

Wet christmas tree



Production & Sales Report 4Q19

Highlights on production and sales in 4Q19

Rio de Janeiro, February 10th, 2019 – After several years of stagnation, we have delivered an excellent operating performance. Reaching daily, quarterly and annual oil and gas production records.

In 4Q19, oil and gas production reached 3.025 million barrels of oil equivalent per day (MMboed), which represents a new landmark in Petrobras history, as we break through the 3.0 MMboed barrier in a quarter for the first time.

In 2019, we recorded an average production of 2.770 MMboed, reaching the upper limit of the target set for 2019, of 2.7 MMboed, with a variation of 2.5% up or down, increasing 5.4% in relation to 2018. Oil production in Brazil was 2.172 MMbpd, exceeding the target of 2.1 MMbpd.

The operating result for the year reflects the better results in 2H19, driven by the ramp-up of new production systems, which more than made up for the challenges faced in 1H19.

The ramp-ups of P-67 and P-69 in the Lula field contributed to new monthly records for both our own and the operated production of 3.1 MMboed (November) and 3.8 MMboed (December), respectively. Also in November, with the start of production on P-68, we completed the implementation schedule for 8 production systems in less than 24 months, something unprecedented in our history. In addition, in December, we reached a new daily record in our own production of 3.3 MMboed.

The 2020 production target is 2.7 MMboed, with a variation of 2.5% up or down, corresponding to the commercial production of 2.4 MMboed and 2.2 MMbpd of oil. The numbers consider the effect, in Petrobras stake, of Tartaruga Verde and Nigeria fields sales, whose transactions have already been concluded and which, together, produced 86 thousand barrels per day (kbpd).

Production in the pre-salt layer continues to evolve, reaching 1.533 MMbpd in 4Q19 and 1.277 MMbpd in 2019, representing an increase of 46.4% against 4Q18 and 28.4% against 2018, respectively. In 2019, oil production in the pre-salt came to represent more than half of total oil production in Brazil, 59% compared to 49% in 2018.

On November 6, we acquired the assets of Itapu and Búzios in the Transfer of Rights Surplus auction, reaffirming our focus on the exploration and production of world-class offshore assets, mainly in the pre-salt, in which we are the natural owners.

Búzios is the largest offshore deep-water oil field in the world. It is a world-class asset, with substantial reserves, low risk and low lifting cost, being resilient to price scenarios below US\$ 40 per barrel. It is an asset in which we are the natural owner, as Petrobras is able to extract a higher return than another operator.

We ended 2019 with 9,590 MMboe in proven reserves (SEC criterion), in line with the previous year. It is worth noting that the reserves of Itapu and Búzios assets acquired in the Transfer of Rights Surplus auction are not included in this volume. The divestment operations concluded during the year provided the anticipated monetization of 72 MMboe. Disregarding the divestments, we were able to replace 106% of the volume produced, mainly due to the good performance and the greater production history of the Santos Basin pre-salt reservoirs, in addition to incorporations related to the re-allocation of volumes due to the revision of the Transfer of Rights contract and the approval of new projects in the Santos, Campos and Espírito Santo Basins. The relationship between the volume of proven reserves and the volume produced is 10.5 years.

On January 24, 2020, the P-70 platform, which will be installed in the Atapu field, in Santos Basin pre-salt, arrived in Rio de Janeiro. An innovation was used to transport the unit from China to Rio de Janeiro: a dry tow. It was loaded on a semi-submersible vessel used to transport heavy cargo instead of being driven by ocean tugs. With that, we were able to reduce the average transportation time from 100 days to around 45 days. Time is an extremely important variable for the return of a project, which highlights the contribution of the decrease in transportation time obtained through the use of dry tow.

The P-70 has the capacity to process 150 kbpd and 6 million cubic meters of natural gas per day. The forecast is that it will start producing in the first half of this year.

On January 29, 2020, the P-77 reached its capacity of 150 kbpd, concluding its ramp-up in 10 months.

In the refining segment, we increased our production of bunker and low-sulfur fuel oil streams due to the appreciation of these streams in the international market due to the new specification of IMO 2020. In this way, we capture export opportunities and start supplying the domestic market with the new specifications. The production of these streams, in 4Q19, averaged 148 kbpd, an increase of 35% over 3Q19. The production of these streams is on an increasing trend, with a volume produced in 2Q19 of only 46 kbpd. Our refining system and logistics infrastructure are well positioned to capture these opportunities.

