

STATISTICAL YEARBOOK 2017



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1.1 Summary of selected operating statistics

thousand barrels per day

Part 1/3

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Variation 2017/2016 (%)
Production and process												
Total hydrocarbons (Mboed)	4,392	3,965	3,776	3,793	3,722	3,697	3,653	3,538	3,269	3,037	2,738	-9.8
Crude oil	3,076	2,792	2,601	2,577	2,553	2,548	2,522	2,429	2,267	2,154	1,948	-9.5
Natural gas ^a (MMcf/d)	6,058	6,919	7,031	7,020	6,594	6,385	6,370	6,532	6,401	5,792	5,068	-12.5
Condensates and gas liquids	395	366	370	377	384	365	360	359	324	305	279	-8.6
Natural gas processing (MMcf/d)	4,283	4,240	4,436	4,472	4,527	4,382	4,404	4,343	4,073	3,672	3,237	-11.8
Crude oil processing in refineries	1,270	1,261	1,295	1,184	1,167	1,199	1,224	1,155	1,065	933	767	-17.8
Dry gas production in plants (MMcf/d) ^b	3,546	3,461	3,572	3,618	3,692	3,628	3,693	3,640	3,398	3,047	2,663	-12.6
Refined products and LPG ^c	1,512	1,491	1,525	1,416	1,379	1,405	1,457	1,385	1,267	1,119	915	-18.2
Petrochemicals (Mt) ^d	14,584	14,414	14,526	15,655	15,125	13,475	13,992	14,057	12,585	11,291	9,420	-16.6
Domestic sales												
Volume												
Refined products and LPG	1,816	1,827	1,771	1,762	1,787	1,841	1,785	1,709	1,704	1,647	1,578	-4.2
LPG ^e	300	291	281	288	285	286	283	281	277	201	170	-15.4
Motor gasolines	760	792	792	802	799	803	787	776	793	823	797	-3.1
Jet fuel	68	65	55	56	56	59	62	67	71	76	82	7.1
Diesel	358	382	359	371	384	401	392	389	385	387	365	-5.6
Fuel oil	257	220	209	185	201	214	189	122	112	103	125	21.5
Others ^d	72	77	76	61	63	78	72	74	67	57	40	-31.1
Dry gas (MMcf/d)	3,064	3,086	3,119	3,255	3,383	3,388	3,463	3,451	3,247	3,347	2,623	-21.6
Petrochemicals (Mt) ^e	4,010	4,154	4,032	4,187	4,251	4,188	3,962	4,134	3,775	4,001	4,119	3.0

1.1 Summary of selected operating statistics

thousand barrels per day

Part 2/3

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Variation 2017/2016 (%)
Value (MM\$)												
Refined products and LPG	473,833	543,175	513,035	584,666	679,684	779,322	813,453	830,570	660,456	576,857	784,877	36.1
LPG ^e	54,456	55,972	49,461	53,386	57,981	64,966	71,729	78,259	78,194	50,180	49,137	-2.1
Motor gasolines	247,338	265,981	258,488	295,109	328,457	368,673	404,474	428,011	355,820	336,018	443,050	31.9
Jet fuel	23,369	31,936	18,321	22,935	31,560	36,337	35,418	36,449	27,077	28,945	39,024	34.8
Diesel	96,920	111,425	121,521	144,010	166,241	193,723	211,471	225,702	162,727	136,793	210,050	53.6
Fuel oil	42,396	61,670	51,908	56,767	80,265	99,840	78,002	46,838	25,906	16,436	35,623	116.7
Others ^d	9,353	16,191	13,336	12,459	15,179	15,784	12,359	15,310	10,732	8,485	7,993	-5.8
Dry gas	78,644	105,436	58,102	67,141	64,466	50,233	68,129	78,666	53,037	67,536	74,288	10.0
Petrochemicals ^{e,f}	25,708	32,939	23,739	31,791	37,662	36,988	34,809	38,014	31,727	28,901	28,701	-0.7
Foreign trade												
Volume												
Crude oil exports	1,686	1,403	1,222	1,361	1,338	1,255	1,189	1,142	1,172	1,194	1,174	-1.7
Condensate exports	-	-	-	-	1	6	5	2	1	-	-	-
Natural gasolines (naphthas) exports	76	66	69	68	75	69	67	66	63	53	45	-14.6
Dry gas (MMcfd)												
Exports	139	107	67	19	1	1	3	4	3	2	2	-19.5
Imports	386	447	422	536	791	1,089	1,290	1,358	1,416	1,934	1,766	-8.7
Refined products and LPG ^g												
Exports	104	126	174	125	109	72	110	133	131	133	113	-14.9
Imports	495	553	519	627	678	671	603	640	740	799	935	17.0
Petrochemicals (Mt)												
Exports	693	587	741	677	458	602	614	406	334	125	61	-51.5
Imports	270	250	388	268	101	190	74	85	107	278	333	19.6
Return of products under abroad processing agreements	2	-	-	-	-	-	-	-	-	-	-	-

1.1 Summary of selected operating statistics

Part 3/3

thousand barrels per day

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Variation 2017/2016 (%)
Value (MMUS\$)												
Crude oil exports												
Crude oil exports	37,937	43,342	25,605	35,986	49,379	46,851	42,712	35,638	18,451	15,582	20,023	28.5
Condensate exports	-	-	-	-	24	182	170	54	13	-	-	-
Natural gasolines (naphthas) exports	1,911	2,138	1,319	1,849	2,619	2,257	2,162	1,986	1,007	733	747	1.9
Dry gas												
Exports	351	316	103	32	2	1	3	5	2	1	1	13.2
Imports	996	1,424	633	939	1,272	1,216	2,495	2,819	1,674	2,098	2,484	18.4
Refined products and LPG ^g												
Exports	2,140	3,399	3,338	2,915	3,574	2,500	3,365	3,426	1,580	1,162	1,656	42.5
Imports	15,797	21,893	13,308	20,335	29,408	29,631	25,706	25,467	18,984	17,684	23,814	34.7
Petrochemicals												
Exports	242	349	147	245	260	283	171	132	63	20	38	84.3
Imports	145	158	168	174	125	252	129	168	196	85	123	43.4
Prices (US\$/b)												
Exports												
Crude oil ^h	61.64	84.38	57.40	72.46	101.13	101.96	98.44	85.48	43.12	35.65	46.73	31.1
Istmo	69.92	81.09	63.38	78.63	106.22	107.28	104.69	93.39	49.28	37.72	50.75	34.6
Maya	60.38	82.92	56.22	70.65	98.97	99.99	96.89	83.75	41.12	35.30	46.41	31.5
Olmeca	70.89	99.37	65.79	79.58	109.83	109.39	107.92	93.54	51.46	39.71	51.79	30.4

a. Includes nitrogen and CO₂.

b. Excludes ethane injected to dry gas pipelines.

c. Includes LPG from gas processors complexes, refineries and PEP as well as gasolines of the Cangrejera Petrochemical Complex.

d. As of August 1, 2015 includes petrochemicals of Pemex Ethylene and Pemex Fertilizers and as of November 1, 2015 those from Pemex Industrial Transformation.

The data of previous dates correspond to Pemex-Petrochemical, Pemex-Gas and Basic Petrochemical and Pemex-Refining.

e. Excludes gasnaphta (refined product).

f. Includes solvents, propane and pentanes.

g. Includes naphthas and condensates.

h. Crude oil basket.

Note. The production of liquid hydrocarbons is the sum of crude oil with condensates and liquids from natural gas.

1.2 Statistics on safety and environmental protection

Part 1/2

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Frequency index (number of disabling accidents per million of man-hours worked)											
Petróleos Mexicanos	0.59	0.47	0.42	0.42	0.54	0.61	0.57	0.38	0.47	0.36	0.34
Pemex Exploration and Production	1.21	0.74	0.72	0.43	0.39	0.56	0.49	0.35	0.46	0.25	0.13
Pemex Industrial Transformation	-	-	-	-	-	-	-	-	-	0.39	0.20
Pemex Logistics	-	-	-	-	-	-	-	-	-	0.34	0.74
Pemex Drilling and Services	-	-	-	-	-	-	-	-	-	0.47	0.76
Pemex Fertilizers	-	-	-	-	-	-	-	-	-	1.00	1.43
Pemex Ethylene	-	-	-	-	-	-	-	-	-	-	0.16
Pemex Corporate	0.07	0.12	0.07	0.09	0.48	0.61	0.95	0.48	0.49	0.39	0.26
Pemex-Refining	0.27	0.24	0.32	0.66	0.80	0.76	0.46	0.29	0.44	-	-
Pemex-Gas and Basic Petrochemical	0.10	0.53	0.10	0.18	0.20	0.35	0.32	0.16	0.06	-	-
Pemex-Petrochemical	0.48	0.80	0.45	0.29	0.68	0.49	0.84	0.80	1.04	-	-
Severity index (number of lost workdays per million of man-hours worked)											
Petróleos Mexicanos	26	27	26	25	29	32	32	25	31	23	21
Pemex Exploration and Production	52	41	44	30	30	36	38	28	44	25	8
Pemex Industrial Transformation	-	-	-	-	-	-	-	-	-	26	17
Pemex Logistics	-	-	-	-	-	-	-	-	-	15	47
Pemex Drilling and Services	-	-	-	-	-	-	-	-	-	59	52
Pemex Fertilizers	-	-	-	-	-	-	-	-	-	16	80
Pemex Ethylene	-	-	-	-	-	-	-	-	-	-	9
Pemex Corporate	2	4	3	4	14	10	32	12	17	16	11
Pemex-Refining	15	17	17	36	39	40	22	29	26	-	-
Pemex-Gas and Basic Petrochemical	2	44	13	23	18	21	27	3	3	-	-
Pemex-Petrochemical	25	43	31	11	28	30	49	48	62	-	-

1.2 Statistics on safety and environmental protection

Part 2/2

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Environmental protection											
Emissions to atmosphere (MMt)											
Direct											
CO ₂ equivalent	-	-	-	59.9	49.2	43.4	47.1	55.6	52.1	57.9	39.9
CO ₂	44.2	54.8	50.2	45.4	41.5	39.7	40.6	45.0	42.6	43.4	34.4
CH ₄ (methane)	-	-	-	0.7	0.4	0.2	0.3	0.5	0.5	0.7	0.3
Criteria pollutants (Mt)											
SO _x	576.9	946.2	831.1	632.2	471.0	413.3	481.5	606.9	733.0	900.2	652.9
NO _x	109.2	108.5	108.0	97.8	112.8	108.1	112.6	110.2	116.1	99.9	82.9
COV	47.0	50.4	45.9	44.4	42.8	39.9	38.4	37.3	44.8	48.3	41.0
PST	20.0	19.5	20.5	20.5	21.3	17.0	18.2	17.3	16.9	14.6	11.0
Raw water use (MMm³)											
Raw water	-	-	-	179.8	177.1	180.3	188.5	195.6	193.1	192.4	182.1
Water reuse	-	-	-	-	38.9	38.6	41.6	38.5	34.5	32.6	29.5
Leakage and spills ^b											
Events ^c	392	329	216	154	131	264	153	155	209	192	223
Volumen (t)	14,993	2,005	7,033	-	-	-	1,121	3	1	...	-
Volumen (b)	48,200	13,899	52,096	25,824	2,690	39	24,629	5,110	1,164	8,329	506
Volumen (MMcf)	-	-	-	-	6	13	9	50	83	24	18
Final inventory											
Waste (Mt)	-	-	-	-	35.9	24.9	34.0	31.8	39.1	47.8	44.1
											20.2

a. Includes the supply of seawater

b. Excludes service pipelines (aqueducts, salt pipelines, beach transport and distribution).

c. Excludes events caused by clandestine shots.



1.3 Employees ^a

covered positions, number at year end

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
covered positions, number at year end											
Petróleos Mexicanos	141,146	143,421	145,146	147,368	150,561	150,697	154,774	153,085	138,391	126,532	124,660

a. Petróleos Mexicanos and its Subsidiary Productive Companies (EPS, for its acronym in spanish). For 2015 and previous years includes Subsidiary Entities.

Excludes subsidiaries or personnel by service.

1.4 Petrochemical production

thousand tonnes

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Variation 2017/2016 (%)
Petróleos Mexicanos	14,584	14,414	14,526	15,655	15,125	13,475	13,992	14,057	12,585	11,291	9,420	-16.6
Pemex Industrial Transformation ^a	-	-	-	-	-	-	-	-	8,209	7,444	6,192	-16.8
Pemex Ethylene ^b	-	-	-	-	-	-	-	-	2,970	2,529	1,884	-25.5
Pemex Fertilizers ^c	-	-	-	-	-	-	-	-	1,406	1,319	1,343	1.9
Pemex-Exploration and Production	-	-	...	...	...	1	1	1	...	...	-	-
Pemex-Gas and Basic Petrochemical	6,412	5,983	6,151	6,197	6,304	5,800	5,719	5,861	-	-	-	-
Pemex-Petrochemical	7,050	7,361	7,196	8,333	7,704	6,341	7,018	7,012	-	-	-	-
Pemex-Refining	1,121	1,071	1,178	1,124	1,117	1,333	1,253	1,183	-	-	-	-

a. On November 1, 2015 the agreement to create Pemex Industrial Transformation came into effect, so previous data correspond to Pemex-Refining, Pemex-Gas and Basic Petrochemical and Pemex-Petrochemical.

b. On August 1, 2015 the agreement to create Pemex Ethylene came into effect, so previous data correspond to Pemex-Petrochemical.

c. On August 1, 2015 the agreement to create Pemex Fertilizers came into effect, so previous data correspond to Pemex-Petrochemical.



1.5 Petrochemical production by work center

thousand tonnes

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Variation 2017/2016 (%)
Petrochemical complexes												
Cangrejera	2,792	2,726	2,801	3,324	2,913	1,259	2,185	2,860	2,555	2,057	1,446	-29.7
Aromatics train ^a	1,736	1,713	1,688	2,245	1,752	192	1,218	1,773	1,517	1,361	910	-33.2
Ethylene and derivatives ^b	1,056	1,013	1,114	1,079	1,161	1,067	967	1,087	1,038	696	536	-22.9
Cosoleacaque ^c	1,748	2,059	1,871	2,122	2,028	2,196	2,174	2,078	1,406	1,319	1,343	1.9
Morelos ^b	1,482	1,824	1,833	2,111	1,919	1,994	2,013	1,897	1,932	1,833	1,347	-26.5
Pajaritos	966	697	680	751	685	733	481	...	-	-	-	-
Independencia ^a	23	55	11	26	159	159	165	177	170	151	118	-21.9
Escolín	10	-	-	-	-	-	-	-	-	-	-	-
Tula	27	-	-	-	-	-	-	-	-	-	-	-
Refineries ^a												
Ciudad Madero	373	376	375	380	327	359	344	216	381	255	63	-75.4
Cadereyta	427	403	450	404	423	522	456	470	258	232	323	39.7
Salamanca	48	55	59	53	59	56	73	47	58	59	47	-20.4
Tula	137	124	156	106	121	135	93	118	104	93	87	-7.0
Minatitlán	18	16	16	19	46	136	147	186	130	80	50	-37.8
Salina Cruz	117	97	123	162	141	125	141	146	146	124	65	-47.9
Gas processing complexes ^a												
Cactus	1,350	1,156	1,269	1,252	1,188	1,110	1,119	1,050	1,133	1,350	1,273	-5.8
Nuevo Pemex	1,870	1,572	1,246	1,281	1,476	1,223	1,248	1,173	868	1,174	1,401	19.3
Morelos	1,045	1,023	1,223	1,230	1,055	1,135	1,159	1,102	1,082	903	567	-37.2
Cangrejera	1,100	1,219	1,222	1,083	1,208	1,129	990	1,239	1,189	886	547	-38.3
Poza Rica	131	93	134	143	178	176	90	69	60	47	39	-15.9
Pajaritos	219	206	207	211	196	199	209	199	232	78	150	93.7
Ciudad Pemex	204	210	228	242	218	209	220	205	170	126	141	11.5
Reynosa	75	65	8	-	-	-	-	-	-	-	-	-
Matapionche	41	33	31	26	24	19	16	16	13	12	12	-3.9
Burgos	374	403	582	727	757	595	664	805	694	510	399	-21.7
Arenque	3	2	2	3	3	3	4	3	3	3	2	-47.0
Pemex Exploration and Production ^d												

