

Development of Lithium Brine Projects

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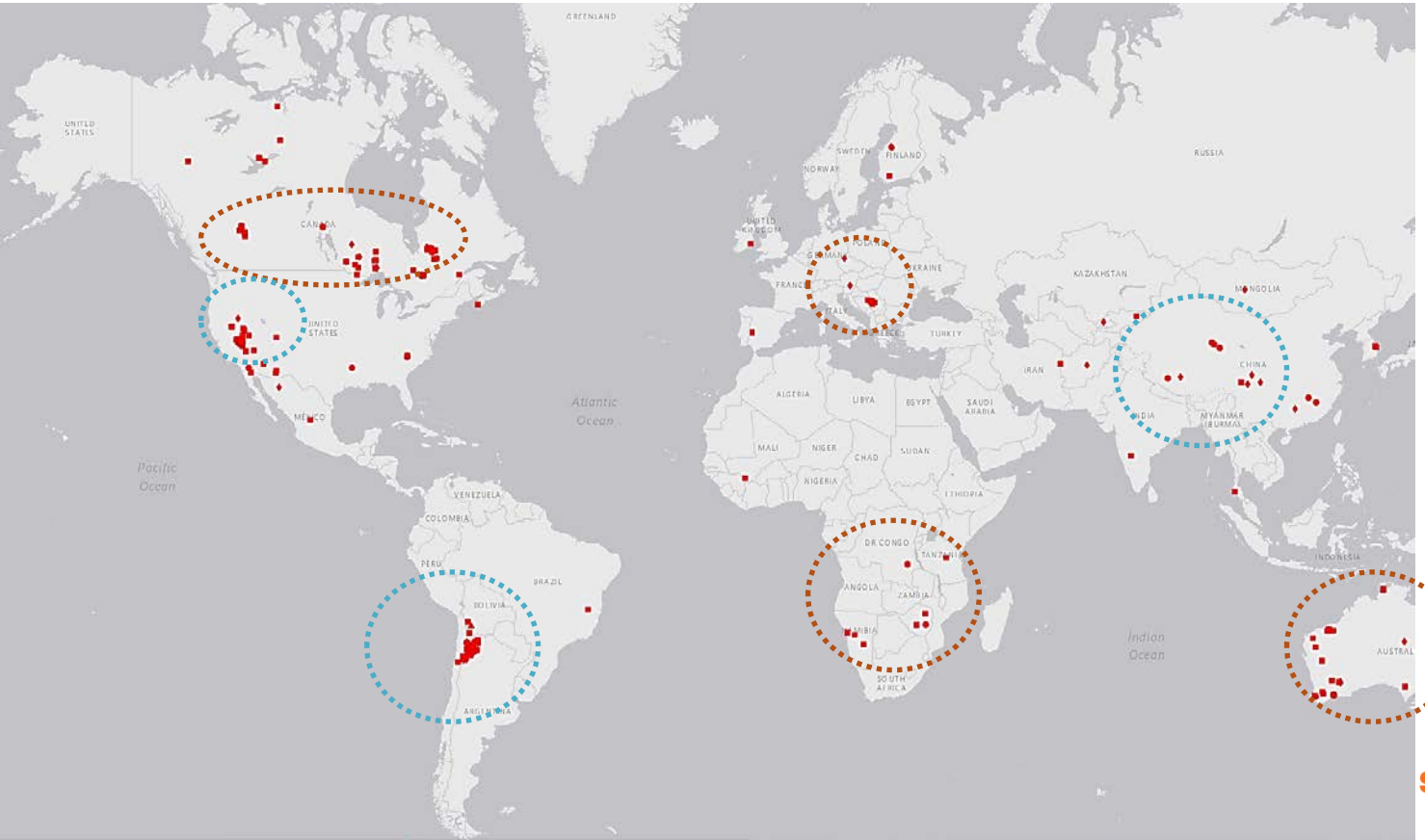
Lithium Deposits Worldwide



Primary Commodity

- Lithium

Mining Properties

Development Stage

- Exploration
- Operating
- Grassroots
- Reserves Development
- Target Outline
- Advanced Exploration
- Feasibility
- Prefeas/Scoping
- Preproduction
- Expansion
- Satellite
- Limited Production
- Construction Started
- Feasibility Complete
- Feasibility Started
- All Others
- NA

