



# PALEOSCAN™

## Assessing Trap Uncertainty: A Geological & Stochastic Workflow for Early Exploration

*Sven Philit*

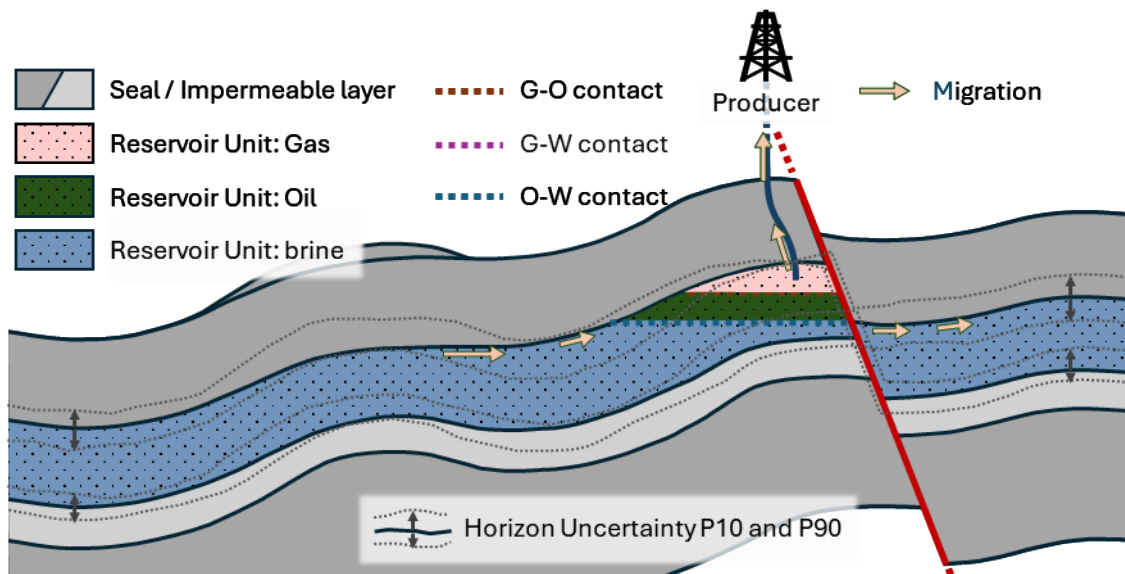
March 2025



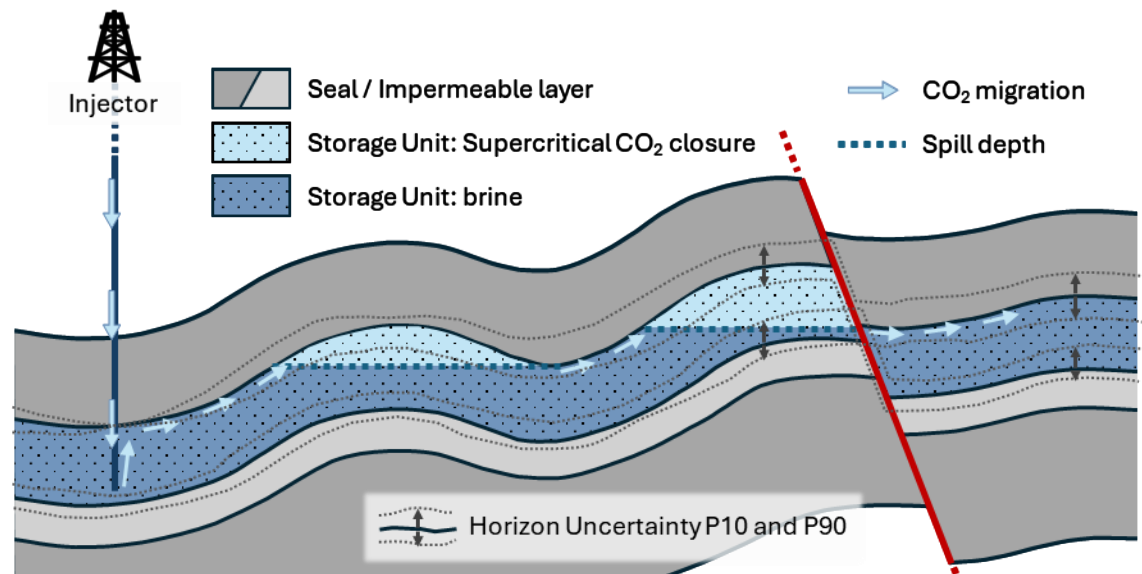
# Uncertainties for Prospect Assessment Derisking

