

Pool: a natural underground reservoir containing an accumulation of oil and/or natural gas separated, or appearing to be separated, from any other such accumulation.

Field: may refer to a certain geographical area from which petroleum is produced or to a particular underground producing zone. A field may contain one or more pools linked by some common element, such as their lying along the same trend or their being a product of a common geographical disturbance.

Petroleum Production

Maximum efficient rate (MER): the maximum rate at which oil can be produced without damaging the reservoir and causing avoidable underground waste.

Good production practice: production of crude oil or raw natural gas at a rate limited to what can be produced without adversely affecting resource conservation or the opportunity of each owner in the pool to obtain his share of production.

Under favourable conditions, roughly 10% of the oil remaining in a reservoir can be produced over a year, but the rate can be considerably lower if the oil is viscous, if reservoir permeability is low or if the rate of production must be restricted to prevent damage to the reservoir (for example, by water penetration).

Not all of the oil or gas initially present in a reservoir can be "recovered" or extracted in the production process. Although the **recovery factor** can vary markedly from one reservoir to another, a rough guideline is that one-third of the oil initially in place in a conventional oil reservoir is recoverable and about three-quarters of the gas in place in a natural gas reservoir is recoverable. These factors have been gradually improving as production technology advances.

To increase the recovery factor, **natural recovery mechanisms** may be augmented by sophisticated methods of **enhanced recovery**. This introduces a final group of definitions.

Drive: the displacement of crude oil and natural gas through the pore spaces of a reservoir rock towards a well bore, as a result of the expansion of reservoir fluids or movements of fluids under pressure towards areas of lower pressure. This drive may be caused by the influx of underground water as the oil or gas is produced (water drive), by gas coming out of solution in the oil (solution gas drive), or by the expansion of free gas in a gas cap (gas-cap drive).

Primary recovery: Oil or gas produced as a result of natural drive in the reservoir. The flow of oil to the surface may occur naturally (flowing well) or may be accomplished by mechanical pumping (pumping well).

Pressure maintenance: The injection of a fluid, most commonly water or natural gas, to