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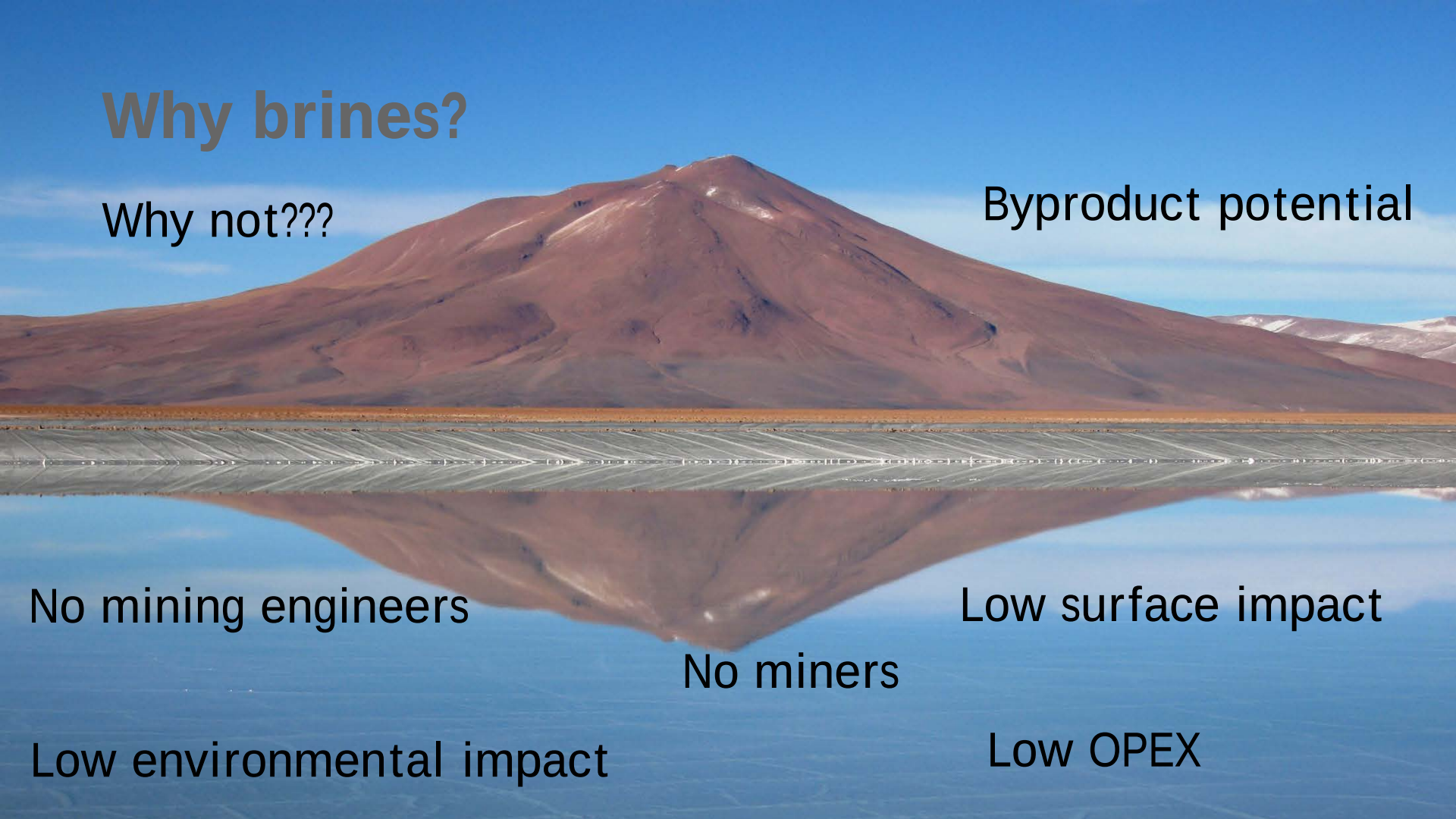
Why brines?



Why not???

