

Black Oil Reservoir

Undersaturated Oil Reservoir with Vapour Liquid Envelope having quality lines broadly spaced at reservoir conditions with separator conditions lying on relatively low quality lines.

The most common type of Oil Reservoirs.

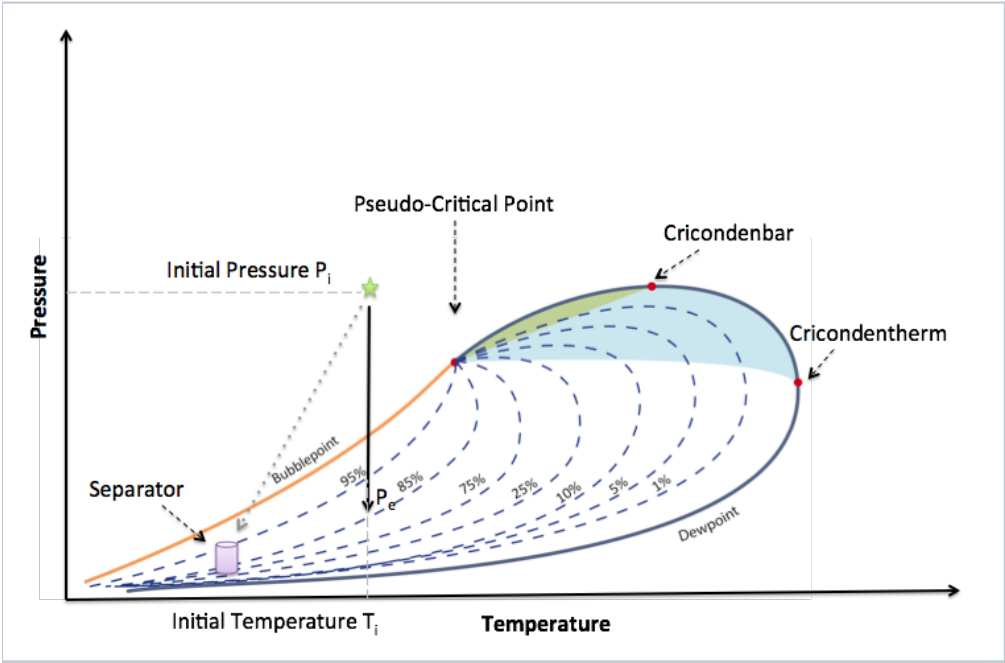


Fig. 1. Production path of the Black Oil Reservoir on the Phase Equilibrium Diagram.

The dash lines showing the Vapour Quality Lines (with inverse numbering).

The downward solid black arrow shows a reservoir pressure depletion path.

The downward grey dash arrow shows a wellbore lift pressure drop path.

Table 1 – Example of Black Oil composition (in mol %)

Substance	Black Oil
CO ₂	0.02
N ₂	0.34
C ₁	34.62
C ₂	4.11
C ₃	1.01
iC ₄	0.76

<i>n</i> C ₄	0.49
<i>i</i> C ₅	0.43
<i>n</i> C ₅	0.21
C _{6s}	1.16
C ₇₊	56.40
Rs (SCF/STB)	320
Rv (STB/MMSCF)	3125
API gravity	23.6
M ₇₊	274
7+	0.920

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References

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