



Petrobras' Proved Reserves in 2017

Rio de Janeiro, January 29, 2018 – Petróleo Brasileiro S.A. – Petrobras informs the volume of its proved petroleum reserves (oil, condensate and natural gas) estimated at the end of 2017 according to ANP/SPE (Brazilian National Agency of Petroleum, Natural Gas and Biofuels / Society of Petroleum Engineers) and SEC (US Securities and Exchange Commission) criteria.

Proved Reserves per ANP/SPE Criteria

According to ANP/SPE criteria, on December 31, 2017, Petrobras' proved oil, condensate and natural gas reserves reached 12.415 billion barrels of oil equivalent (boe), as shown in Table 1. In 2016, these volumes were 12.514 billion boe.

Table 1 – Proved Reserve Volumes in 2017 (ANP/SPE criteria)

		Proved Reserves
Item		
Petrobras	Oil and Condensate (billion bbl)	10.553
	Natural Gas (billion m ³)	299.512
	Oil Equivalent (billion boe)	12.415

Table 2 details the evolution of proved reserves in 2017, according to ANP/SPE criteria.



Table 2 – Evolution of Proved Reserves in 2017 (ANP/SPE criteria)

Composition of Proved Reserves	Petrobras (billion boe)
Proved Reserves December/2016	12.514
b) Incorporation of Proved Reserves in 2017	0.821
c) Year Production in 2017 ¹	-0.920
d) Annual Variation (b+c)	-0.099
e) Proved Reserves December/2017 (a+d)	12.415

¹ This volume includes the production of synthetic oil and gas and does not consider the production of the Extended Well Tests (EWTs) in exploratory blocks in Brazil, since they refer to areas without declaration of commerciality, and therefore without associated reserves. Furthermore, this volume doesn't include Petrobras' oil, condensate and natural gas production in Bolivia, since Bolivian Constitution (article 357) prohibits concessionaires from disclosing reserves.

Even with a production historical record in 2017, Petrobras was able to replace 89% of the produced volume, mainly due to the drilling of new wells and better than forecasted behavior from reservoirs in the pre-salt of Santos and Campos basins. Regarding onshore fields the highlight was the reduction of operational costs in Solimões basin, Amazonas state.

The ratio between the proved reserves and produced volume is 13.5 years, (13.7 years in Brazil). The ratio between developed proved reserves and proved reserves was 49% in 2017.

Proved Reserves per SEC Criteria

According to SEC criteria, on December 31, 2017, Petrobras' proved oil, condensate, and natural gas reserves reached 9.752 billion barrels of oil equivalent (boe), as shown in Table 3. In 2016, those volumes were 9.672 billion boe.



Table 3 – Proved Reserve Volumes in 2017 (SEC criteria)

Item		Proved Reserves
Petrobras	Oil and Condensate (billion bbl)	8.435
	Natural Gas (billion m ³)	209.793
	Oil Equivalent (billion boe)	9.752

The evolution of proved reserves according to SEC criteria is shown in Table 4:

Table 4 – Evolution of Proved Reserves in 2017 (SEC criteria)

Composition of Proved Reserves	Petrobras (billion boe)
a) Proved Reserves December/2016	9.672
b) Incorporation of Proved Reserves in 2017	1.000
c) Year Production 2017 ²	-0.920
d) Annual Variation (b+c)	-0.080
e) Proved Reserves December/2016 (a+d)	9.752

² The same highlights presented to proved reserves according to ANP/SPE are applicable to proved reserves according to SEC criteria.

According to SEC criteria, Petrobras presented a 109% Reserve Replacement Index (RRI). The ratio between the proved reserves and produced volume is 10.6 years (10.7 years in Brazil). The ratio between developed proved reserves and proved reserves was 53% in 2017.

The main difference between ANP/SPE and SEC criteria is the oil price considered in calculating the economic feasibility of reserves.

Petrobras historically submits to certification at least 90% of its proved reserves according to SEC criteria. The current certifying entity is D&M (DeGolyer and MacNaughton).