



International Partnership for Geothermal Technology

Australia's Collaboration
On
Developing Reservoir Production Techniques

Australia is interested in collaborating on developing EGS Reservoir Production Techniques

Slide 2

- ▶ Reservoir Assessment
- ▶ Reservoir Modelling
- ▶ Reservoir Fracture Mapping & Description
- ▶ Flow Performance Continuity Assurance



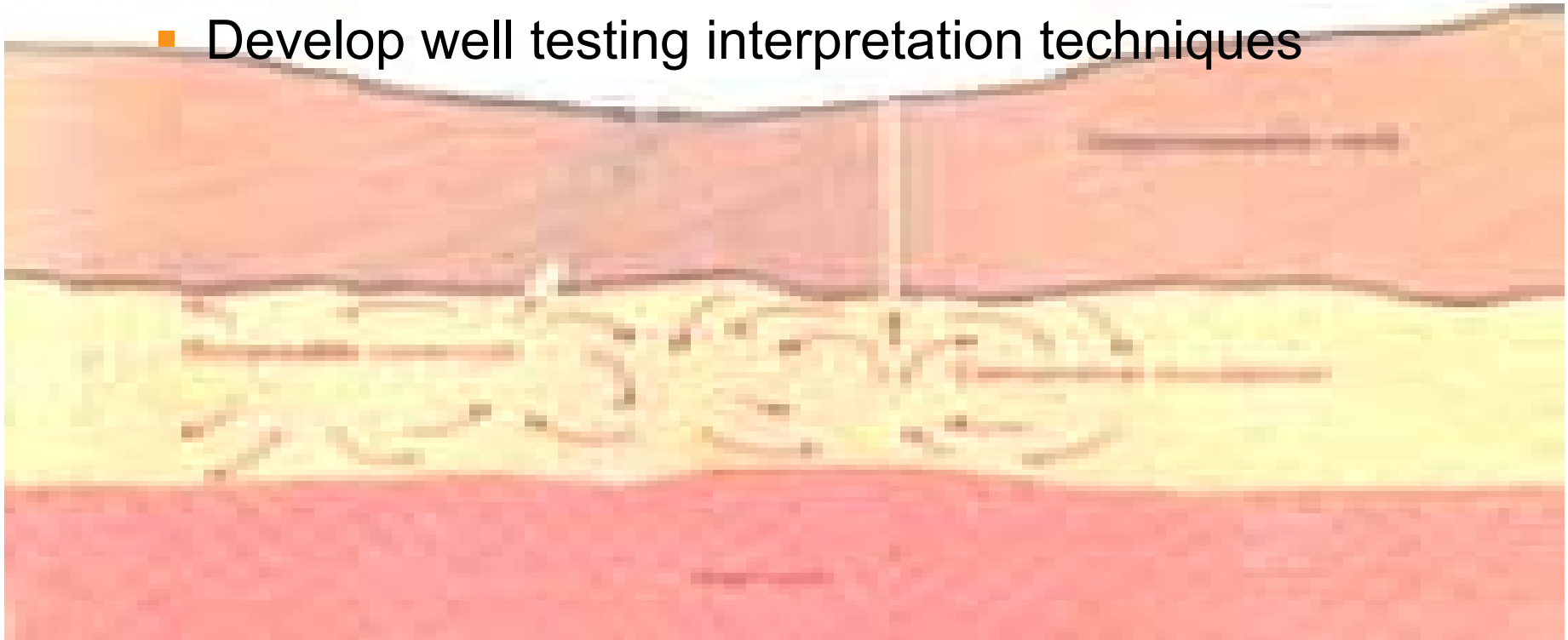
What is the Core of Australia's Thinking?

- Australia – EGS applications only ?
 - Totally different from US & Iceland experience
- EGS has many more degrees of freedom than oil & gas
 - Vertical reservoir limits – generally no effective bottom to reservoir – limit is drilling technical /commercial
 - Enormous lateral flexibility – can choose ideal well spacing
 - Stimulation treatments – pressure, acid, etc
- Exporting our learning & experience
 - Must trade for access to developed technology

Australia's EGS Reservoir Production Needs

1 Reservoir Assessment

- Well testing techniques - info from single well
- Develop well testing interpretation techniques



Australia's EGS Reservoir Production Needs

2 Reservoir modelling

- Improved reservoir characterisation & model development – Geothermal
- Develop fracture distribution prediction method – pre-drill
 - Programme on fractures in granites, sedimentary systems
 - Hydraulic parameters, cooling, loading histories

Australia's EGS Reservoir Production Needs

3 Reservoir Fracture Mapping & Description (Reservoir Flowpath Short-Circuit Avoidance)

- Develop mapping techniques
- Develop techniques for modelling flow characteristics vs. reservoir properties

Australia's EGS Reservoir Production Needs

- 4 Reservoir life - flow, temp maintenance
 - Produce consistent thermal energy to surface long-term – V, T
 - Keep reservoir flowing
- Develop knowledge database – flow characteristics vs reservoir properties
- Develop flow improvement techniques that work far from the well bore
 - techniques to measure/monitor reservoir flow performance
 - what makes flow change?

Australia's EGS Reservoir Production Needs

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Australia's EGS Reservoir Production Needs

Also:

Data Acquisition and Management

- 1.Data transfer standards – interpretability
- 2.Build on / access / add to geological databases
- 3.Data schema for production & economic data
- 4.Access to production & economic data.