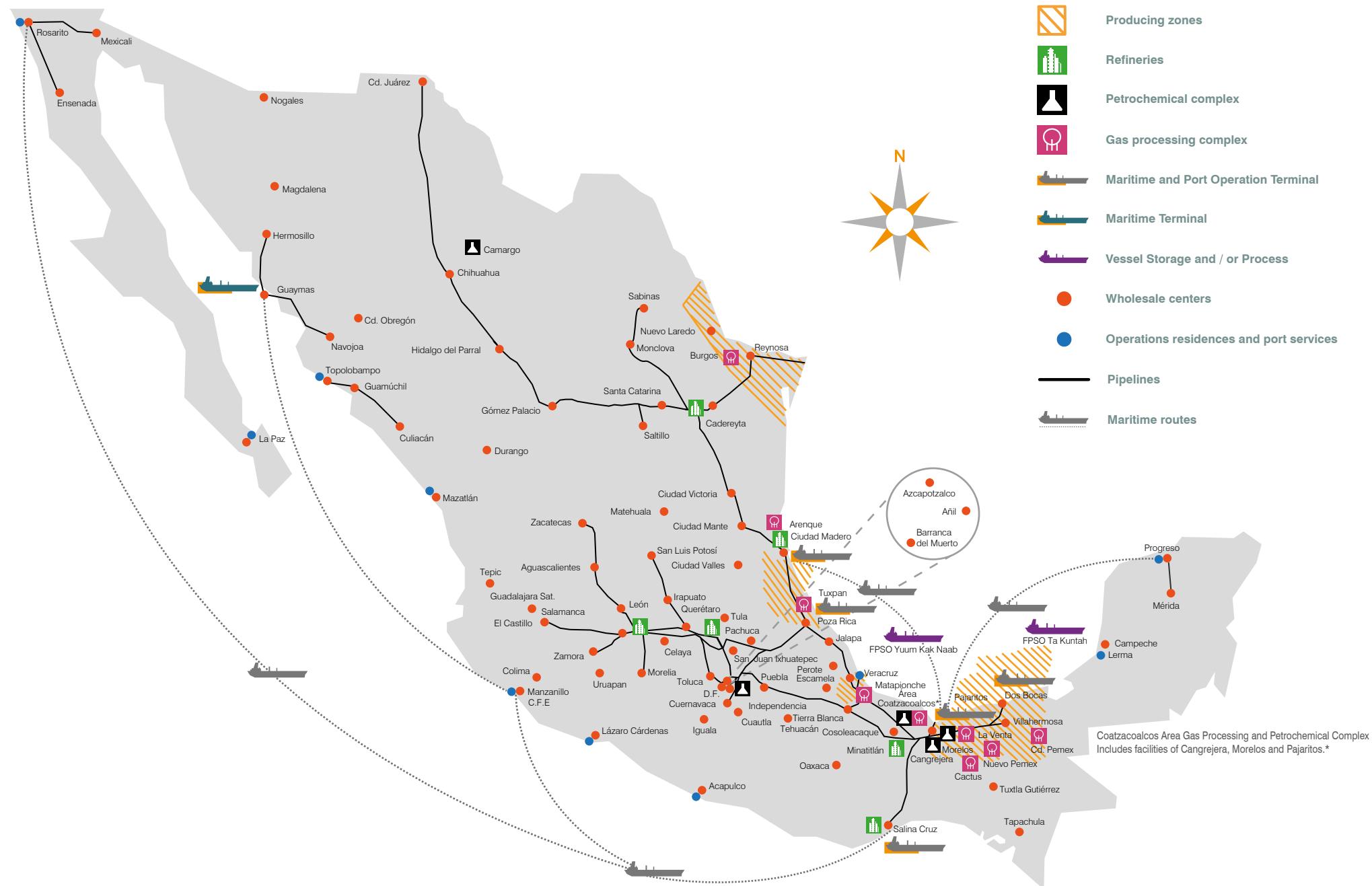
a. On November 1, 2015 the agreement to create Pemex Industrial Transformation came into effect, so previous data correspond to Pemex-Petrochemical.

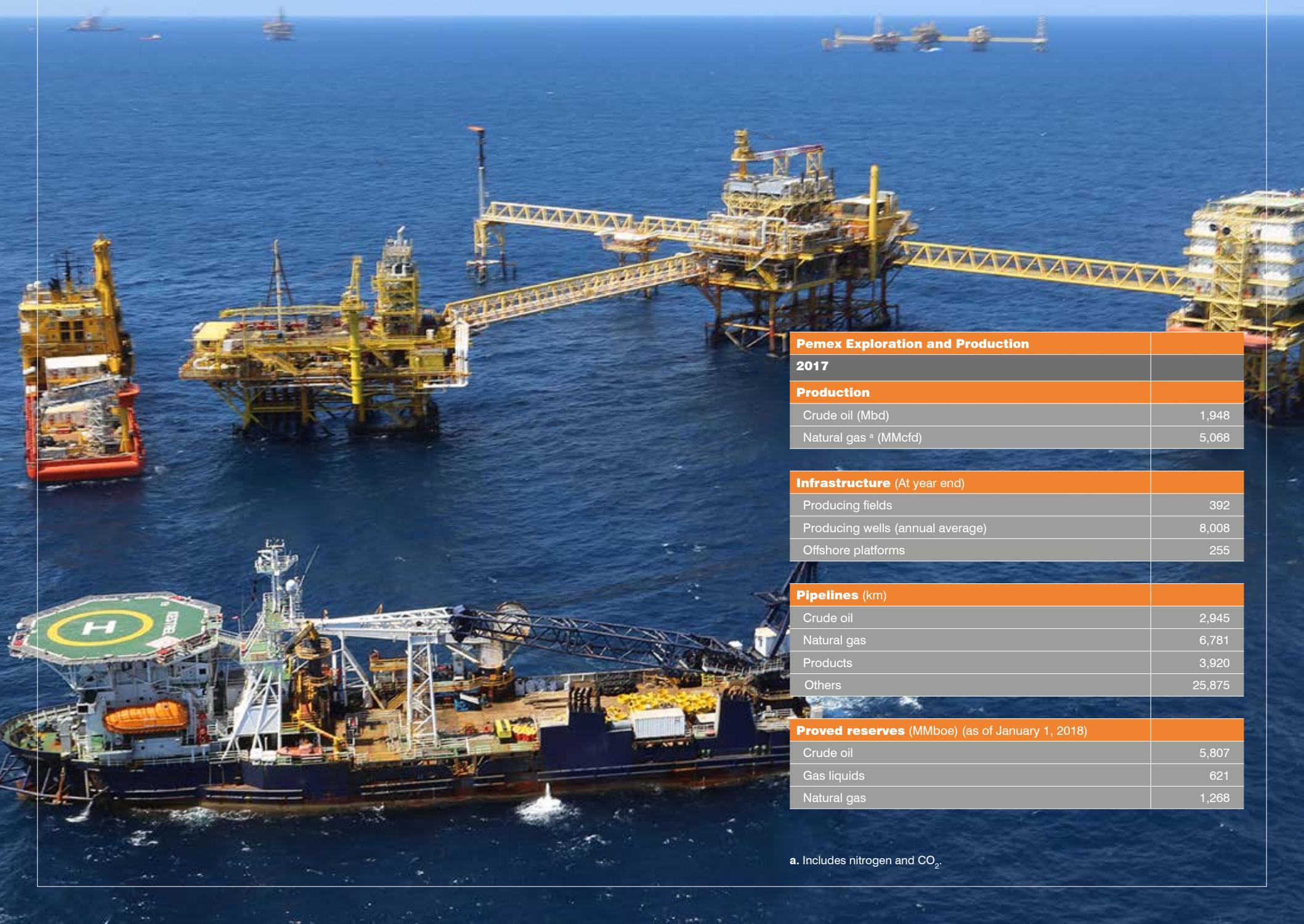
b. On August 1, 2015 the agreement to create Pemex Ethylene came into effect, so previous data correspond to Pemex-Petrochemical.

c. On August 1, 2015 the agreement to create Pemex Fertilizers came into effect, so previous data correspond to Pemex-Petrochemical.

d. Sulfur production.

OIL FACILITIES





Pemex Exploration and Production

2017

Production

Crude oil (Mbd)	1,948
Natural gas ^a (MMcf/d)	5,068

Infrastructure (At year end)

Producing fields	392
Producing wells (annual average)	8,008
Offshore platforms	255

Pipelines (km)

Crude oil	2,945
Natural gas	6,781
Products	3,920
Others	25,875

Proved reserves (MMboe) (as of January 1, 2018)

Crude oil	5,807
Gas liquids	621
Natural gas	1,268

^a. Includes nitrogen and CO₂.

2.1 Hydrocarbon reserves and production ^a

million barrels of crude oil equivalent

Part 1/2

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 ^b	2018 ^b
Total	45,376	44,483	43,563	43,075	43,074	43,837	44,530	42,158	37,405	22,223	22,149	21,089
Shallow water blocks AS01	14,086	13,358	12,786	12,097	12,081	12,526	12,491	12,211	11,532	8,143	9,148	8,331
Shallow water blocks AS02	4,647	4,760	5,189	6,011	6,384	7,054	7,338	6,692	6,001	3,965	3,335	3,395
North blocks	20,397	20,149	19,725	19,142	18,884	18,689	19,014	17,779	14,911	7,094	7,534	7,544
South blocks	6,246	6,216	5,863	5,824	5,725	5,568	5,688	5,476	4,961	3,022	2,132	1,819
Proved ^c	15,514	14,717	14,308	13,992	13,796	13,810	13,868	13,439	13,017	9,632	8,562	7,695
Shallow water blocks AS01	7,652	7,025	6,712	6,712	6,283	6,139	6,164	6,050	6,012	4,464	4,515	4,008
Shallow water blocks AS02	1,627	1,630	1,894	1,892	2,076	2,116	2,165	2,169	2,227	1,847	1,234	1,266
North blocks	1,846	1,722	1,652	1,352	1,436	1,575	1,689	1,581	1,520	1,232	1,300	1,246
South blocks	4,388	4,341	4,049	4,036	4,001	3,980	3,851	3,639	3,258	2,090	1,513	1,175
Probable	15,257	15,144	14,517	14,237	15,013	12,353	12,306	11,377	9,966	6,452	6,567	6,529
Shallow water blocks AS01	3,690	3,290	2,977	2,480	3,085	3,204	3,189	2,866	2,362	2,131	2,753	2,462
Shallow water blocks AS02	1,116	1,405	1,537	1,530	1,700	1,976	2,107	1,865	1,509	929	1,002	1,104
North blocks	9,222	9,234	8,863	9,150	9,060	6,169	6,093	5,793	5,373	3,036	2,593	2,717
South blocks	1,230	1,215	1,140	1,077	1,168	1,003	917	853	722	356	220	246
Possible	14,605	14,621	14,738	14,846	14,265	17,674	18,356	17,343	14,421	6,139	7,020	6,865
Shallow water blocks AS01	2,744	3,043	3,097	2,906	2,713	3,183	3,137	3,296	3,158	1,548	1,880	1,861
Shallow water blocks AS02	1,904	1,725	1,759	2,590	2,607	2,963	3,065	2,658	2,265	1,190	1,099	1,025
North blocks	9,329	9,193	9,210	8,640	8,388	10,945	11,233	10,405	8,018	2,826	3,641	3,580
South blocks	628	660	673	711	556	584	921	984	981	576	400	399

2.1 Hydrocarbon reserves and production ^a

million barrels of crude oil equivalent

Part 2/2

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 ^b	2018 ^b
Memorandum												
Natural gas reserves (MMMcf)												
Total	47,368	45,859	44,623	44,712	44,970	46,309	48,759	46,601	43,713	20,825	18,833	19,436
Shallow water blocks AS01	3,068	2,710	2,620	2,509	2,731	2,736	2,843	2,673	2,448	2,360	2,913	2,435
Shallow water blocks AS02	6,049	6,566	7,166	8,920	9,755	11,227	11,396	10,670	10,571	3,987	2,845	3,086
North blocks	30,565	29,193	28,005	26,800	26,461	26,091	27,804	26,620	24,682	10,750	10,410	11,349
South blocks	7,687	7,390	6,832	6,483	6,024	6,253	6,716	6,638	6,012	3,729	2,665	2,566
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Hydrocarbons production (MMboe)	1,618	1,603	1,451	1,378	1,384	1,359	1,353	1,333	1,291	1,193	1,112	999
Crude oil	1,188	1,123	1,022	950	941	932	933	921	887	827	788	725
Natural gas and condensates	429	481	429	429	444	428	421	413	405	366	323	274

a. As of January 1st. The hydrocarbon reserves information in the proved category or 1P was dictated favorably by the Comisión Nacional de Hidrocarburos (National Hydrocarbon Commission) on March 23, 2018 based on his CNH.E.20.001/18 resolution. Likewise, categories 2P and 3P were dictated favorably by said Comisión based on its resolution CNH.E.32.001/18 on May 29, 2018.

b. From 2017 the structure of Pemex Exploration and Production corresponds to blocks.

c. Since 2003, Petróleos Mexicanos has adopted the definitions of the Securities and Exchange Commission (SEC) of the U.S. for the definition of proven reserves and its estimate has been applied retroactively since 1998.

Note: The total values may not match the sum of the partial ones due to rounding.

2.2 Hydrocarbon reserves, 2018 ^a

million barrels of crude oil equivalent

	Crude oil	Gas liquids ^b	Natural gas	Total
Total	15,738	1,614	3,737	21,089
Shallow water blocks AS01	7,534	328	468	8,331
Shallow water blocks AS02	2,484	318	593	3,395
North blocks	4,682	680	2,182	7,544
South blocks	1,038	288	493	1,819
Proved ^c	5,807	621	1,268	7,695
Shallow water blocks AS01	3,558	188	262	4,008
Shallow water blocks AS02	848	152	267	1,266
North blocks	740	90	416	1,246
South blocks	661	190	323	1,175
Probable	4,853	480	1,197	6,529
Shallow water blocks AS01	2,216	99	147	2,462
Shallow water blocks AS02	822	78	204	1,104
North blocks	1,669	266	782	2,717
South blocks	146	36	63	246
Possible	5,079	514	1,273	6,865
Shallow water blocks AS01	1,761	41	59	1,861
Shallow water blocks AS02	814	88	123	1,025
North blocks	2,273	324	984	3,580
South blocks	231	61	107	399
Memorandum				
Natural gas reserves (MMMcf)	Proved	Probable	Possible	Total
Total	6,593	6,223	6,620	19,436
Shallow water blocks AS01	1,362	766	307	2,435
Shallow water blocks AS02	1,388	1,059	640	3,086
North blocks	2,162	4,069	5,119	11,349
South blocks	1,682	330	555	2,566

a. As of January 1st. The hydrocarbon reserves information in the proved category or 1P was dictated favorably by the Comisión Nacional de Hidrocarburos (National Hydrocarbon Commission) on March 23, 2018 based on his CNH.E.20.001/18 resolution. Likewise, categories 2P and 3P were dictated favorably by said Comisión based on its resolution CNH.E.32.001/18 on May 29, 2018.

b. Includes condensates.

c. Since 2003, Petróleos Mexicanos has adopted the definitions of the Securities and Exchange Commission (SEC) of the U.S. for the definition of proven reserves and its estimate has been applied retroactively since 1998.

Note: The total values may not match the sum of the partial ones due to rounding.



2.3 Wells drilling and exploitation of fields

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Wells drilled ^a	615	822	1,490	994	1,000	1,290	705	538	278	125	83
Wells completed	659	729	1,150	1,303	1,034	1,238	823	535	312	149	79
Exploratory wells	49	65	75	39	33	37	38	24	26	21	24
Producing wells	26	27	29	23	16	21	23	8	13	6	15
Success rate % ^b	53	42	39	59	48	57	61	33	50	29	63
Development wells	610	664	1,075	1,264 ^c	1,001	1,201	785	511	286	128	55
Producing wells	569	612	1,014	1,200	955	1,159	747	484	266	110	51
Success rate % ^c	94	92	94	95	95	97	96	95	93	86	93
Drilling rigs ^d	116	143	176	130	128	136	139	106	67	26	27
Exploratory wells	20	30	26	19	17	17	21	15	12	8	13
Development wells	96	113	150	111	111	119	118	92	55	19	14
Kilometers drilled	1,798	2,199	3,770	2,589	2,541	3,007	1,627	1,413	815	330	294
Average depth by well ^e (m)	2,744	2,748	2,494	2,605	2,418	2,429	2,710	2,738	3,038	3,617	-
Discovered fields	16	13	14	6	10	12	14	5	6	5	6
Crude oil	5	5	7	3	3	4	8	1	6	5	6
Natural gas	11	8	7	3	7	8	6	4	-	-	-
Producing fields	352	345	394	405	416	449	454	448	434	405	392
Wells in operation ^f	6,280	6,382	6,890	7,476	8,315	9,439	9,836	9,558	9,363	8,750	8,008
Average production of total hydrocarbons per well (bcoed)	699	622	549	508	448	392	373	370	349	347	342

a. Wells drilled to the target.

b. Commercial success.

c. Excludes injection wells.

d. Number of average equipment.

e. It refers to the average depth of wells drilled to the target.

f. Annual average.