Byproduct potential

No mining engineers

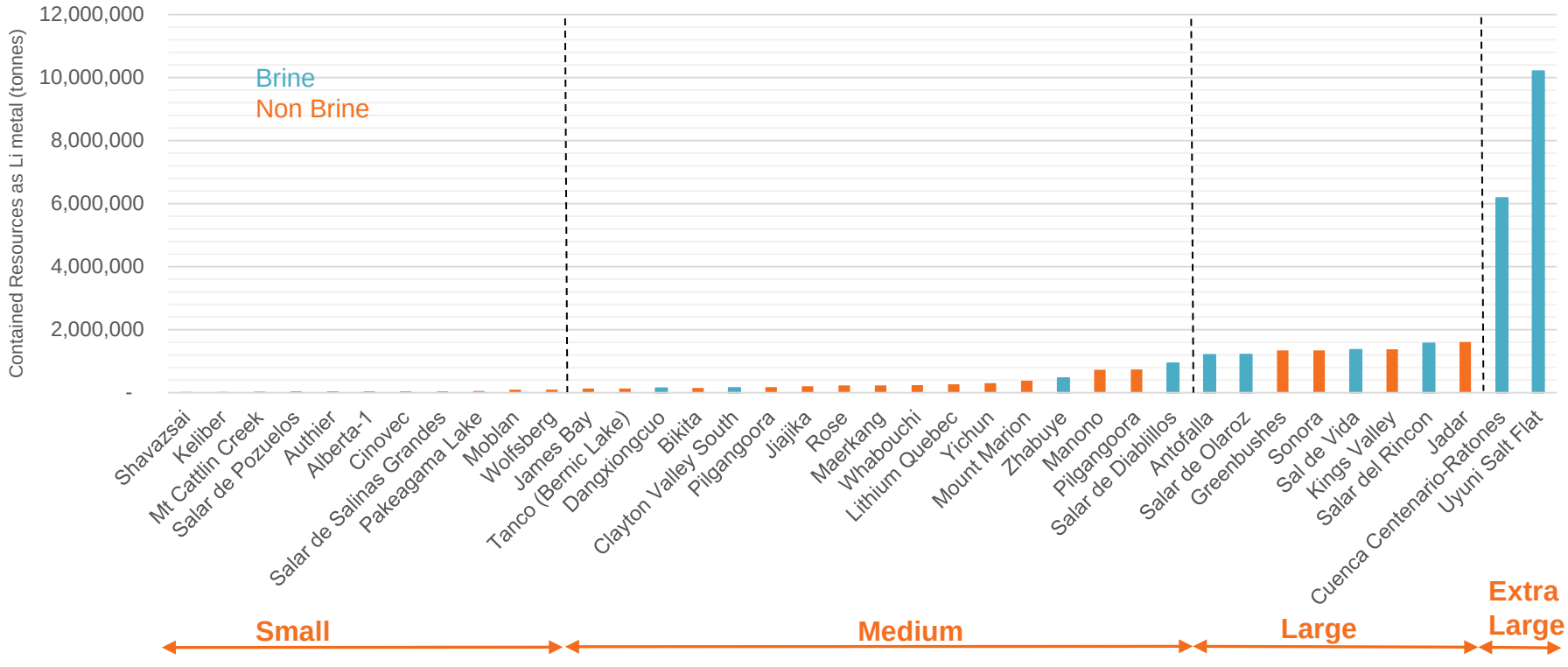
Low surface impact

No miners

Low environmental impact

Low OPEX

Lithium Resources



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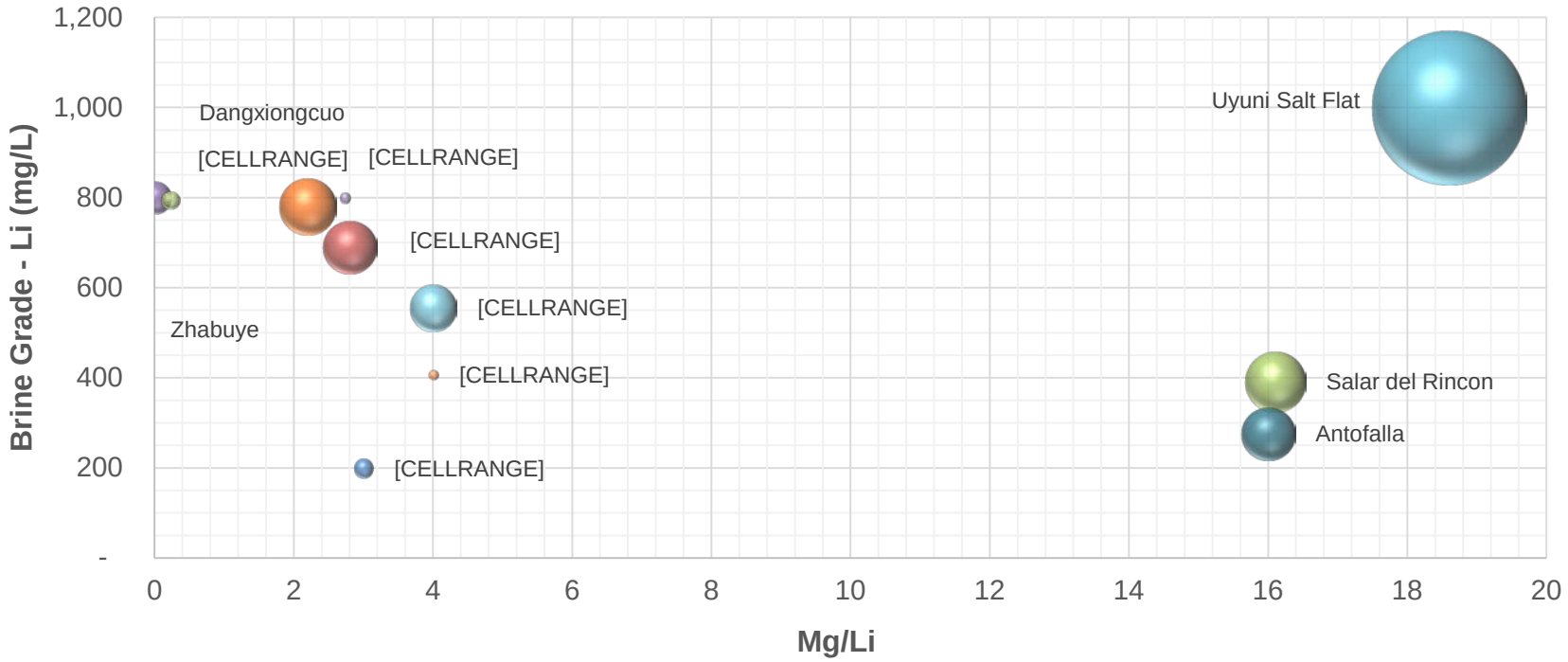
Lithium Brine Deposits - Overall



Bubble size represents Reported Contained Tonnes of Li Resources

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Brine vs Hard Rock Evaluation

Hard Rock

- Tonnes
- Grade

Brines

- Extractable brine volume = $V_{aquifer}$ x Sy
- Average brine chemistry
- Permeability which determines brine hydraulic conductivity and transmissivity, to factor how fast the brine can be extracted

Brine Resource Estimate Model

$$G^{xyz} = S_y{}^{zxy} \cdot C^{zxy} \cdot b^{zxy}$$

Where,

G^{zxy} : Unit Volume tonnage in xyz

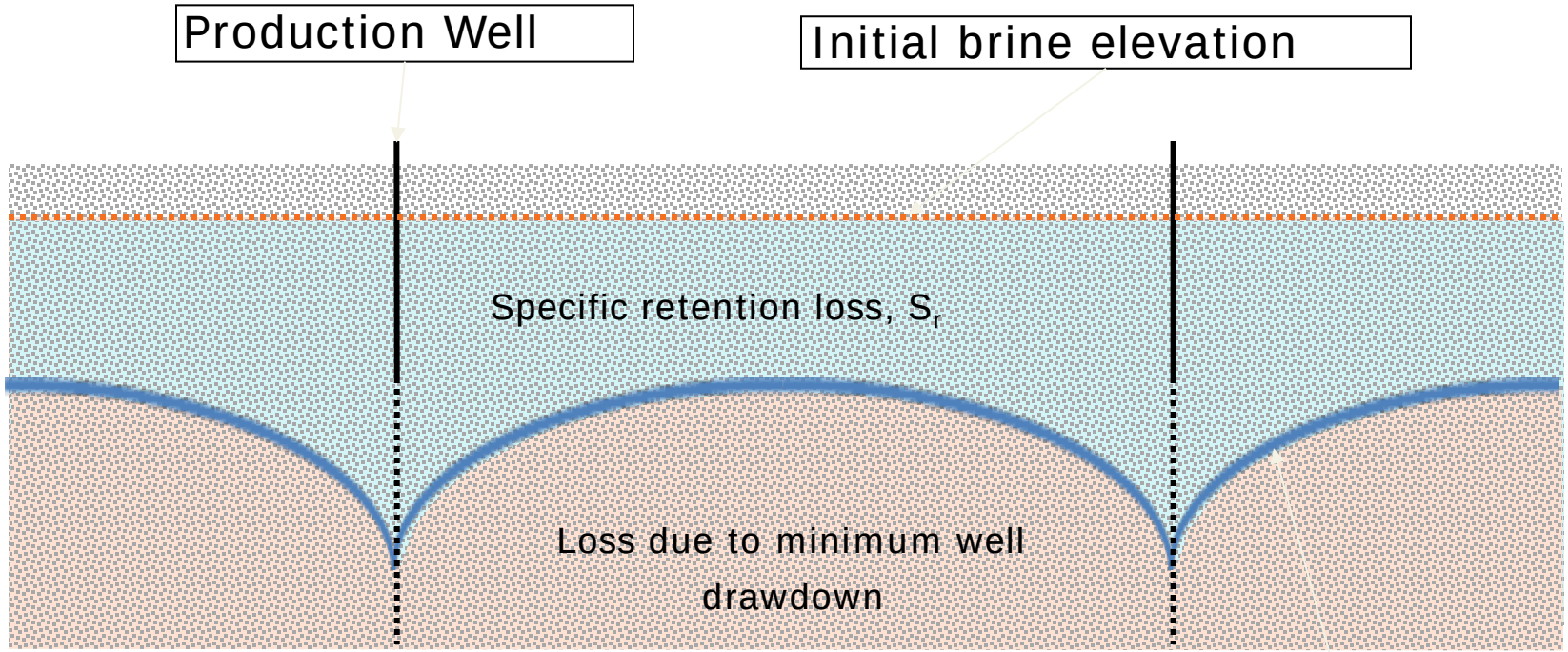
$S_y{}^{zxy}$: Specific yield in xyz

C^{zxy} : Elemental concentration in xyz

b^{zxy} : Unit “thickness”

