

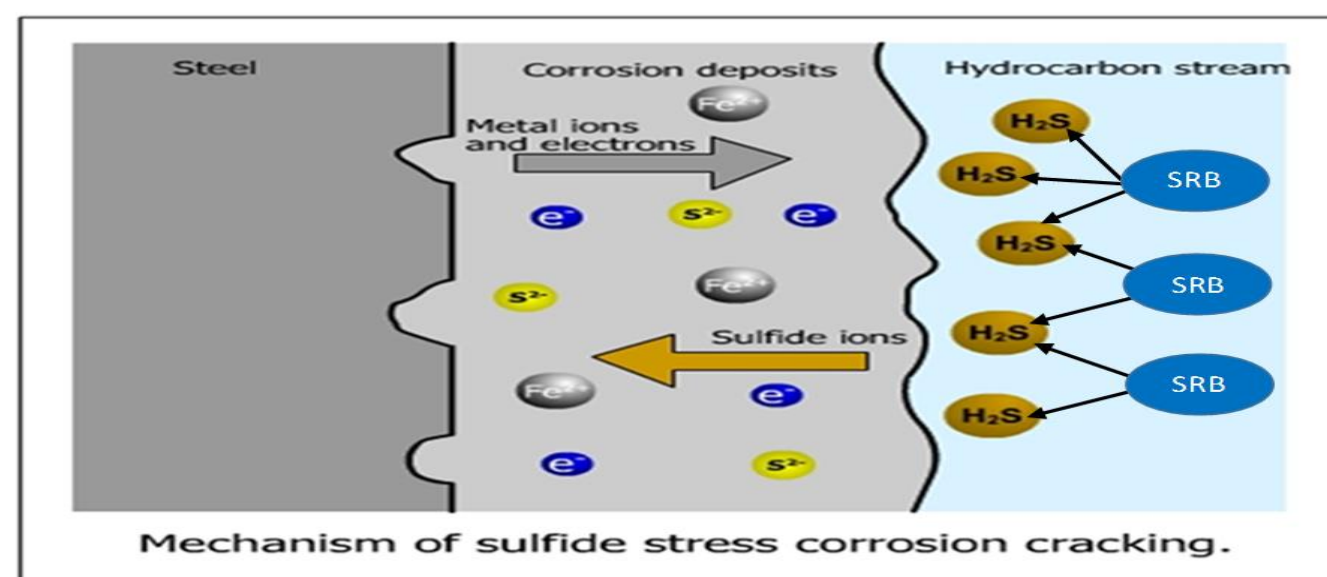
COSTS OF SOURING OIL AND ITS OPTIMISATION

A Construction of a Decision Tree Model and Sensitivity Analysis of Each Option

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Introduction

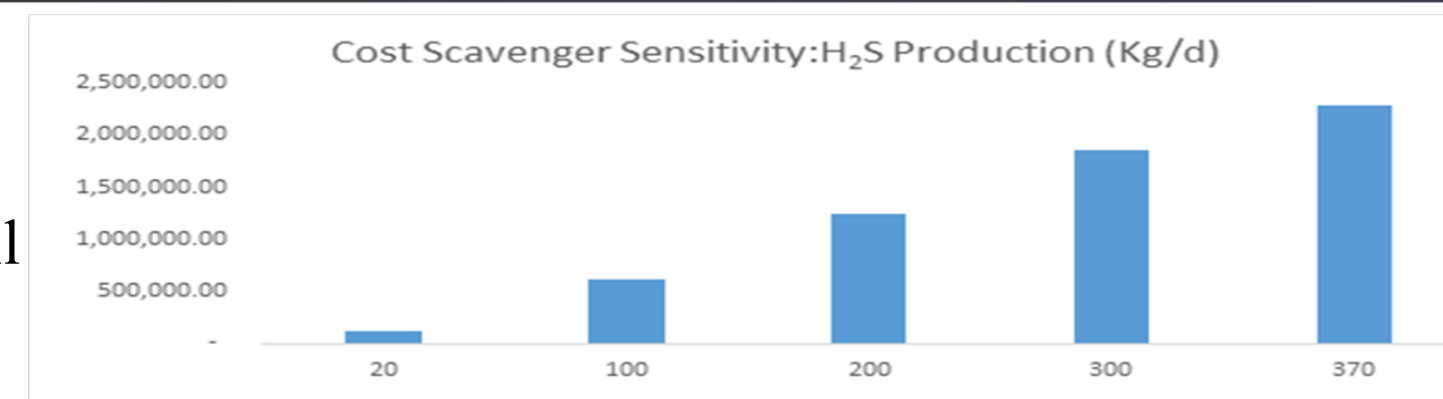
