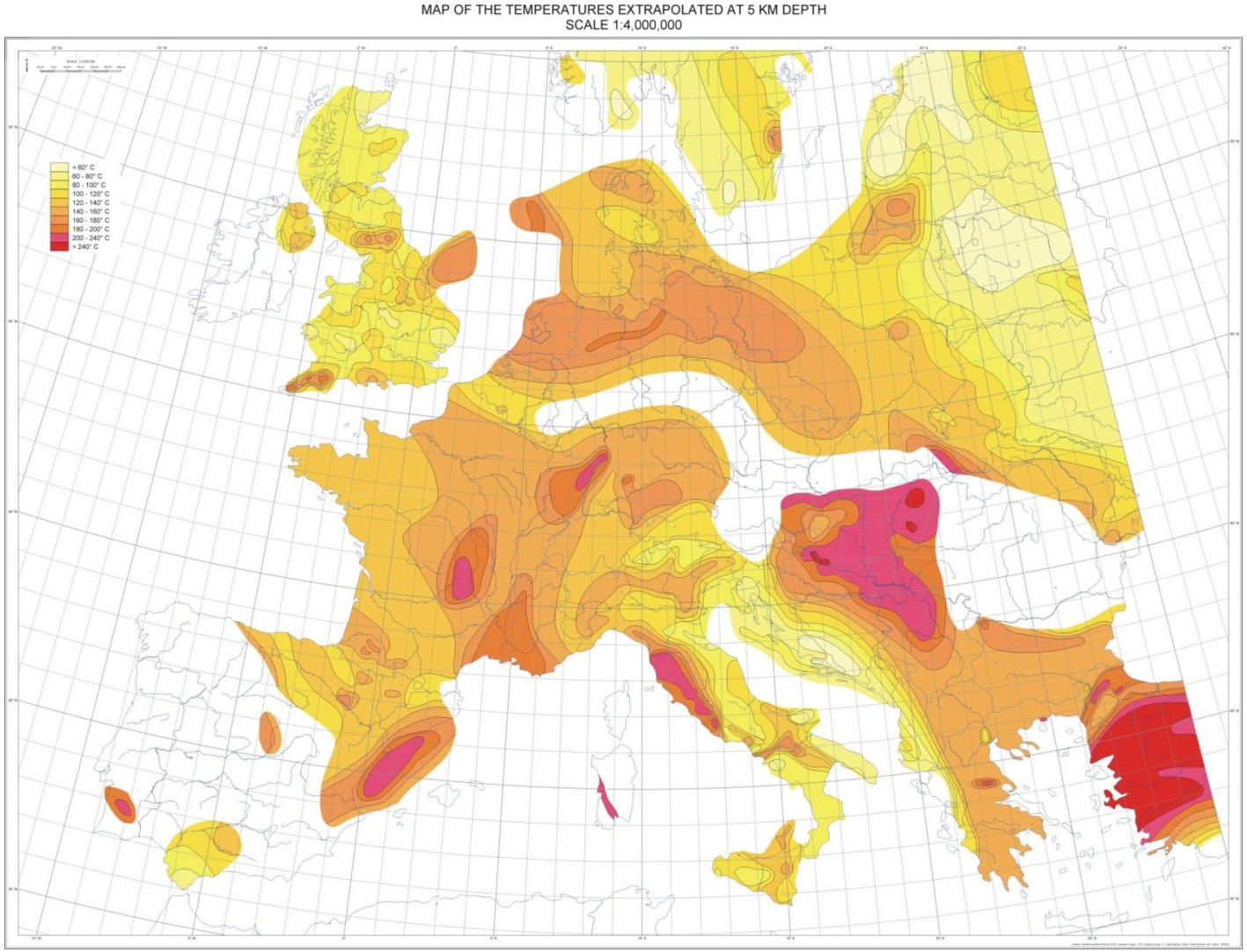
EC 'Atlas of geothermal resources in Europe' (2002)

