

Carbon sequestration potential of the Lorestan area, Iran

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Table of content

Introduction

- Importance of CO₂ storage
- Importance of CO₂ Storage in this zone
- Location of defined structures

Conclusion and next steps

- Preliminary result of the study
- What will be further steps to finalize site characterization

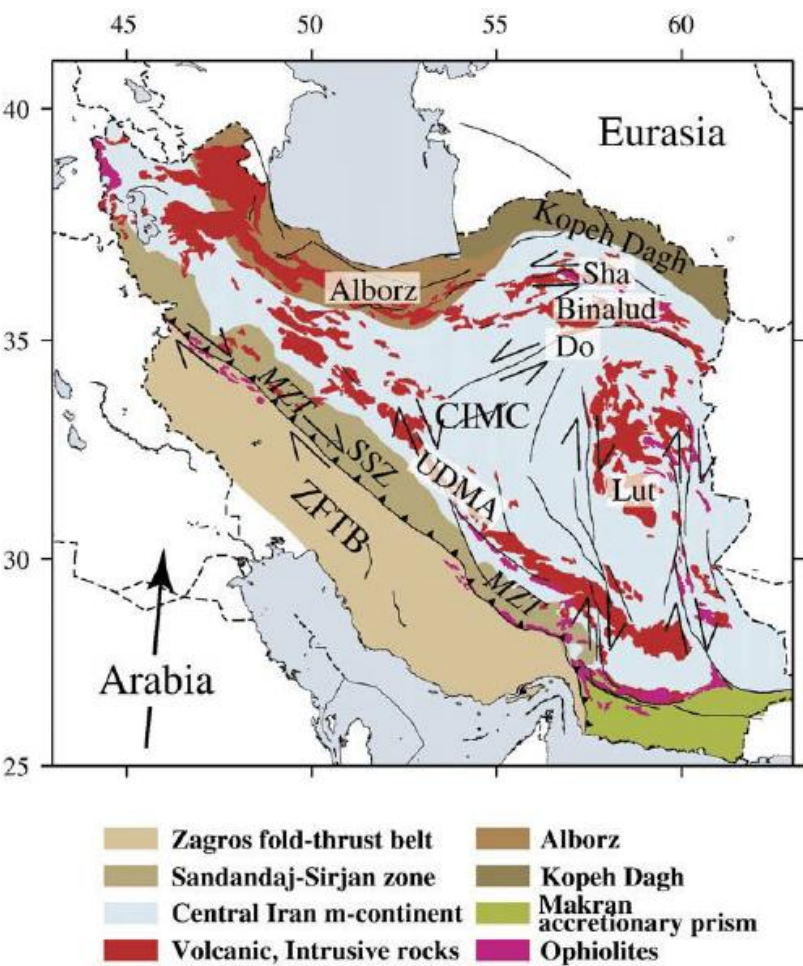
Methodology

- Defining workflow of our study
- Geological characterization
- Petrophysical characterization

