

Decline Curve Analysis = DCA

@wikipedia

Mathematical model predicting the fluid production from a reservoir based on the past [production/injection history](#).

It can be applied to any fluid production: [water](#), [oil](#) or [gas](#).

It does not involve the knowledge of [formation pressure](#) or [bottom-hole pressure](#) and is solely based on [production/injection history](#) data.

This comes as advantage in quick estimation of production perspectives and as disadvantage in accurate long-terms predictions.

There are many popular decline metrics, including the most popular:

Arps	conventional reservoirs
Duong	tight gas, shales
Power Law	tight gas, shales
Neural Network	wide-range

The first historically and the most popular [Decline Curve Analysis](#) methodology in conventional reservoirs is [Arps decline model](#):

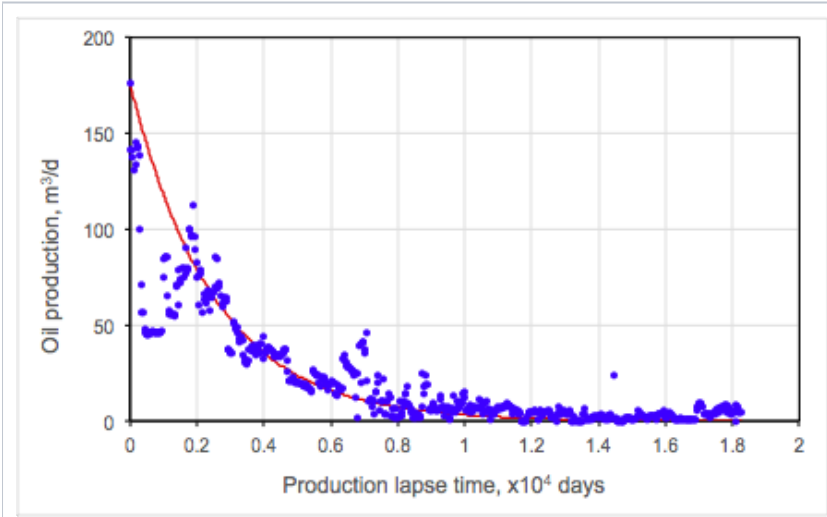


Fig. 1. [Exponential Production Decline](#)

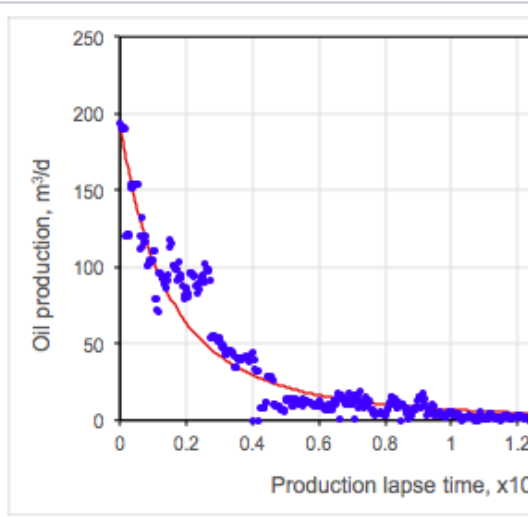


Fig. 2. [Hyperbolic Production Decline](#)

See Also

[Petroleum Industry](#) / [Upstream](#) / [Production](#) / [Subsurface Production](#) / [Field Study & Modelling](#) / [Production Analysis](#) / [Analytical Production Forecast](#)

[DCA Arps @model](#)

[DCA Power Law @model](#)

References

[DCA @petrowiki](#)

[DCA @fekete](#)