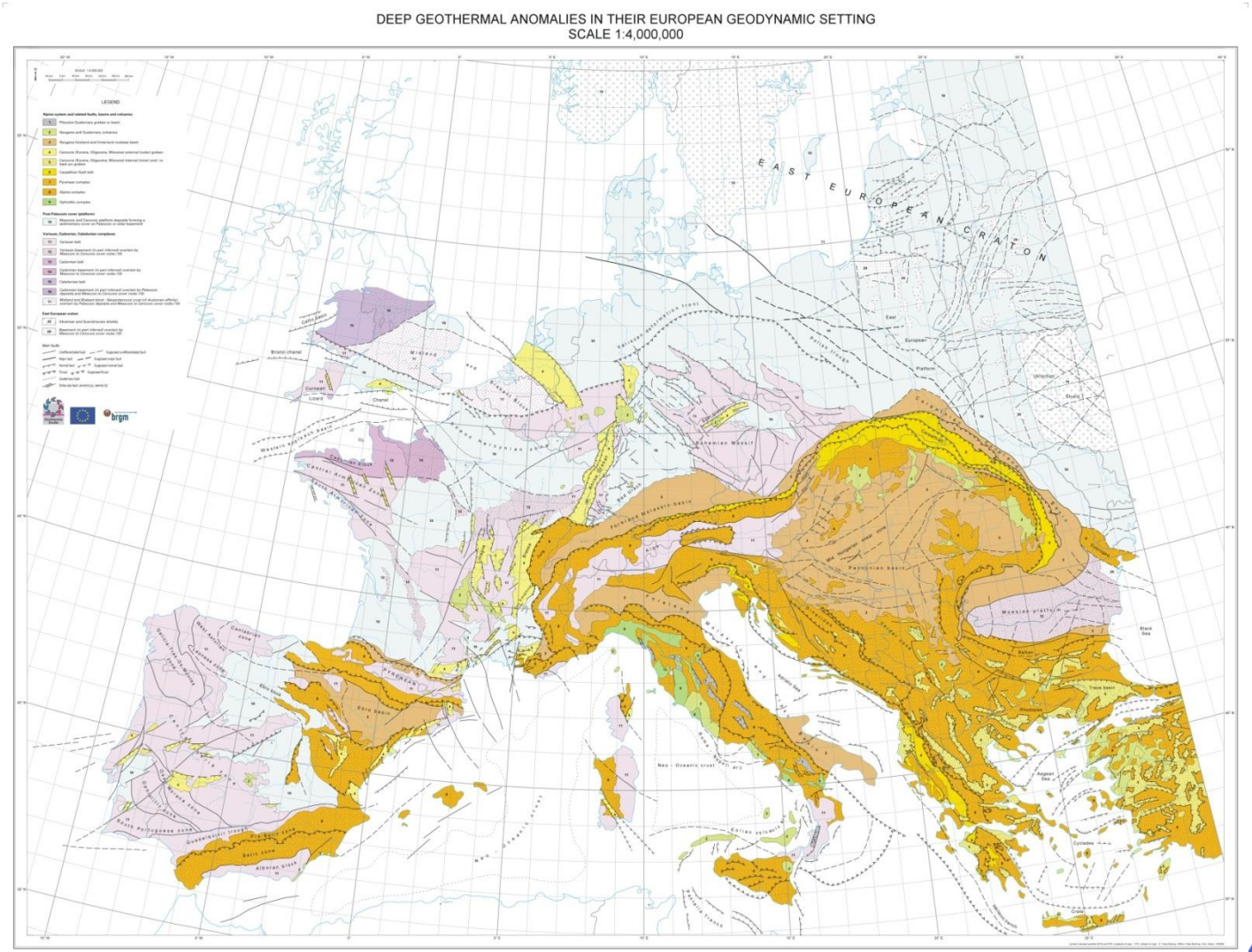
Resource assessment for UK (hydrogeothermal resources)

Eastern England

European Map



ENGINE Project (FP6)



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Other Public Sources:

- WGC 1995, 2000, 2005, 2010: Country Updates
- National geological databases
- Methodology from other continents:
  - Canada
  - USA
  - Australia

Canada

Geothermal energy resource potential of Canada (GS of Canada, 2011)

Contains maps on EGS potential !

