Wireline Formation Testing (WFT)

Short-term Pressure Transient Analysis performed in open-hole well with wireline pressure gauge.

Can be complemented by downhole fluid sampling with the same toolstring.

The key objective is to measure formation pressure and permeability at specified downhole locations.

It usually does not reach the fully developed radial flow to assess the reservoir thickness.

Below is the table summary of typical WFT Readings, the typical diagnostics and typical recommendations.

WFT Readings	Diagnostics	Typical Recommendations
Pressure Gradient Change	Either OGC or FWL	Pick OGC/FWL
The pressure of some Hydrocarbon Beddings stay at initial pressure while most others deplete	The beddings are not depleted	The overlooked Hydrocarbon Beddings should be connected to production
The pressure of some Hydrocarbon Beddings is much lower than most others	The layers deplete faster	Revise geological model in terms of connectivity of Hydrocarbon Beddings Arrange pressure support to depleted Hydrocarbon Beddings
The pressure of some Hydrocarbon Beddings is much higher than most others	The Hydrocarbon Beddings are getting a better pressure support from aquifer or gas cap or water injection	Revise geological model in terms of connectivity of Hydrocarbon Beddings Restrict injection in these Hydrocarbon Beddings
The pressure in overlying/underlying water reservoir is regular	The area around the new well was most probably not facing the thief production/injection	The expectations from the current reservoir model check out !
The pressure in overlying/underlying water reservoir is lower than that of oil/gas pay	The area around the new well was most probably subject to thief production	Check which offset well is having a thief production and shut it off
The pressure in overlying/underlying water reservoir is higher than that of oil/gas pay	The area around the new well was most probably subject to thief injection	Check which offset well is having a thief injection and shut it off

See Also

Petroleum Industry / Upstream / Subsurface E&P Disciplines / Well Testing / Subsurface Well Testing / Open-Hole Well Test

[Well & Reservoir Surveillance]