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### Original Research Article

## Optimization of Corrosion Information in Oil and Gas Wells Using Electrochemical Experiments

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### ABSTRACT

Corrosion reactions are often complex heterogeneous reactions that are accelerated by interactions such as: common kinetic considerations, electrolyte chemical composition, mass transfer between the electrolyte and the metal surface, Different surface effects such as adsorption, desorption and surface hardness are determined. The interactions between these factors make it difficult to reproduce electrochemical data or precise conditions that cause a metal to be corroded. These are the experimental factors that must be considered when corrosion tests are being designed. Ignoring these factors can produce data that does not provide the true corrosion behavior of the test metal under study. This paper presents the relationship between the inherent errors of corrosion measurement and suggestions on how to handle variability of electrochemical data.

**Keywords:** Corrosion reactions, Interaction rate, Activation energy, electrochemical data.