CO_2 Geologic Storage

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Indiana Summit Sept 2008
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Finding a Storage Site

Scale Approximation: 500MW ~ 100 MT CO_2 ~ 100 Square Miles Storage

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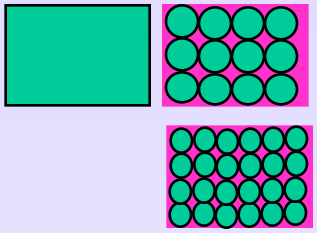
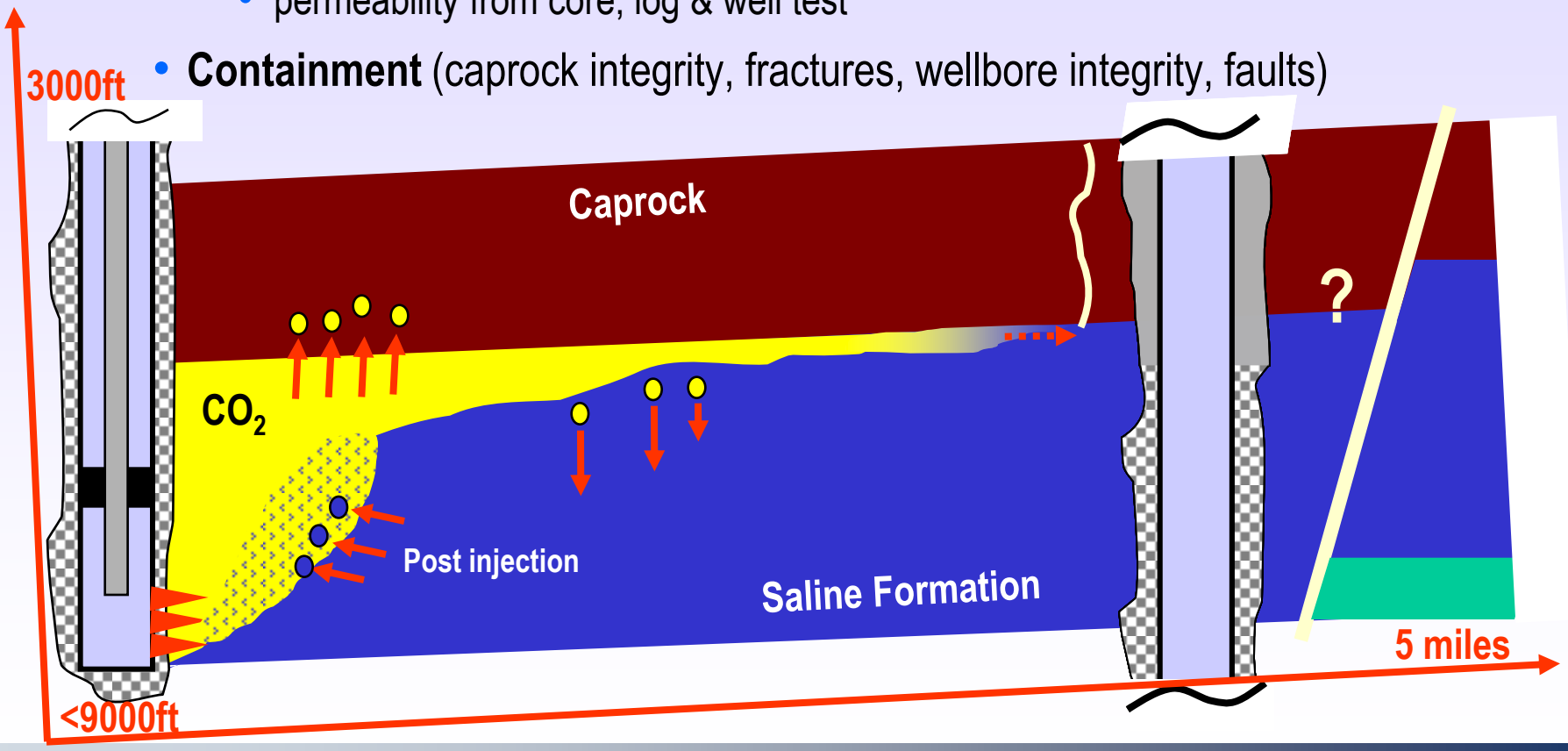
Storage Fundamentals

- **Capacity:** (match to source & estimate plume shape)
  - bulk volume (seismic) X porosity (logs) X *"storage factor"*
- **Injectivity** (how many wells)
  - permeability from core, log & well test
- **Containment** (caprock integrity, fractures, wellbore integrity, faults)