RESOURCES is the sum of G^{zxy}

Factors that matter - Extractability



Reserve base subject to an in-situ recovery factor

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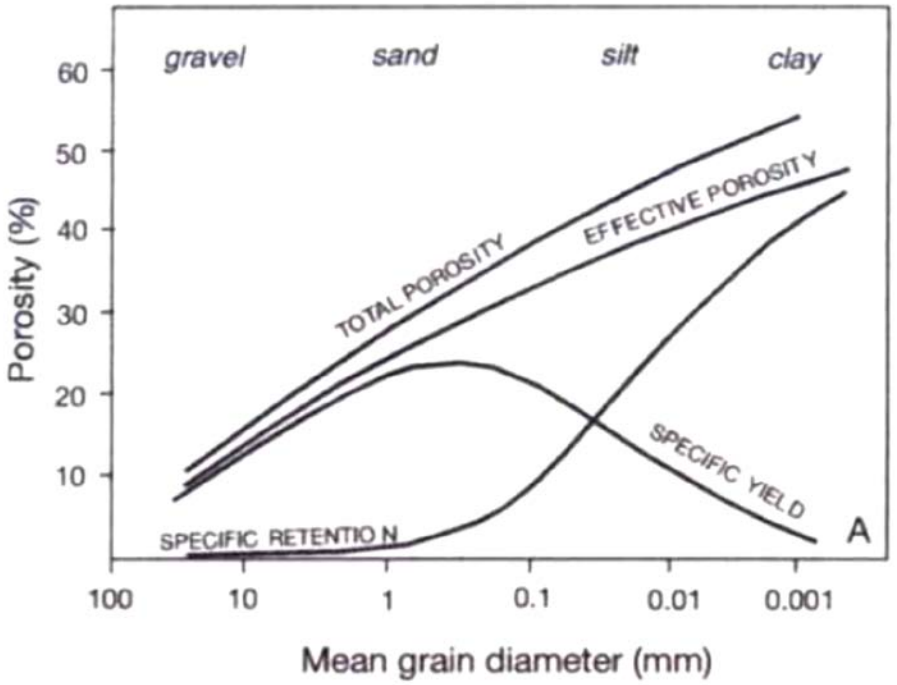
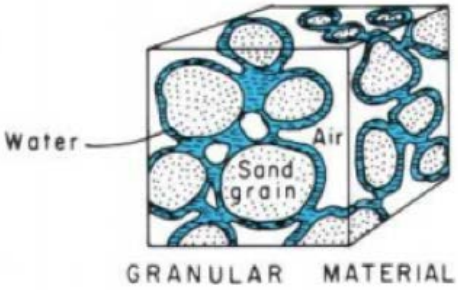
Factors that matter - Porosity

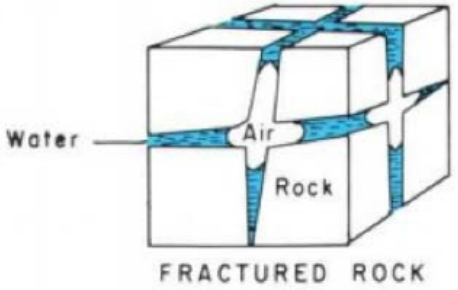


Houston et al., 2011

Pt > Pe ; Pe = Sy + Sr



Water retained as a film on rock surfaces and in capillary-size openings after gravity drainage.



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Porosity: JORC vs 43-101

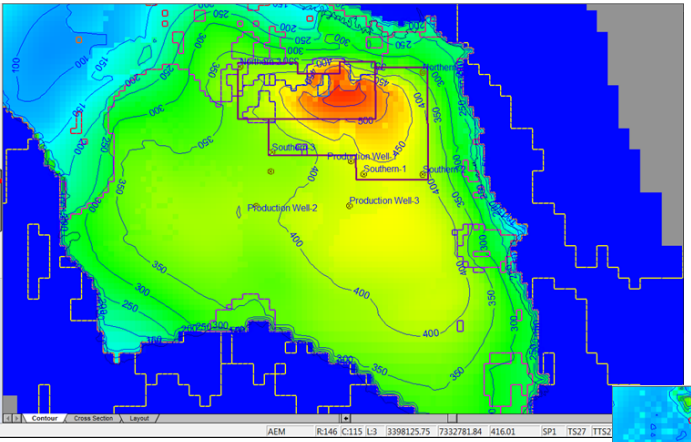
CIM 43-101

- Guidance updated for brines in 2012
- Requires Sy to be determined using two independent methodologies

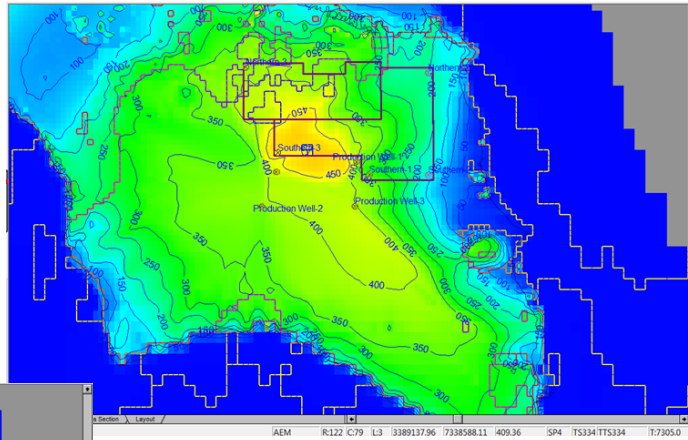
JORC

- JORC Table 1 does not include all items significant for brines, or for crystalline evaporites in brine/evaporite systems.
- Could use Total Porosity to estimate a brine resource