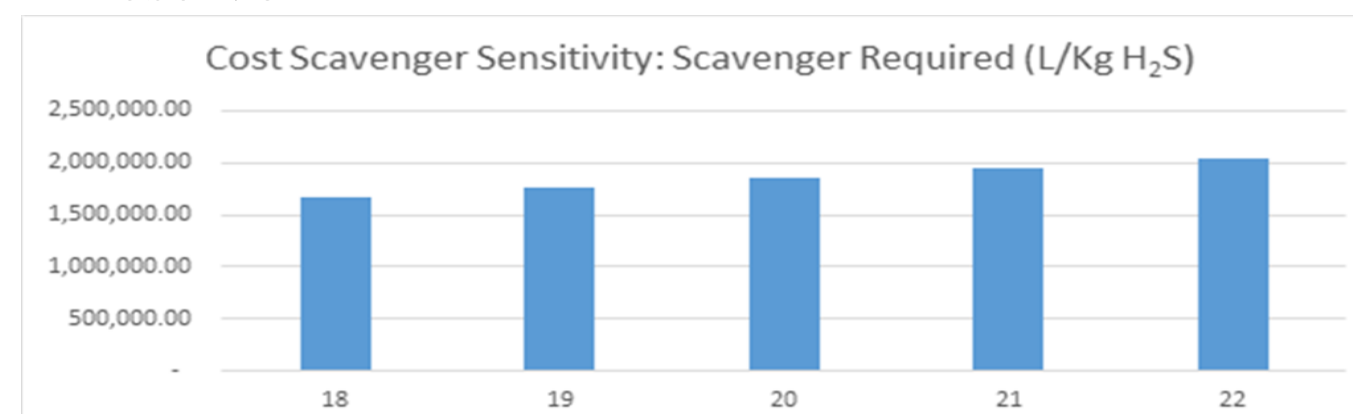
- The phenomenon of souring reservoir which is strongly related to the H₂S content affects crude's oil quality, generates corrosion of tubular goods and brings unexpected considerable costs to Oil companies