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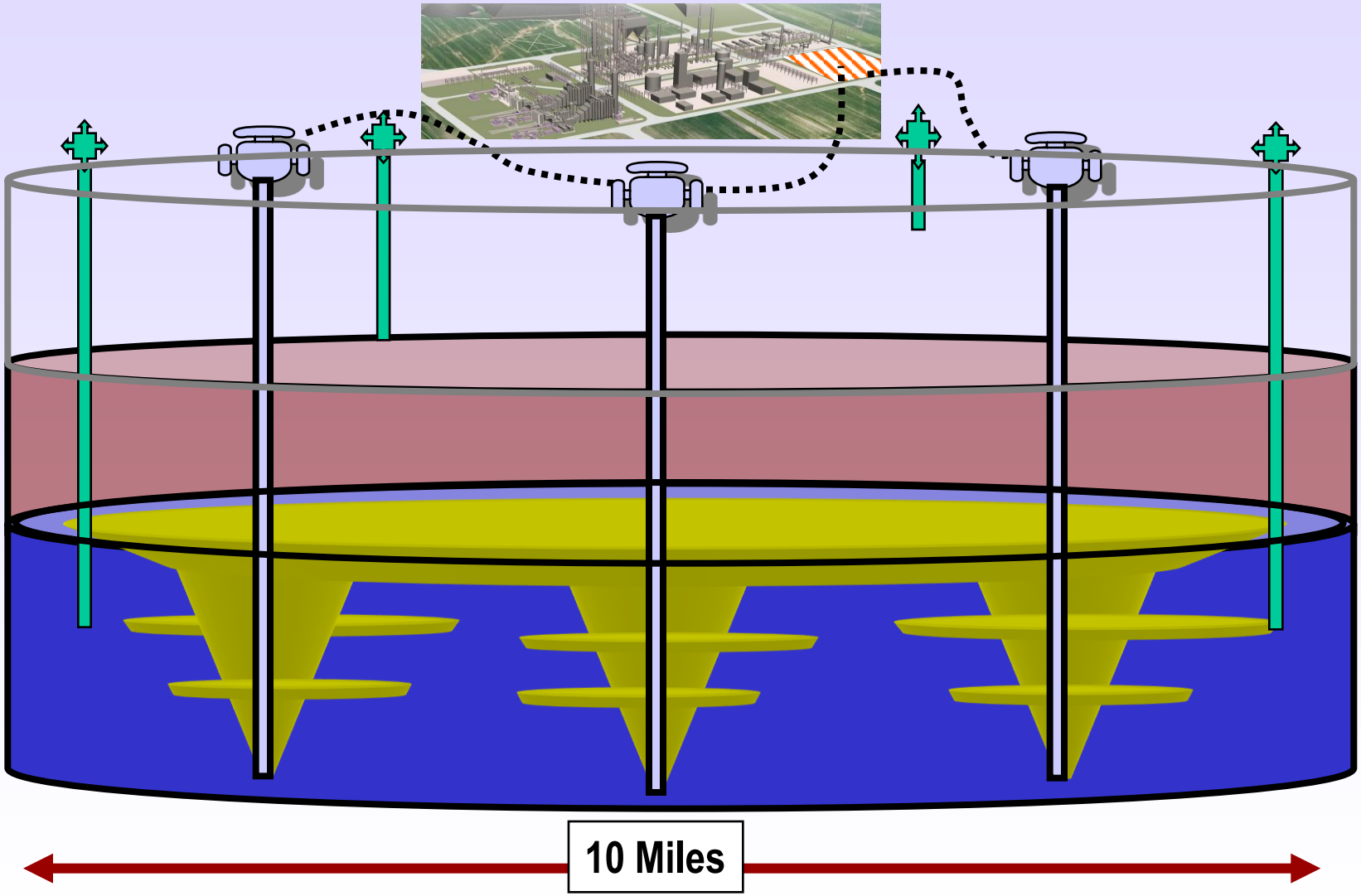
The Big Picture



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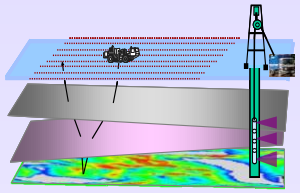
Commercial Scale Storage Timeline