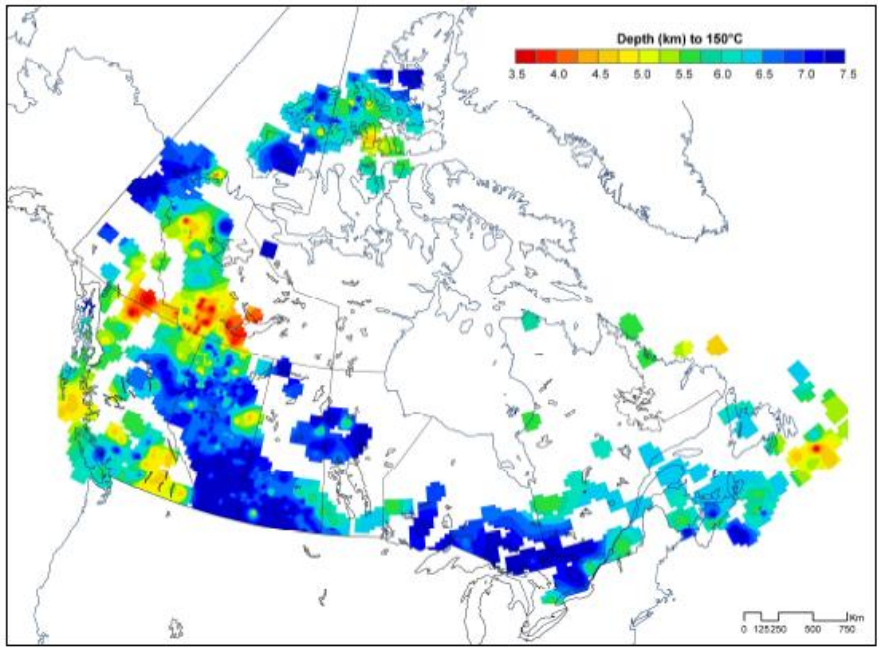
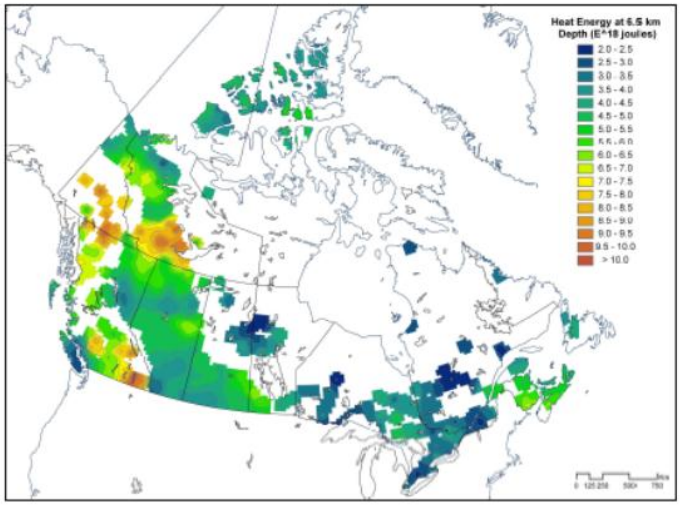


Figure 8.4. Depth (km) to 150 °C temperature.



igure 8.2. Heat Energy at 6-7 km depth.

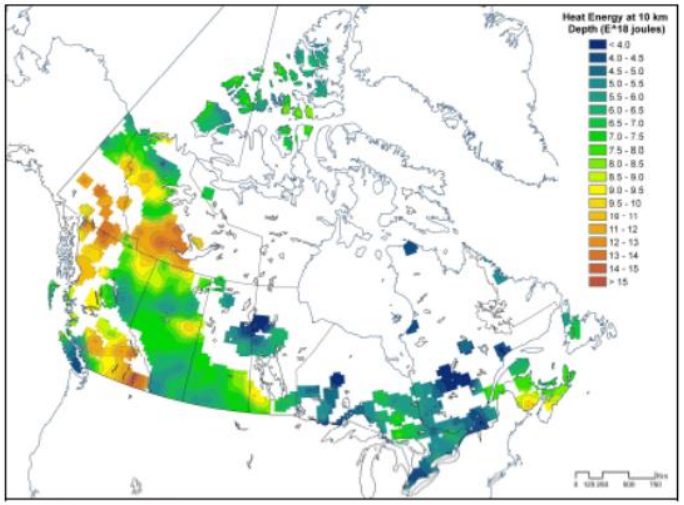


Figure 8.3. Heat Energy at 9-10 km.