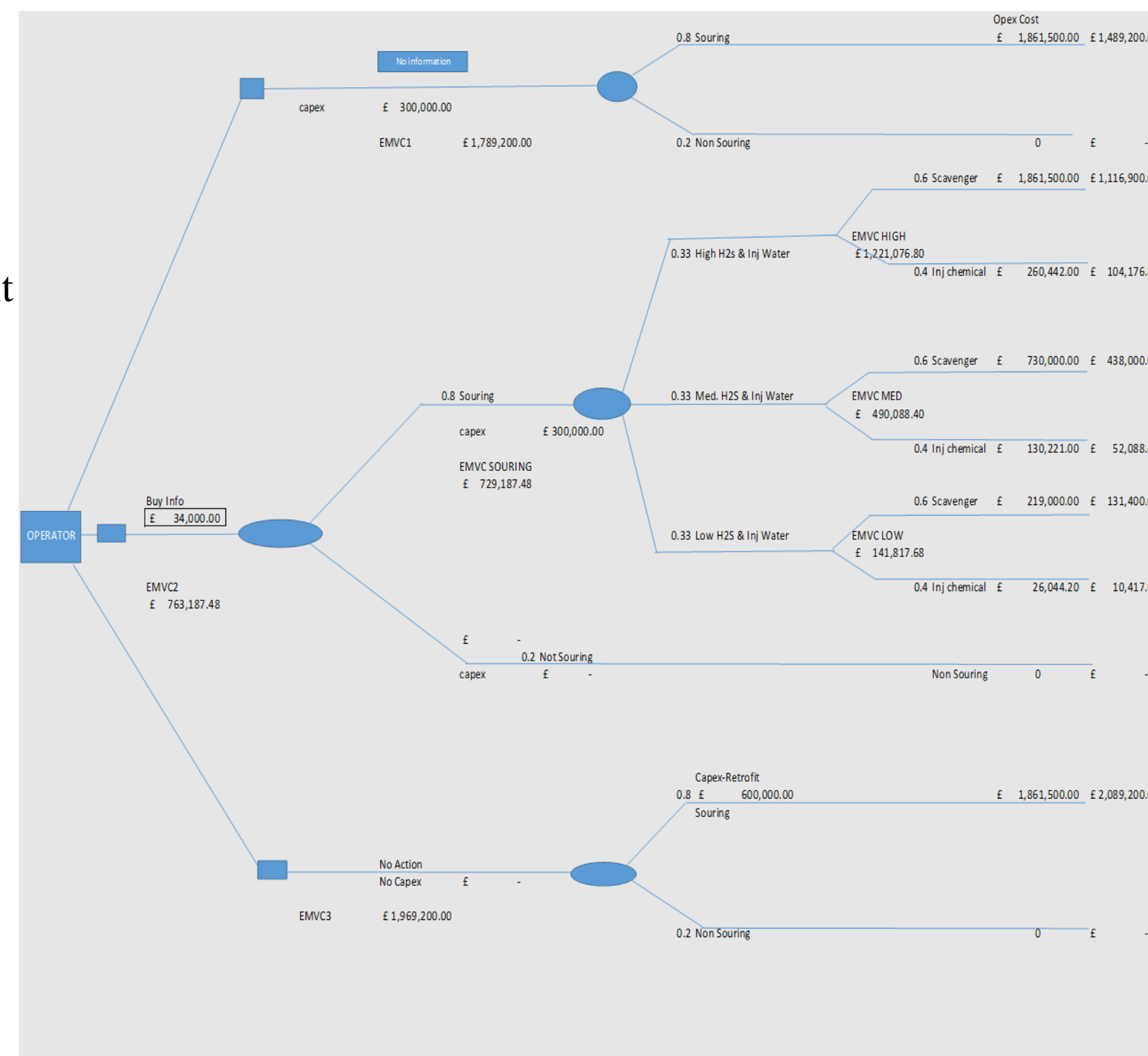
- There are many ways to treat sour oil however information about if this event will occurred, when it will occurred and to what extent wasn't applicable until Rawwater provided the TVS model.
- Even though this information has a value Rawwater claimed that this information could obtained cost optimization to oil field operators

Methodology

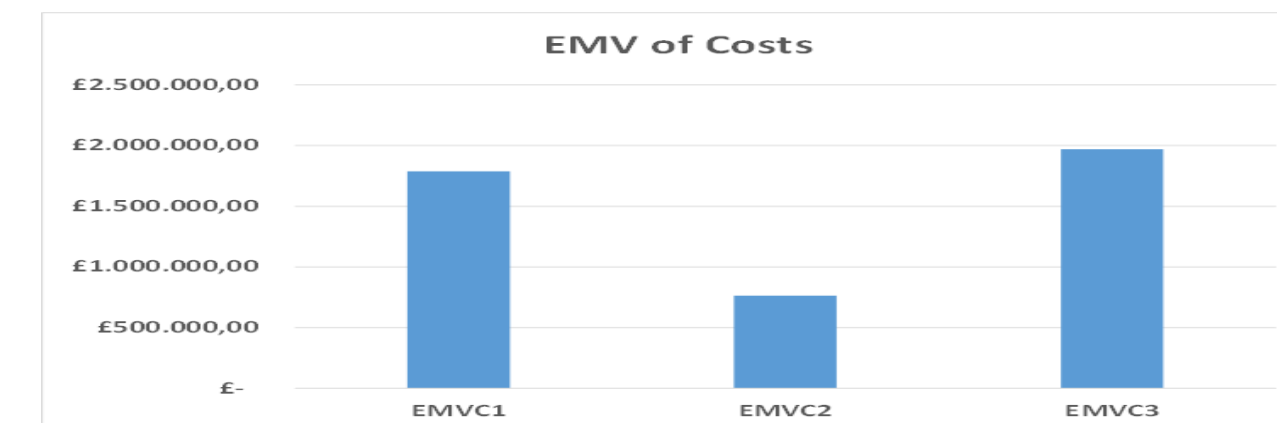
- Sensitivity analysis has been undertaken for current real costs of an oil field that suffers from souring reservoir