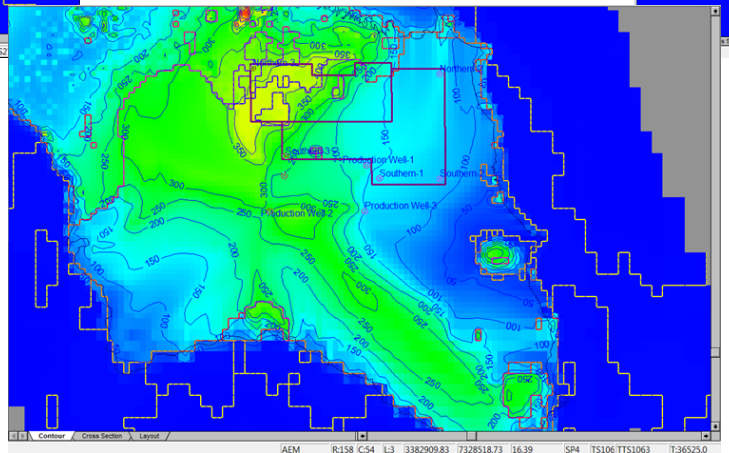
Numerical GW Model



Year 0



Year 20



Year 100

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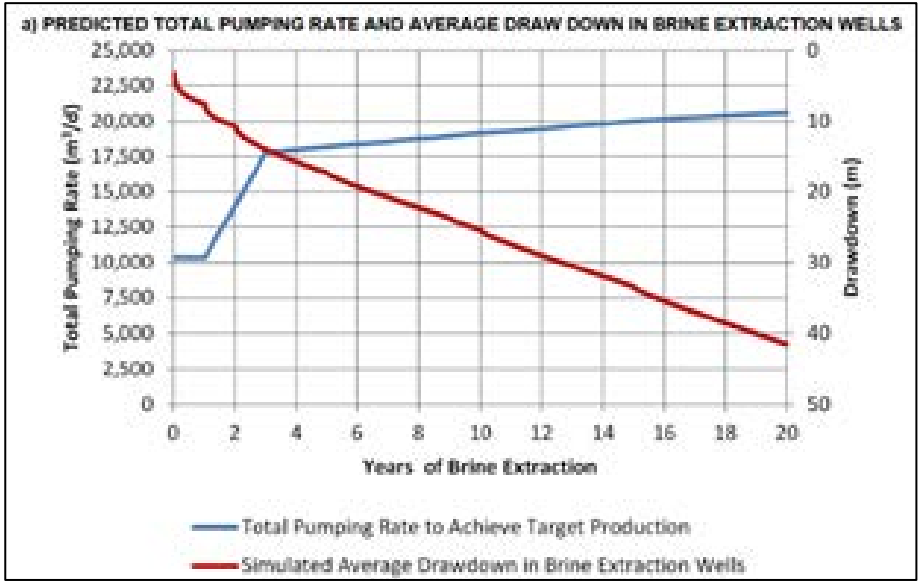
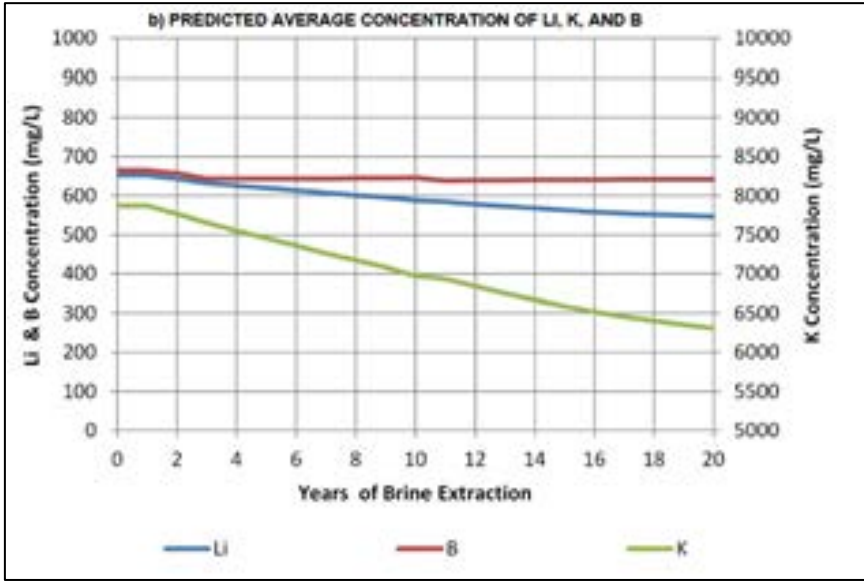
Mine planning tool