## Uncertainty affects Gross Rock Volumes (GRV) at stake

### Conventional Hydrocarbon Resource



### CO<sub>2</sub> Storage

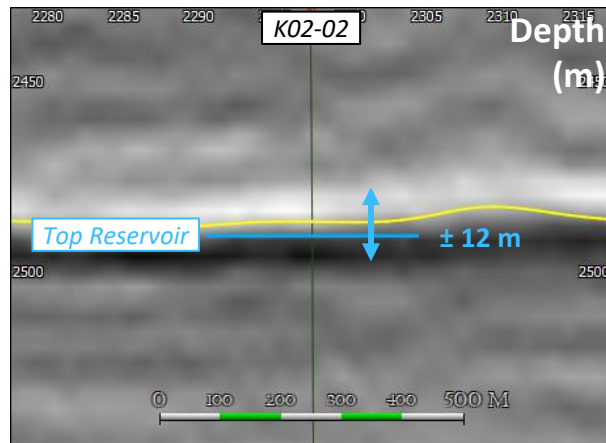


➡ Need to assess top/bottom reservoir position potential error

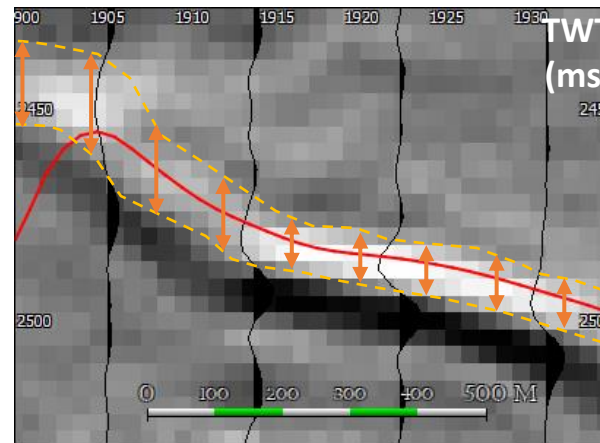
# Uncertainty Factors



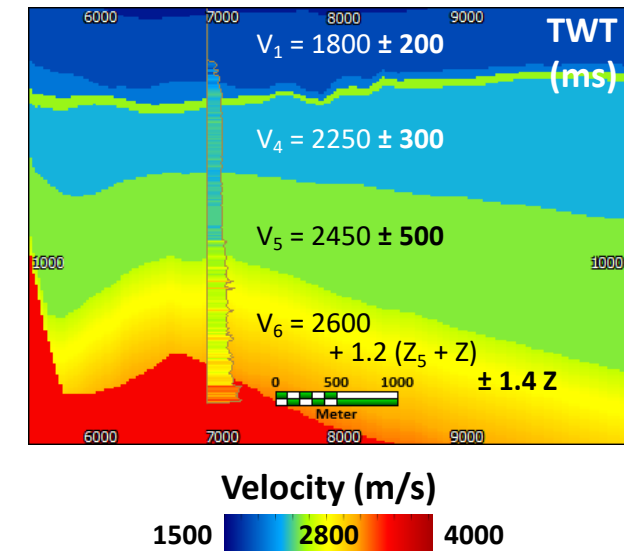