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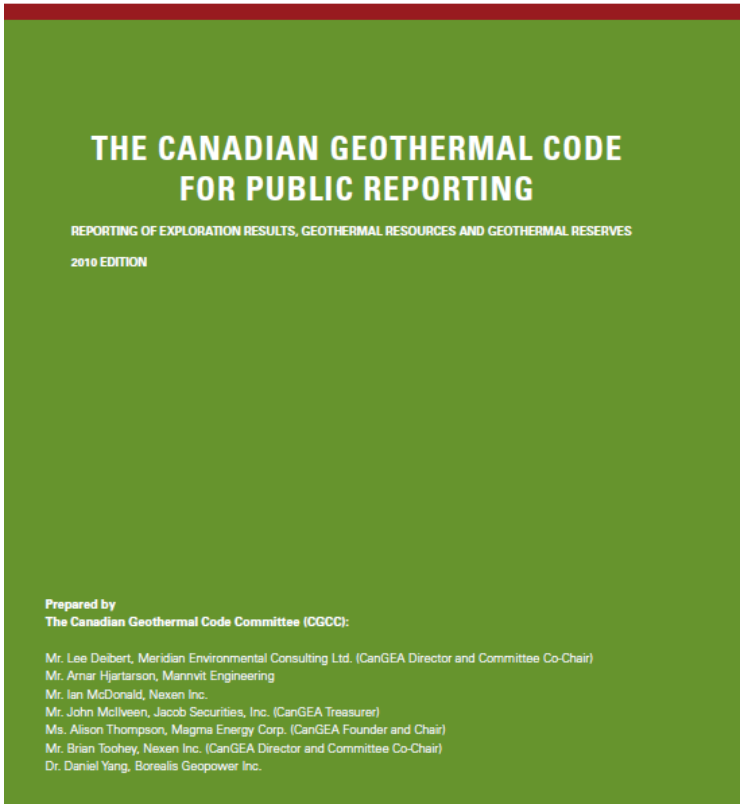
Canada

Canadian Geothermal code for public reporting, Cangea, 2010

CanGEA
CANADIAN GEOTHERMAL ENERGY ASSOCIATION

"Accelerate Canadian exploration and development of geothermal resources in order to provide secure, clean and sustainable energy"

5,000 MW BY 2015!