2.4 Wells drilling

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016 ^a	2017
Wells drilled											
Exploratory wells	49	68	71	40	32	36	40	22	22	22	24
Terrestrial	43	54	55	31	26	27	30	9	4	4	6
Marine	6	14	16	9	6	9	10	13	18	18	18
Development wells	566	754	1,419	954	968	1,254	665	516	256	103	59
Terrestrial	514	693	1,379	914	929	1,210	622	463	216	69	37
Marine	52	61	40	40	39	44	43	53	40	34	22
Wells completed											
Exploratory wells	49	65	75	39	33	37	38	24	26	21	24
Terrestrial	42	52	60	32	24	28	28	14	4	4	5
Marine	7	13	15	7	9	9	10	10	22	17	19
Development wells	610	664	1,075	1,264	1,001	1,201	785	511	286	128	55
Terrestrial	556	603	1,035	1,226	958	1,158	746	462	244	94	31
Marine	54	61	40	38	43	43	39	49	42	34	24

a. Includes drilled wells by PPS and private contractors.

2.5 Crude oil production by blocks and asset

thousand barrels per day

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 ^b	Variation 2017/2016 (%)
Total	3,076	2,792	2,601	2,577	2,553	2,548	2,522	2,429	2,267	2,154	1,948	-9.5
Production Subdirection Shallow Water blocks AS01	2,018	1,746	1,493	1,397	1,343	1,309	1,304	1,232	1,126	1,082	1,035	-4.4
Integral Production Asset block AS01-01	1,490	1,040	685	558	501	454	440	375	273	216	177	-18.1
Integral Production Asset block AS01-02	527	706	808	839	842	855	864	857	853	867	858	-1.0
Production Subdirection Shallow Water blocks AS02	506	500	518	544	561	585	593	620	634	619	549	-11.2
Integral Production Asset block AS02-03	312	308	305	296	276	266	294	299	287	259	203	-21.4
Integral Production Asset block AS02-04	194	192	212	248	284	319	299	320	347	360	346	-3.9
Production Subdirection South blocks	465	459	498	532	531	508	481	452	394	344	267	-22.5
Integral Production Asset block S01	44	52	69	82	81	77	81	77	59	47	31	-33.1
Integral Production Asset block S02	187	185	200	218	223	205	173	161	145	127	100	-21.4
Integral Production Asset block S03	190	175	172	160	143	130	134	125	102	90	72	-19.8
Integral Production Asset block S04	45	47	57	72	83	96	93	89	88	80	63	-21.0
Production Subdirection North blocks	87	87	93	104	119	145	145	125	113	109	98	-9.8
Integral Production Asset block N01	-	-	-	1	3	5	8	5	-	-	-	-
Integral Production Asset block N02 ^a	85	85	89	98	113	136	128	109	101	94	83	-11.8
Integral Production Asset block N03	2	2	5	5	3	4	9	11	12	15	15	3.5

a. From 2007 to 2016 corresponds to the production of Poza Rica-Altamira Production Assets and Integral Assets of Tertiary Oil of the Gulf.

b. From 2017 the structure of Pemex Exploration and Production corresponds to blocks.



2.6 Crude oil production by blocks and type

thousand barrels per day

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 ^a	Variation 2017/2016 (%)
Total	3,076	2,792	2,601	2,577	2,553	2,548	2,522	2,429	2,267	2,154	1,948	-9.5
Heavy	2,039	1,766	1,520	1,464	1,417	1,385	1,365	1,266	1,152	1,103	1,049	-4.9
Light	838	815	812	792	798	834	847	864	838	785	689	-12.3
Lighter	199	210	270	321	337	329	310	299	277	266	210	-20.8
Production Subdirection Shallow Water blocks AS01	2,018	1,746	1,493	1,397	1,343	1,309	1,304	1,232	1,126	1,082	1,035	-4.4
Heavy	1,976	1,702	1,446	1,380	1,323	1,279	1,258	1,160	1,054	1,015	977	-3.8
Light	42	44	47	17	20	30	46	72	72	67	58	-13.8
Production Subdirection Shallow Water blocks AS02	506	500	518	544	561	585	593	620	634	619	549	-11.2
Heavy	...	...	...	...	...	1	...	...	1	3	1	-61.4
Light	410	417	419	446	467	490	494	505	503	482	439	-8.9
Lighter	96	84	99	98	93	94	99	114	130	134	109	-18.7
Production Subdirection South blocks	465	459	498	532	531	508	481	452	394	344	267	-22.5
Heavy	11	11	13	17	17	19	27	35	32	22	17	-24.2
Light	352	321	314	294	272	260	251	237	216	190	148	-21.9
Lighter	103	127	171	221	242	230	203	180	146	132	102	-23.0
Production Subdirection North blocks	87	87	93	104	119	145	145	125	113	109	98	-9.8
Heavy	53	53	61	67	78	86	80	70	66	62	54	-12.7
Light	34	34	33	36	39	54	57	50	47	46	44	-5.8
Lighter	-	-	-	1	3	5	8	5	-	-	...	-

a. From 2017 the structure of Pemex Exploration and Production corresponds to blocks.



2.7 Crude oil production in selected fields

thousand barrels per day

Part 1/2

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 ^a	Variation 2017/2016 (%)
Total	3,076	2,792	2,601	2,577	2,553	2,548	2,522	2,429	2,267	2,154	1,948	-9.5
Production Subdirection Shallow Water blocks AS01	2,018	1,746	1,493	1,397	1,343	1,309	1,304	1,232	1,126	1,082	1,035	-4.4
Cantarell												
Akal	1,388	925	543	370	314	234	203	177	99	70	55	-20.7
Sihil	12	19	35	60	66	111	110	57	38	27	21	-21.0
Ek	17	18	28	50	47	42	51	41	30	26	16	-37.7
Ixtoc	12	12	11	12	15	23	29	33	26	21	17	-20.1
Maloob	73	113	170	218	243	279	298	332	371	378	403	6.5
Zaap	113	225	277	274	280	290	299	306	293	295	297	1.0
Ku	327	364	353	337	311	277	258	210	175	159	106	-33.5
Others	76	70	75	77	66	52	56	76	94	107	119	11.1
Production Subdirection Shallow Water blocks AS02	506	500	518	544	561	585	593	620	634	619	549	-11.2
Xanab	-	-	2	20	44	66	66	77	90	139	160	15.2
Tsimín	-	-	-	-	-	4	29	66	74	43	25	-41.8
Ixtal	68	83	108	118	106	88	71	57	49	33	23	-29.5
Kuil	-	-	-	-	-	6	48	57	36	33	24	-27.3
Homol	3	11	15	15	28	45	46	52	56	52	47	-10.4
Chuc	87	69	68	74	58	52	54	49	31	29	16	-44.3
May	30	40	45	43	44	51	45	32	18	18	17	-5.5
Yaxché	6	7	16	24	40	56	45	26	23	20	16	-21.9
Sinán	66	59	60	64	52	44	26	25	17	10	8	-21.4
Bolontikú	54	58	62	54	50	35	26	24	22	17	13	-23.9
Kab	6	-	...	11	17	28	27	19	12	12	12	-4.1
Kax	7	6	8	10	15	14	15	15	16	15	14	-7.3
Caan	72	67	50	43	34	24	20	12	9	8	8	-6.7
Abkatún	22	20	18	12	15	15	12	8	8	10	10	0.6
Others	83	81	66	57	57	57	61	100	173	179	156	-12.4

2.7 Crude oil production in selected fields

thousand barrels per day

Part 2/2

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 ^a	Variation 2017/2016 (%)
Production Subdirection South blocks												
Samaria	62	53	49	43	41	40	45	53	48	34	27	-21.0
Tizón	7	8	15	15	12	19	27	27	27	28	24	-17.3
Costero	2	9	18	22	22	21	21	19	12	8	6	-31.2
Jujo-Tecominoacán	74	71	61	43	30	26	22	18	11	11	9	-11.6
Rabasa	-	...	2	8	12	14	17	18	19	18	15	-13.3
Sen	27	41	46	54	58	51	29	13	7	5	4	-14.0
Caparoso-Pijije-Escuintle	18	20	31	52	64	45	27	13	14	13	9	-32.3
Teotleco	-	2	6	10	14	15	16	12	7	5	5	-4.8
Others	276	256	270	284	278	278	277	280	250	222	168	-24.3
Production Subdirection North blocks												
Poza Rica	13	10	9	8	8	11	11	8	7	7	7	-1.8
Corralillo	1	2	3	4	10	12	11	7	5	5	4	-16.6
Tamaulipas-Constituciones	9	8	8	8	8	9	10	10	10	9	7	-22.7
Others	65	67	73	85	93	113	113	100	91	87	80	-8.7

a. From 2017 the structure of Pemex Exploration and Production corresponds to blocks.



2.8 Natural gas production by blocks and asset

million cubic feet per day

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 °	Variation 2017/2016 (%)
Total ^a	6,058	6,919	7,031	7,020	6,594	6,385	6,370	6,532	6,401	5,792	5,068	-12.5
Hydrocarbon gas	5,894	6,271	6,516	6,319	5,899	5,659	5,665	5,748	5,489	4,851	4,196	-13.5
Nitrogen	143	629	496	683	681	708	691	774	897	926	863	-6.8
Carbon dioxide	21	18	18	18	15	17	14	9	16	15	9	-38.4
Production Subdirection Shallow Water blocks AS01	1,157	1,901	1,782	1,584	1,406	1,334	1,412	1,692	1,834	1,774	1,686	-5.0
Integral Production Asset block AS01-01	945	1,629	1,455	1,252	1,075	1,004	1,007	1,121	1,277	1,185	1,133	-4.3
Integral Production Asset block AS01-02	212	273	327	332	331	330	405	571	557	589	552	-6.3
Production Subdirection Shallow Water blocks AS02	993	1,023	1,112	1,172	1,208	1,259	1,327	1,396	1,449	1,340	1,202	-10.3
Integral Production Asset block AS02-03	544	569	580	594	559	524	579	553	456	391	320	-18.2
Integral Production Asset block AS02-04	448	454	531	578	649	736	748	843	994	950	882	-7.1
Production Subdirection South blocks	1,353	1,451	1,600	1,765	1,692	1,652	1,571	1,515	1,380	1,250	1,011	-19.1
Integral Production Asset block S01	534	560	591	580	572	543	515	491	455	382	292	-23.7
Integral Production Asset block S02	518	572	679	774	716	696	606	583	500	499	427	-14.4
Integral Production Asset block S03	240	251	261	306	288	297	320	289	265	231	183	-20.8
Integral Production Asset block S04	61	68	69	105	117	116	129	153	160	138	109	-20.8
Production Subdirection North blocks	2,556	2,544	2,537	2,500	2,288	2,139	2,061	1,929	1,738	1,428	1,169	-18.1
Integral Production Asset block N01	1,412	1,383	1,515	1,478	1,344	1,269	1,287	1,221	1,099	865	699	-19.1
Integral Production Asset block N02 ^b	223	205	212	203	227	269	279	252	247	240	207	-14.0
Integral Production Asset block N03	922	957	810	819	717	601	495	455	392	323	263	-18.4

a. Includes nitrogen and CO₂.

b. From 2007 to 2016 corresponds to the production of Poza Rica-Altamira Production Assets and Integral Assets of Tertiary Oil of the Gulf.

c. From 2017 the structure of Pemex Exploration and Production corresponds to blocks.

2.9 Natural gas production in selected fields

million cubic feet per day

Part 1/3

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 °	Variation 2017/2016 (%)
Total ^a	6,058	6,919	7,031	7,020	6,594	6,385	6,370	6,532	6,401	5,792	5,068	-12.5
Production Subdirection Shallow Water blocks AS01	1,157	1,901	1,782	1,584	1,406	1,334	1,412	1,692	1,834	1,774	1,686	-5.0
Cantarell												
Akal	877	1,559	1,397	1,191	1,014	926	921	1,046	1,213	1,132	1,087	-4.0
Ixtoc	27	22	20	12	14	20	23	25	18	14	13	-8.9
Sihil	11	9	14	24	26	44	43	23	15	11	8	-21.0
Ku	146	159	181	175	172	152	192	297	259	236	227	-3.4
Zaab	48	85	104	98	95	101	108	141	134	143	151	5.6
Maloob	16	27	42	57	63	76	104	131	162	207	167	-19.3
Others	33	40	26	26	22	16	21	29	34	33	32	-0.6
Production Subdirection Shallow Water blocks AS02	993	1,023	1,112	1,172	1,208	1,259	1,327	1,396	1,449	1,340	1,202	-10.3
Tsimín	-	-	-	-	-	18	128	266	308	201	134	-33.1
May	143	206	268	271	310	372	301	219	132	131	116	-11.9
Ixtal	135	167	212	241	214	189	164	132	99	57	41	-28.0
Caan	186	201	173	176	146	119	103	86	45	33	34	2.2
Kuil	-	-	-	-	-	9	77	73	44	56	39	-30.1
Sinan	144	112	120	133	119	115	83	69	61	31	20	-36.5
Homol	3	12	17	19	36	56	56	62	68	58	50	-14.1
Bolontikú	87	79	83	77	77	61	47	52	60	44	35	-20.2
Chuc	98	76	76	77	67	65	63	51	31	34	20	-42.1
Xanab	-	-	1	14	24	30	43	48	65	104	123	18.5
Kax	14	14	16	22	31	25	29	33	30	29	26	-11.5
Kab	8	-	...	13	23	43	45	27	19	16	15	-6.1
Och	24	19	20	13	23	23	23	26	18	14	21	49.0
Taratunich	68	49	30	27	33	31	27	25	17	17	15	-14.8
Etkal	-	-	-	-	-	-	22	23	7	8	14	81.7
Yaxché	4	4	7	16	24	27	30	17	13	13	10	-22.9
Others	78	85	87	74	79	78	86	187	434	492	488	-0.8

2.9 Natural gas production in selected fields

million cubic feet per day

Part 2/3

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 °	Variation 2017/2016 (%)
Production Subdirection South blocks	1,353	1,451	1,600	1,765	1,692	1,652	1,571	1,515	1,380	1,250	1,011	-19.1
Tizón	37	48	93	92	68	91	141	157	155	163	130	-20.0
Costero	23	61	124	160	167	170	159	147	154	136	96	-29.6
Jujo-Tecominoacán	84	95	101	127	109	115	114	110	84	71	56	-20.8
Terra	-	-	7	26	29	40	54	96	60	65	61	-6.6
Íride	106	100	102	94	94	74	87	96	88	89	87	-3.1
Samaria	96	85	94	85	63	52	61	67	41	24	15	-36.6
Giraldas	61	70	67	59	57	54	55	56	47	37	32	-13.0
Teotleco	-	4	13	30	41	49	58	50	50	45	42	-6.0
Narváez	84	94	95	68	61	39	37	40	22	19	14	-30.4
Caparroso-Pijije-Escuintle	50	53	89	129	162	122	74	40	36	36	28	-22.4
Sunuapa	4	5	23	38	46	47	38	39	42	42	33	-20.1
Sen	69	115	137	155	147	135	68	37	25	21	13	-36.9
Ogarrio	18	16	18	26	26	24	25	32	36	24	26	8.3
Cárdenas	28	27	26	34	25	17	28	29	14	15	14	-3.9
Oxiacaque	52	72	36	46	35	36	32	29	31	26	22	-13.2
Cunduacán	71	62	65	69	40	62	42	26	26	32	34	4.8
Juspi	1	...	...	3	13	20	35	25	7	2	2	-2.7
Pareto	-	-	-	-	8	16	22	21	13	4	6	46.9
Edén-Jolote	16	14	15	12	16	22	24	20	20	21	17	-15.6
Cráter	12	15	27	45	41	40	23	14	9	7	4	-38.5
Others	541	513	466	469	443	425	394	384	421	373	279	-25.2
Production Subdirection North blocks	2,556	2,544	2,537	2,500	2,288	2,139	2,061	1,929	1,738	1,428	1,169	-18.1
Nejo	18	40	80	130	141	147	181	212	215	176	134	-24.1
Cauchy ^b	-	-	2	140	164	175	181	181	145	133	93	-29.9
Cuitláhuac ^b	97	84	84	85	87	87	93	85	78	64	52	-18.5
Papán ^b	57	211	244	220	167	121	87	66	48	31	25	-16.7
Culebra ^b	163	147	113	98	86	75	70	62	56	52	47	-9.3

