



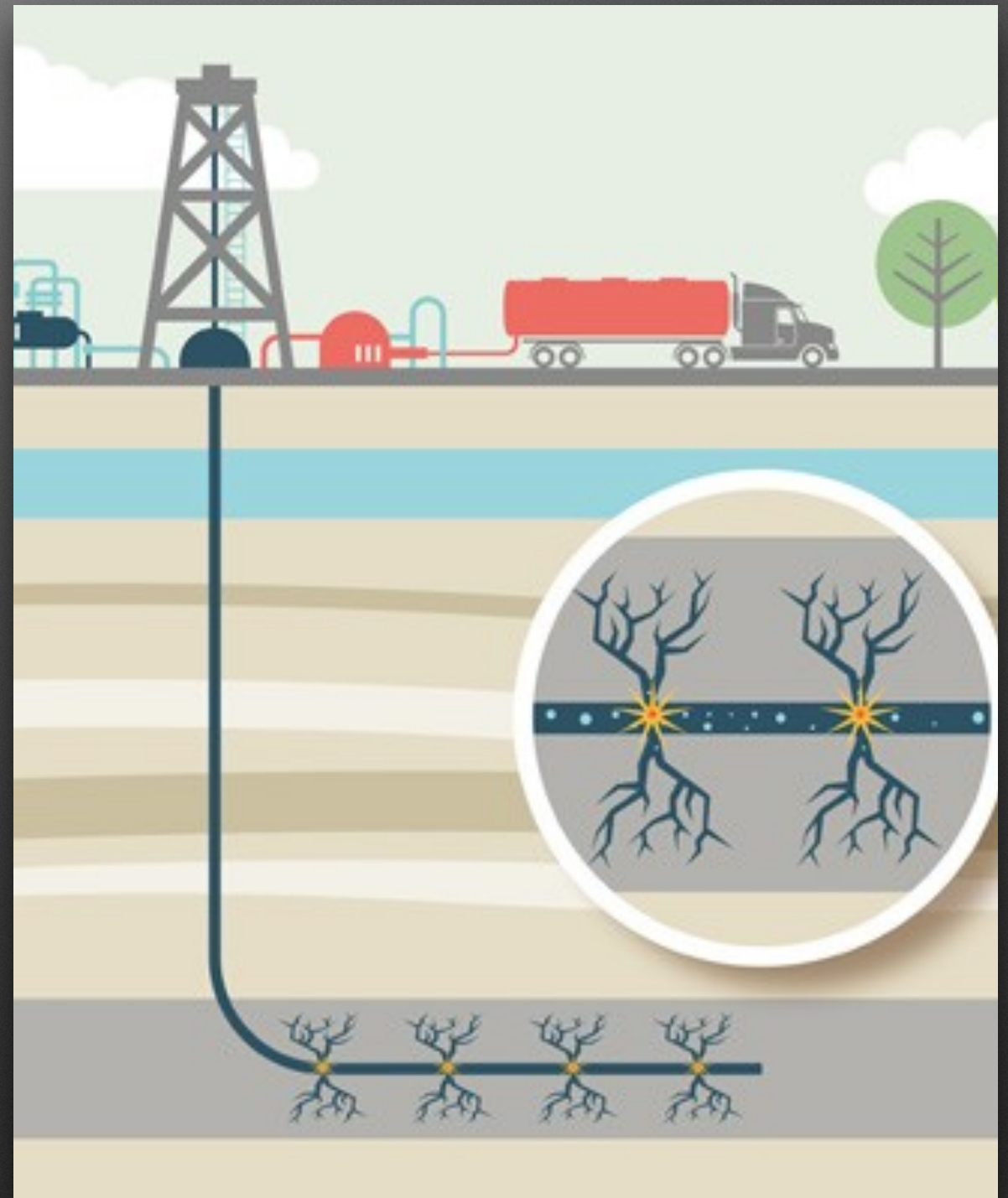
# Predict Rock Injectivity

Erwan de Boisjolly  
*Final project*



# Shale Gas wells

- Shale gas
- Horizontal drilling
- Hydraulic Fracturation
- Rock Injectivity





# Drilling Process

- Drilling parameters
  - Weight On Bit
  - Rotation Per Minute
  - Torque
  - *etc*
- Time based data
  - 1 data point / 5 seconds  
(4 days of drilling)