Quantity



Quality

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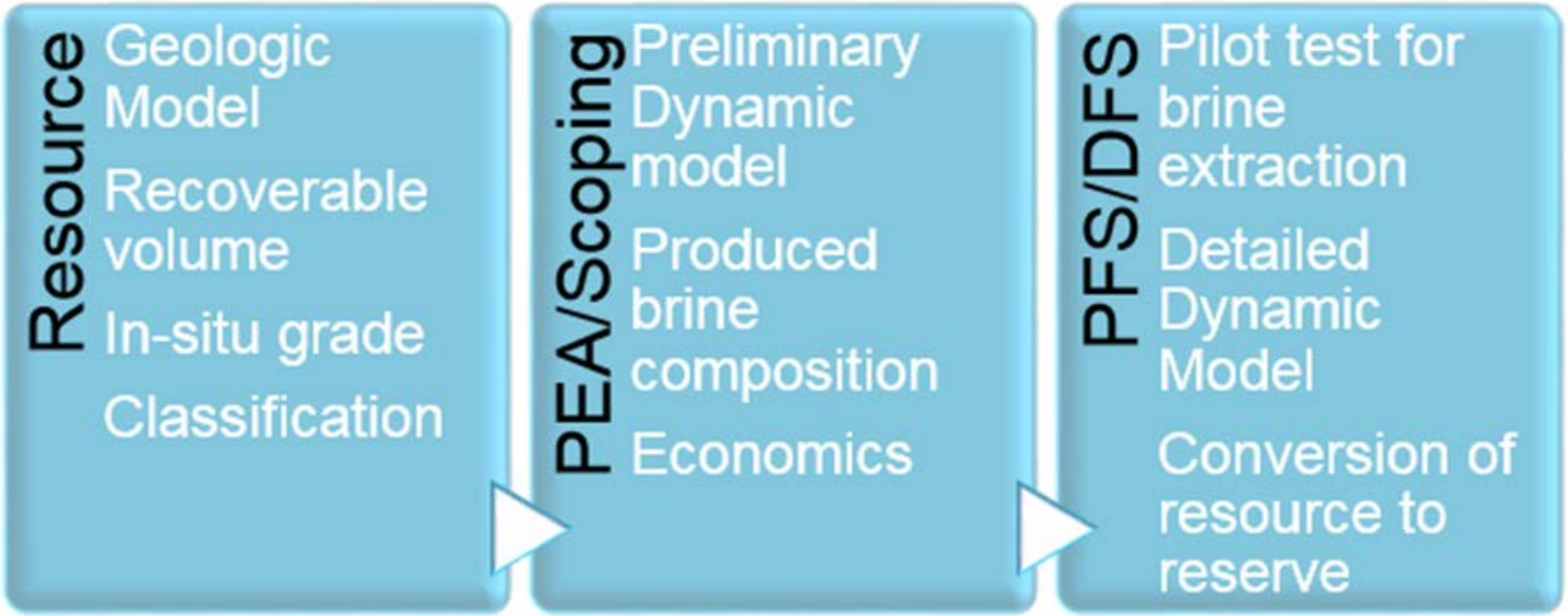
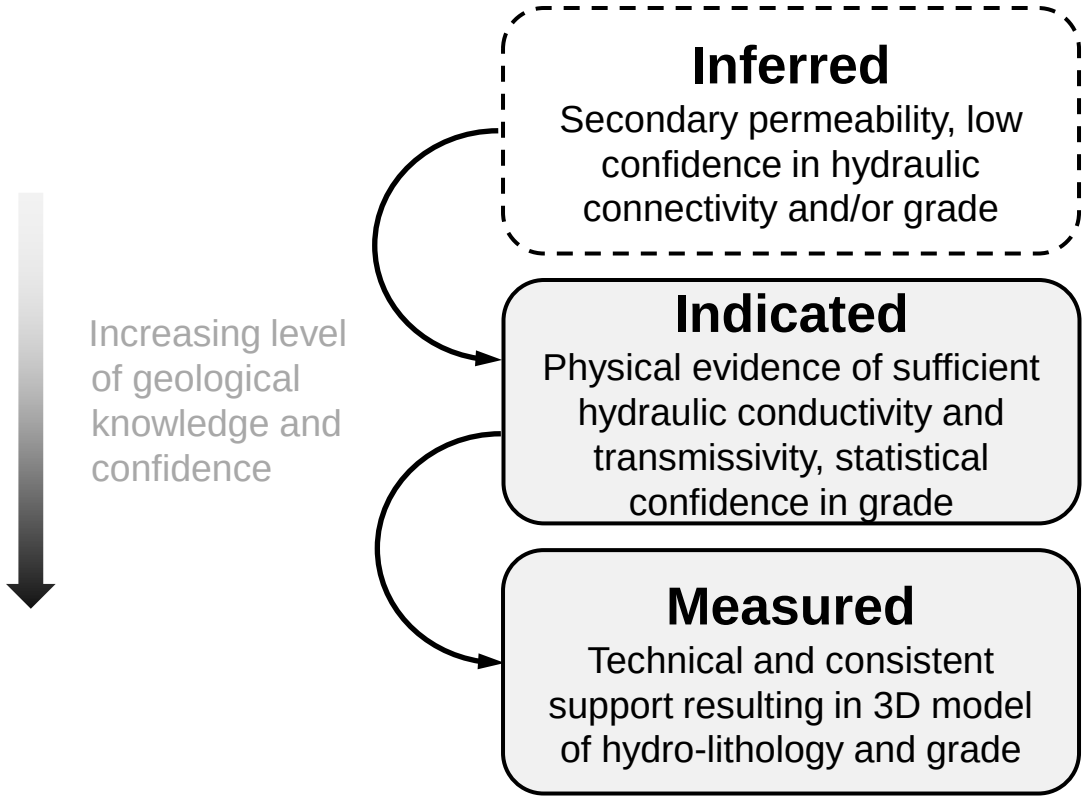
Interpretation of MRMR studies applied to brine deposits