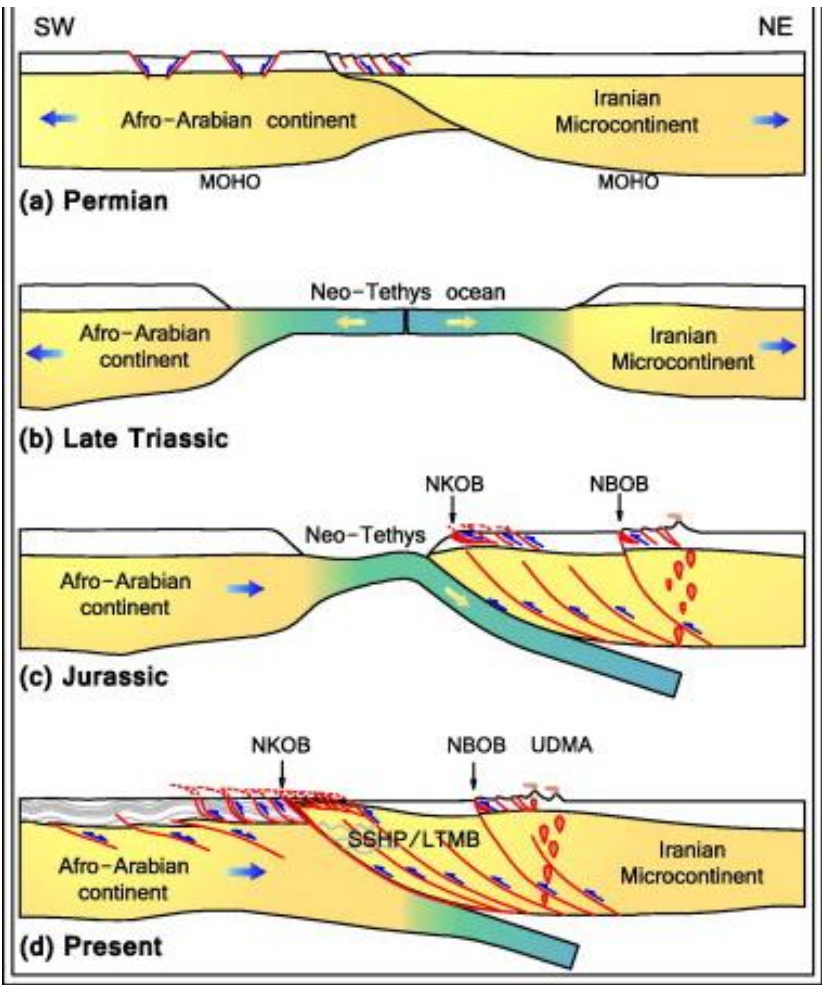
Question/references

- Reports and articles
- Question

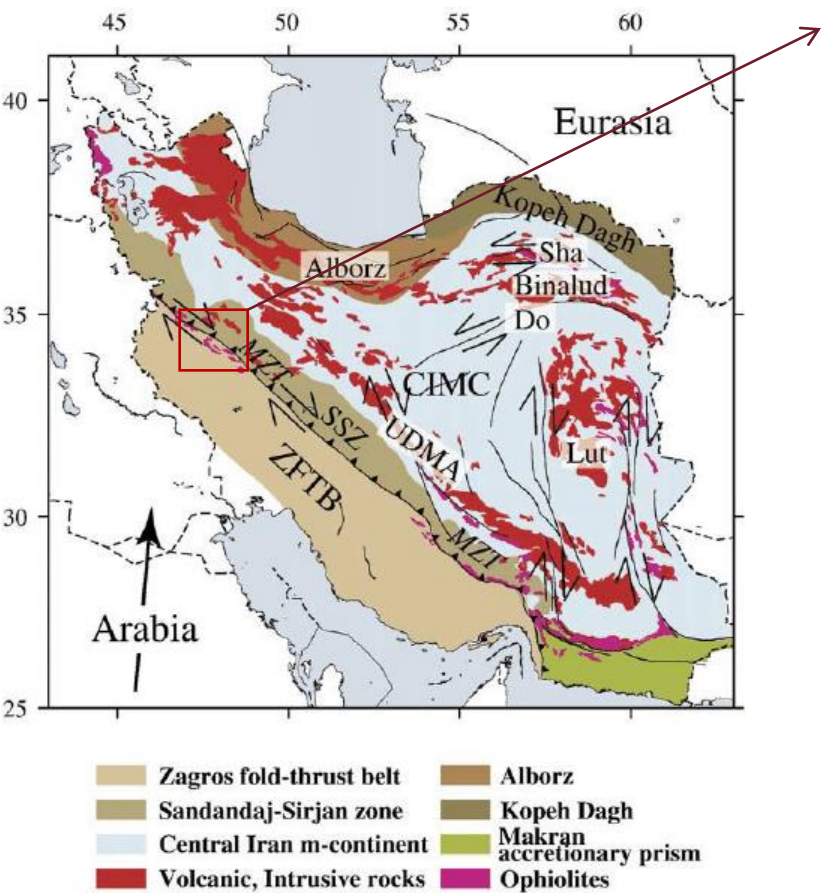