Possible site



Collect Data
- 2-D Seismic
- Drill Well
- 3-D Seismic

Study
- Existing Data

2-3 yrs | 5-7yrs | 30 yrs | 50 yrs | 100+

Risk Control & Performance Assessment

(Functions) Capacity, Injectivity, Containment >>>> (Stakes) HSE, Cost, Image

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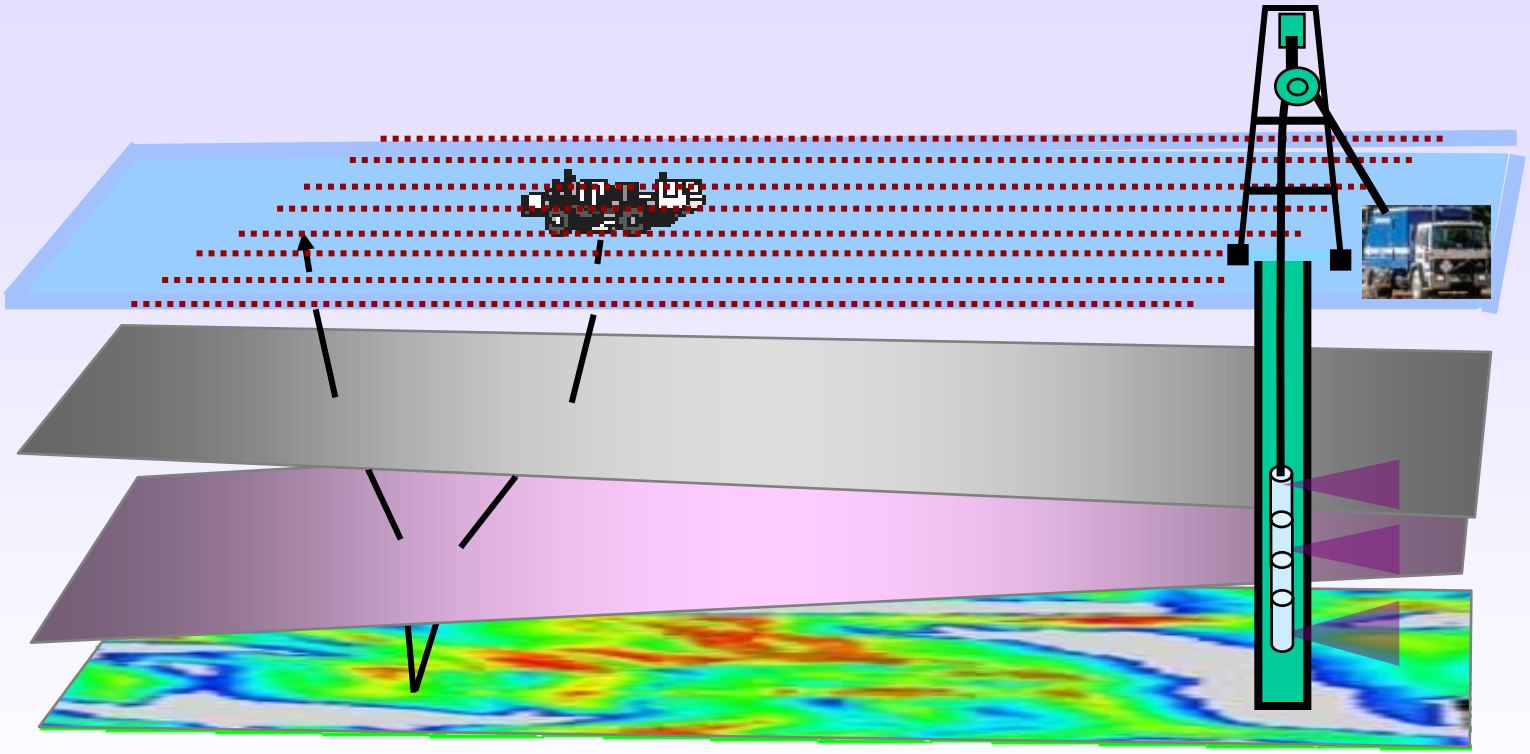
Data Collection



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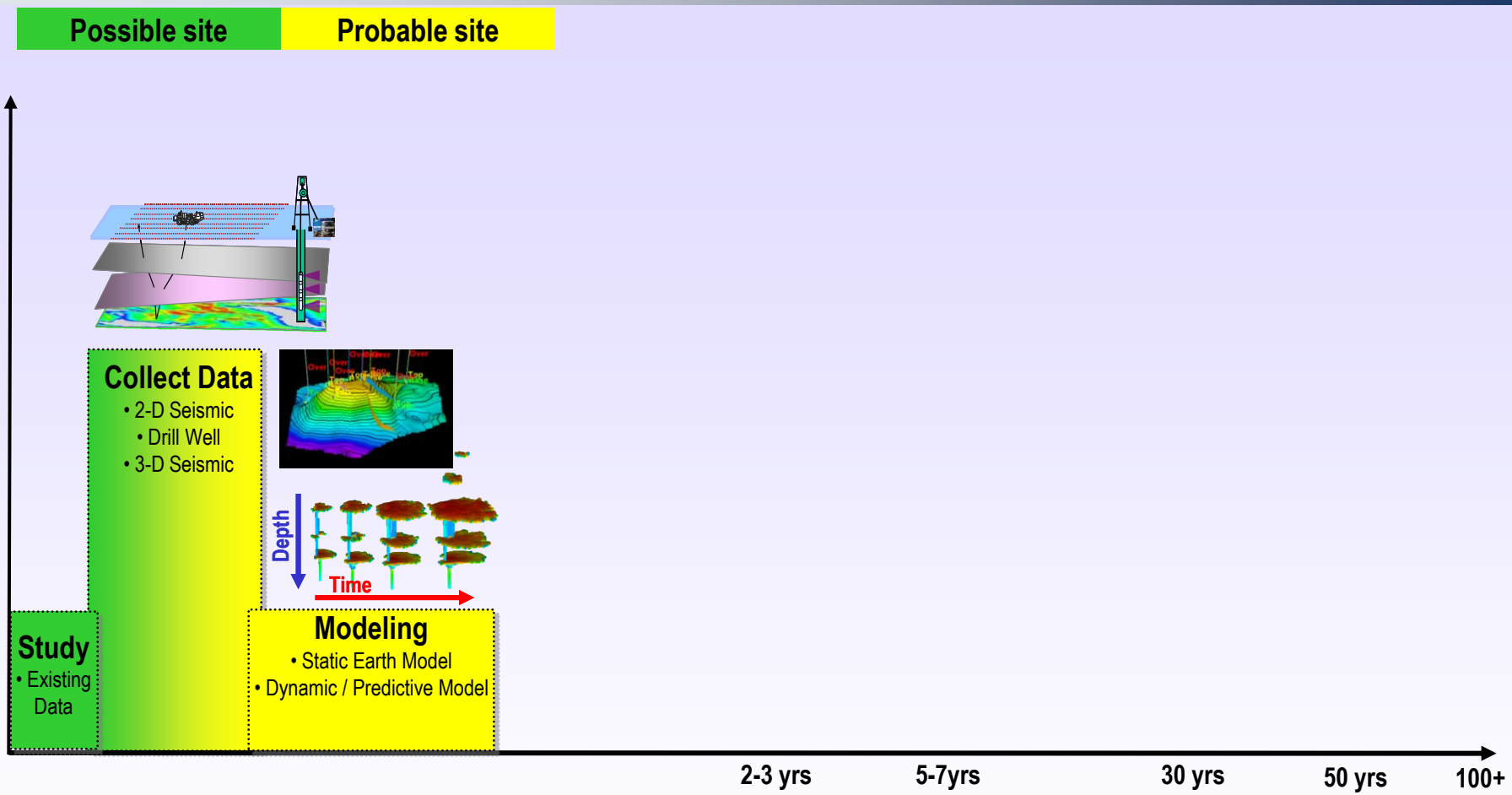
Commercial Scale Storage Timeline