## Marker position



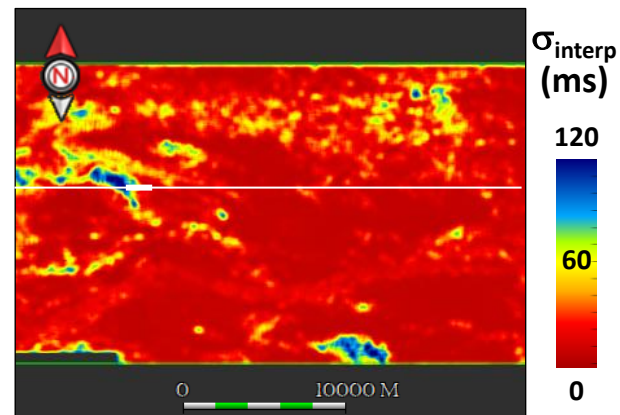
## Interpretation



## Velocity Model



## Horizon uncertainty map





# Structural uncertainty

*Interpretation uncert.*

*Velocity uncert.*

*Well tops uncert.*

## Impact on resources

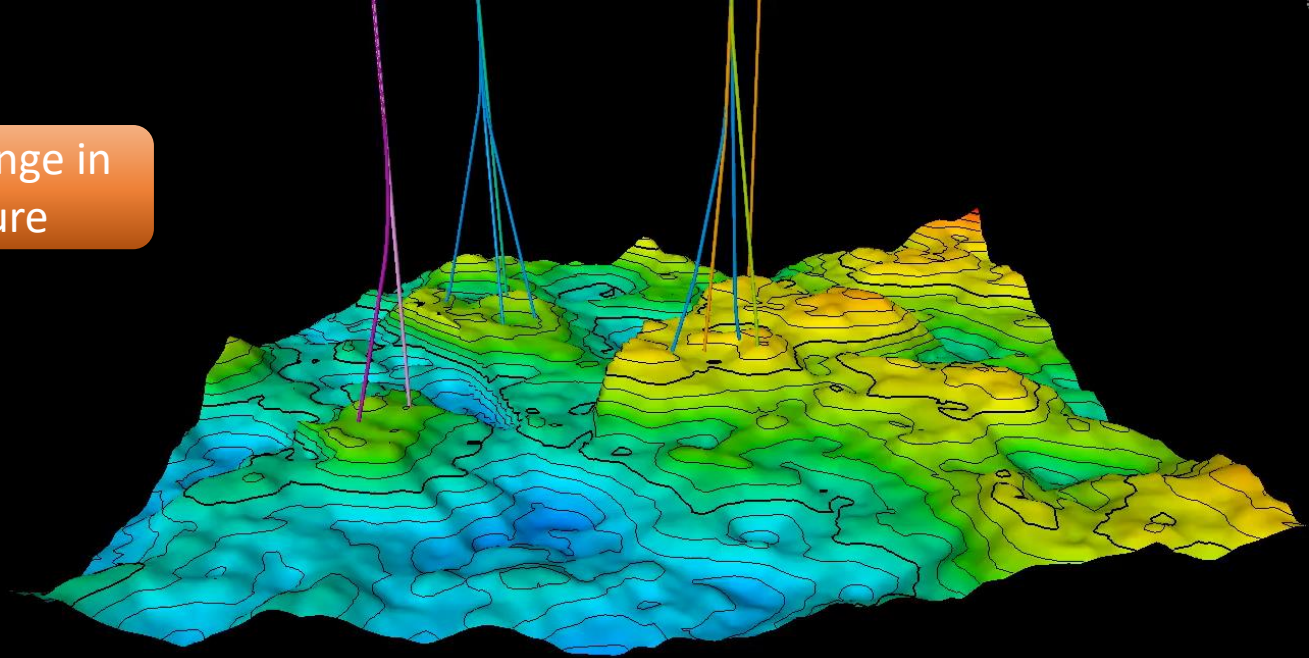
*Probability of success  