Oil exports increased 11% compared to 3Q19 and 38% compared to 4Q18. In November, Petrobras' exports reached a record level of 767 kbpd.

In the gas and energy segment, electricity generation stands out, which increased 16% compared to 3Q19, reflecting the worsening of the hydrological scenario.

1 - Exploration & Production

Thousand barrels of oil equivalent per day (kboed)	4Q19	3Q19	4Q18	2019	2018	Variation (%)		
						4Q19 / 3Q19	4Q19 / 4Q18	2019 / 2018
Crude oil and natural gas - Brazil	2,938	2,794	2,566	2,688	2,527	5.2	14.5	6.4
Crude oil (kbpd) ¹	2,394	2,264	2,055	2,172	2,035	5.7	16.5	6.7
Onshore	122	123	131	124	135	(0.8)	(6.9)	(8.1)
Shallow water	59	69	84	66	90	(14.5)	(29.8)	(26.7)
Post-salt - deep and ultra deep	680	706	793	704	816	(3.7)	(14.2)	(13.7)
Pre-salt	1,533	1,367	1,047	1,277	994	12.1	46.4	28.5
Natural gas (kboed)	544	530	511	516	492	2.6	6.5	4.9
Crude oil and natural gas - Abroad	86	84	94	82	101	2.4	(8.5)	(18.8)
Total (kboed)	3,025	2,878	2,660	2,770	2,628	5.1	13.7	5.4

Oil and natural gas production was 2,770 kboed in 2019, representing an increase of 5.4% in relation to 2018. In 4Q19, total production broke the 3,000 kboed barrier for the first time, reaching 3,025 kboed, a growth of 13.7% compared to 4Q18, mainly due to the ramp-up of the 8 new systems that went into production in 2018 and 2019 in the fields of Búzios (P-74, P-75, P-76 and P-77), Lula (P-67 and P-69), Berbigão and Sururu (P-68) and Tartaruga Verde (FPSO Campos dos Goytacazes). In relation to 3Q19, we had a 5.1% growth, due to the increase in production from the pre-salt fields.

Pre-salt oil production increased 12.1% in 4Q19 in relation to the previous quarter and 28.5% in 2019 when compared to 2018, mainly reflecting the increase in production in the Búzios and Lula fields. It is worth noting the increase in the representativeness of the pre-salt in oil production in Brazil, which grew from 49% in 2018 to 59% in 2019.

The production of post-salt oil in deep and ultra-deep waters decreased by 3.7% in relation to the previous quarter due to the increase in maintenance stoppages. In comparison with 2018, there was also a reduction of 13.7%, due to the end of the production cycle of platforms P-33 and P-37, which will be replaced by new units for the revitalization of the Marlim field, and the postponement of the startup of new wells, due to adjustments in the processing plants of the platforms to fit the oil and grease content of the discharged water².

The revitalization of the Marlim field includes the replacement of nine platforms by two planned to start-up in 2022 and 2023. Currently, Marlim produces about 100 kbpd, the new platforms will have the capacity to produce 80 kbpd (Marlim 1) and 70 kbpd (Marlim 2) of oil and 7 million m³/day (Marlim 1) and 4 million m³/day (Marlim 2) of natural gas, extending the productive life of the field.

In 4Q19, oil production in shallow waters decreased by 10 kbpd compared to 3Q19 due to the divestment of Polo Pargo and the maintenance stoppage of the PNA-2 platform (Namorado field). Compared to 2018, production was 24 kbpd

¹ Includes LNG

² Part of the Term of Commitment signed with IBAMA.

lower, also impacted by the aforementioned reasons, in addition to the final production stoppage of the PNA-1 platform in the Congro/Namorado field.

In 4Q19, oil production in onshore fields remained stable compared to the previous quarter and decreased 11 kbpd in 2019 compared to 2018, mainly due to the natural decline in production.

In December, total production was 3,077 kboed. In this month, we had the divestment closing of 34 onshore fields at Polo Riacho da Forquilha, in Rio Grande do Norte, and a 50% stake in the Tartaruga Verde field, in Campos Basin post-salt. In addition, in January 2020, the sale of our interest in Petrobras Oil & Gas B.V. (PO&GBV) was completed. The 2019 average oil production of PO&GBV's assets was around 34 kbpd (Petrobras share).