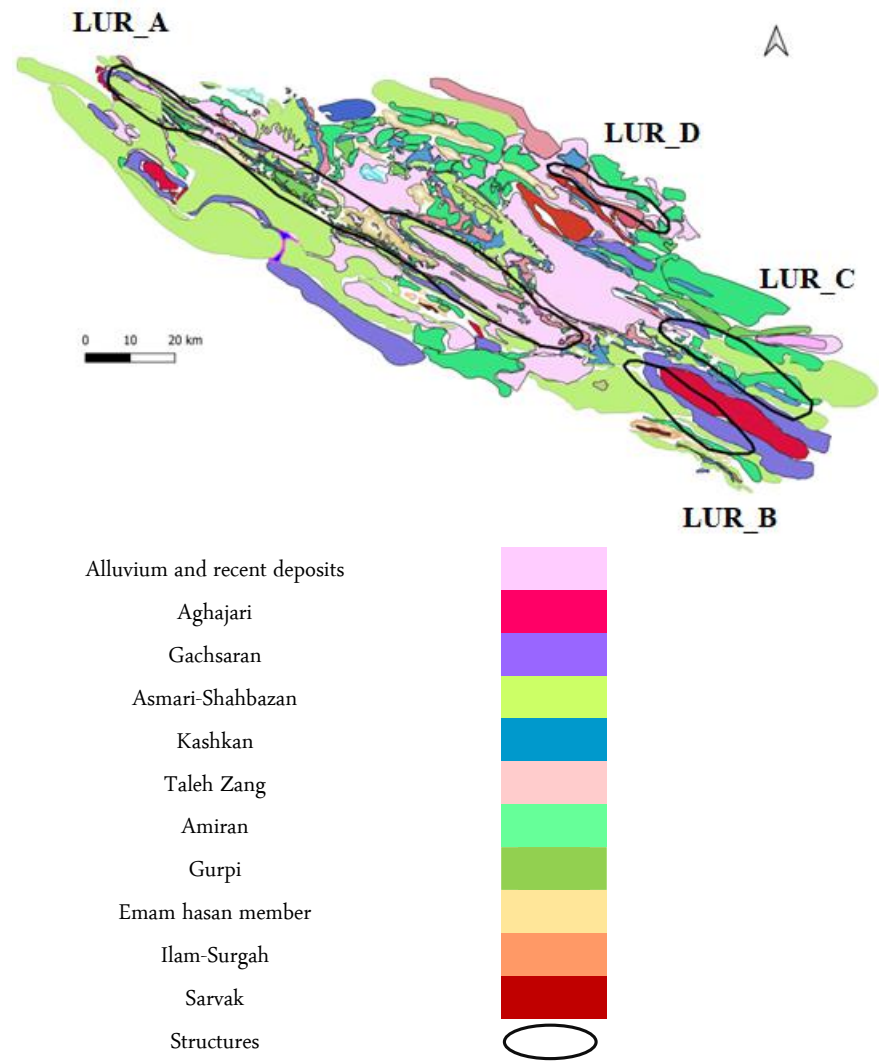
Kaviani, et al., 2009



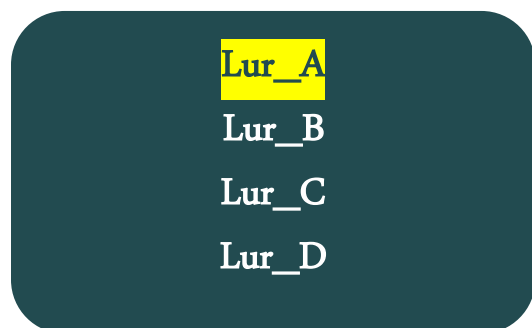
Sarkarinejad et al, 2014.