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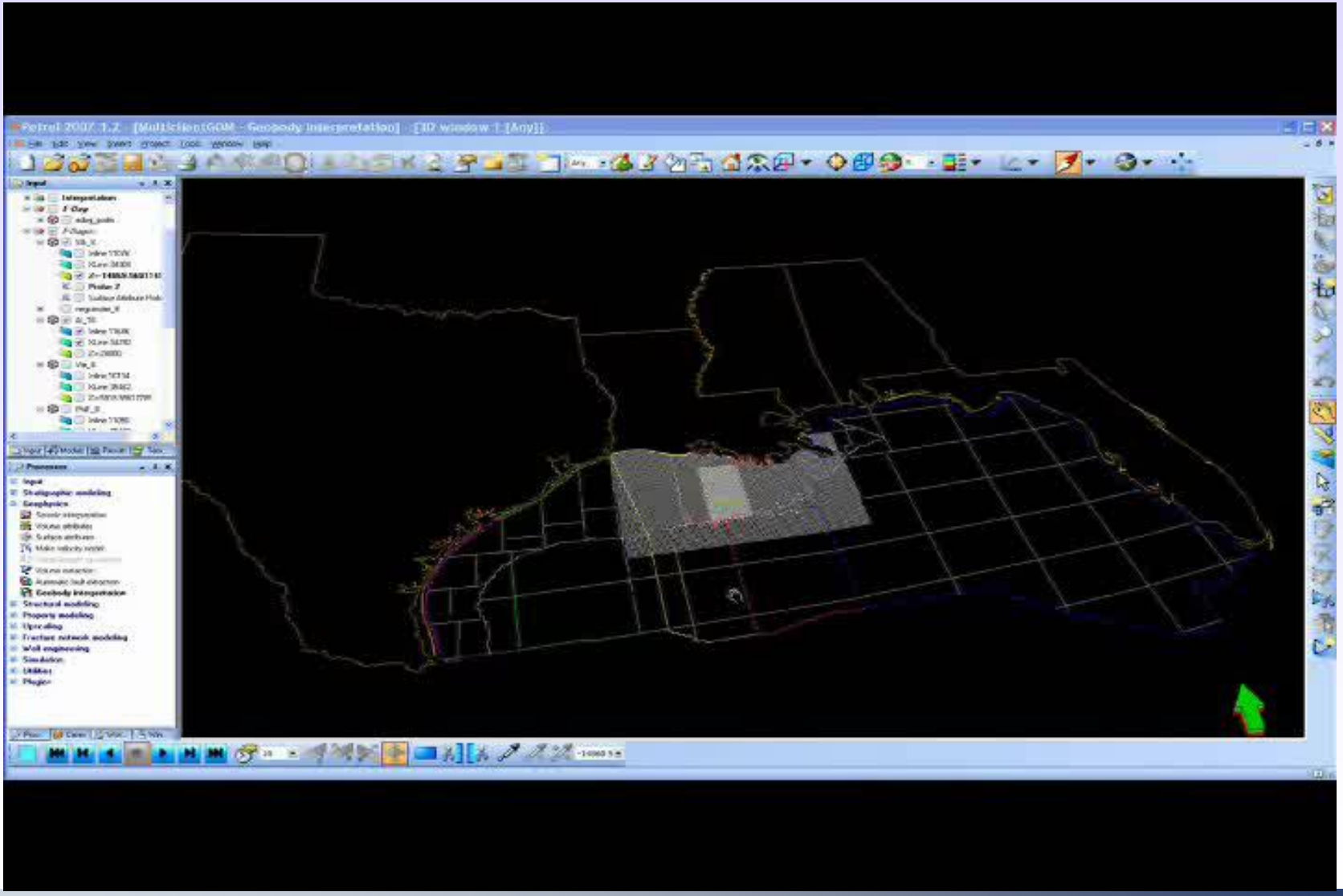
Example Modeling Animation