2.9 Natural gas production in selected fields

million cubic feet per day

Part 3/3

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 ^c	Variation 2017/2016 (%)
Arcabuz ^b	94	91	91	94	68	63	61	62	70	50	40	-19.4
Cuervito ^b	21	27	41	43	44	48	49	47	43	29	23	-20.0
Velero ^b	113	86	87	50	45	53	50	46	44	36	32	-11.3
Lizamba ^b	243	301	264	192	137	90	56	46	34	26	17	-34.8
Santa Anita ^b	18	24	39	43	37	34	37	39	36	29	26	-11.5
Comitas ^b	27	20	28	29	40	34	31	38	44	32	25	-20.4
Topo ^b	10	9	10	9	11	18	34	37	32	22	17	-21.6
Palmito ^b	7	7	10	21	39	42	37	35	34	28	23	-15.9
Chapul ^b	-	-	-	-	3	16	43	32	23	16	9	-41.9
Corralillo	1	2	5	6	14	28	37	31	28	22	18	-15.1
Fundador ^b	86	77	66	54	40	38	39	31	24	20	20	1.4
Arcos ^b	64	55	46	33	24	28	28	27	23	21	19	-12.2
Arenque	32	27	22	20	24	24	24	23	25	23	18	-19.3
Sigma ^b	22	18	15	24	37	30	27	23	15	10	8	-18.3
Santa Rosalía ^b	39	32	40	36	32	24	23	22	19	17	15	-15.5
Cuatro Milpas ^b	19	18	22	32	29	26	25	21	17	15	12	-19.1
Agua Fría	6	11	15	9	16	20	25	19	20	24	21	-12.8
Rabel ^b	-	-	-	-	-	24	24	16	15	9	5	-43.8
Kabuki ^b	-	-	-	16	51	36	25	16	9	8	5	-33.7
Forastero ^b	21	48	99	87	53	34	23	16	11	7	6	-14.2
Apertura ^b	170	150	101	97	72	46	28	14	8	5	4	-22.2
Others	1,227	1,060	1,013	931	828	777	726	682	624	526	455	-13.6

a. Includes nitrogen and CO₂.

b. Non associated gas field.

c. From 2017 the structure of Pemex Exploration and Production corresponds to blocks.



2.10 Natural gas production by type in selected fields

million cubic feet per day

Part 1/2

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 ^b	Variation 2017/2016 (%)
Total^a	6,058	6,919	7,031	7,020	6,594	6,385	6,370	6,532	6,401	5,792	5,068	-12.5
Non associated gas	2,613	2,599	2,550	2,458	2,171	1,910	1,763	1,712	1,575	1,252	1,011	-19.2
Production Subdirection North blocks	2,424	2,403	2,371	2,313	2,052	1,826	1,683	1,614	1,491	1,182	951	-19.5
Cauchy	-	-	2	140	164	175	181	181	145	133	93	-29.9
Nejo	18	40	80	111	107	83	71	145	215	176	134	-24.1
Cuitláhuac	97	84	84	85	87	87	93	85	78	64	52	-18.5
Papán	57	211	244	220	167	121	87	66	48	31	25	-16.7
Culebra	163	147	113	98	86	75	70	62	56	52	47	-9.3
Arcabuz	94	91	91	94	68	63	61	62	70	50	40	-19.4
Cuervito	21	27	41	43	44	48	49	47	43	29	23	-20.0
Velero	113	86	87	50	45	53	50	46	44	36	32	-11.3
Lizamba	243	301	264	192	137	90	56	46	34	26	17	-34.8
Santa Anita	18	24	39	43	37	34	37	39	36	29	26	-11.5
Comitas	27	20	28	29	40	34	31	38	44	32	25	-20.4
Topo	10	9	10	9	11	18	34	37	32	22	17	-21.6
Palmito	7	7	10	21	39	42	37	35	34	28	23	-15.9
Chapul	-	-	-	-	3	16	43	32	23	16	9	-41.9
Fundador	86	77	66	54	40	38	39	31	24	20	20	1.4
Arcos	64	55	46	33	24	28	28	27	23	21	19	-12.2
Sigma	22	18	15	24	37	30	27	23	15	10	8	-18.3
Santa Rosalía	39	32	40	36	32	24	23	22	19	17	15	-15.5
Cuatro Milpas	19	18	22	32	29	26	25	21	17	15	12	-19.1
Corindón	45	49	47	42	33	26	21	21	17	15	13	-14.6
Kriptón	6	6	6	11	17	17	12	17	12	8	6	-21.8
Rabel	-	-	-	-	-	24	24	16	15	9	5	-43.8
Lankahuasa	92	64	49	38	27	22	18	16	16	15	14	-6.0
Kabuki	-	-	-	16	51	36	25	16	9	8	5	-83.7
Forastero	21	48	99	87	53	34	23	16	11	7	6	-14.2
Benavides	15	16	18	18	18	18	16	16	13	4	...	-

2.10 Natural gas production by type in selected fields

million cubic feet per day

Part 2/2

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 ^b	Variation 2017/2016 (%)
Cali	-	-	18	33	29	21	19	16	13	11	10	-12.6
Apertura	170	150	101	97	72	46	28	14	8	5	4	-22.2
Mareógrafo	-	11	21	25	22	18	15	12	8	5	2	-51.3
Chancarro	-	-	-	-	-	7	12	10	9	3	...	-
Fronterizo	7	9	8	7	9	12	12	10	9	7	6	-15.5
Master	-	-	-	-	-	-	16	10	2	5	5	-7.0
Torrecillas	33	25	23	19	16	12	12	10	9	8	7	-8.4
Arquimia	202	119	55	32	23	22	13	9	5	...	-	-
Cougar	-	-	8	31	31	25	13	7	3	3	2	-19.8
Dragón	3	3	6	5	4	9	12	7	5	3	2	-24.2
Others	731	656	631	539	451	392	351	348	329	261	226	-13.5
Production Subdirection South blocks	189	196	179	145	119	83	80	98	85	70	60	-14.1
Narváez	84	94	95	68	61	39	37	40	22	19	14	-30.4
José Colomo	29	27	24	19	16	12	10	9	7	6	6	-4.3
Others	75	75	60	58	42	32	33	49	55	44	40	-8.2
Associated gas	3,445	4,320	4,480	4,562	4,423	4,475	4,608	4,820	4,826	4,541	4,057	-10.7

a. Includes nitrogen and CO₂.

b. From 2017 the structure of Pemex Exploration and Production corresponds to blocks.

2.11 Crude oil and natural gas production by state

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Variation 2017/2016 (%)
Crude oil (Mbd)	3,076	2,792	2,601	2,577	2,553	2,548	2,522	2,429	2,267	2,154	1,948	-9.5
Territorial sea	2,539	2,266	2,030	1,959	1,919	1,910	1,907	1,860	1,768	1,708	1,589	-7.0
Tabasco	428	419	450	470	463	433	400	376	327	291	228	-21.7
Veracruz	62	58	63	80	94	118	120	111	106	101	91	-9.5
Chiapas	31	34	40	47	46	45	48	47	38	28	19	-33.2
Puebla	5	6	9	11	18	25	27	18	15	14	13	-12.8
Tamaulipas	9	9	9	10	12	16	19	17	11	11	8	-21.0
San Luis Potosí	...	...	1	1	1	1	1	...	...	...	...	-
Natural gas ^a (MMcfd)	6,058	6,919	7,031	7,020	6,594	6,385	6,370	6,532	6,401	5,792	5,068	-12.5
Territorial sea	2,280	3,026	2,976	2,824	2,678	2,660	2,793	3,137	3,331	3,157	2,924	-7.4
Tabasco	1,099	1,215	1,377	1,536	1,453	1,404	1,332	1,279	1,161	1,077	887	-17.7
Veracruz	1,008	1,048	922	938	853	762	661	636	576	495	407	-17.8
Chiapas	245	227	214	216	222	226	207	192	164	125	89	-28.6
Puebla	7	11	19	19	35	52	78	56	59	59	48	-17.8
Tamaulipas	989	937	957	896	803	787	825	801	731	593	483	-18.6
Nuevo León	397	391	432	463	454	424	411	387	355	267	210	-21.1
Coahuila	31	61	134	128	96	70	63	43	24	20	19	-2.0
Campeche	2	2	1	-	-	-	-	-	-	-	-	-
San Luis Potosí	...	...	...	...	...	...	...	...	...	...	...	-

a. Includes nitrogen and CO₂.

2.12 Crude oil distribution

thousand barrels per day

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Variation 2017/2016 (%)
Availability	3,078	2,793	2,603	2,579	2,554	2,549	2,523	2,430	2,268	2,154	1,949	-9.5
Production	3,076	2,792	2,601	2,577	2,553	2,548	2,522	2,429	2,267	2,154	1,948	-9.5
Naphtha and condensates	2	2	2	2	2	1	1	1	1	1	1	-7.4
Distribution	3,058	2,754	2,594	2,549	2,515	2,479	2,420	2,310	2,242	2,134	1,937	-9.2
To refineries	1,231	1,216	1,264	1,191	1,172	1,211	1,229	1,161	1,064	935	769	-17.8
To petrochemical plants	126	131	97	-	-	-	-	-	-	-	-	-
To export terminals	1,701	1,407	1,232	1,358	1,343	1,268	1,190	1,149	1,178	1,199	1,168	-2.6
Linefill, stock changes, losses, injections, transfers and statistical differences	20	39	10	30	39	70	104	120	26	21	12	-40.5



2.13 Natural gas distribution

million cubic feet per day

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Variation 2017/2016 (%)
Availability	5,622	5,640	5,786	5,821	5,599	5,336	5,193	5,128	4,721	4,181	3,635	-13.1
Production	6,058	6,919	7,031	7,020	6,594	6,385	6,370	6,532	6,401	5,792	5,068	-12.5
Sour gas	3,415	4,236	4,315	4,312	4,131	4,135	4,214	4,459	4,509	4,258	3,799	-10.8
Sweet gas	956	939	1,093	1,176	1,178	1,137	1,202	1,207	1,137	923	757	-18.1
Dry gas	1,688	1,743	1,623	1,531	1,286	1,112	954	865	755	611	512	-16.2
From gas processing complexes ^a	1,153	1,136	1,167	1,202	1,160	1,216	1,183	1,181	1,149	1,160	1,067	-8.0
Impurities to the atmosphere or injected to the deposit	99	500	565	614	586	605	590	523	645	769	715	-7.0
Carbon dioxide (CO ₂)	21	18	18	18	15	17	14	9	16	15	9	-38.4
Nitrogen	78	482	547	597	572	588	576	513	629	754	705	-6.5
Hydrocarbon gas to the atmosphere	469	851	699	421	249	127	124	246	436	511	216	-57.8
Condensation in pipelines and plants	244	225	226	241	245	275	323	321	336	326	400	22.6
Self-consumption	482	513	526	573	583	647	710	739	747	685	699	2.0
Hydrocarbon gas injected into the deposit	303	334	387	546	545	568	582	732	673	504	491	-2.7
Net linefil	-8	-9	8	7	-53	42	30	24	-7	-25	-20	-19.0
Distribution	5,622	5,640	5,786	5,796	5,583	5,335	5,192	5,128	4,721	4,177	3,636	-13.0
To processing plants	4,287	4,256	4,458	4,483	4,536	4,423	4,452	4,428	4,106	3,682	3,250	-11.7
Sweetening plants	3,150	3,190	3,388	3,427	3,454	3,401	3,357	3,410	3,231	2,995	2,697	-9.9
Cryogenic plants	1,138	1,066	1,070	1,056	1,082	1,022	1,095	1,018	875	687	553	-19.6
Direct to pipelines dry gas	1,334	1,382	1,326	1,312	1,047	912	741	698	615	491	385	-21.5
To refineries	2	2	2	...	...	...	-	3	...	4	1	-83.5
Statistical difference and measurement errors	...	...	...	25	15	...	1	...	...	4	-1	-133.4

a. Refers to the processed gas in the complexes.



DRILLING AND SERVICES



Pemex Drilling and Services	
2017	
Average Drilling Rigs	47
In exploration	13
In development	34

3.1 Drilling, completion and repair of wells

	Variation 2017/2016		
	2016	2017	(%)
Wells drilled ^a	91	52	-42.9
Drilled exploratory wells	22	23	4.5
Terrestrial	4	6	50.0
Marine	18	17	-5.6
Drilled development wells	69	29	-58.0
Terrestrial	35	7	-80.0
Marine	34	22	-35.3
Wells completed ^a	90	54	-40.0
Completed exploratory wells	20	27	35.0
Terrestrial	3	8	166.7
Marine	17	19	11.8
Completed development wells	70	27	-61.4
Terrestrial	36	3	-91.7
Marine	34	24	-29.4
Repairs			
Major well repairs	69	58	-15.9
Terrestrial	42	33	-21.4
Marine	27	25	-7.4
Minor well repairs	548	441	-19.5
Terrestrial	498	363	-27.1
Marine	50	78	56.0
Drilled kilometers	325	216	-33.5

a. Excludes two wells made by third parties.

Note. The wells drilled were made with own equipment and administered by PPS.

3.2 Use of equipments number of days

	Variation 2017/2016		
	2016	2017	(%)
Number of days ^a	15,405	11,643	-24.4
Terrestrial equipment			
Use of management equipments	5,785	4,207	-27.3
Marine equipment			
Use of management equipments	9,620	7,436	-22.7
Fixed rigs	2,164	1,684	-22.2
Self-lifting rigs	6,315	5,199	-17.7
Semi-submersible equipment	1,141	553	-51.5
Use of drill pipe (meters)			
Fixed rigs	777,025	1,103,206	42.0
Self-raising rigs	185,805	276,793	49.0

a. Equipment managed by Pemex Drilling and Services (average days).

3.3 Service to wells number of services

	Variation 2017/2016		
	2016	2017	(%)
Number of services	24,851	20,658	-16.9
Drilling and Services Unit	24,851	20,658	-16.9
Center	10,446	7,917	-24.2
South	6,500	6,001	-7.7
Southeast	4,113	3,860	-6.2
Marine	2,360	1,225	-48.1
North	1,432	1,655	15.6



INDUSTRIAL TRANSFORMATION



Pemex Industrial Transformation	
2017	
Gas processing complexes ^a	9
Process capacity	
Gas sweetening plants (MMcf/d)	4,523
Condensate sweetening plants (Mbd)	6
Cryogenic plants (MMcf/d)	5,912
Natural gas liquids fractionation (Mbd)	569
Processing	
Wet gas (MMcf/d)	3,237
Condensates (Mbd)	41
Production	
Dry gas (MMcf/d)	2,663
Natural gas liquids (Mbd)	283
Refineries	6
Atmospheric distillation capacity (Mbd)	1,627
Crude oil and liquids process (Mbd)	767
Production of refined products (Mbd)	787
Petrochemical complexes ^b	2
Plants	5
Installed capacity (Mt)	1,734
Aromatics, derivatives and others production ^c (Mt)	6,192
Domestic sales	
Dry gas (MMcf/d)	2,623
Refined products and LPG (Mbd)	1,578
Petrochemicals (Mt)	2,505
Service stations	11,315
Petrochemicals pipelines (km)	1,441

a. Cactus, Ciudad Pemex, Nuevo Pemex, Burgos, Poza Rica, La Venta, Arenque, Matapionche and Coatzacoalcos Area (Cangrejera, Morelos and Pajaritos).

b. Independencia (San Martín Texmelucan) and aromatic train of Cangrejera Complexes.

c. Production of gas processing complexes (4,531 Mt), refineries (634 Mt) and petrochemical complexes (1,028 Mt).