Production history:

Thousand barrels of oil equivalent per day (kboed)	2019	2018	2017	2016	2015
Crude oil and natural gas - Brazil	2,688	2,527	2,654	2,625	2,591
Crude oil (kbpd)	2,172	2,035	2,154	2,144	2,128
Onshore	124	135	150	N/A	N/A
Shallow water	66	90	118	N/A	N/A
Post-salt - deep and ultra deep	704	816	977	N/A	N/A
Pre-salt	1,277	994	908	N/A	N/A
Natural gas (kboed)	516	492	500	480	463
Crude oil and natural gas -Abroad	82	101	112	165	195
Total (kboed)	2,770	2,628	2,767	2,790	2,786

2 - Refining

Thousand barrels per day (kbpd)	4Q19	3Q19	4Q18	2019	2018	Variation (%)		
						4Q19 / 3Q19	4Q19 / 4Q18	2019 / 2018
Total production volume	1,793	1,816	1,736	1,779	1,765	(1.3)	3.3	0.8
Total sales volume	1,729	1,805	1,848	1,754	1,807	(4.2)	(6.4)	(2.9)
Refining plants utilization factor (%)	76	80	75	77	76	(5.0)	1.3	1.3
Processed fresh cargo ³	1,658	1,740	1,642	1,675	1,664	(4.7)	1.0	0.7
Processed cargo ⁴	1,709	1,791	1,685	1,720	1,715	(4.6)	1.4	0.3
Domestic crude oil as % of total	92%	90%	90%	91%	91%	2.2	2.2	-

In 2019, there was an increase in the production of oil products and utilization factor of the refining system in relation to 2018. The higher production volume was directed to the export of bunker and high octane gasoline, which is valued in the American market, with lower sales of this oil product in the domestic market.

The drop in sales in the domestic market in 2019 was mainly due to gasoline, due to the higher market share of importers and hydrated ethanol.

Oil products output in 4Q19 reached 1,793 kbpd, representing a decrease of 1.3% in relation to 3Q19. This decrease was due to lower sales in the domestic market, mainly diesel, and scheduled maintenance stoppages that occurred at REGAP and REVAP.

The drop in sales, mainly of diesel, in 4Q19 in relation to the previous quarter was mainly due to the seasonal reduction in the consumption of this oil product, in addition to the increase in the mandatory biodiesel content, from 10% to 11%. The mandatory percentage of biodiesel sold to the final consumer will be increased to 12% in March 2020.

2.1- Diesel

Thousand barrels per day (kbpd)	4Q19	3Q19	4Q18	2019	2018	Variation (%)		
						4Q19 / 3Q19	4Q19 / 4Q18	2019 / 2018
Production volume	683	710	736	698	715	(3.8)	(7.2)	(2.4)
Sales volume for the Brazilian market	697	770	782	725	731	(9.5)	(10.8)	(0.8)

Diesel production fell due to the use of some of its streams to produce 0.5% bunker according to IMO 2020 specifications and the lower availability of the refining system. Diesel sales in 2019 dropped compared to 2018, with an increased share of imported diesel.

Diesel production in 4Q19 reached 683 kbpd, representing a reduction of 3.8% in relation to 3Q19. The lower production in the quarter was due to the lower demand and the use of diesel streams for the formulation of the 0.5% bunker, in addition to scheduled maintenance stoppages at REGAP and REVAP.

³ Daily volume of oil processed in the country used to calculate the utilization factor of the refining park

⁴ Daily volume of oil and NGL processed in the country

2.2 - Gasoline

Thousand barrels per day (kbpd)	4Q19	3Q19	4Q18	2019	2018	Variation (%)		
						4Q19 / 3Q19	4Q19 / 4Q18	2019 / 2018
Production volume	380	416	379	394	393	(8.7)	0.3	0.3
Sales volume for the Brazilian market	383	377	405	378	402	1.7	(5.5)	(6.0)

The volume of gasoline production remained stable between 2019 and 2018. There was a drop in sales due to the higher market share of importers and hydrated ethanol. This drop was offset by an increase in exports of 34 kbpd.

In 4Q19, gasoline production decreased 8.7% compared to 3Q19, mainly due to the maintenance stoppages of REGAP, REVAP, RLAM, REPAR and RPBC units.

In 4Q19, sales increased 1.7% due to seasonal factors.

2.3 – Fuel Oil

Thousand barrels per day (kbpd)	4Q19	3Q19	4Q18	2019	2018	Variation (%)		
						4Q19 / 3Q19	4Q19 / 4Q18	2019 / 2018
Production volume	249	197	162	205	178	26.4	53.7	15.2
Sales volume for the Brazilian market	37	38	42	39	46	(2.7)	(13.2)	(14.5)

Fuel oil production increased in 2019 due to the bunker's price appreciation in the international market, which brought fuel oil export opportunities in particular to the Singaporean market. There was a drop in sales volume in the domestic market between 2019 and 2018 due to lower deliveries for thermal generation.