(trap, seal)*

*Volumes*

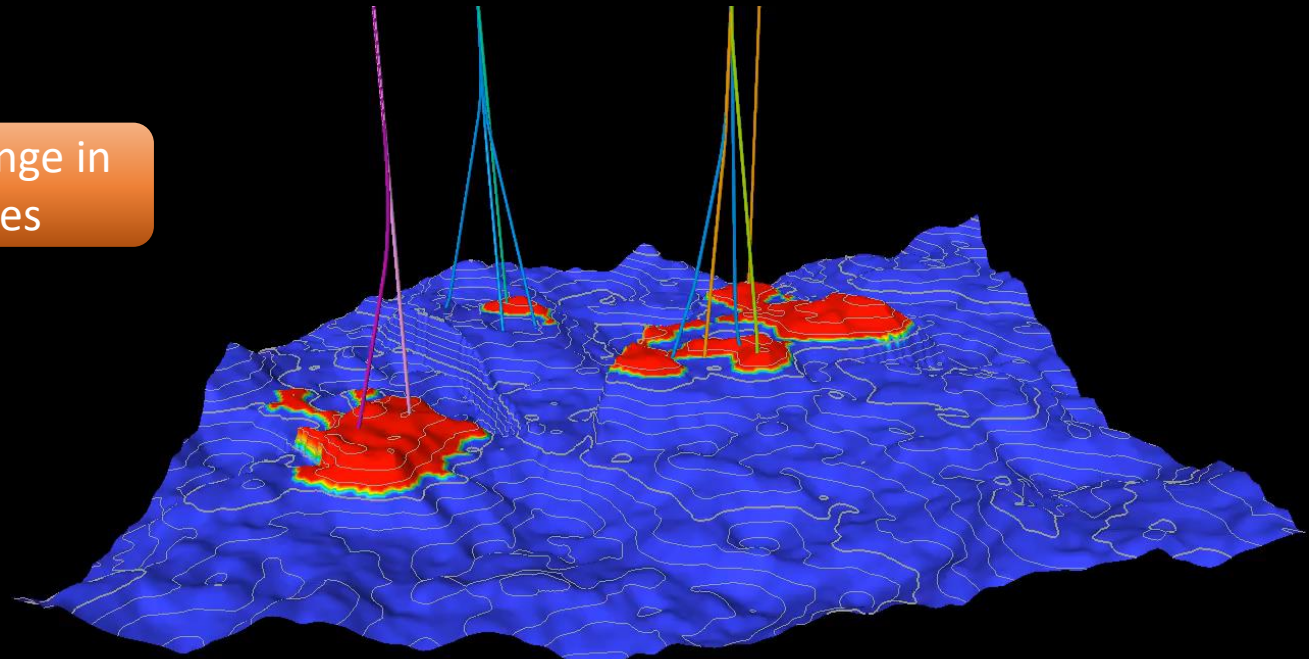
*Sweet spots  
targets*

*Prognosis*

Small change in  
structure



Large change in  
reserves



# Proposed Workflow

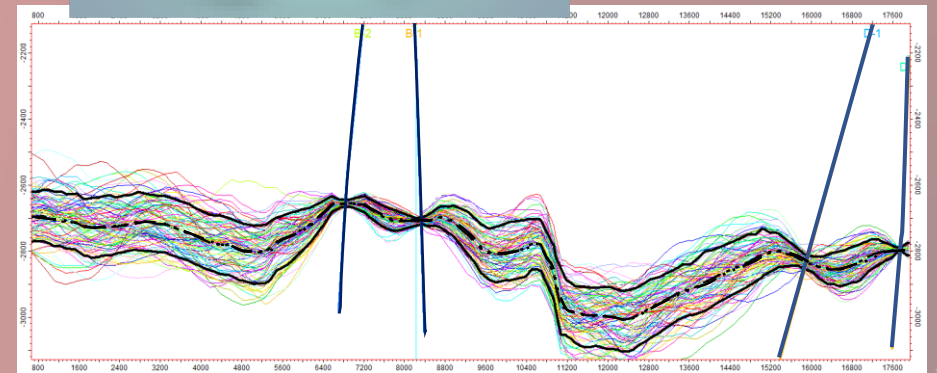
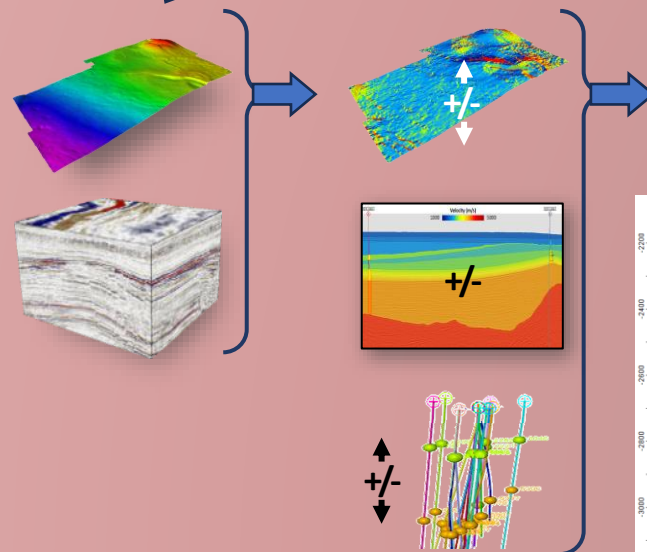
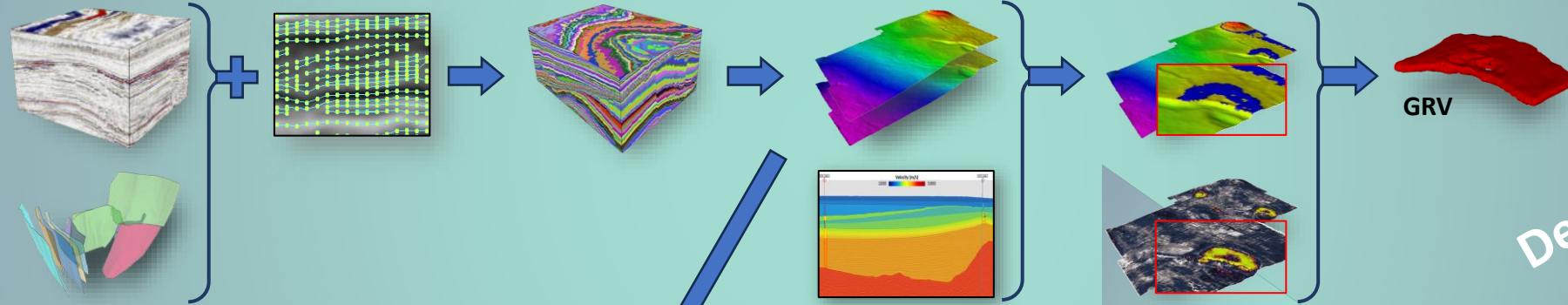