# Data filtering



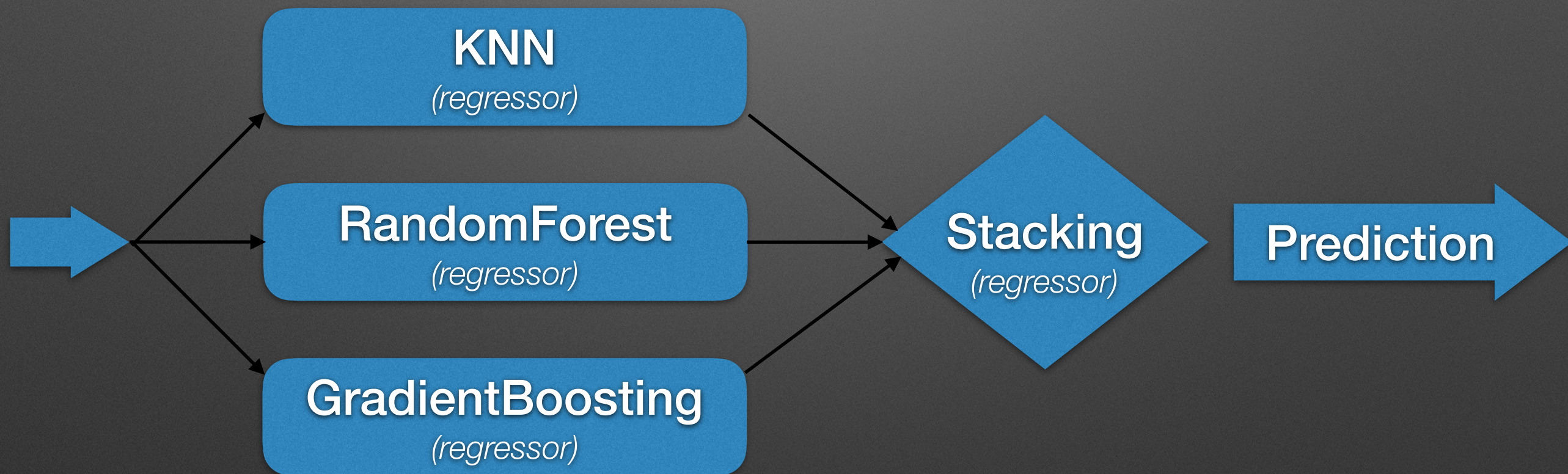


# Data Preprocessing



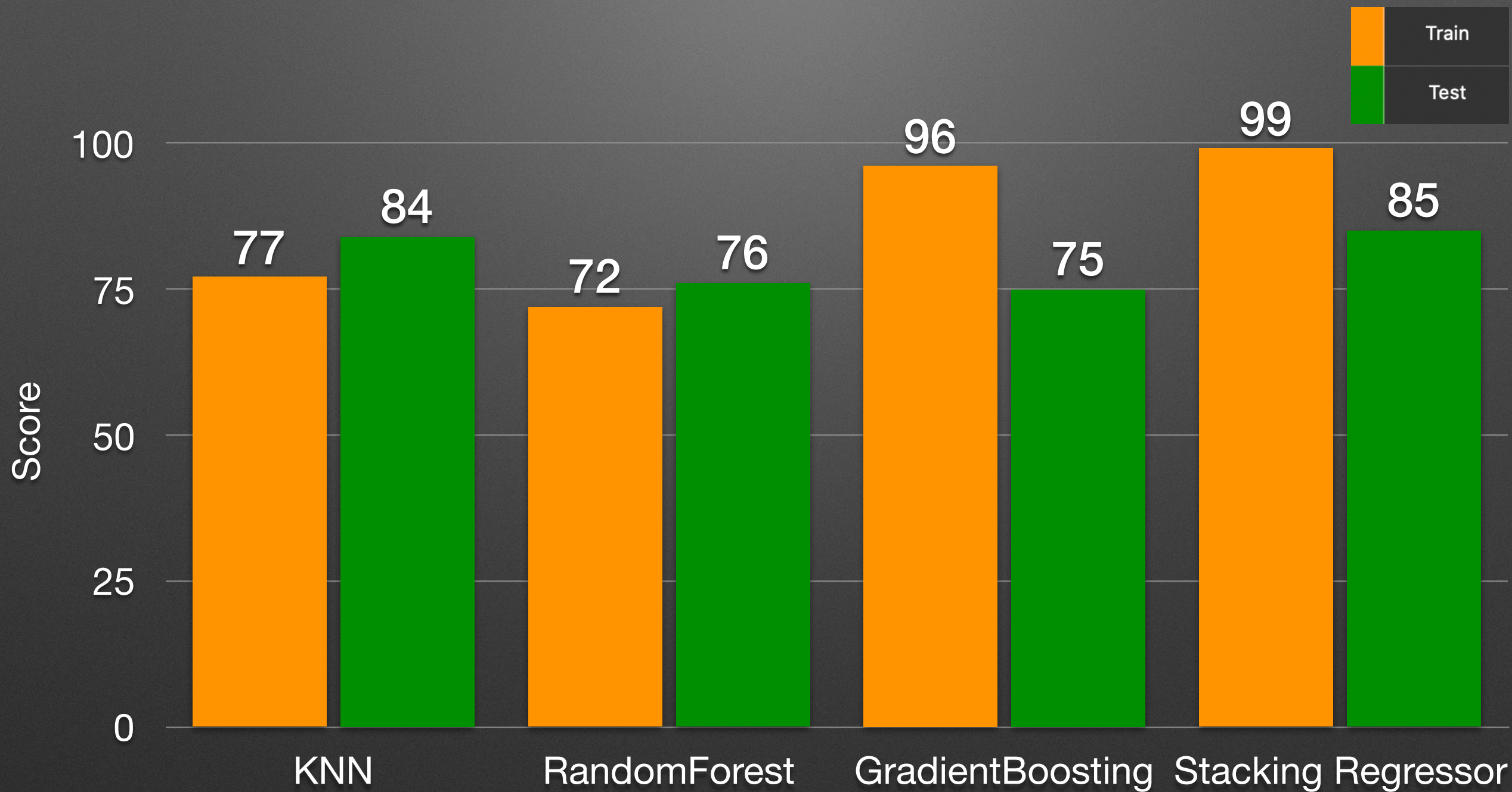


# Modeling



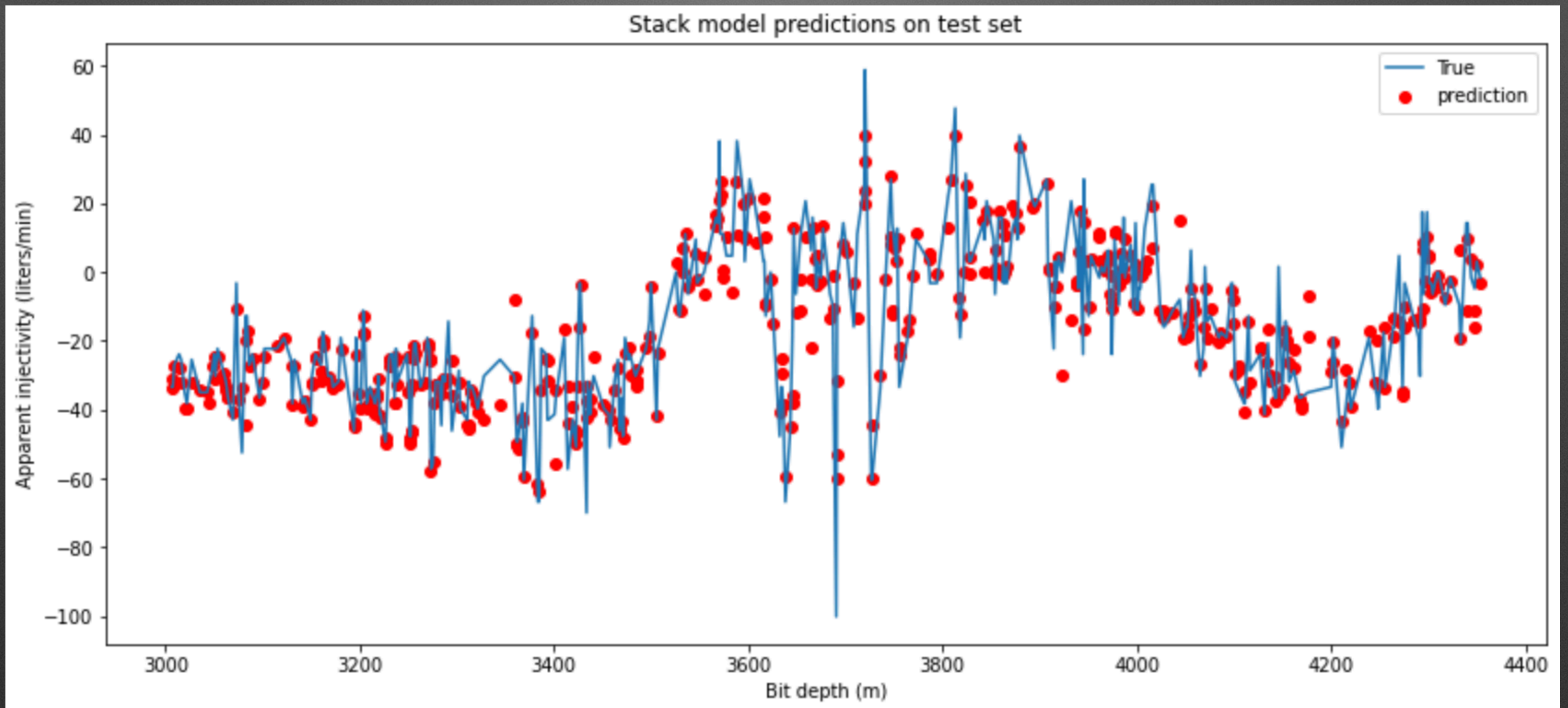


# Stacking Regressor





# Modeling results





# Cost savings

- Rig cost 125 k\$ / day

*=> log to acquire injectivity  
(‘labels’): 24h*

- Logging service
- Better production





# Thank you !

Questions ?