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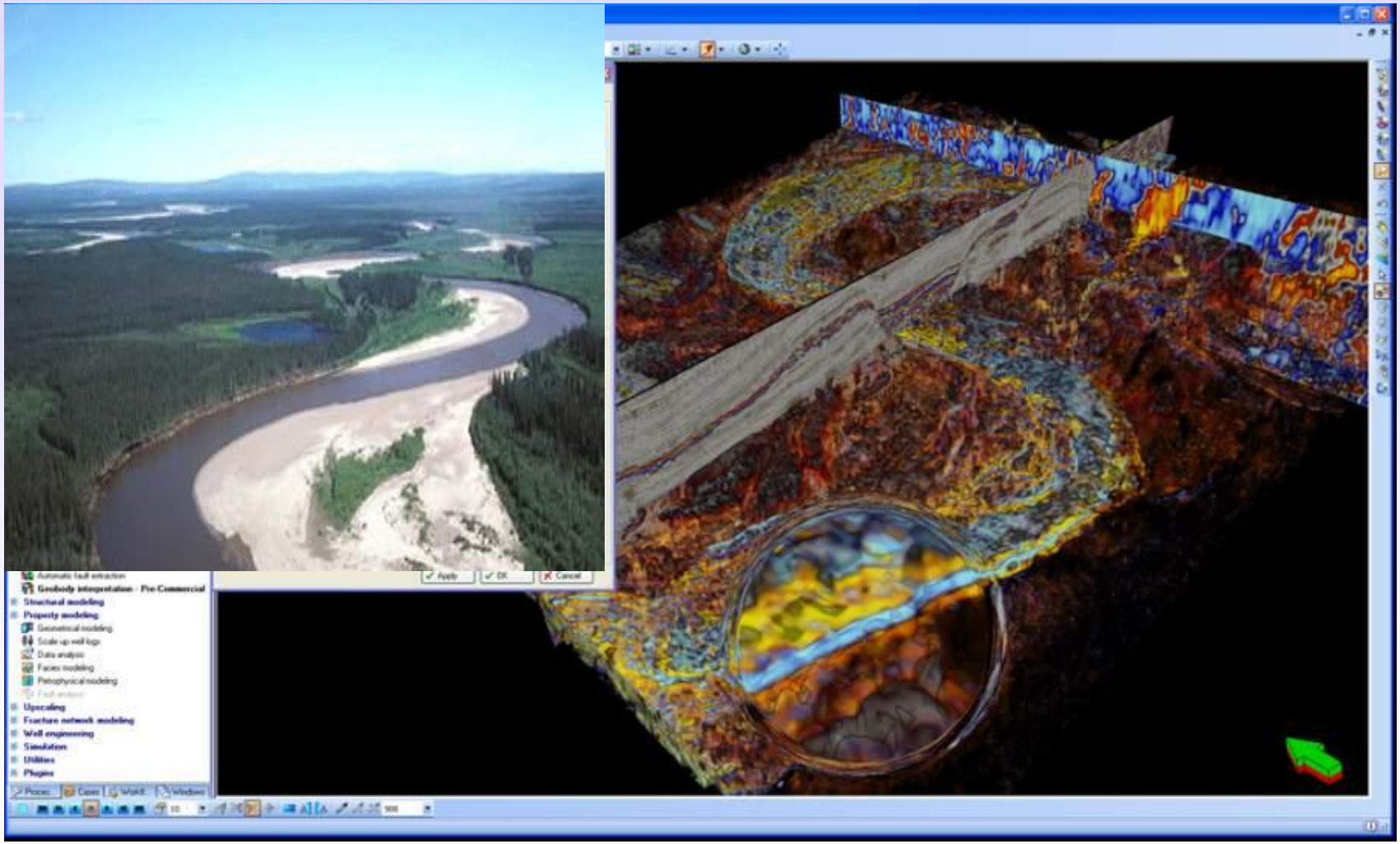
Modeling



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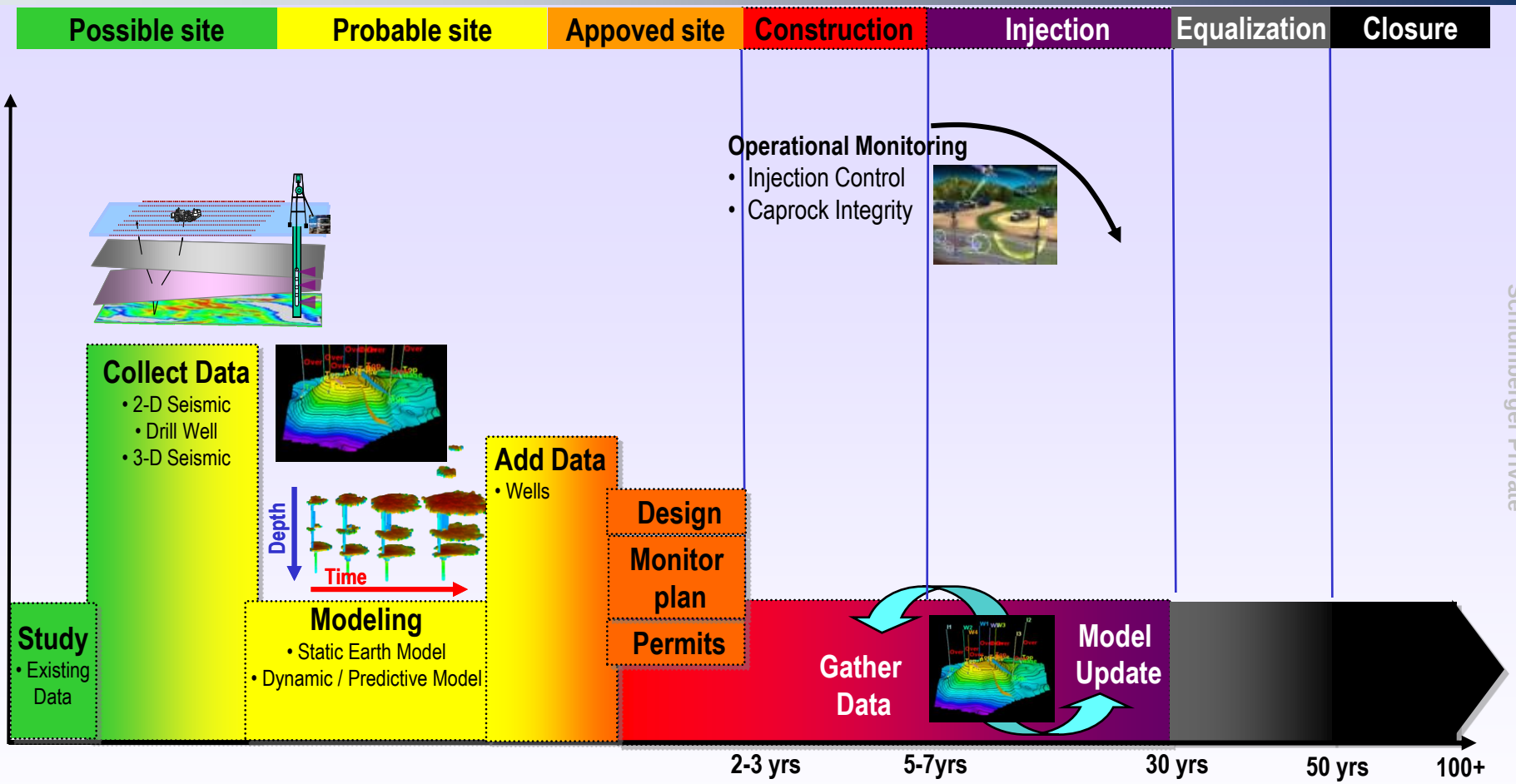
Commercial Scale Storage Timeline