*Time*

*Depth*

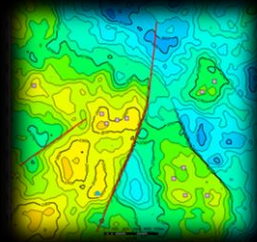
Deterministic

GRV

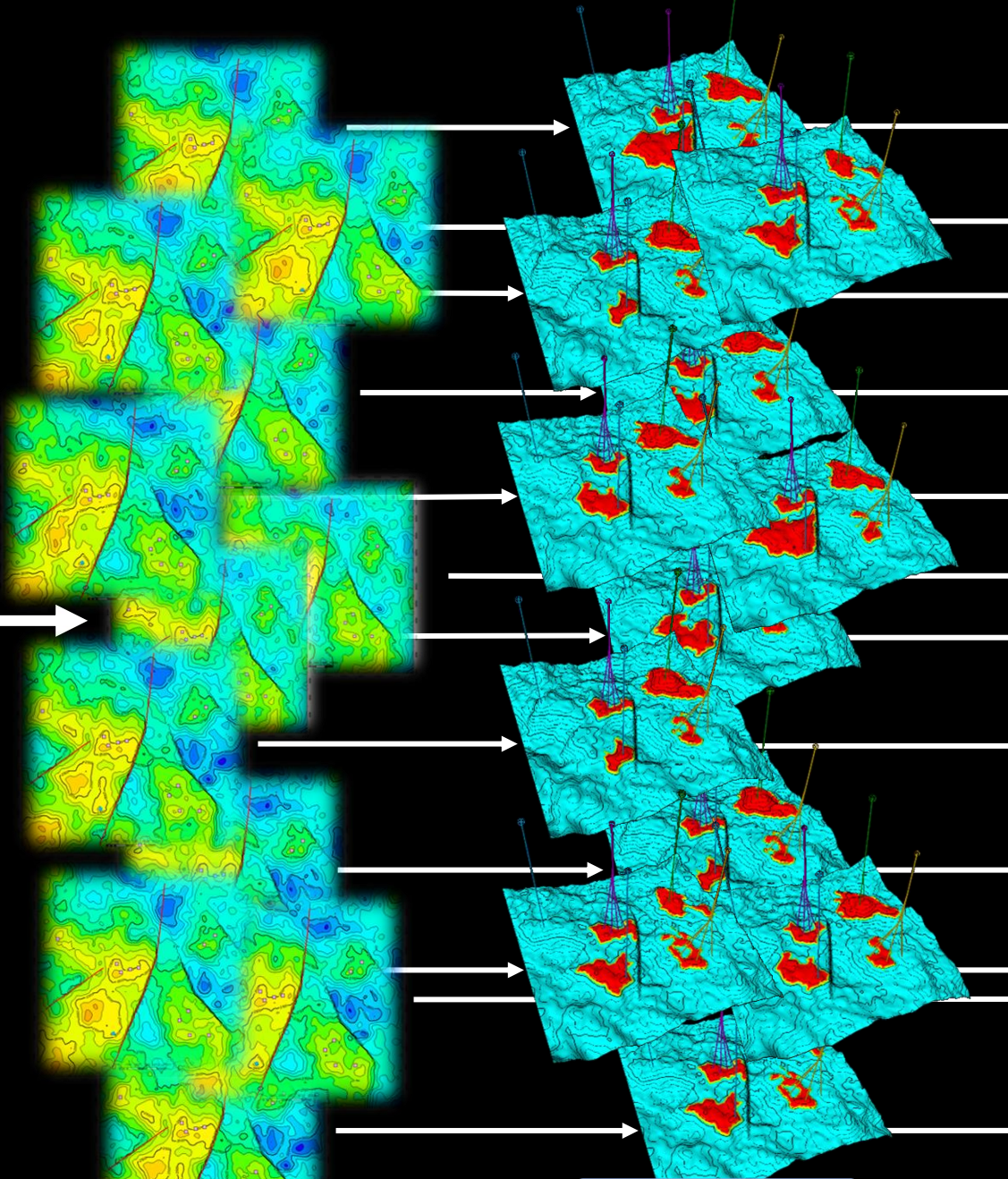




# Stochastic Depth Conversion