4.1 Processing capacity in gas plants ^a

million cubic feet per day

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Sweetening plants											
Sour condensates (Mbd)	144	144	144	144	144	144	144	144	144	144	144
Sour natural gas	4,503	4,503	4,503	4,503	4,503	4,503	4,503	4,523	4,523	4,523	4,523
Liquids recovery plants											
Cryogenic	5,392	5,592	5,792	5,792	5,712	5,912	5,912	5,912	5,912	5,912	5,912
Absorption	350	350	-	-	-	-	-	-	-	-	-
Liquids fractionation ^b (Mbd)	587	587	569	569	569	569	569	569	569	569	569

a. On November 1, 2015 the agreement to create Pemex Industrial Transformation came into effect, so previous data correspond to Pemex-Gas and Basic Petrochemical.

b. Includes natural gas liquids recovery plants.



4.2 Gas processing by complex ^a

million cubic feet per day

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Variation 2017/2016 (%)
Processing												
Wet gas	4,283	4,240	4,436	4,472	4,527	4,382	4,404	4,343	4,073	3,672	3,237	-11.8
Sour gas	3,162	3,188	3,381	3,422	3,445	3,395	3,330	3,356	3,225	2,997	2,688	-10.3
Cactus	1,404	1,597	1,712	1,674	1,696	1,620	1,672	1,702	1,660	1,452	1,145	-21.1
Ciudad Pemex	884	831	847	888	854	931	862	880	795	728	796	9.3
Matapionche	67	54	51	49	45	33	26	24	18	17	16	-5.9
Nuevo Pemex	668	593	658	678	677	580	530	534	546	624	596	-4.4
Arenque	31	26	23	26	30	35	35	29	32	31	22	-30.7
Poza Rica	109	86	91	106	144	196	204	189	174	145	113	-21.7
Sweet gas ^b	1,120	1,052	1,055	1,050	1,082	987	1,074	986	847	675	550	-18.5
Cactus	-	-	-	-	-	-	...	-	-	...	3	-
Ciudad Pemex	67	60	52	53	41	6	10	4	5	10	9	-7.1
La Venta	53	62	57	79	102	98	112	109	111	102	79	-22.0
Reynosa ^c	183	117	11	-	-	-	-	-	-	-	-	-
Burgos	804	808	932	913	931	875	945	868	726	560	455	-18.6
Nuevo Pemex	14	5	3	5	8	7	6	5	4	3	3	-11.2
Gas to liquified extraction	4,264	4,224	4,399	4,458	4,483	4,346	4,381	4,303	3,904	3,450	3,199	-7.3
Wet gas	4,134	4,085	4,252	4,304	4,347	4,206	4,234	4,172	3,745	3,394	3,086	-9.1
Reprocessing streams ^d	130	139	146	154	136	140	147	131	159	56	113	103.2

a. On November 1, 2015 the agreement to create Pemex Industrial Transformation came into effect, so previous data correspond to Pemex-Gas and Basic Petrochemical.

b. Includes sweet vapors from condensates.

c. As of August 31, 2009, it is out of operation.

d. Gas from reprocessed pipelines in liquefiable recovery plants at Pajaritos, Poza Rica, Reynosa and from internal processes at Cangrejera.



4.3 Dry gas balance ^a

million cubic feet per day

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Variation 2017/2016 (%)
Origin	5,353	5,367	5,393	5,540	5,604	5,692	5,782	5,751	5,483	5,502	4,824	-12.3
Production	3,546	3,461	3,572	3,618	3,692	3,628	3,693	3,640	3,398	3,047	2,663	-12.6
Ethane to pipelines dry gas	87	76	74	74	76	64	62	59	57	27	4	-85.7
From producing fields	1,334	1,382	1,325	1,312	1,045	911	737	694	612	494	391	-20.8
Imports	386	447	422	536	791	1,089	1,290	1,358	1,416	1,934	1,766	-8.7
Destination	5,330	5,369	5,367	5,509	5,571	5,662	5,747	5,732	5,449	5,471	4,636	-15.3
Pemex consumption	2,128	2,176	2,181	2,235	2,187	2,273	2,208	2,190	2,113	2,035	1,927	-5.3
Cogeneration	-	-	-	-	-	-	72	86	88	87	85	-2.5
Exports	139	107	67	19	1	1	3	4	3	2	2	-19.5
Domestic sales ^b	3,064	3,086	3,119	3,255	3,383	3,388	3,463	3,451	3,247	3,347	2,623	-21.6
Linefil	...	-1	1	...	...	...	1	1	-1	...	-1	-
Difference	22	-2	26	31	33	31	35	19	34	31	188	514.9

a. On November 1, 2015 the agreement to create Pemex Industrial Transformation came into effect, so previous data correspond to Pemex-Gas and Basic Petrochemical.

b. Measured volumes at 1 kg/cm² and 20°C. It does not include transfers between Subsidiary Productive Companies.



4.4 Production in gas processing complexes ^a

thousand barrels per day

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Variation 2017/2016 (%)
Dry gas (MMcfd)	3,546	3,461	3,572	3,618	3,692	3,628	3,693	3,640	3,398	3,047	2,663	-12.6
Natural gas liquids ^b	405	376	379	386	392	368	365	367	331	311	283	-9.0
LPG ^c	199	183	182	186	188	179	181	179	153	142	129	-9.5
Ethane	119	117	121	119	121	115	109	110	107	106	101	-4.7
Natural gasolines (naphthas)	85	74	76	79	82	72	73	77	69	62	52	-16.3
Others ^d	2	2	1	1	1	2	2	1	1	...	1	-
Sulfur (Mt)	659	660	712	670	636	592	620	603	538	471	419	-11.1

a. On November 1, 2015 the agreement to create Pemex Industrial Transformation came into effect, so previous data correspond to Pemex-Gas and Basic Petrochemical.

b. Includes stabilized condensates, reprocessing in Cangrejera and other streams to fractionation.

c. Includes transfers from Pemex Exploration and Production.

d. Heavy products of Reynosa and liquids transferred to Ciudad Madero refinery.

4.5 Refining capacity ^a

thousand barrels per day

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Atmospheric distillation	1,540	1,540	1,540	1,540	1,690	1,690	1,690	1,602	1,640	1,602	1,627
Vacuum distillation	754	754	754	754	832	832	832	768	772	768	772
Cracking	381	381	381	381	423	423	423	423	423	423	423
Visbreaking	91	91	91	91	91	91	91	91	91	91	91
Reforming	279	279	279	279	279	279	279	279	279	279	279
Hydrodesulfurization	926	926	926	1,010	1,067	1,067	1,067	1,067	1,100	1,230	1,230
Alkylation and isomerization	152	128	128	128	142	155	155	154	155	154	154
Coking	100	100	100	100	156	156	156	156	156	156	156
Petrochemical plants ^b (Mt)	2,175	2,175	2,175	2,229	2,229	2,229	2,229	2,465	2,465	2,465	2,465

a. On November 1, 2015 the agreement to create Pemex Industrial Transformation came into effect, so previous data correspond to Pemex-Refining.

b. Excludes hydrogen plants.



4.6 Refinery production ^a

thousand barrels per day

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Variation 2017/2016 (%)
Refined products and LPG from SNR	1,312	1,307	1,343	1,229	1,190	1,226	1,276	1,206	1,114	977	787	-19.5
LPG ^b	27	26	27	26	21	25	25	26	21	17	16	-6.6
Gasolines	456	451	472	424	400	418	437	422	381	325	257	-21.0
Base ^c	4	7	3	3	1	...	...	1	4	2	2	13.8
Pemex Magna ^d	426	419	364	341	324	337	360	291	273	151	11	-92.7
ULS Pemex Magna ^e	-	-	82	67	62	62	57	99	88	165	239	44.2
Pemex Premium	26	25	23	12	14	20	20	31	17	8	6	-27.4
Others	...	...	...	...	...	...	-	-	-	-	-	-
Jet fuel	66	64	57	52	56	57	61	53	48	43	41	-5.4
Diesel	334	344	337	290	274	300	313	287	275	216	154	-28.9
Pemex Diesel	326	336	291	221	194	226	218	187	191	130	87	-32.8
ULS Pemex Diesel	-	-	45	68	80	73	92	98	83	85	64	-25.0
Others	8	7	1	1	...	1	4	2	...	1	2	137.1
Fuel oil	301	289	316	322	307	273	269	259	237	228	217	-4.7
Asphalts	32	34	32	25	26	23	19	24	18	17	16	-2.4
Dry gas	55	55	55	54	63	68	71	64	62	62	48	-22.7
Other refined products ^f	40	45	47	37	42	62	81	71	72	69	38	-45.1
Other products by SNR (Mt)	1,121	1,071	1,178	1,124	1,117	1,333	1,253	1,183	1,078	842	634	-24.7
Carbonic anhydride	23	22	30	23	14	13	14	12	17	15	15	-0.6
Sulfur	371	381	402	322	323	419	409	359	320	202	132	-34.6
Carbon black	382	347	325	410	423	467	419	351	298	288	267	-7.2
Isopropanol	11	10	6	5	4	4	4	6	2	3	2	-35.5
Propylene	333	311	414	363	352	431	406	455	441	333	217	-34.9

a. On November 1, 2015 the agreement to create Pemex Industrial Transformation came into effect, so previous data correspond to Pemex-Refining.

b. Excludes LPG from the gas processing complexes.

c. Base gasoline. Unfinished product intended to mix for marketing.

d. Includes gasoline transfer from Cangrejera to the Minatitlán refinery.

e. Start production in January 2009.

f. Includes: lubricants, paraffines, coke, vacuum gas oil, aeroflex, furfural extract and light cyclic oil.



4.7 Crude oil processing and refined products production by refinery ^a

thousand barrels per day

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Variation 2017/2016 (%)
Crude oil processing	1,270	1,261	1,295	1,184	1,167	1,199	1,224	1,155	1,065	933	767	-17.8
Production ^b	1,312	1,307	1,343	1,229	1,190	1,226	1,276	1,206	1,114	977	787	-19.5
Cadereyta												
Processing	210	208	217	177	171	188	189	181	159	122	127	4.2
Production	219	220	225	180	171	194	191	183	164	125	130	4.2
Ciudad Madero												
Processing	141	152	152	126	117	128	130	111	129	87	45	-49.0
Production	161	163	161	134	118	131	140	119	135	95	49	-48.5
Minatitlán												
Processing	170	162	167	159	152	171	183	168	152	112	86	-23.2
Production	174	172	180	177	168	187	201	198	177	143	102	-28.7
Salamanca												
Processing	188	192	192	186	171	179	195	171	149	171	157	-8.3
Production	184	193	189	184	167	175	194	174	147	172	154	-10.5
Salina Cruz												
Processing	272	279	277	270	279	257	282	270	240	239	137	-42.6
Production	284	290	290	281	285	260	298	275	248	242	139	-42.6
Tula												
Processing	289	267	290	266	277	277	246	255	236	202	215	6.7
Production	292	269	299	273	281	279	252	257	243	201	213	6.0

a. On November 1, 2015 the agreement to create Pemex Industrial Transformation came into effect, so previous data correspond to Pemex-Refining.

b. Excludes products under abroad processing agreements.



4.8 Capacity by petrochemical complex ^a

thousand tonnes

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total	3,566	3,567	3,567	3,587	3,587	4,714	4,558	3,257	3,259	1,694	1,734
Cangrejera ^b	3,279	3,280	3,280	3,300	3,300	4,427	4,271	2,975	2,977	1,477	1,516
Independencia	287	287	287	287	287	287	287	282	282	217	217

a. Nominal capacity. On November 1, 2015 the agreement to create Pemex Industrial Transformation came into effect, so previous data correspond to Pemex-Petrochemical.

b. From 2006 to 2015 the full capacity of Cangrejera Petrochemical Complex is presented. From 2016, the aromatics train is shown; the remaining plants belong to Pemex Ethylene.



4.9 Aromatics, derivatives and others production by work center ^a

Part 1/2

thousand tonnes

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Variation 2017/2016 (%)
Total	9,293	8,822	9,027	9,592	9,332	7,485	8,355	8,994	8,209	7,444	6,192	-16.8
Cangrejera	1,736	1,713	1,688	2,245	1,752	192	1,218	1,773	1,517	1,361	910	-33.2
Aromatics and derivatives	1,085	1,058	957	1,042	923	166	799	1,017	1,022	940	622	-33.8
Aromine 100	120	104	37	41	40	...	29	62	51	59	24	-59.9
Benzene	118	101	79	118	118	26	76	118	83	47	19	-59.5
Styrene	134	120	91	65	128	29	81	122	101	32	-	-
Ethylbenzene	149	136	105	77	144	35	95	140	116	38	-	-
High octane hydrocarbon	124	249	433	444	232	24	298	317	465	578	467	-19.2
Toluene	175	153	139	188	159	25	122	144	117	87	53	-39.3
Xylenes	30	46	60	100	93	26	84	110	85	98	59	-39.8
Aromatic various ^b	235	149	13	10	10	1	15	4	3	1	-	-
Others	652	655	730	1,203	829	26	419	756	495	421	288	-31.6
Butanes	95	106	79	44	47	1	17	32	21	12	8	-35.6
Hexane	56	54	46	51	45	5	22	37	31	12	7	-40.8
Hydrogen	161	148	110	159	128	13	55	86	82	97	76	-21.2
Pentanes	112	89	279	752	473	4	250	481	275	209	141	-32.7
Miscellaneous products ^c	228	259	217	197	137	3	75	120	86	91	56	-38.6
Independencia	23	55	11	26	159	159	165	177	170	151	118	-21.9
Methane derivatives												
Methanol	12	44	...	16	151	151	157	168	161	145	116	-20.2
Petrochemical specialities ^d	11	11	11	10	9	8	9	9	9	6	2	-64.4
Gas processing complexes	6,412	5,983	6,151	6,197	6,304	5,800	5,719	5,861	5,445	5,090	4,531	-11.0
Sulfur	659	660	712	670	636	592	620	603	538	471	419	-11.1
Ethane	2,480	2,439	2,508	2,483	2,505	2,401	2,264	2,294	2,230	2,216	2,105	-5.0
Natural gasolines (naphthas)	3,273	2,884	2,931	3,045	3,163	2,808	2,835	2,964	2,676	2,402	2,006	-16.5

4.9 Aromatics, derivatives and others production by work center ^a

Part 2/2

thousand tonnes

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Variation 2017/2016 (%)
Refineries	1,121	1,071	1,178	1,124	1,117	1,333	1,253	1,183	1,078	842	634	-24.7
Carbonic anhydride	23	22	30	23	14	13	14	12	17	15	15	-0.6
Sulfur	371	381	402	322	323	419	409	359	320	202	132	-34.6
Isopropanol	11	10	6	5	4	4	4	6	2	3	2	-35.5
Carbon black	382	347	325	410	423	467	419	351	298	288	267	-7.2
Propylene	333	311	414	363	352	431	406	455	441	333	217	-34.9
Memorandum												
Refined products ^e	194	185	204	483	353	13	223	225	31	80	13	-84.4
Gasnaphtha	-	38	29	27	29	-	...	1	1	...	1	-
Octane basis gasoline	-	-	89	356	264	9	191	197	9	60	-	-
Heavy naphtha	194	147	86	99	60	3	32	28	21	20	12	-42.7

a. On November 1, 2015 the agreement to create Pemex Industrial Transformation came into effect, so previous data correspond to Pemex-Petrochemical.

b. Aromatic various: heavy aromatics, fluxoil, paraxylene and orthoxylene.

c. Miscellaneous products: heptane, isohexane and liquefiable hydrocarbons.

d. Includes additives for motor gasoline, antifreeze compounds, dispersing agents, dewaxers, corrosion inhibitors, surfactants and smoke suppressors.

e. Refined products in Cangrejera sent to refineries.