MRMR – Mineral Resource and/or Mineral Reserves

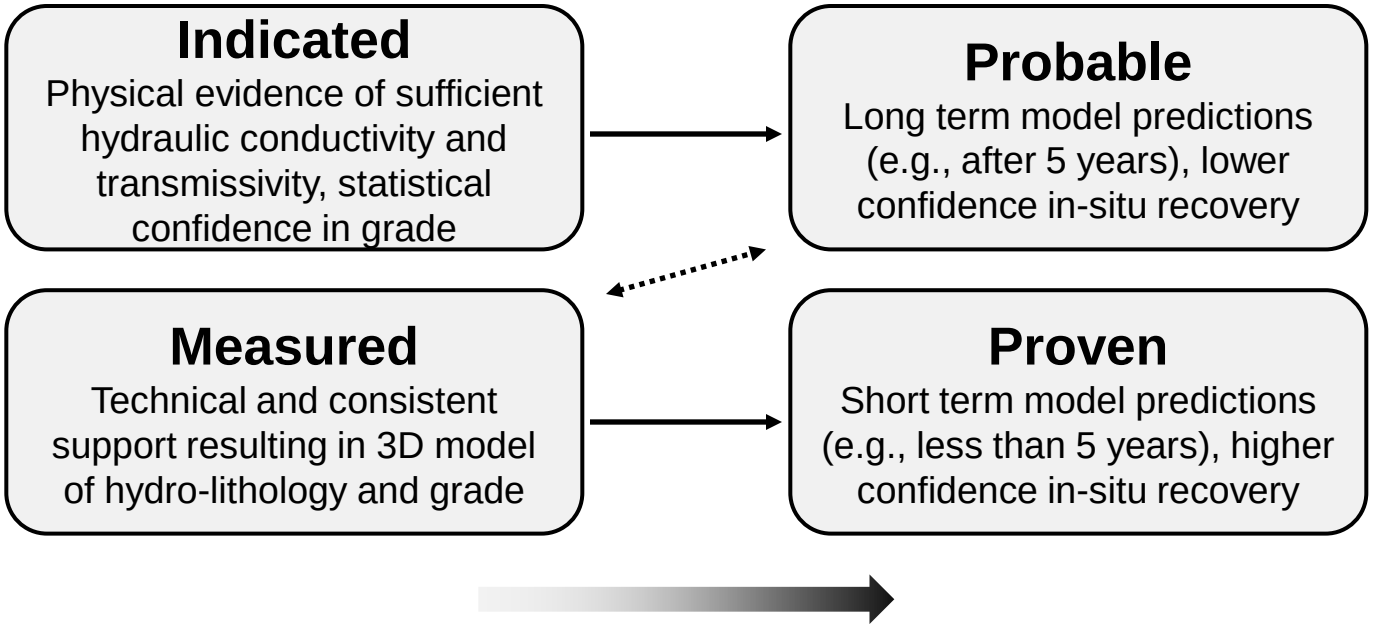
An interpretation of mineral resource classification



CIM Definition of Mineral Reserve (May 20, 2014)

A Mineral Reserve is the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at Pre-Feasibility or Feasibility level as appropriate that include application of Modifying Factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified.

Mineral resource to mineral reserve for brine deposits



Modifying Factors: consideration of mining, processing, economics, marketing, legal, environmental, social and governmental factors

Your mineral reserve estimate should…

- Account for in-situ recovery factors for raw brine extraction from the salar
- Be limited to measured and indicated mineral resource classifications
- Include ex-situ recovery factors which must be offset by additional raw brine extraction
- Address spent brine handling and/or process water supply which may impact predicted mine life
- **Remain economic**

Traditional Brine Process

SQM Ponds, Atacama, Chile

Salar del Rincon, NW Argentina

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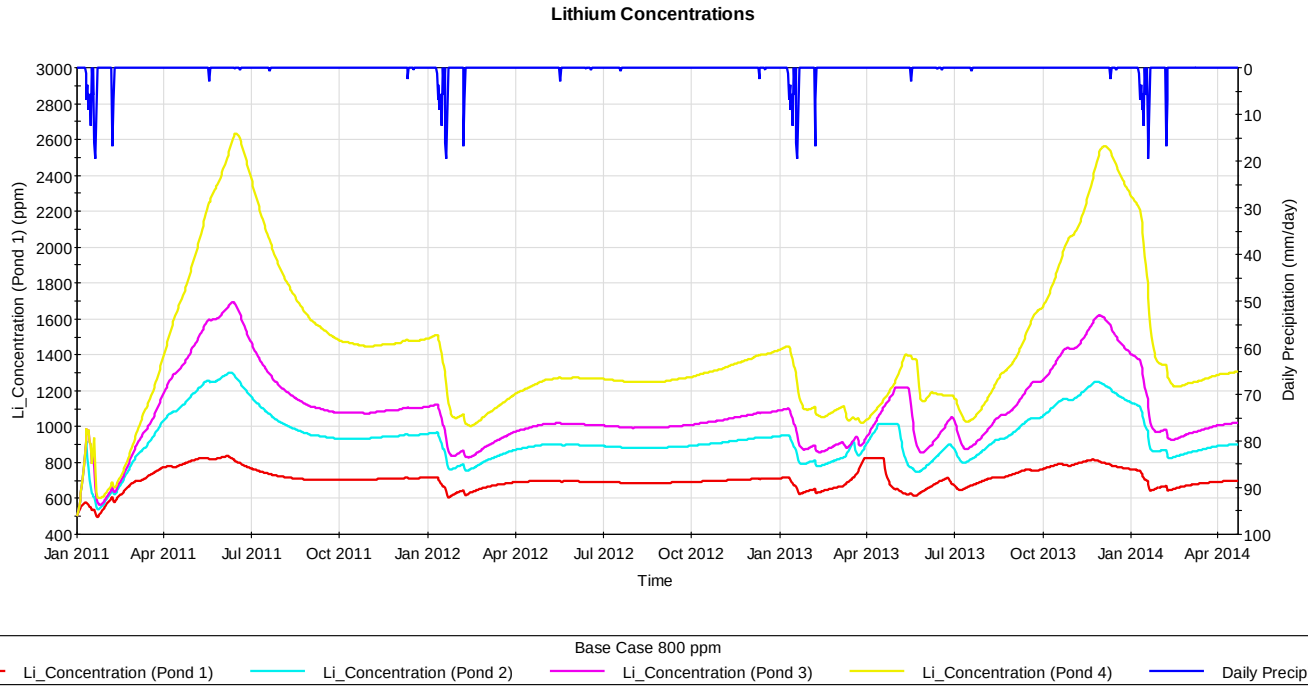
Brine Evaporation Pond Process Simulation