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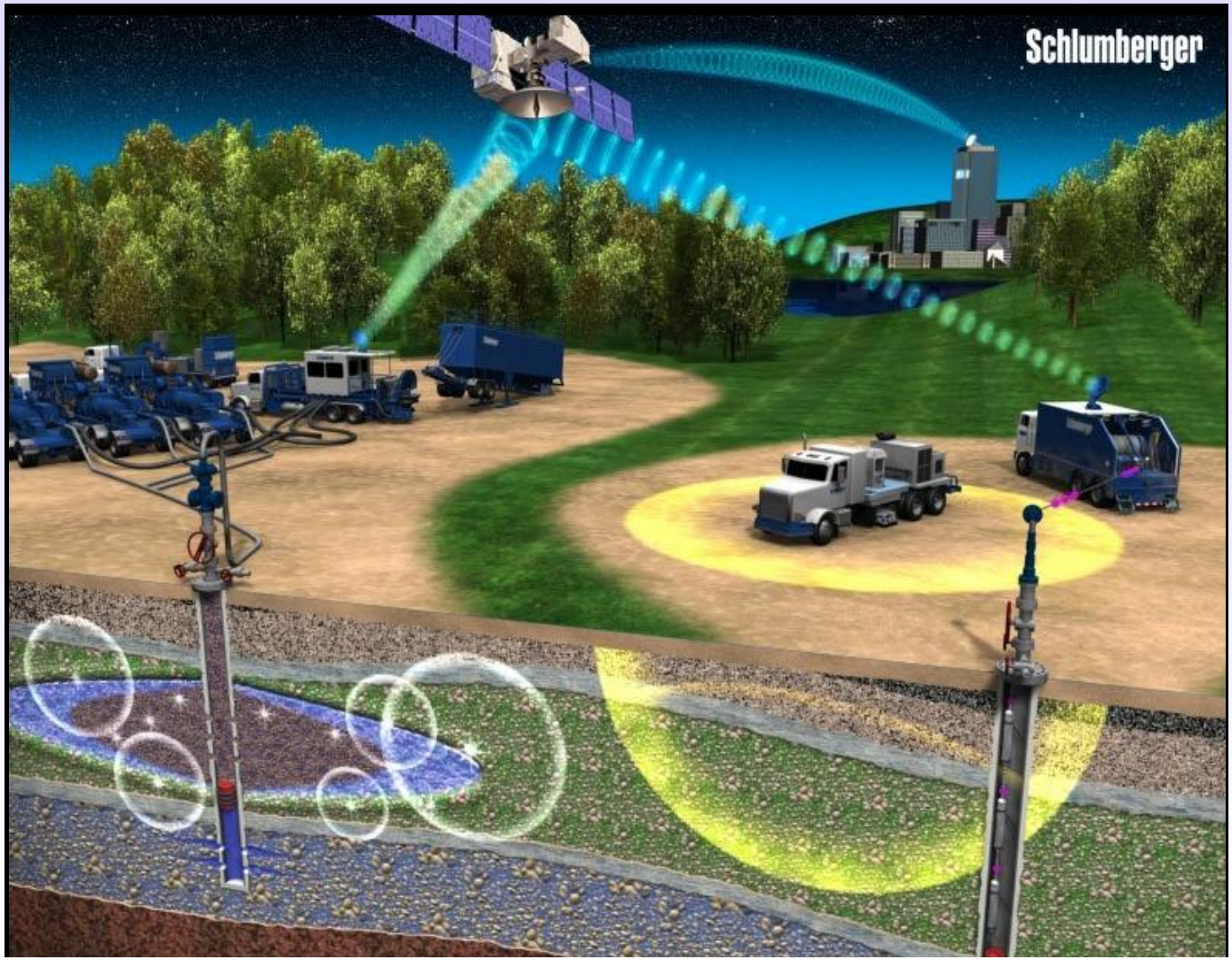
Operational Monitoring