Kaviani, et al., 2009



Site Characterizing



Input data

Seismic lines
Well log data
Geological maps

Geological Model of structure

1st stage

Target formation

2nd stage

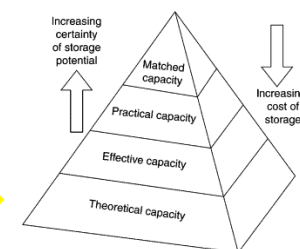
Petrophysical Parameters

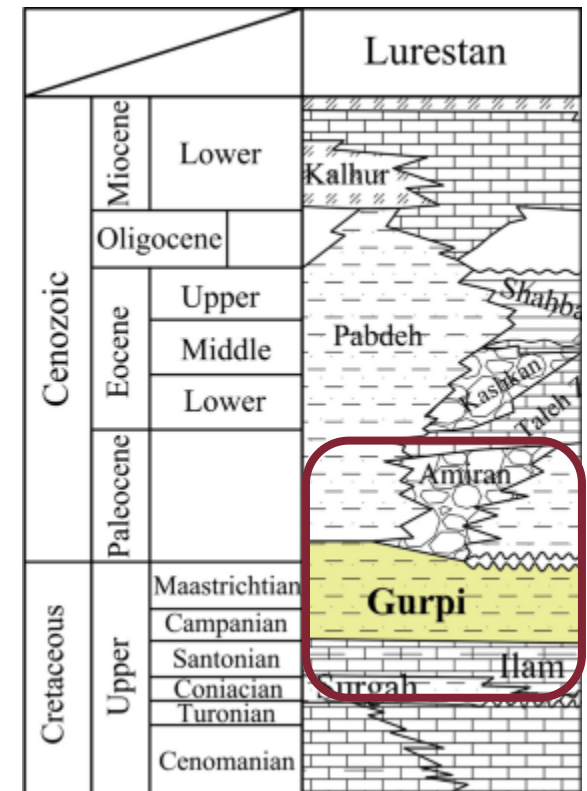
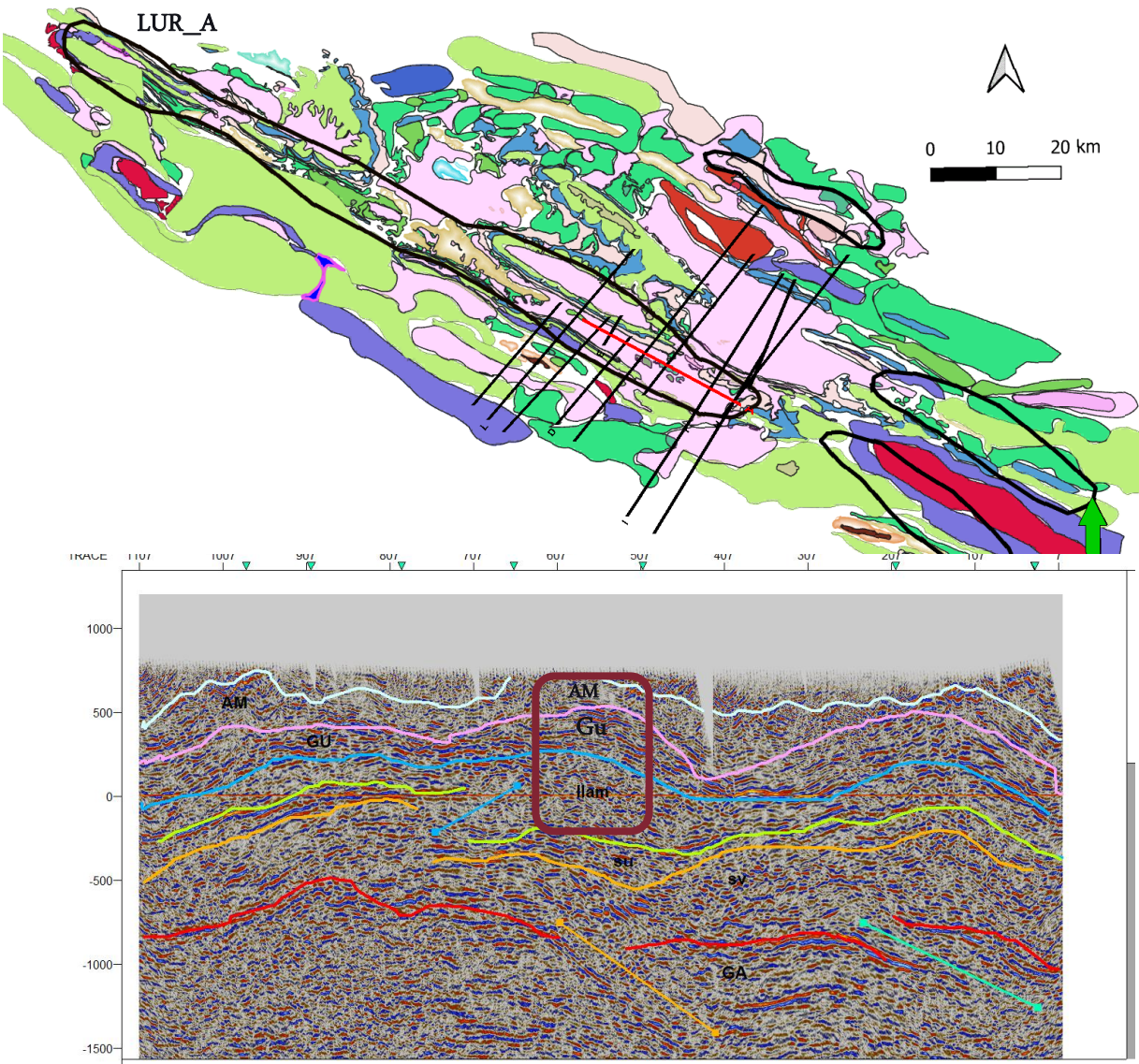
3rd stage

