

The Emerging Estate of “Produced” Water: The Intersection of Ownership, Disposal, Pore Space and Storage



50th Annual Ernest E. Smith Oil, Gas and Mineral Law Institute

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1



Topics Discussed

WHAT IS PRODUCED WATER?

WHO OWNS PRODUCED WATER?

CURRENT CASE AT THE TEXAS SUPREME COURT

PRACTICAL CONSIDERATIONS

2

2

What is the big deal with Produced Water?

The trash has now become the treasure:

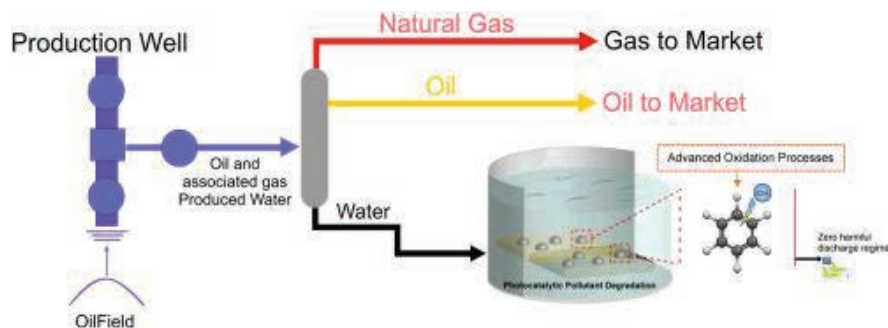
- Millions of Dollars can be earned from treating Produced Water

4 billion barrels per year (~511,000 ac-ft) including:

- Lithium, Cadmium, other rare earth minerals
- Useable non-potable water

What is Produced Water?

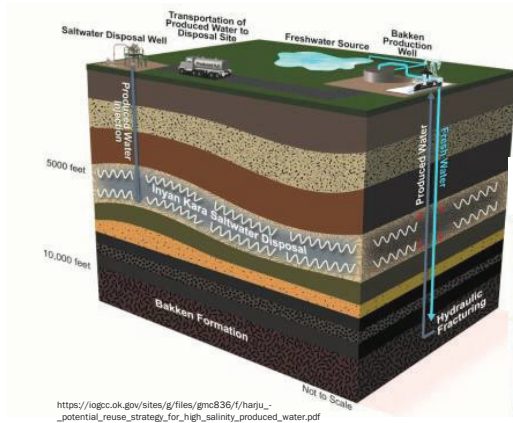
- Fluid byproduct brought to the surface during fracking operations/exploration



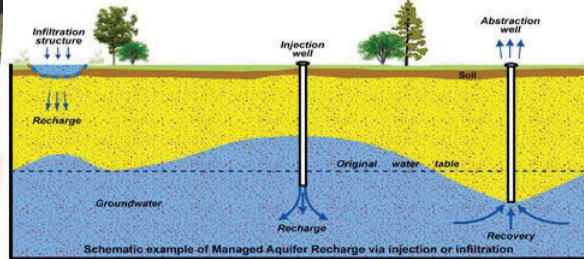
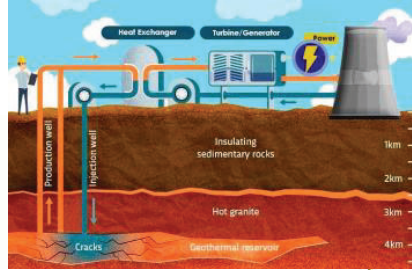
Kingsley Tamunokuro Amakiri, Anyela Ramirez Canon, Marco Molinari, Athanasios Angelis-Dimakis, Review of oilfield produced water treatment technologies, Chemosphere, Volume 298, 2022, 134064, ISSN 0045-6535, <https://doi.org/10.1016/j.chemosphere.2022.134064>.

Emerging Produced Water Technologies

- GHCR: Geologic, Homogenization, Conditioning, and Reuse
- Geothermal Energy
- Aquifer Recharge*

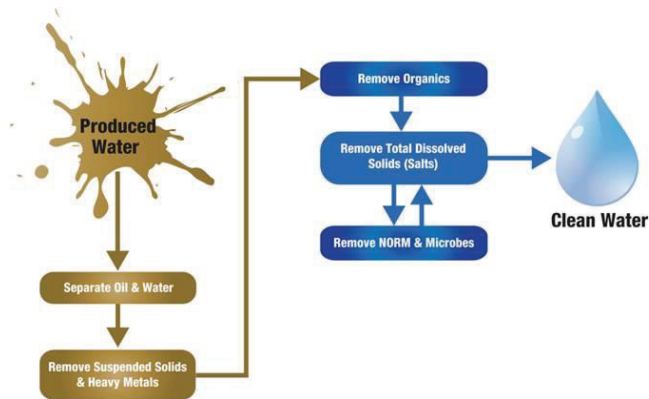


https://ogcc.ok.gov/sites/g/files/gmc836/f/harju_-_potential_reuse_strategy_for_high_salinity_produced_water.pdf



How Value is Created?

- Operator does not have to pay for groundwater
- Operator then uses groundwater for operation
- Treats produced water
- Sells or Reuses treated produced water



<https://www.oil-gasportal.com/produced-water-treatment/?print=print>

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