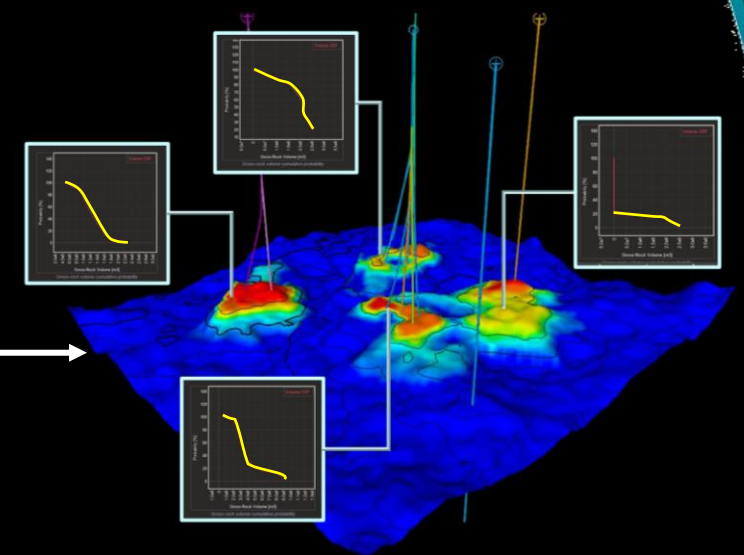


Time  
interpretation



Depth model

Traps



Targets &  
Volumes

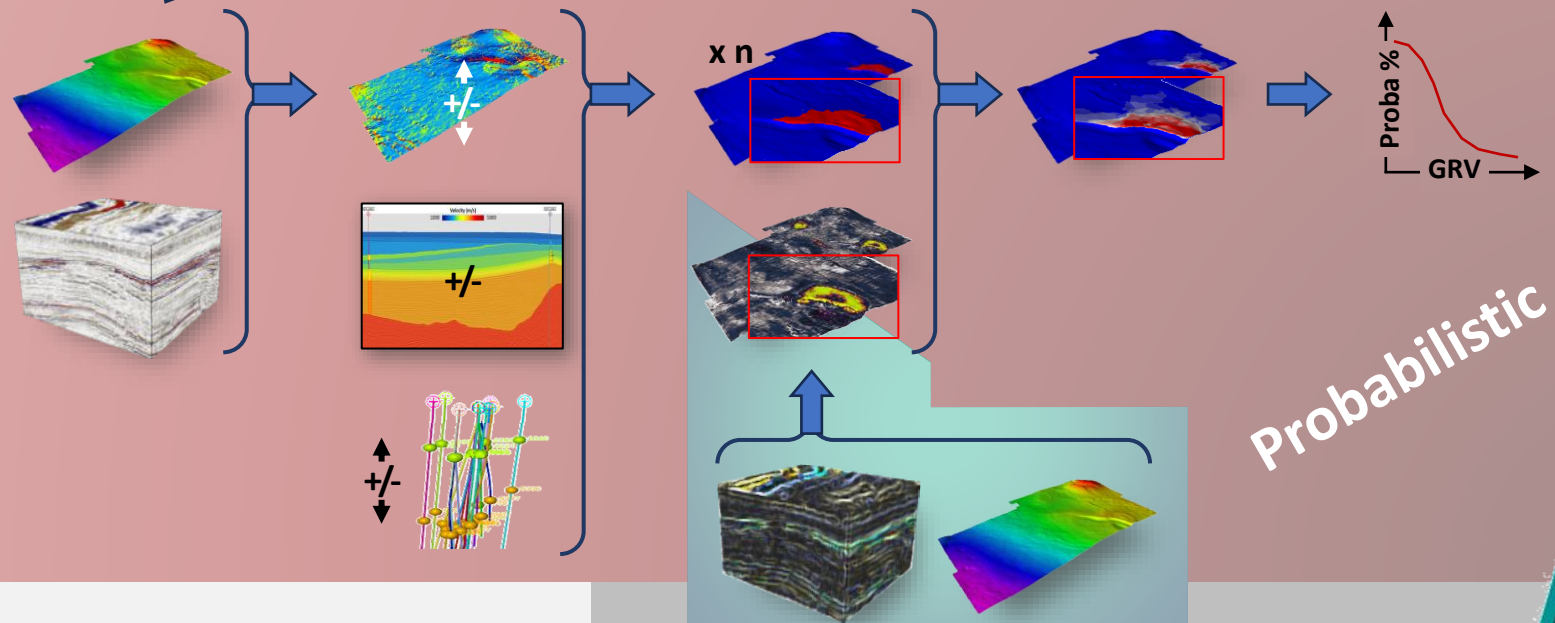
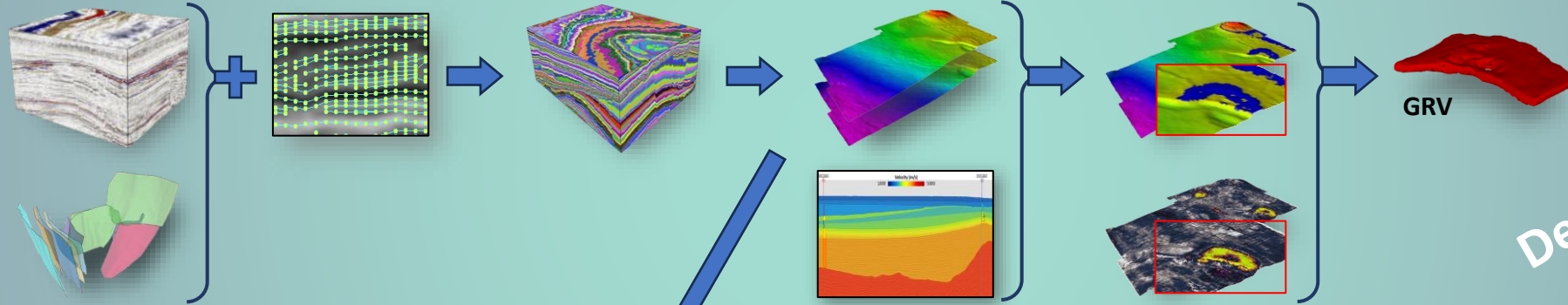
# Proposed Workflow



*Time*

*Depth*

*Deterministic*





**Thank you for your  
attention!**

   
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