

Pressure-Rate artificial neural network = PRANN

Specific type of the pressure-rate history analysis based on the [Artificial Neural Network Regression](#).

This is the categorical concept and has many different implementations.

One normally split the solutions into the following sub-categories:

- Single-well
- Multi-well

and

- Pressure Rate
- Rate Pressure
- Rate Rate
- Pressure Pressure

The **Rate** property in the above table could be a:

- production or injection rate
- surface or subsurface rate
- **total sandface rate** q_t^\uparrow or **liquid rate** q_L^\uparrow or component rate (oil, water or gas)

There is a large number of various permutations of input-output parameters which creates a big variety of model realizations and corresponding analysis.

One of the most useful [Production Analysis](#) can be conducted with the following **PRANN** design:

Producers BHP + Injector THP Producers Oil/Water/Gas surface rate + Formation Pressure P_e

See Also

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