4.10 Volume of domestic sales ^a

thousand barrels per day

Part 1/2

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Variation 2017/2016 (%)
Dry gas (MMcfd)	3,064	3,086	3,119	3,255	3,383	3,388	3,463	3,451	3,247	3,347	2,623	-21.6
Refined products and LPG	1,816	1,827	1,771	1,762	1,787	1,841	1,785	1,709	1,704	1,647	1,578	-4.2
LPG ^b	300	291	281	288	285	286	283	281	277	201	170	-15.4
Refined products	1,515	1,535	1,490	1,474	1,502	1,556	1,502	1,428	1,427	1,446	1,408	-2.6
Motor gasolines	760	792	792	802	799	803	787	776	793	823	797	-3.1
Pemex Magna	659	706	728	744	739	715	668	639	638	637	660	3.6
Pemex Premium	101	86	64	58	60	88	119	137	155	185	137	-26.2
Kerosenes	68	65	55	56	56	59	62	67	71	76	82	7.1
Jet fuel	68	65	55	56	56	59	62	67	71	76	82	7.1
Others	...	...	...	...	...	...	...	...	...	...	...	-
Diesel	358	382	359	371	384	401	392	389	385	387	365	-5.6
Pemex Diesel	315	332	315	325	331	339	333	336	331	335	318	-5.3
Others	44	50	44	46	53	61	59	53	54	52	48	-7.5
Fuel oil	257	220	209	185	201	214	189	122	112	103	125	21.5
Asphalts	30	33	31	24	25	22	17	22	16	16	15	-3.6
Lubricants	6	6	5	5	4	4	5	4	3	3	2	-36.3
Paraffines	1	1	1	1	1	1	1	1	1	1	...	-
Others ^c	35	38	40	32	33	51	49	47	48	38	22	-42.3

4.10 Volume of domestic sales ^a

thousand barrels per day

Part 2/2

Petrochemicals (Mt)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Variation 2017/2016 (%)
												16.5
Ethane	-	-	-	-	-	-	17	119	176	606	1,147	89.3
Sulfur	579	668	593	582	648	649	521	655	573	580	530	-8.7
Carbon black	384	354	331	419	430	474	426	349	299	291	268	-7.8
Propane	8	8	8	9	9	8	9	10	10	11	11	-0.3
Aromatics and derivatives ^d	476	389	248	208	265	161	197	247	240	155	111	-28.2
Methanol	86	83	73	84	114	108	100	111	112	111	101	-9.5
Others ^e	663	579	631	606	549	593	482	439	431	396	337	-15.0

a. On November 1, 2015 the agreement to create Pemex Industrial Transformation came into effect, so previous data correspond to Pemex-Refining, Pemex-Gas and Basic Petrochemical and Pemex-Petrochemical.

b. Includes LPG from the gas processing complexes and refineries.

c. Includes coke, impex background, impregnating agent, greases, cat heavy naphtha, domestic gas oil, industrial gas oil, jet fuel, gasolvent, gasnaphtha and gasoline to the automotive industry.

d. Includes aromine 100, benzene, styrene, ethylbenzene, fluxoil, orthoxylene, paraxylene, toluene, xylenes, heavy aromatics, cumene and solcan.

e. Considers: butanes, heptane, hexane, heavy naphtha, light naphtha, pentanes, petrochemical specialties, propylene, chemical grade propylene, solvent L, carbonic anhydride, acetaldehyde, vinyl chloride, dichloroethane, perchlorethylene, heavy alkylaryl, isopropanol, polypropylene, propylene tetramer, lamp oil, muriatic acid, alico 4, butadiene, cyclohexane, ethylene for setting, isobutane, isohexane, light polymer, absorption solvent, solvent P, carbon tetrachloride, colorless petroleum and light refined.



GAS.
- NOVA
- AMORFA
- PREMIUM
- MAGNA

DIESEL
DESULFURADO
YGASOLE

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TURBOSINA
1

2

3

4.11 Value of domestic sales ^a

million pesos

Part 1/2

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Variation 2017/2016 (%)
Total ^b	565,026	663,334	579,952	663,850	759,890	844,244	895,153	924,182	723,780	653,211	870,459	33.3
Dry gas	78,644	105,436	58,102	67,141	64,466	50,233	68,129	78,666	53,037	67,536	74,288	10.0
Refined products and LPG	473,833	543,175	513,035	584,666	679,684	779,322	813,453	830,570	660,456	576,857	784,877	36.1
LPG ^c	54,456	55,972	49,461	53,386	57,981	64,966	71,729	78,259	78,194	50,180	49,137	-2.1
Refined products	419,377	487,203	463,574	531,280	621,703	714,356	741,724	752,311	582,262	526,677	735,740	39.7
Motor gasolines	247,338	265,981	258,488	295,109	328,457	368,673	404,474	428,011	355,820	336,018	443,050	31.9
Pemex Magna	209,007	231,071	233,307	270,122	300,937	326,187	340,751	347,952	274,007	248,595	361,022	45.2
Pemex Premium	38,332	34,910	25,180	24,987	27,520	42,486	63,723	80,059	81,814	87,423	82,029	-6.2
Kerosenes	23,377	31,947	18,330	22,942	31,566	36,343	35,420	36,450	27,078	28,950	39,028	34.8
Jet fuel	23,369	31,936	18,321	22,935	31,560	36,337	35,418	36,449	27,077	28,945	39,024	34.8
Others	8	11	9	7	6	6	2	...	1	5	4	-21.3
Diesel	96,920	111,425	121,521	144,010	166,241	193,723	211,471	225,702	162,727	136,793	210,050	53.6
Pemex Diesel	84,752	96,435	106,129	125,556	142,560	163,114	178,929	194,546	139,796	117,556	181,854	54.7
Others	12,168	14,990	15,392	18,453	23,681	30,609	32,542	31,157	22,930	19,236	28,195	46.6
Fuel oil	42,396	61,670	51,908	56,767	80,265	99,840	78,002	46,838	25,906	16,436	35,623	116.7
Asphalts	6,107	11,493	10,277	8,814	10,539	11,165	7,865	10,788	7,575	5,469	5,896	7.8
Lubricants	2,168	3,318	2,000	2,430	3,154	3,098	2,991	2,619	1,297	1,473	1,061	-27.9
Paraffines	248	372	235	297	304	377	339	319	258	267	231	-13.5
Others ^d	822	997	814	911	1,176	1,138	1,161	1,584	1,600	1,272	801	-37.0

4.11 Value of domestic sales ^a

million pesos

Part 2/2

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Variation 2017/2016 (%)
Petrochemicals	12,549	14,723	8,815	12,042	15,740	14,689	13,571	14,945	10,287	8,818	11,294	28.1
Ethane	-	-	-	-	-	-	32	284	311	1,285	2,990	132.7
Sulfur	236	1,818	32	663	1,355	1,167	660	796	926	586	540	-7.8
Carbon black	1,038	1,424	1,150	1,809	2,368	3,078	2,502	1,963	1,035	801	1,173	46.5
Propane	61	79	49	74	94	70	70	92	58	74	112	51.3
Aromatics and derivatives ^e	5,898	5,335	2,704	2,719	4,387	2,979	3,641	4,427	3,479	2,122	1,673	-21.2
Methanol	426	496	265	390	556	665	734	776	748	625	807	29.1
Others ^f	4,889	5,572	4,614	6,388	6,980	6,729	5,932	6,607	3,729	3,326	3,999	20.2

a. On November 1, 2015 the agreement to create Pemex Industrial Transformation came into effect, so previous data correspond to Pemex-Refining, Pemex-Gas and Basic Petrochemical and Pemex-Petrochemical.

b. Cash flow figures. Not includes STPS and VAT.

c. Includes LPG from the gas processing complexes and refineries.

d. Includes coke, impex background, impregnating agent, greases, cat heavy naphtha, domestic gas oil, industrial gas oil, jet fuel, gasolvent, gasnaphtha and gasoline to the automotive industry.

e. Includes aromine 100, benzene, styrene, ethylbenzene, fluxoil, orthoxylene, paraxylene, toluene, xylenes, heavy aromatics, cumene and solcan.

f. Considers: butanes, heptane, hexane, heavy naphtha, light naphtha, pentanes, petrochemical specialties, propylene, chemical grade propylene, solvent L, carbonic anhydride, acetaldehyde, vinyl chloride, dichloroethane, perchlorethylene, heavy alkylaryl, isopropanol, polypropylene, propylene tetramer, lamp oil, muriatic acid, alico 4, butadiene, cyclohexane, ethylene for setting, isobutane, isohexane, light polymer, absorption solvent, solvent P, carbon tetrachloride, colorless petroleum and light refined.



4.12 Service stations by state ^a

number

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total	7,940	8,351	8,803	9,232	9,637	10,042	10,416	10,830	11,210	11,578	11,315
Aguascalientes	75	79	92	98	107	116	122	125	131	140	136
Baja California	389	411	426	460	477	495	514	527	541	565	496
Baja California Sur	92	99	104	112	127	135	143	149	152	154	151
Campeche	43	43	46	51	54	58	61	66	74	81	86
Coahuila	310	331	349	359	368	382	389	413	420	422	425
Colima	69	74	78	83	89	93	101	102	107	112	114
Chiapas	165	171	187	198	212	218	227	242	255	274	275
Chihuahua	434	449	460	472	483	492	507	524	532	542	543
Ciudad de México	326	330	334	346	352	355	357	358	362	362	322
Durango	171	172	172	178	177	182	181	193	201	209	214
Guanajuato	380	391	407	429	453	484	510	530	550	570	557
Guerrero	163	165	175	177	179	186	189	191	197	207	210
Hidalgo	208	216	225	231	240	248	257	267	279	286	278
Jalisco	551	586	625	666	702	730	778	815	850	876	891
México	637	672	713	748	783	820	858	900	929	987	913
Michoacán	330	341	358	371	376	388	402	414	428	437	437
Morelos	99	110	114	119	125	133	136	140	144	144	146
Nayarit	86	92	101	105	110	121	128	137	148	150	153
Nuevo León	517	538	565	596	616	629	639	649	657	661	653
Oaxaca	150	160	177	181	189	197	206	211	221	236	239
Puebla	318	326	343	357	385	413	433	460	488	509	482
Querétaro	126	135	142	149	159	171	184	217	233	267	255
Quintana Roo	87	98	116	122	143	152	162	165	170	168	175
San Luis Potosí	179	192	212	216	221	225	227	232	238	252	255
Sinaloa	319	341	360	376	394	418	443	462	469	476	468
Sonora	391	407	424	443	455	472	488	506	521	527	507
Tabasco	107	116	124	132	139	152	158	165	170	178	171
Tamaulipas	400	434	458	488	496	504	507	513	529	542	516
Tlaxcala	73	78	84	88	92	94	96	101	102	105	107
Veracruz	447	474	499	529	567	597	623	649	687	700	693
Yucatán	142	153	162	173	182	196	205	219	235	245	253
Zacatecas	156	167	171	179	185	186	185	188	190	194	194

a. Only includes service stations belonging to the Pemex franchise. Starting in 2016 there are non-franchised service stations in the country.

Note: Until 2016 all marketed gasoline was provided by Petróleos Mexicanos.



ETHYLENE



Pemex Ethylene

2017

Production (Mt)	1,884
Domestic sales (Mt)	646
Facilities	
Petrochemical complexes ^a	2
Plants	11
Installed capacity (Mt)	3,599

a. Morelos and Cangrejera (aromatics train).

5.1 Capacity by petrochemical complex ^a

thousand tonnes

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total	5,541	5,542	5,815	6,030	6,030	7,313	7,157	5,852	5,704	4,227	3,599
Cangrejera ^b	3,279	3,280	3,280	3,300	3,300	4,427	4,271	2,975	2,977	1,500	1,321
Morelos	2,262	2,262	2,535	2,730	2,730	2,886	2,886	2,877	2,727	2,727	2,277

a. Nominal capacity. On August 1, 2015 the agreement to create Pemex Ethylene came into effect, so previous data correspond to Pemex-Petrochemical.

b. From 2006 to 2015 the full capacity of Cangrejera Petrochemical Complex is presented. From 2016 includes the ethylene and derivatives plants; the aromatic train belongs to Pemex Industrial Transformation.



5.2 Product production of ethylene and derivatives ^a

thousand tonnes

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Variation 2017/2016 (%)
Total	3,542	3,534	3,627	3,941	3,765	3,793	3,462	2,985	2,970	2,529	1,884	- 25.5
Methane derivatives	99	99	91	144	128	126	130	116	115	96	68	- 29.0
Carbonic anhydride	99	99	91	144	128	126	130	116	115	96	68	- 29.0
Ethane derivatives	2,607	2,604	2,695	2,831	2,750	2,775	2,473	2,089	1,993	1,691	1,274	- 24.6
Vinyl chloride	235	157	155	187	168	185	108	-	-	-	-	-
Dichloroethane	391	267	259	306	275	301	180	-	-	-	-	-
Ethylene	1,001	1,062	1,160	1,126	1,124	1,128	1,034	988	917	758	579	- 23.6
Ethylene glycol	163	193	152	198	168	172	181	164	173	166	116	- 30.2
Ethylene oxide	301	344	280	372	355	345	367	351	338	294	218	- 25.6
HD Polyethylene	157	170	195	181	174	174	166	157	135	97	43	- 55.7
LD Polyethylene	277	258	288	264	274	259	257	238	196	148	99	- 33.2
LD linear polyethylene	81	154	206	196	212	212	181	192	235	228	219	- 3.8
Propylene and derivatives	47	17	31	84	62	49	52	65	66	43	13	- 69.9
Acetonitrile	1	-	1	2	2	1	...	1	1	...	-	-
Hydrocyanic acid	3	-	1	6	4	3	3	5	5	3	-	-
Acrylonitrile	24	-	12	55	39	32	35	44	47	26	-	-
Propylene	20	17	17	21	17	13	13	16	14	13	13	- 3.5
Others	789	814	810	882	825	843	806	715	796	700	529	- 24.4
Hydrochloric acid	141	93	92	109	98	108	63	-	-	-	-	-
Muriatic acid	50	49	37	34	16	45	30	-	-	-	-	-
Butadiene	35	33	37	35	35	40	37	42	39	35	26	- 23.5
Polyethylene wax	2	2	2	2	2	2	1	2	1	1	1	- 38.3
CPDI	-	-	-	30	18	17	22	21	24	15	-	-
Hydrogen	-	-	-	-	-	7	6	1	65	65	36	- 45.2
Ethylene pyrolysis liquids	45	46	48	44	44	42	40	32	32	26	22	- 16.5
Nitrogen	106	135	149	167	165	164	172	176	188	166	143	- 14.1
Oxygen	410	455	445	460	447	418	434	441	446	391	301	- 23.0

a. On August 1, 2015 the agreement to create Pemex Ethylene came into effect, so previous data correspond to Pemex-Petrochemical.



5.3 Product production by complex ^a

Part 1/2

thousand tonnes

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Variation 2017/2016 (%)
Total	3,542	3,534	3,627	3,941	3,765	3,793	3,462	2,985	2,970	2,529	1,884	-25.5
Cangrejera	1,056	1,013	1,114	1,079	1,161	1,067	967	1,087	1,038	696	536	-22.9
Ethylene	470	409	511	495	536	510	406	503	483	341	295	-13.4
LD Polyethylene	267	258	288	264	274	259	257	238	196	148	99	-33.2
Ethylene oxide	96	116	96	101	116	98	100	116	107	64	54	-14.7
Ethylene glycol	14	11	12	11	11	10	13	14	15	10	8	-22.9
Others	209	219	207	208	224	190	192	217	237	133	80	-39.8
Oxygen	133	148	129	130	142	117	127	134	141	70	33	-52.4
Nitrogen	30	33	29	30	34	30	32	34	36	17	8	-53.1
Raw butane	19	14	22	21	22	19	15	23	22	18	15	-20.0
Hydrogen	-	-	-	-	-	-	-	-	12	7	5	-25.5
Technical grade propylene	9	9	11	12	10	6	4	9	8	8	7	-1.8
Pyrolysis liquids	17	15	16	16	16	18	14	18	18	13	11	-11.0
Morelos	1,482	1,824	1,833	2,111	1,919	1,994	2,013	1,897	1,932	1,833	1,347	-26.5
Ethylene	396	534	526	529	472	531	537	485	434	417	284	-32.0
Ethylene oxide	205	228	184	272	239	247	267	235	231	230	164	-28.7
LD linear polyethylene	81	154	206	196	212	212	181	192	235	228	219	-3.8
HD Polyethylene	157	170	195	181	174	174	166	157	135	97	43	-55.7
Ethylene glycol	149	182	140	187	157	162	168	150	158	156	108	-30.7
Carbonic anhydride	99	99	91	144	128	126	130	116	115	96	68	-29.0
Acrylonitrile	-	-	12	55	39	32	35	44	47	26	-	-
Others	396	458	479	547	499	510	528	518	578	583	462	-20.8
Oxygen	276	307	316	330	305	302	307	308	304	321	268	-16.6
Nitrogen	76	102	120	136	131	135	140	142	153	149	135	-9.6
Propylene	10	9	5	9	7	7	9	7	5	6	5	-5.6
Acetonitrile	-	-	1	2	2	1	...	1	1	...	-	-
Hydrocyanic acid	-	-	1	6	4	3	3	5	5	3	-	-
Raw butane	16	19	15	14	13	20	22	20	17	16	12	-27.3
Polyethylene wax	2	2	2	2	2	2	1	2	1	1	1	-38.3
Pyrolysis liquids	15	19	18	17	16	16	16	15	14	13	10	-21.8
CPDI	-	-	-	-	30	18	17	22	21	24	15	-
Hydrogen	-	-	-	-	-	7	6	1	53	59	31	-47.4

5.3 Product production by complex ^a

Part 2/2

thousand tonnes

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Variation 2017/2016 (%)
Memorándum ^{b, c}	1,004	697	680	751	685	733	481	-	-	-	-	-
Escolín	10	-	-	-	-	-	-	-	-	-	-	-
LD Polyethylene	10	-	-	-	-	-	-	-	-	-	-	-
Tula	27	-	-	-	-	-	-	-	-	-	-	-
Acrylonitrile	24	-	-	-	-	-	-	-	-	-	-	-
Acetonitrile	1	-	-	-	-	-	-	-	-	-	-	-
Hydrocyanic acid	3	-	-	-	-	-	-	-	-	-	-	-
Pajaritos	966	697	680	751	685	733	481	-	-	-	-	-
Hydrocyanic acid	141	93	92	109	98	108	63	-	-	-	-	-
Muriatic acid	50	49	37	34	16	45	30	-	-	-	-	-
Vinyl chloride	235	157	155	187	168	185	108	-	-	-	-	-
Dichloroethane	391	267	259	306	275	301	180	-	-	-	-	-
Ethylene	135	118	123	102	117	87	91	-	-	-	-	-
Pyrolysis liquids	14	12	13	12	11	8	10	-	-	-	-	-

a. On August 1, 2015 the agreement to create Pemex Ethylene came into effect, so previous data correspond to Pemex-Petrochemical.

b. The petrochemical complexes Escolín and Tula out of operation since 2008.

c. The ethylene and vinyl chloride plants (Chlorinated III) belonged to Pemex until September 2013.