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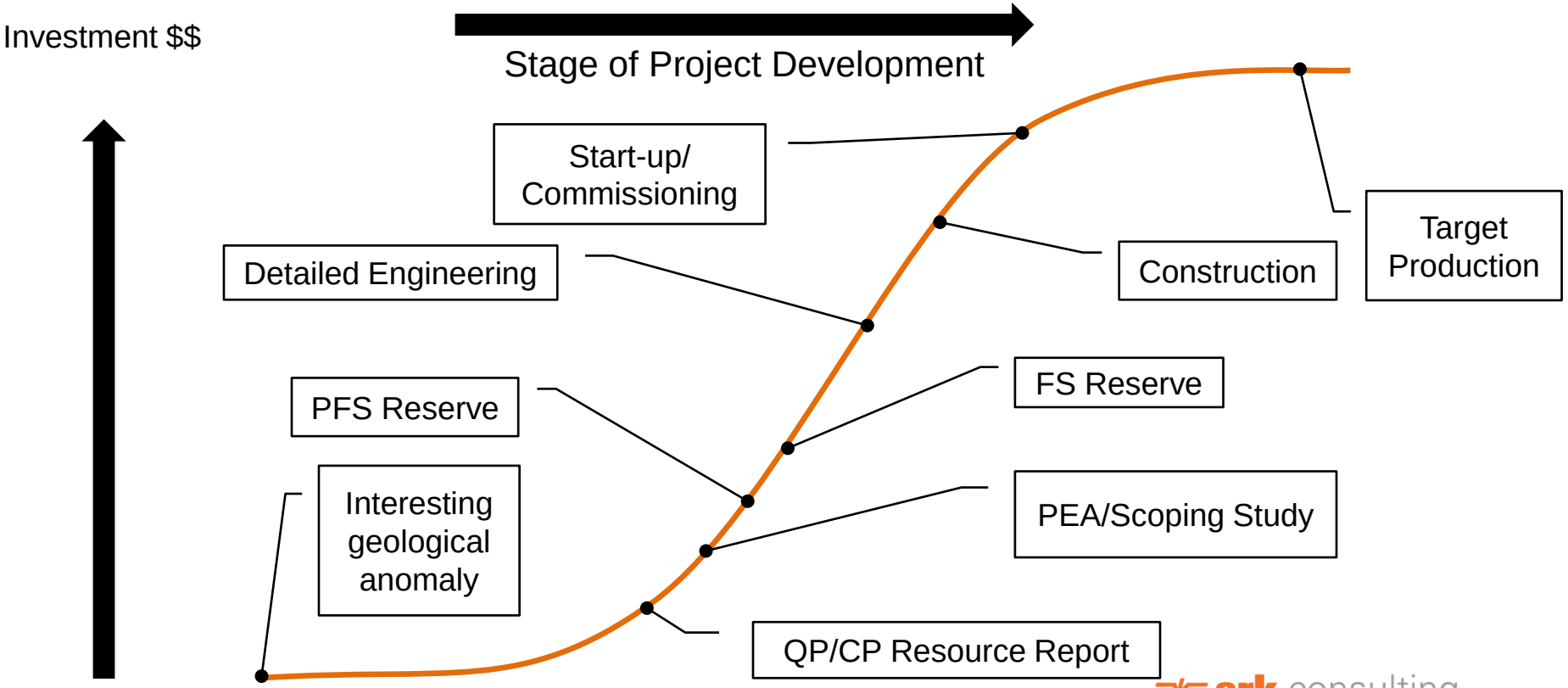
Value Creation



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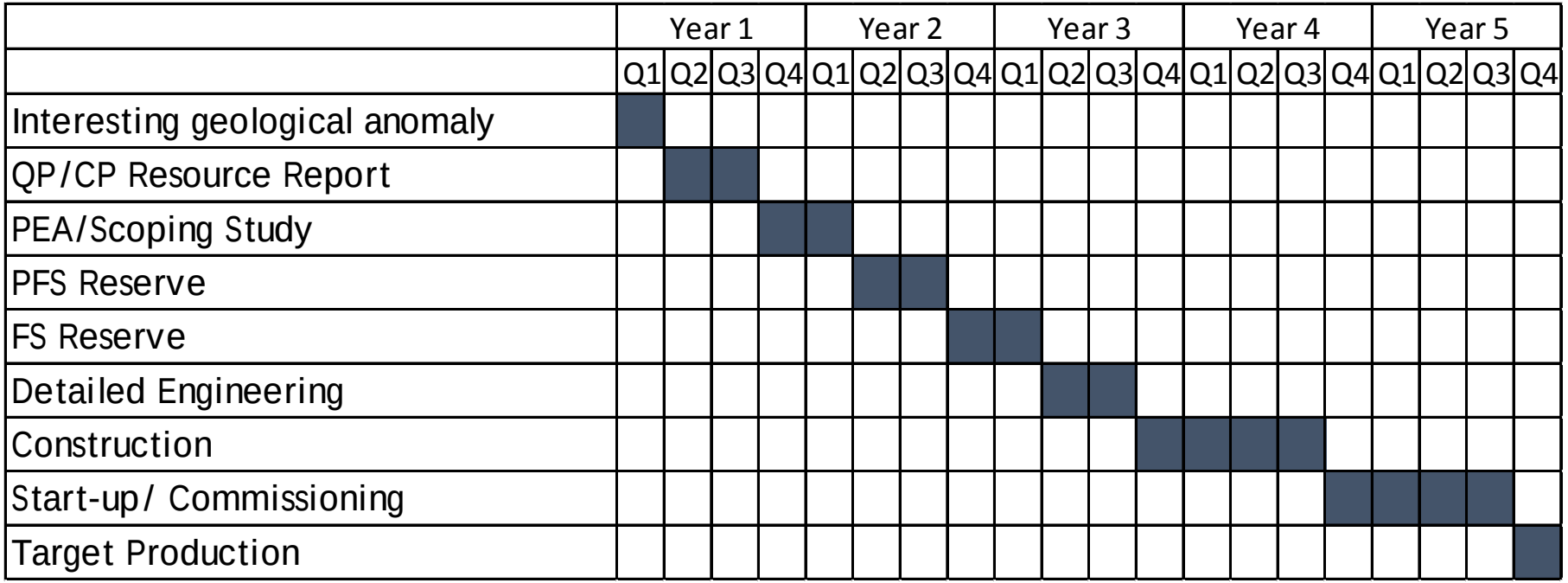
Lithium Brine Projects Development Timeline



Take Home Message

- Brine moves!
- Brines can be very profitable
- Technically complex to explore and estimate resources
- Transition from Static Resource to Dynamic Resource using the continuum of geologic stratigraphy through the use of sequence stratigraphy and onto the final use of HSU’s
- Choice of process that fits the situation, brine chemistry, weather, etc.
- Take good care of your hydrogeologist, you will thank him later