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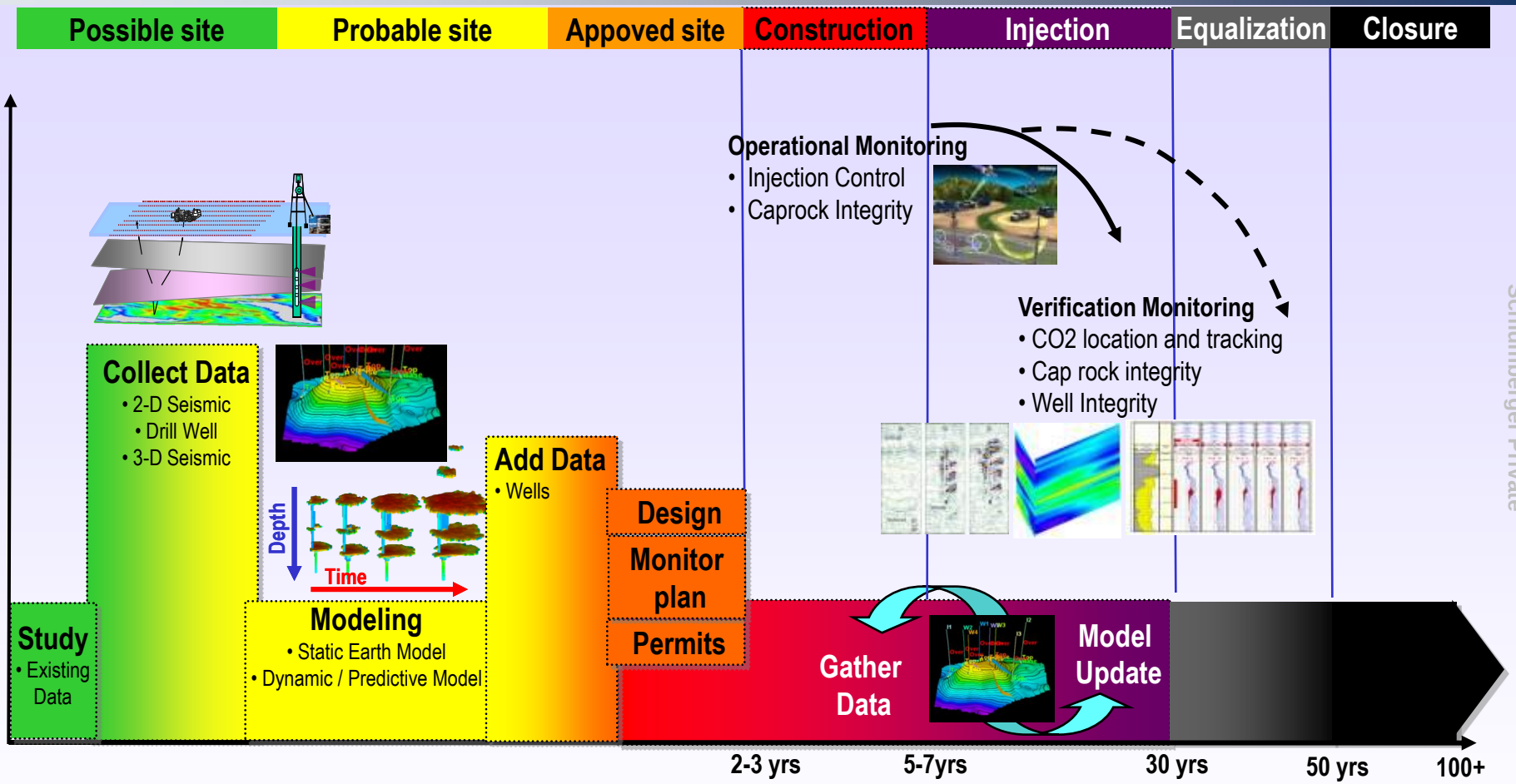
Commercial Scale Storage Timeline



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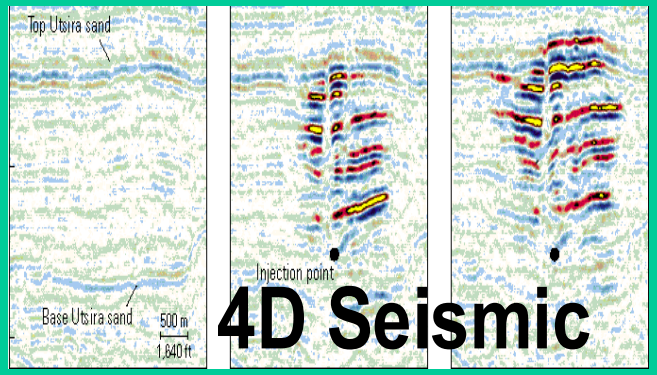
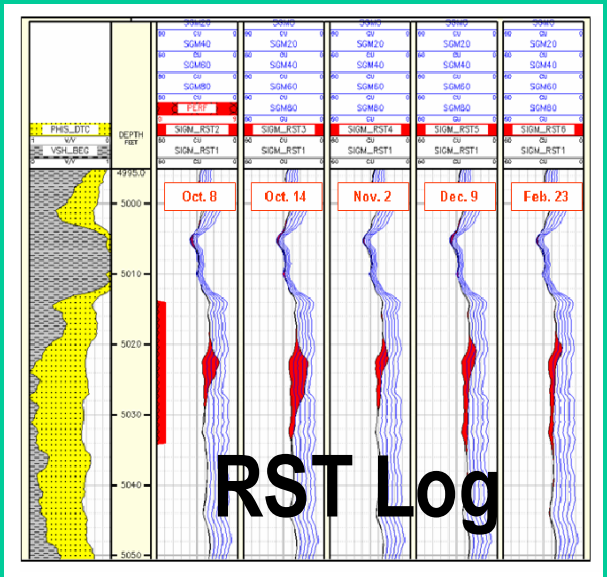
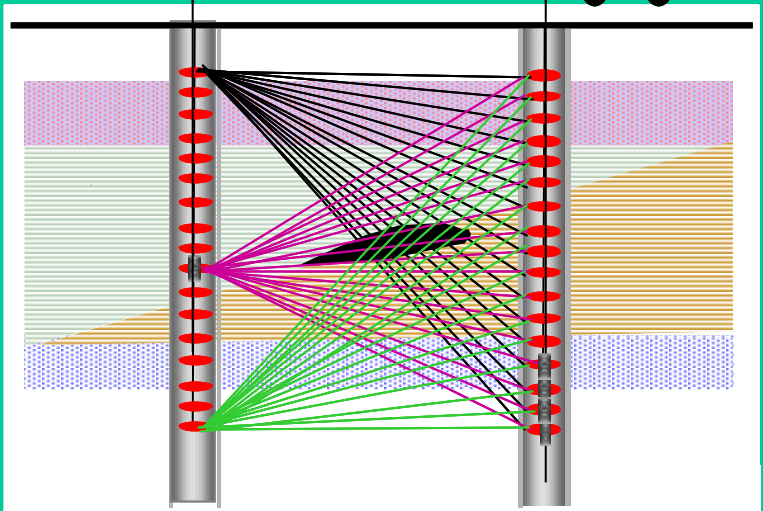
Verification Monitoring