Fuel oil production increased 26.4% in 4Q19 compared to 3Q19, due to the capture of opportunities due to IMO 2020 specifications.

2.4- Naphtha

Thousand barrels per day (kbpd)	4Q19	3Q19	4Q18	2019	2018	Variation (%)		
						4Q19 / 3Q19	4Q19 / 4Q18	2019 / 2018
Production volume	85	73	63	78	67	16.4	34.9	16.4
Sales volume for the Brazilian market	80	72	96	82	97	10.2	(16.9)	(15.2)

Naphtha production increased in 2019, enabling the reduction of imports compared to 2018. Sales fell due to the drop in demand by Braskem.

Naphtha production in 4Q19 increased 16.4% in relation to 3Q19 mainly due to the resumption of demand by Braskem in this quarter, which was fully met by our own production.

2.5- Liquefied Petroleum Gas (LPG)

Thousand barrels per day (kbpd)	4Q19	3Q19	4Q18	2019	2018	Variation (%)		
						4Q19 / 3Q19	4Q19 / 4Q18	2019 / 2018
Production volume	118	137	123	124	126	(13.9)	(4.1)	(1.6)
Sales volume for the Brazilian market	228	240	227	229	231	(4.7)	0.4	(1.0)

LPG production and sales remained stable in 2019 and 2018.

In 4Q19, sales and LPG production decreased 13.9% and 4.7% respectively in relation to the previous quarter due to the seasonal reduction in the market and the maintenance stoppage of catalytic cracking units.

2.6- Jet Fuel

Thousand barrels per day (kbpd)	4Q19	3Q19	4Q18	2019	2018	Variation (%)		
						4Q19 / 3Q19	4Q19 / 4Q18	2019 / 2018
Production volume	100	101	105	105	110	(1.0)	(4.8)	(4.5)
Sales volume for the Brazilian market	121	116	124	119	123	3.7	(2.9)	(2.6)

In 2019, there was a decrease in the production of jet fuel following the reduction in sales due to the retraction in demand.

In 4Q19, jet fuel remained stable when compared to the previous quarter. Sales in 4Q19 increased 3.7% compared to 3Q19, due to the adjustment in the national aviation sector that occurred in May 2019, whose impact was stronger on sales in the third quarter of 2019.

3 - Gas & Power

Operational	4Q19	3Q19	4Q18	2019	2018	Variation (%)		
						4Q19 / 3Q19	4Q19 / 4Q18	2019 / 2018
Sale at ACR ⁵ - average MW	2,788	2,788	2,788	2,788	2,788	-	-	-
Sale of electricity in ACL ⁶ and for internal consumption - average MW	1,174	1,154	1,208	1,169	1,233	1.7	(3.0)	(5.2)
Generation of electricity - Average MW	2,539	2,190	1,230	2,028	2,205	15.9	106.5	(8.0)
Settlement price of the differences ⁷ SE/CO - R\$/MWh	272	214	158	226	289	27.1	71.8	(21.8)
National gas delivery (MM m ³ /day)	51	52	51	51	49	(1.5)	(0.8)	3.3
Regasification of liquefied natural gas (MM m ³ /day)	4	13	2	8	7	(66.6)	186.4	19.4
Import of natural gas (MM m ³ /day)	26	14	19	18	22	89.1	37.3	(19.4)
Sales volume of natural gas - MM m ³ /day	80	78	71	75	77	2.7	12.7	(1.4)

In 2019, electricity generation was 2,028 average MW, representing a drop of 8% in relation to 2018, mainly due to the improvement of the hydrological condition in relation to the previous year, reflected in the reduction in the value of the PLD. This reduction in demand in the thermoelectric segment impacted the sale of natural gas, however we highlight: (a) the increase in national gas delivery, which grew from 49 MM m³/day to 51 MM m³/day, mainly due to the higher production of pre-salt in Santos Basin, and (b) the higher share of liquefied natural gas (LNG) in the total supply due to lower LNG prices in the international market.

