

Hydrocarbon Reserves Classification

@wikipedia

Hydrocarbon Reserves Classification provides the primary insight into the size, uncertainty and structure of the Hydrocarbon Reserves.

Very Small	Small	Medium	Big	Giant	Super-Giant
< 7 mln bbl	7 ÷ 70 mln bbl	70 ÷ 200 mln bbl	200 ÷ 700 mln bbl	700 ÷ 2,000 mln bbl	> 2,000 mln bbl
< 1 mln ton	1 ÷ 10 mln ton	10 ÷ 30 mln ton	30 ÷ 100 mln ton	100 ÷ 300 mln ton	> 300 mln ton

3P = Proven P90 + Probable P50 + Possible P10				
2P = Proven P90 + Probable P50				
1P = Proven P90			Probable P50	Possible P10
Proven Developed Reserves(PD)		Proven Undeveloped Reserves (PUD)		
Proven Developed Producing (PDP)	Proven Developed Non-Producing (PDN)			

See also [Russian Hydrocarbon Reserves Uncertainty Categories](#).

	Gas	Condensate	Light oil	Medium Oil	Heavy Oil	Extra Heavy Oil (Bitumen)
kg /m³	< 702*	702 ÷ 801	801 ÷ 870	870 ÷ 920	920 ÷ 1000	> 1000
API	> 70°	45° ÷ 70°	45° ÷ 31.1°	22.3° ÷ 31.1°	10° ÷ 22.3°	4° ÷ 10°

* – with reference to air.

	Dynamic fluid viscosity	Extra high perm	High perm	Medium perm	Low perm	Tight (Shale)
	cP	> 1000 md	100 md ÷ 1000 md	10 md ÷ 100 md	0.1 md ÷ 10 md	< 0.1 md
Low viscous oil	< 1					
Medium viscous oil	1 ÷ 10					
High viscous oil	10 ÷ 100					
Extra high viscous oil	100 ÷ 10,000					
Bitumen	> 10,000					

where box colours mean:

Conventional Reserves	Unconventional Reserves	Unrecoverable Reserves
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and the ranges of properties in the table are only tentatively define the category based on the industry statistics and conventions, which vary over history and locations.

Undersaturated Oil Reservoir		Saturated Oil Reservoir		Natural Gas Reservoir		
Black Oil Reservoir	Volatile Oil Reservoir	Gas Cap Oil Reservoir	Oil Rim Reservoir	Retrograde Gas Condensate Reservoir	Wet Gas Reservoir	Dry Gas Reservoir
		both underlying Natural Gas Reservoir				

Sweet crude	Sour crude
Sulfur < 0.5%	Sulfur > 0.5%

Very Fast Oil	Fast Oil	Commensurable mobilitie of Oil and Water	Fast Water	Very Fast Water
<0.2	0.2 ÷ 0.75	0.75 ÷ 1.25	1.25 ÷ 5	>5

Very Poor	Poor	Medium	Good	Very Good
< 0.45	0.45 ÷ 1.0	1.0 ÷ 3.5	3.5 ÷ 8.0	> 8.0

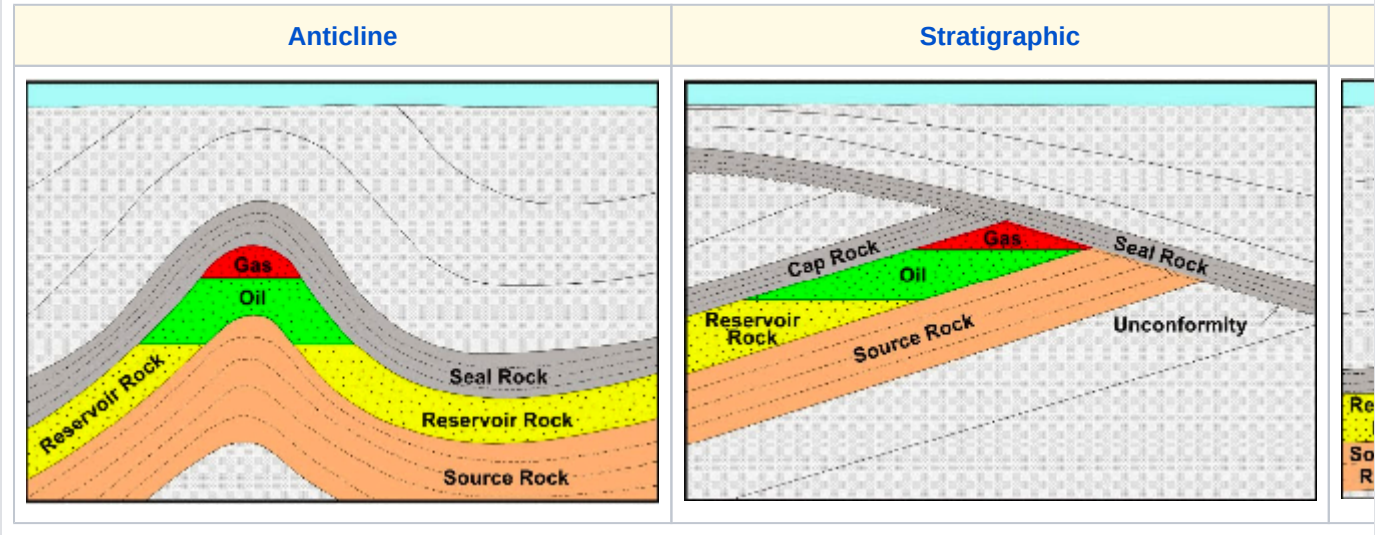
	Strong Aquifer	Poor Aquifer	No Aquifer
Edge Aquifer			
Bottom Aquifer			

Sedimentary		Igneous	Metamorphic
Clastic Rock	Carbonate Rock		

Matrix	Fissured	Fractured
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Uniform	Dissected
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Faulted	Compartmentalized
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See Also

[Petroleum Industry / Upstream / Subsurface E&P Disciplines / Petroleum Geology / Petroleum Reservoir / Hydrocarbon Reserves](#)

[\[Russian Hydrocarbon Reserves Uncertainty Categories \]](#)[\[Hydrocarbon Reserves Uncertainty \]](#)

References

<https://www.spe.org/industry/reserves.php>

https://www.spe.org/industry/docs/GuidelinesEvaluationReservesResources_2001.pdf

<https://www.spe.org/industry/docs/PRMS-Guide-for-Non-Technical-Users-2007.pdf>