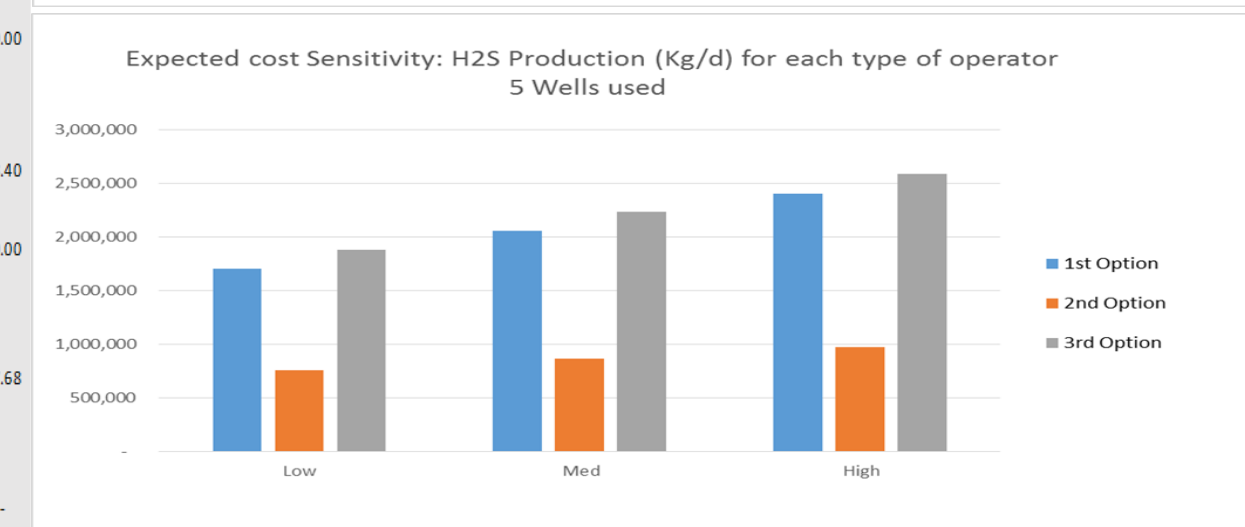
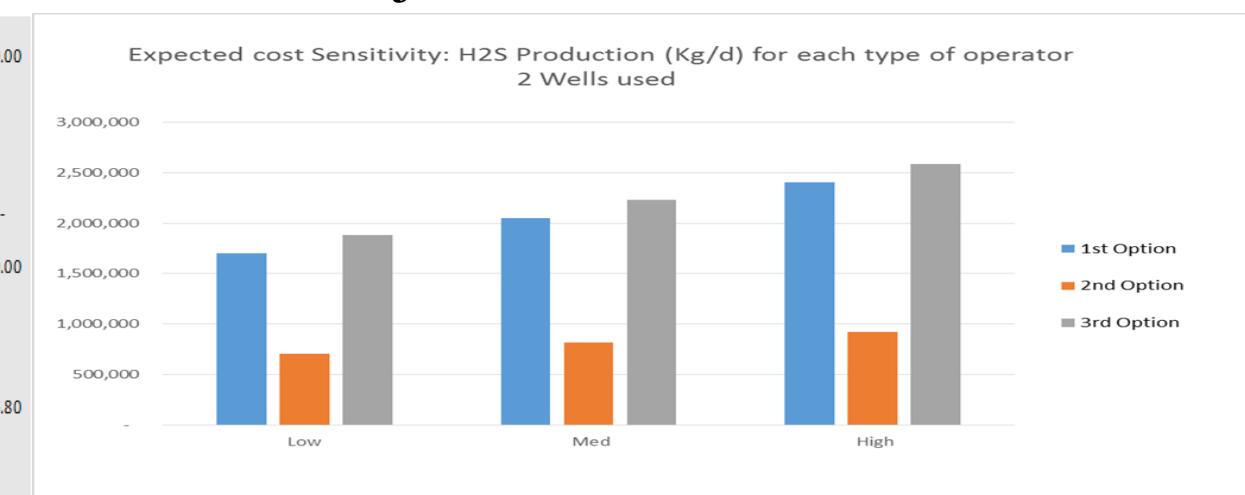
- The cost of the forecast information that Rawwater provides has been identified under realistic assumptions
- A decision tree model has been constructed in order to verify options and probabilistic outcomes



Results



- Sensitivity analysis via VBA identified grades of H₂S content, cost of information, wells and water injection rate



Conclusion

- The second option is the most cost efficient (option which includes forecast information)
- The monetary value of the information that Rawwater provides is much lower than its perceived value in the market