In 4Q19, electricity generation was 2,539 average MW, a 15.9% increase over 3Q19. This increase was mainly due to the higher generation of energy outside the order of merit due to the lower average cost of acquiring natural gas, in view of the better remuneration for spot prices due to the worsening of the hydrological scenario in relation to the previous quarter. The higher thermoelectric dispatch using natural gas favorably influenced the volume of gas sales, which reached the level of 80 MM m³/day in 4Q19, representing an increase of 2.7% in relation to 3Q19. With stable deliveries of national gas, there was a change in the natural gas import profile, with an increase in the share of Bolivian gas to the detriment of LNG.

⁵ Regulated Contracting Environment in the electrical system.

⁶ Free Contracting Environment in the electrical system

⁷ Electricity prices in the spot market calculated weekly and weighted by level of free load (light, medium and heavy), number of hours and capacity of the market in question

Exhibit I: Consolidated Sales Volume

Sales volume (kbpd)	4Q19	3Q19	4Q18	2019	2018	Variation %		
						4Q19 / 3Q19	4Q19 / 4Q18	2019 / 2018
Diesel	697	770	782	725	731	(9.5)	(10.9)	(0.8)
Gasoline	383	377	405	378	402	1.6	(5.4)	(6.0)
Fuel oil	37	38	42	39	46	(2.6)	(11.9)	(15.2)
Naphtha	80	72	96	82	97	11.1	(16.7)	(15.5)
LPG	228	240	228	229	231	(5.0)	-	(0.9)
Jet Fuel	121	116	124	119	123	4.3	(2.4)	(3.3)
Others	179	172	147	166	157	4.1	21.8	5.7
Total oil products	1,725	1,785	1,824	1,738	1,787	(3.4)	(5.4)	(2.7)
Alcohols, nitrogenous, renewable and others	3	4	15	7	17	(25.0)	(80.0)	(58.8)
Natural gas	381	356	322	350	345	7.0	18.3	1.4
Total domestic market	2,109	2,145	2,161	2,095	2,149	(1.7)	(2.4)	(2.5)
Exports of petroleum, oil products and others	866	802	630	735	594	8.0	37.5	23.7
Sales of international units	91	78	225	101	236	16.7	(59.6)	(57.2)
Total external market	957	880	855	836	830	8.8	11.9	0.7
Grand total	3,066	3,025	3,016	2,931	2,979	1.4	1.7	(1.6)

Exhibit II: Net imports and exports

Thousand barrels per day (kbpd)	4Q19	3Q19	4Q18	2019	2018	Variation (%)		
						4Q19 / 3Q19	4Q19 / 4Q18	2019 / 2018
Net export (import)	509	469	202	381	243	8.5	152.0	56.8
Import	357	332	424	354	349	7.5	(15.8)	1.4
Crude Oil	154	153	147	168	154	0.7	4.8	9.1
Diesel	73	87	94	70	59	(16.1)	(22.3)	18.6
Gasoline	38	14	49	28	19	171.4	(22.4)	47.4
Naphtha	6	-	40	8	30	-	(85.0)	(73.3)
GLP	61	55	66	62	67	10.9	(7.6)	(7.5)
Other oil products	25	23	28	18	20	8.7	(10.7)	(10.0)
Export	866	801	626	735	592	8.1	38.3	24.2
Crude Oil	647	583	468	536	428	11.0	38.2	25.2
Fuel oil	156	131	109	133	121	19.1	43.1	9.9
Other oil products	63	87	49	66	43	(27.6)	28.6	53.5

In 2019, net exports increased 138 kbpd, with a monthly oil export record of 767 kbpd in November, which grew by 108 kbpd, following the increase in production, in addition to the increase in gasoline and export of streams for the formulation of 0.5% bunker. There was a drop in naphtha imports, with higher supply of our own production to meet domestic demand.

In 4Q19, net exports grew by 40 kbpd, and higher exports of oil and fuel oil were noteworthy.

Export history:

Thousand barrels per day (kbpd)	2019	2018	2017	2016	2015
Crude Oil	536	428	512	387	360
Oil Products	199	164	157	155	149

Disclaimer

This release includes forward-looking that are subject to risks and uncertainties. The forward-looking statements, which address the Company's expected business and financial performance, among other matters, contain words such as "believe," "expect," "estimate," "anticipate," "optimistic," "intend," "plan," "aim," "will," "may," "should," "could," "would," "likely," and similar expressions. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date on which they are made. There is no assurance that the expected events, trends or results will actually occur. We undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information or future events or for any other reason. The amounts informed for 4Q19 on are estimates. The operational data contained in this release is not audited by the independent auditor.