5.4 Volume of domestic sales ^a

thousand tonnes

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Variation 2017/2016 (%)
Total	934	1,014	1,019	1,180	1,147	1,142	1,123	1,125	1,114	915	646	-29.5
Methane derivatives	57	55	35	50	52	52	46	20	26	17	11	-35.5
Carbonic anhydride	57	55	35	50	52	52	46	20	26	17	11	-35.5
Ethane derivatives	845	932	945	1,019	1,002	1,006	985	982	955	816	612	-25.0
Ethylene ^b	32	36	10	3	4	4	4	4	5	-	-	-
Ethylene glycol	169	191	152	197	167	172	181	166	175	168	116	-30.6
Ethylene oxide	196	212	181	235	241	229	243	240	223	181	138	-23.8
Polyethylenes	447	492	601	584	590	601	556	572	552	467	358	-23.5
HD Polyethylene	146	153	168	175	162	160	147	159	140	93	44	-52.6
LD Polyethylene	302	339	433	409	427	441	410	413	412	374	313	-16.2
Propylene and derivatives	30	25	37	78	70	62	64	76	76	54	20	-62.9
Hydrocyanic acid	-	-	1	6	4	3	3	4	5	3	-	-
Acrylonitrile	1	...	11	54	39	33	33	48	45	29	...	-
Propylene	29	25	25	18	26	26	28	24	27	22	20	-8.9
Others	2	2	2	33	23	22	29	46	56	28	2	-91.6
Polyethylene wax	1	2	2	5	5	5	4	5	4	3	2	-28.6
CPDI	-	-	-	28	17	17	20	21	24	14	-	-
Hydrogen	-	-	-	-	-	-	-	-	...	...	-	-
Nitrogen	-	-	-	-	-	-	4	14	15	6	...	-
Oxygen	...	...	...	...	...	...	1	7	13	5	...	-

a. On August 1, 2015 the agreement to create Pemex Ethylene came into effect, so previous data correspond to Pemex-Petrochemical.

b. In 2006 and 2007 includes ethylene for setting.

Note: Excludes credit and debit notes.



5.5 Value of domestic sales ^a

million pesos

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Variation 2017/2016 (%)
Total	10,459	13,289	11,306	15,702	16,541	16,420	15,928	17,888	16,910	15,393	12,622	- 18.0
Methane derivatives	19	19	13	18	18	18	16	8	11	9	6	- 33.4
Carbonic anhydride	19	19	13	18	18	18	16	8	11	9	6	- 33.4
Ethane derivatives	10,104	12,873	10,879	14,260	15,006	15,220	14,660	16,208	15,649	14,539	12,253	- 15.7
Ethylene ^b	330	492	94	44	55	66	62	65	72	-	-	-
Ethylene glycol	1,621	2,037	1,217	2,043	2,252	2,219	2,352	2,054	2,131	2,002	1,856	- 7.3
Ethylene oxide	1,810	2,352	1,564	2,206	2,225	2,124	2,271	2,470	2,615	2,547	2,423	- 4.9
Polyethylenes	6,343	7,992	8,005	9,968	10,475	10,811	9,974	11,619	10,832	9,991	7,974	- 20.2
HD Polyethylene	1,939	2,363	2,089	2,636	2,657	2,792	2,580	3,200	2,759	1,945	928	- 52.3
LD Polyethylene	4,404	5,629	5,916	7,331	7,818	8,019	7,394	8,418	8,073	8,045	7,046	- 12.4
Propylene and derivatives	326	382	401	1,384	1,467	1,135	1,212	1,603	1,156	788	341	- 56.8
Hydrocyanic acid	-	-	1	7	4	3	4	6	5	4	-	-
Acrylonitrile	1	-	195	1,081	952	718	722	1,134	795	502	5	- 99.0
Propylene	325	382	204	296	510	414	486	462	357	283	336	18.6
Others	9	14	13	39	50	47	40	69	93	56	23	- 59.9
Polyethylene wax	9	13	13	39	49	46	35	42	41	32	22	- 30.9
CPDI	-	-	-	...	...	...	...	...	...	...	-	-
Hydrogen	-	-	-	-	-	-	-	-	...	...	-	-
Nitrogen	-	-	-	-	-	-	5	16	24	12	...	-
Oxygen	...	1	...	...	...	...	...	1	11	28	12	...

a. On August 1, 2015 the agreement to create Pemex Ethylene came into effect, so previous data correspond to Pemex-Petrochemical.

b. In 2006 and 2007 includes ethylene for setting.

Note: Excludes credit and debit notes.



245 W01-A
SILO

245 W01-B
SILO

245 W01-C
SILO

345 W01-R
SILO

345 W01-S
SILO

345 W01-T
SILO

FERTILIZERS



Pemex Fertilizers

2017

Production (Mt) 1,343

Domestic sales (Mt) 968

Facilities

Petrochemical complexes^a 2

Plants 5

Installed capacity of products and by-products (Mt) 4,633

Pipeline (km)

Petrochemicals 281

^a. Cosoleacaque and Camargo.

6.1 Capacity by petrochemical complex ^a

thousand tonnes

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total	5,310	5,310	5,309	5,309	4,639	4,651	4,651	4,651	4,651	4,651	4,633
Camargo	333	333	333	333	333	333	333	333	333	333	333
Cosoleacaque	4,977	4,977	4,976	4,976	4,306	4,318	4,318	4,318	4,318	4,318	4,300

a. On August 1, 2015 the agreement to create Pemex Fertilizers came into effect, so previous data correspond to Pemex-Petrochemical.

6.2 Production of fertilizers ^a

thousand tonnes

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Variation 2017/2016 (%)
Methane derivatives	1,748	2,059	1,871	2,122	2,028	2,196	2,174	2,078	1,406	1,319	1,343	1.9
Ammonia	760	896	790	899	867	939	922	869	575	533	500	- 6.2
Carbonic anhydride ^b	989	1,163	1,080	1,223	1,161	1,256	1,252	1,209	830	786	844	7.4

a. On August 1, 2015 the agreement to create Pemex Fertilizers came into effect, so previous data correspond to Pemex-Petrochemical.

b. Carbonic anhydride is a by-product of the process of obtaining ammonia; one part is marketed and the rest is vented to the atmosphere.



6.3 Volume of domestic sales ^a

thousand tonnes

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Variation 2017/2016 (%)
Total	880	1,059	1,130	1,100	1,090	1,054	1,086	1,079	819	934	968	3.6
Ammonia	714	826	895	825	833	812	842	835	643	753	760	1.0
Carbonic anhydride	165	233	235	275	257	242	244	244	166	180	208	15.5
Urea	-	-	-	-	-	-	-	-	10	2	-	-

a. On August 1, 2015 the agreement to create Pemex Fertilizers came into effect, so previous data correspond to Pemex-Petrochemical.

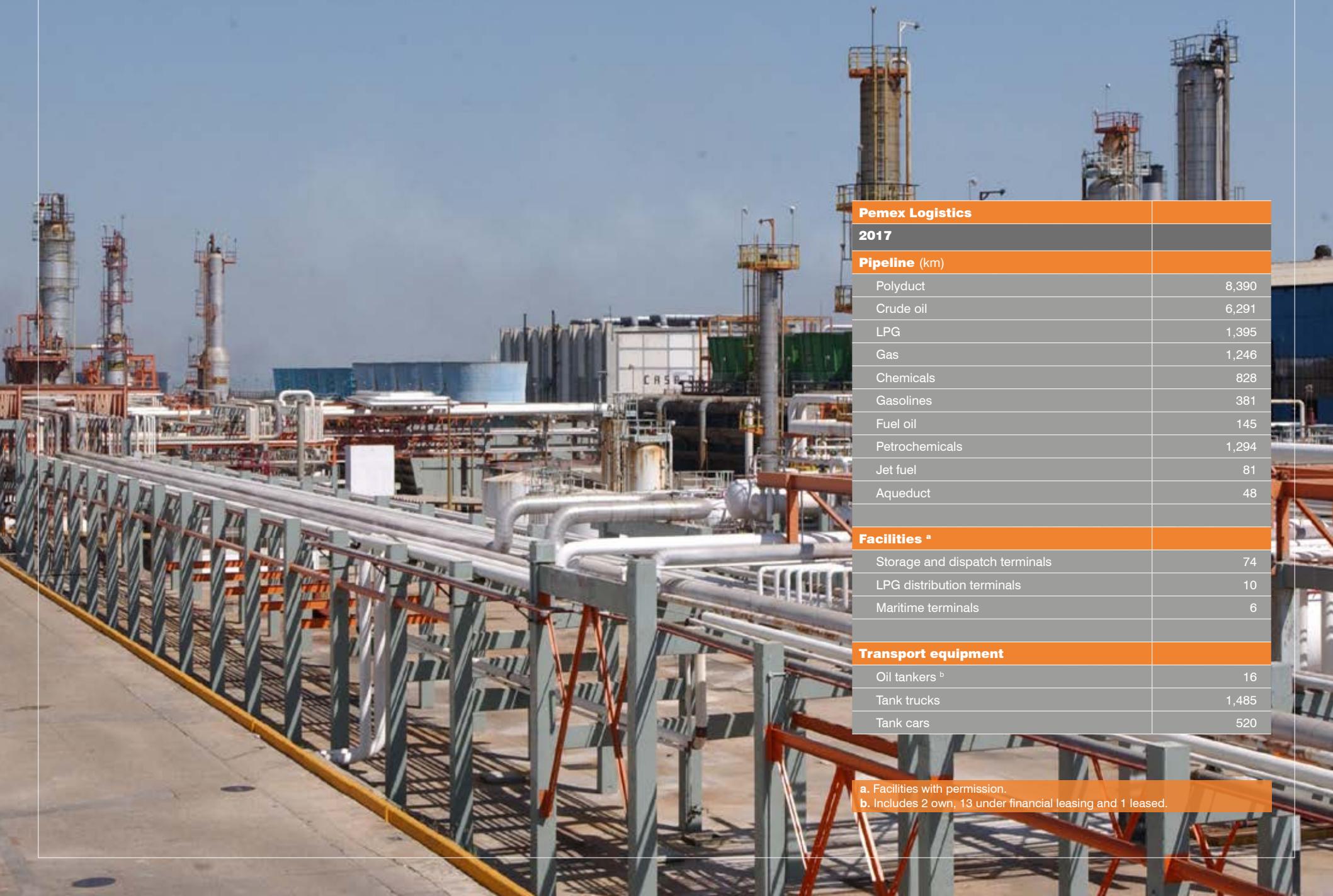
6.4 Value of domestic sales ^a

million pesos

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Variation 2017/2016 (%)
Total	2,680	4,924	3,617	4,047	5,382	5,879	5,310	5,181	4,531	4,690	4,786	2.0
Ammonia	2,639	4,883	3,576	3,996	5,332	5,833	5,256	5,117	4,415	4,593	4,677	1.8
Carbonic anhydride	41	41	40	51	50	46	53	63	70	90	109	21.0
Urea	-	-	-	-	-	-	-	-	47	7	-	-

a. On August 1, 2015 the agreement to create Pemex Fertilizers came into effect, so previous data correspond to Pemex-Petrochemical.



**Pemex Logistics****2017****Pipeline (km)**

Polyduct	8,390
Crude oil	6,291
LPG	1,395
Gas	1,246
Chemicals	828
Gasolines	381
Fuel oil	145
Petrochemicals	1,294
Jet fuel	81
Aqueduct	48

Facilities ^a

Storage and dispatch terminals	74
LPG distribution terminals	10
Maritime terminals	6

Transport equipment

Oil tankers ^b	16
Tank trucks	1,485
Tank cars	520

a. Facilities with permission.

b. Includes 2 own, 13 under financial leasing and 1 leased.

7.1 Volume of transported product ^a

thousand barrels

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016 ^b	2017 ^b	Variation 2017/2016 (%)
Total	1,345,548	1,251,769	1,259,549	1,248,659	1,249,708	1,252,623	1,400,556	1,345,394	1,161,359	1,154,839	926,599	- 19.8
Marine transportation	127,708	121,856	119,553	127,809	123,245	113,894	114,004	112,380	93,159	94,274	76,006	- 19.4
Crude oil ^c	793	449	189	158	-	146	913	-	441	2,458	-	-
Gasolines	51,124	51,347	56,896	60,310	55,660	52,122	55,042	56,116	48,253	47,154	36,695	- 22.2
Intermediate distillates	32,448	35,225	35,343	33,919	34,434	31,463	32,631	33,204	28,470	29,922	25,507	- 14.8
Fuel oil	42,044	31,785	23,523	32,141	32,324	29,419	25,331	21,269	15,796	12,619	12,030	- 4.7
Others	1,299	3,050	3,602	1,281	828	743	88	1,791	199	2,122	1,774	- 16.4
Pipeline transportation	1,122,706	1,030,629	1,032,792	1,004,642	1,007,583	1,012,766	1,025,285	976,631	922,749	907,052	705,700	- 22.2
Crude oil	502,739	474,447	474,473	433,024	426,503	439,643	446,541	420,111	387,674	383,344	298,238	- 22.2
Gasolines	406,221	341,953	341,028	354,918	358,430	357,262	361,934	355,295	350,694	324,197	257,982	- 20.4
Jet fuel	25,017	24,162	23,183	21,856	23,798	23,397	25,149	22,904	20,627	19,816	13,329	- 32.7
Diesel	132,893	132,205	130,581	131,969	138,554	143,956	138,007	132,510	120,602	111,620	83,450	- 25.2
Fuel oil	52,389	54,510	60,656	60,712	58,218	46,100	50,334	42,271	39,074	40,308	34,622	- 14.1
Others	3,449	3,352	2,870	2,163	2,081	2,409	3,322	3,540	4,078	27,767	18,079	- 34.9
Tank trucks transportation	10,286	11,249	14,484	18,483	25,331	27,195	163,155	155,413	36,826	35,684	33,816	- 5.2
Diesel	3,931	4,355	4,112	8,586	10,622	10,622	10,512	12,610	12,770	14,304	14,680	2.6
Gasolines	4,124	4,484	6,447	6,334	6,534	6,244	5,621	5,262	4,813	4,240	3,122	- 26.4
Fuel oil	2,231	2,410	3,925	3,564	8,176	10,330	15,586	18,310	19,244	17,140	16,013	- 6.6
Tank cars transportation	84,848	88,036	92,720	97,725	93,550	98,769	98,112	100,970	108,624	117,829	111,077	- 5.7
Gasolines	41,003	45,842	44,287	45,712	46,209	47,925	49,239	48,414	54,470	57,596	50,670	- 12.0
Intermediate distillates	36,587	35,524	32,975	34,034	36,135	37,595	37,303	40,173	42,690	50,119	53,219	6.2
Fuel oil	2,058	2,019	10,745	14,266	7,994	8,578	7,629	8,725	7,728	6,953	4,318	- 37.9
Others	5,200	4,651	4,714	3,712	3,212	4,672	3,942	3,658	3,737	3,161	2,870	- 9.2

a. On October 1, 2015 the agreement to create Pemex Logistics came into effect, so previous data correspond to Pemex-Refining.

b. Billed figures.

c. From 2007 it stopped transporting crude by Oil tanker, due to the start-up of the pumping station in Mazumiapan.



