

**Title of article:** Cumulative production forecast of an oil well using simplified “Hyperbolic-Exponential” decline models

**Author(s):** Makinde, F.A., Orodu, O.D., Ladipo, A.O., Anawe, P.A.L

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### **Abstract**

Decline Curves are important tools employed in the petroleum production industry to establish a good production performance forecast of production wells. Studies have shown that neither hyperbolic nor exponential decline could accurately produce dependable forecast results, which in turn affects the various economic decisions being made on both investment and future production processes. New simplified models for decline curve analysis are developed. The models are applicable to naturally producing wells that have not been secondarily enhanced. These models use exponential decline to extrapolate hyperbolic decline behaviour in making future production performance forecasts. Estimating different needed parameters and engaging some assumptions, the forecasted cumulative production increment using the model is  $Q_{ei}=20,705$ bbbls. This compares favourably with the existing models.