Formation pressure survey

There is a big range of the methods to assess Formation pressure (Pe) in a given well.

The simplest one is static gradient survey.

Currently the industry reference is the BUS/FOS.

The alternative way is to use RTA or DCV of the long-term BHP.

The multi-well version of RTA (the one which accounts the influence from the off-set wells) is CRM and MDCV.

The RTA/DCV and CRM/MDCV are considered as indirect methods.

They build correlation between BHP and flowarte and then predict formation pressure by simulating the shut-in the well and analysing the BUS/FOS in computer space.

Since the reservoir properties around the tested well and in between the wells may change over time it is important to validate the current BHP-flowrate model before accepting the Formation pressure (Pe) prediction.

The validation is performed as comparison between BHP prediction of the current BHP-flowrate model against the measured BHP.

In case the discrepancy is within the accepted range (which is set by the petroleum asset team depending on the FDP strategy on Formation pressure measurements accuracy) then the predicted value of Formation pressure is accepted.

Otherwise it is highly reccoemnded to shutdown the well and use BUS/FOS along with the historical BHP-flowarte data in order to update the BHP-flowarte model and ensure it continue predicting the accurate values of Formation pressure.

See Also

Petroleum Industry / Upstream / Subsurface E&P Disciplines / Petroleum Geology / Reservoir pressure / Formation pressure (Pe)

Subsurface E&P Disciplines / Production Technology

[Reservoir pressure] [Initial formation pressure, P_i] [Drilled formation pressure, P_d] [Startup formation pressure, P_0] [Multiphase formation pressure]

[Bottomhole pressure (p_{wf})]