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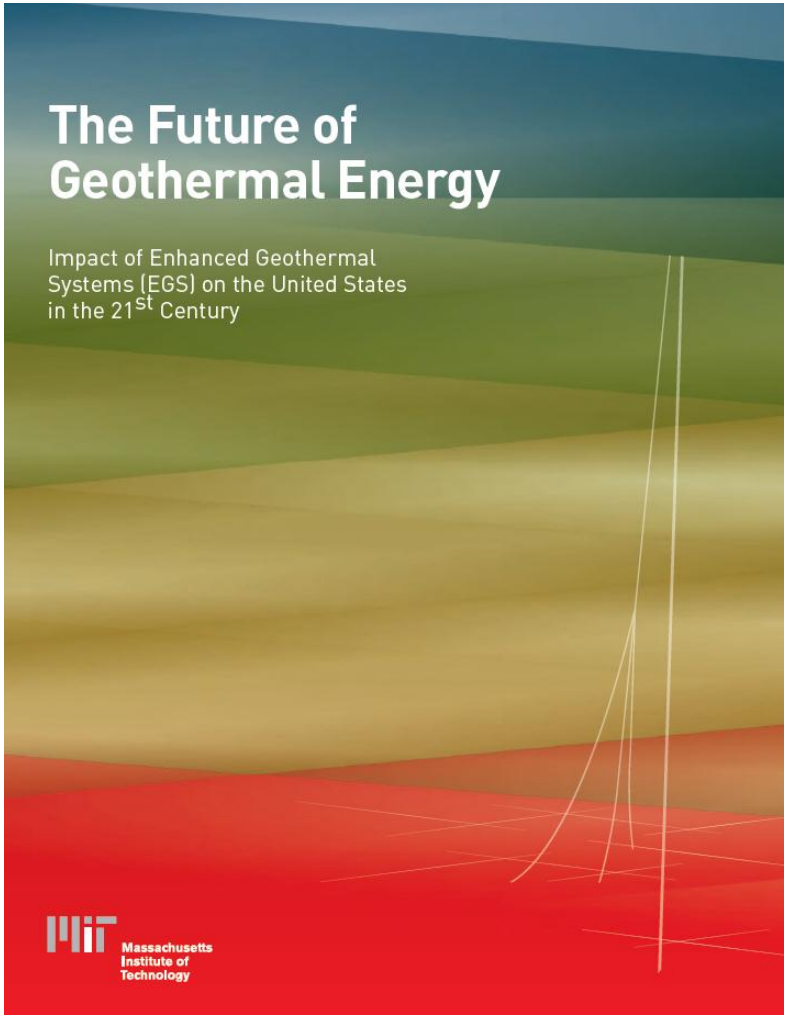
USA

- The Future of Geothermal Energy, MIT, 2006

- GOOGLE.ORG:

  U.S. Geothermal Resource (3-10 km depth) on Google Earth



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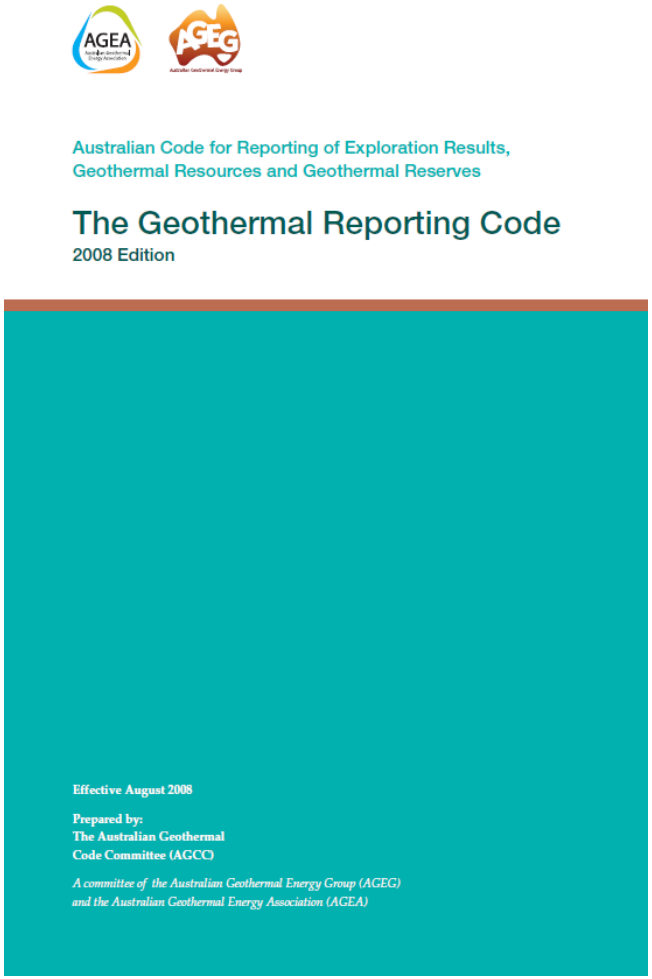
Australia

The Geothermal reporting code, 2008, AGEA-AGEG



Regional compilation of prospective areas and resource assessment

Geoelec Geothermal resource assessment protocol

Expected results:

- Compilation of geological and geophysical data inside Geological surveys, accessible to interested developers as open and easily as possible

- European Geothermal Reporting Code (discussion already started within TP Geoelec)

Thank You!

Visit www.geoelec.eu

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