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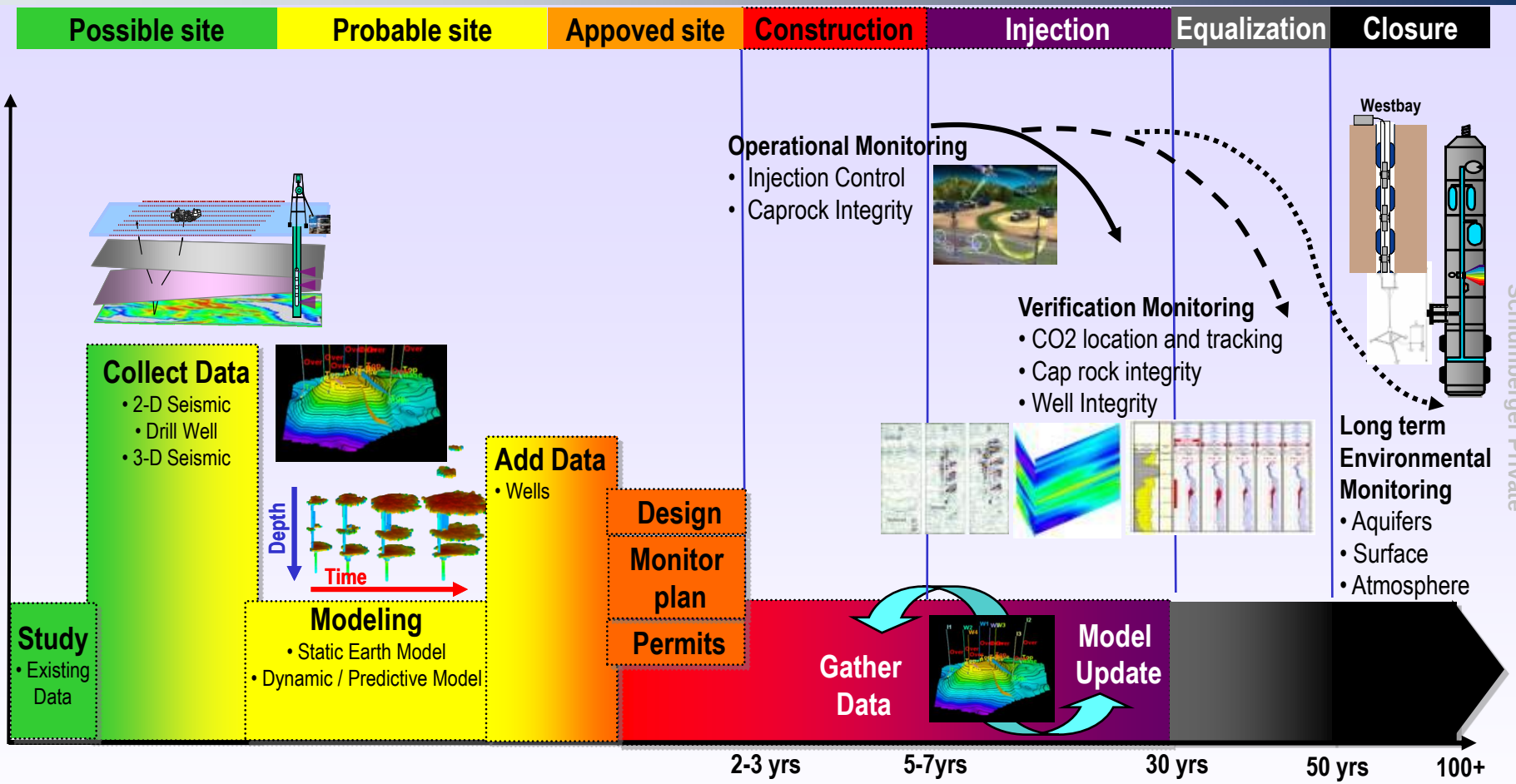

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Questions?

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