3D geological model construction

4th stage

Capacity Calculation

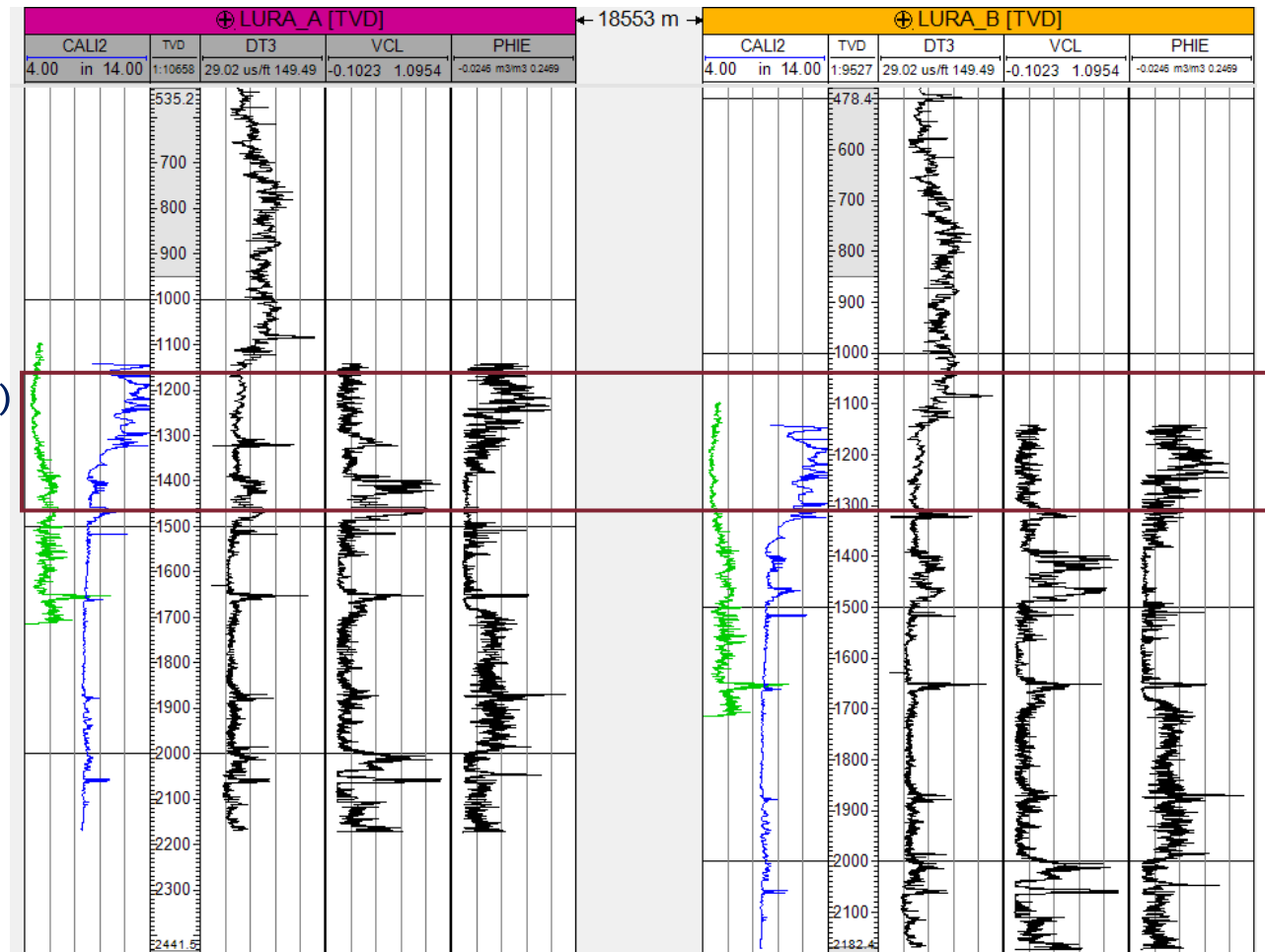




Gowhari et al, 2020

Reservoir formation (Ilam Fm)

- Porosity: 10-25% (some intervals 35%)
- Dolomite lime in some intervals
- Existence of Fracture
- Sw: 18-40%



- Ilam Fm **Reservoir**
- Lithology of host: Lime
- Gurpi Fm **seal**
- Lithology of Seal: Marl

Geological characterization

- Applying petrophysical parameters to create the 3D
- Calculate the capacity of storage Theoretical to **effective** capacity

3D Geological model



Petrophysical characterization

- Porosity of host 10-25%
↓
>20% (Criteria for Storage)
- Fracture reservoir

Dynamic modeling

- Defining the most suitable structure
- Dynamic modeling of plume migration



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Thank You For Your Attention