INTERNATIONAL TRADE



2017 World Crude Oil Exports by Country

thousand barrels per day

Saudi Arabia	6,968
Russia	5,062
Iraq	3,802
Canada	2,912
United Arab Emirates	2,379
Iran	2,125
Kuwait	2,010
Nigeria	1,811
Venezuela	1,596
Angola	1,577
Norway	1,362
Mexico (Pemex)	1,174

Source: OPEC (Annual Statistical Bulletin 2018) and Petróleos Mexicanos.

8.1 Foreign trade in hydrocarbons and their derivatives

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Variation 2017/2016 (%)
thousand barrels per day												
Exports												
Crude oil	1,686	1,403	1,222	1,361	1,338	1,255	1,189	1,142	1,172	1,194	1,174	-1.7
Olmeca	173	130	143	212	203	194	99	91	124	108	19	-82.5
Istmo	41	23	14	75	99	99	103	134	194	153	86	-43.8
Maya ^a	1,472	1,251	1,065	1,074	1,036	962	987	917	854	934	1,069	14.5
Condensates	-	-	-	-	1	6	5	2	1	-	-	-
Dry gas (MMcf/d)	139	107	67	19	1	1	3	4	3	2	2	-19.5
Refined products	180	192	243	193	184	142	176	199	194	186	158	-14.8
Petrochemicals (Mt)	693	587	741	677	458	602	614	406	334	125	61	-51.5
Imports												
Dry gas (MMcf/d)	386	447	422	536	791	1,089	1,290	1,358	1,416	1,934	1,766	-8.7
Refined products ^b	495	553	519	627	678	671	603	640	740	799	935	17.0
Petrochemicals (Mt)	270	250	388	268	101	190	74	85	107	278	333	19.6
million of U.S. dollars												
Net exports	25,643	26,069	16,405	19,577	25,054	20,975	20,252	12,787	263	-2,369	-3,955	67.0
Exports												
Crude oil	42,582	49,543	30,514	41,026	55,858	52,074	48,582	41,241	21,117	17,499	22,465	28.4
Olmeca	37,937	43,342	25,605	35,986	49,379	46,851	42,712	35,638	18,451	15,582	20,023	28.5
Istmo	4,469	4,712	3,445	6,149	8,132	7,754	3,884	3,115	2,333	1,569	358	-77.2
Maya ^a	1,050	683	327	2,149	3,849	3,904	3,926	4,557	3,489	2,108	1,589	-24.6
Condensates	32,419	37,946	21,833	27,688	37,398	35,193	34,902	27,967	12,629	11,905	18,076	51.8
Dry gas	-	-	-	-	24	182	170	54	13	-	-	-
Refined products	351	316	103	32	2	1	3	5	2	1	1	13.2
Petrochemicals	4,052	5,537	4,657	4,764	6,194	4,757	5,527	5,412	2,588	1,895	2,402	26.8
Imports												
Crude oil	16,938	23,474	14,109	21,449	30,805	31,099	28,330	28,454	20,854	19,868	26,420	33.0
Olmeca	996	1,424	633	939	1,272	1,216	2,495	2,819	1,674	2,098	2,484	18.4
Istmo	15,797	21,893	13,308	20,335	29,408	29,631	25,706	25,467	18,984	17,684	23,814	34.7
Maya ^a	242	349	147	245	260	283	171	132	63	20	38	84.3
Condensates	145	158	168	174	125	252	129	168	196	85	123	43.4

a. Includes Altamira and Talam crude oil.

b. Excludes the volume of imported products under abroad processing agreements.



8.2 Volume of crude oil exports by destination

thousand barrels per day

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Variation 2017/2016 (%)
Total	1,686	1,403	1,222	1,361	1,338	1,255	1,189	1,142	1,172	1,194	1,174	-1.7
America	1,488	1,223	1,083	1,179	1,133	994	894	828	705	604	638	5.6
Europe	163	145	104	128	131	176	179	215	248	272	219	-19.5
Far East	35	35	35	54	74	85	116	100	219	318	317	-0.3
Olmeca	173	130	143	212	203	194	99	91	124	108	19	-82.5
America	173	130	143	212	203	194	99	40	48	25	8	-68.9
Europe	-	-	-	-	-	-	-	47	76	78	11	-85.8
Far East	-	-	-	-	-	-	-	4	-	5	-	-
Istmo	41	23	14	75	99	99	103	134	194	153	86	-43.8
America	35	15	9	54	84	61	66	97	84	14	13	-8.9
Europe	6	8	5	18	9	34	37	31	30	17	5	-67.9
Far East	-	-	-	2	6	5	-	6	80	121	67	-44.6
Maya ^a	1,472	1,251	1,065	1,074	1,036	962	987	917	854	934	1,069	14.5
America	1,280	1,078	931	913	846	740	729	690	573	564	617	9.3
Europe	157	138	99	109	122	142	142	137	142	177	202	14.6
Far East	35	35	35	52	67	80	116	90	139	193	250	29.8

a. Includes Altamira and Talam crude oil.



8.3 Value of crude oil exports by destination

million of U.S. dollars

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Variation 2017/2016 (%)
Total	37,937	43,342	25,605	35,986	49,379	46,851	42,712	35,638	18,451	15,582	20,023	28.5
America	33,236	38,187	22,436	31,100	41,745	37,051	32,125	26,188	11,599	8,026	10,921	36.1
Europe	3,858	4,319	2,400	3,409	4,888	6,611	6,472	6,555	3,733	3,437	3,656	6.4
Far East	843	836	769	1,477	2,747	3,189	4,114	2,895	3,119	4,119	5,447	32.2
Olmecca	4,469	4,712	3,445	6,149	8,132	7,754	3,884	3,115	2,333	1,569	358	-77.2
America	4,469	4,712	3,445	6,149	8,132	7,754	3,884	1,373	965	385	155	-59.7
Europe	-	-	-	-	-	-	-	1,582	1,368	1,109	203	-81.7
Far East	-	-	-	-	-	-	-	160	-	76	-	-
Istmo	1,050	683	327	2,149	3,849	3,904	3,926	4,557	3,489	2,108	1,589	-24.6
America	868	493	198	1,567	3,249	2,335	2,499	3,237	1,588	216	254	17.3
Europe	182	191	130	513	344	1,363	1,427	1,104	530	234	110	-53.1
Far East	-	-	-	69	256	207	-	217	1,371	1,658	1,226	-26.0
Maya ^a	32,419	37,946	21,833	27,688	37,398	35,193	34,902	27,967	12,629	11,905	18,076	51.8
America	27,899	32,982	18,793	23,384	30,363	26,962	25,743	21,578	9,046	7,425	10,512	41.6
Europe	3,677	4,128	2,271	2,895	4,544	5,248	5,045	3,870	1,836	2,095	3,343	59.6
Far East	843	836	769	1,408	2,491	2,982	4,114	2,519	1,748	2,385	4,221	76.9

a. Includes Altamira and Talam crude oil.



8.4 Crude oil exports prices

													Variation 2017/2016
U.S. dollars per barrel	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	(%)	
Average price	61.64	84.38	57.40	72.46	101.13	101.96	98.44	85.48	43.12	35.65	46.73	31.1	
Olmeca	70.89	99.37	65.79	79.58	109.83	109.39	107.92	93.54	51.46	39.71	51.79	30.4	
Istmo	69.92	81.09	63.38	78.63	106.22	107.28	104.69	93.39	49.28	37.72	50.75	34.6	
Maya	60.38	82.92	56.22	70.65	98.97	99.99	96.89	83.75	41.12	35.30	46.41	31.5	
2017 U.S. dollars per barrel													
Average price	72.87	96.07	65.58	81.46	110.20	108.85	103.58	88.51	44.59	36.41	46.73	28.3	
Olmeca	83.81	113.13	75.17	89.45	119.69	116.79	113.56	96.86	53.22	40.56	51.79	27.7	
Istmo	82.66	92.32	72.41	88.39	115.75	114.53	110.16	96.70	50.97	38.52	50.75	31.7	
Maya	71.39	94.40	64.24	79.42	107.85	106.75	101.95	86.72	42.53	36.05	46.41	28.8	



8.5 Crude oil export prices by area of destination

U.S. dollars per barrel

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Variation 2017/2016 (%)
Total	61.64	84.38	57.40	72.46	101.13	101.96	98.44	85.48	43.12	35.65	46.73	31.1
America	61.21	85.30	56.73	72.29	100.93	101.84	98.48	86.70	45.08	36.31	46.92	29.2
Europe	64.74	81.18	63.15	73.20	102.35	102.56	99.25	83.67	41.20	34.50	45.71	32.5
Far East	65.54	65.49	61.02	74.55	102.08	102.16	96.88	79.25	38.98	35.36	47.04	33.0
Olmeca	70.89	99.37	65.79	79.58	109.83	109.39	107.92	93.54	51.46	39.71	51.79	30.4
America	70.89	99.37	65.79	79.58	109.83	109.39	107.92	93.36	54.99	41.92	54.57	30.2
Europe	-	-	-	-	-	-	-	92.58	49.23	38.64	49.85	29.0
Far East	-	-	-	-	-	-	-	106.27	-	46.06	-	-
Istmo	69.92	81.09	63.38	78.63	106.22	107.28	104.69	93.39	49.28	37.72	50.75	34.6
America	67.89	87.00	62.45	78.83	105.59	105.29	103.38	91.58	51.80	40.90	52.81	29.1
Europe	81.58	68.97	64.86	77.76	110.27	109.94	107.07	96.88	48.81	37.35	54.60	46.2
Far East	-	-	-	80.72	109.10	113.40	-	105.26	46.82	37.39	50.03	33.8
Maya	60.38	82.92	56.22	70.65	98.97	99.99	96.89	83.75	41.12	35.30	46.41	31.5
America	59.78	83.62	55.31	70.22	98.36	99.66	96.82	85.77	43.45	36.20	46.88	29.5
Europe	64.08	81.85	63.15	72.44	101.79	100.80	97.24	77.60	35.77	33.02	45.24	37.0
Far East	65.54	65.49	61.02	74.27	101.41	101.48	96.88	78.02	36.07	34.63	46.23	33.5

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2003188872-T
N.L. 73428



8.6 Foreign trade of refined products and others

Part 1/2

thousand barrels per day	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Variation 2017/2016 (%)
Net exports	-351	-411	-328	-511	-610	-684	-611	-639	-753	-899	-1,037	15.4
Exports	200	208	253	196	185	148	182	202	195	186	158	-14.8
Dry gas ^a	20	16	10	3	...	...	...	1	...	...	...	-
Condensates	-	-	-	-	1	6	5	2	1	-	-	-
Natural gasolines (naphthas)	76	66	69	68	75	69	67	66	63	53	45	-14.6
Refined products and LPG	104	126	174	125	109	72	110	133	131	133	113	-14.9
LPG	1	...	1	...	1	...	...	1	...	4	6	27.4
Gasolines	4	2	2	-	-	-	-	-	-	-	-	-
Jet fuel	3	6	4	1	2	-	1	-	-	-	-	-
Diesel	9	6	5	...	-	-	-	-	-	-	-	-
Fuel oil	34	59	121	122	101	70	95	129	124	113	104	-8.6
Others	53	52	41	1	5	3	13	3	7	15	4	-74.2
Imports ^b	551	618	581	706	795	831	793	840	948	1,085	1,196	10.3
Dry gas ^a	57	66	62	79	117	161	190	200	209	285	260	-8.7
Refined products and LPG	495	553	519	627	678	671	603	640	740	799	935	17.0
LPG	54	49	52	50	40	44	45	41	50	15	9	-43.2
Propane	29	39	28	29	42	41	35	43	55	36	34	-4.5
Gasolines ^c	315	346	335	410	430	396	375	390	440	511	583	14.0
Diesel	53	68	48	108	136	134	107	133	145	188	237	26.4
Fuel oil	17	33	39	11	25	45	31	13	17	11	24	128.6
Others	27	17	17	19	5	11	10	20	32	39	48	22.5

8.6 Foreign trade of refined products and others

Part 2/2

million of U.S. dollars	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Variation 2017/2016 (%)
Net exports	-12,391	-17,463	-9,180	-16,479	-24,461	-25,907	-22,502	-22,816	-18,055	-17,886	-23,894	33.6
Exports	4,402	5,853	4,761	4,796	6,219	4,940	5,700	5,470	2,602	1,896	2,404	26.8
Dry gas	351	316	103	32	2	1	3	5	2	1	1	13.2
Condensates	-	-	-	-	24	182	170	54	13	-	-	-
Natural gasolines (naphthas)	1,911	2,138	1,319	1,849	2,619	2,257	2,162	1,986	1,007	733	747	1.9
Refined products and LPG	2,140	3,399	3,338	2,915	3,574	2,500	3,365	3,426	1,580	1,162	1,656	42.5
LPG	21	3	14	2	35	3	4	25	...	25	28	13.0
Gasolines	42	36	26	-	-	-	-	-	-	-	-	-
Jet fuel	104	259	106	42	79	-	55	-	-	-	-	-
Diesel	196	220	105	14	-	-	-	-	-	-	-	-
Fuel oil	548	1,122	2,268	2,834	3,288	2,396	2,984	3,335	1,462	973	1,556	59.9
Others	1,230	1,759	820	23	171	101	322	65	118	164	71	-56.5
Imports ^b	16,793	23,316	13,941	21,275	30,680	30,847	28,202	28,286	20,657	19,782	26,298	32.9
Dry gas	996	1,424	633	939	1,272	1,216	2,495	2,819	1,674	2,098	2,484	18.4
Refined products and LPG	15,797	21,893	13,308	20,335	29,408	29,631	25,706	25,467	18,984	17,684	23,814	34.7
LPG	1,095	1,118	771	1,012	988	842	838	843	522	146	123	-15.3
Propane	645	911	460	615	1,208	920	721	887	590	403	541	34.2
Gasolines ^c	10,917	14,611	9,320	13,917	19,541	19,144	17,486	16,691	12,805	11,995	15,380	28.2
Diesel	1,961	3,379	1,382	3,862	6,507	6,600	5,155	5,859	3,981	4,170	6,095	46.2
Fuel oil	385	1,158	944	300	970	1,708	1,159	463	311	154	449	192.0
Others	794	716	431	631	195	416	348	724	774	817	1,225	50.0

a. Fuel oil equivalent.

b. Excludes imported products under abroad processing agreements.

c. Includes MTBE and detergent additive.



8.7 Foreign trade of petrochemicals

													Variation 2017/2016 (%)
thousand tonnes	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017		
Net exports	423	337	353	408	357	412	540	321	227	-154	-272	77.3	
Exports	693	587	741	677	458	602	614	406	334	125	61	-51.5	
Ammonia	56	96	-	99	31	106	39	-	-	-	-	-	-
Sulfur	439	367	522	414	297	359	484	311	271	87	16	-82.0	
Benzene	7	-	-	58	3	-	6	5	6	-	18	-	-
Butadiene	33	33	46	35	33	43	37	42	41	36	26	-27.9	
Styrene	13	-	-	3	13	-	10	10	3	-	-	-	-
Ethylene	24	10	97	19	9	51	6	15	2	-	-	-	-
Polyethylenes	73	69	75	46	71	43	29	24	11	2	...	-	-
Others	45	11	2	3	...	1	3	1	1	1	1	-5.0	
Imports	270	250	388	268	101	190	74	85	107	278	333	19.6	
Ammonia	27	29	108	64	-	-	-	-	33	235	286	21.6	
Toluene	15	37	42	-	-	60	8	10	25	-	3	-	-
Xylenes	32	30	32	-	6	62	18	3	3	-	3	-	-
Others	196	154	206	204	95	68	48	72	46	43	41	-5.9	
million of U.S. dollars													
Net exports	97	191	-21	70	135	31	42	-36	-133	-65	-85	30.5	
Exports	242	349	147	245	260	283	171	132	63	20	38	84.3	
Ammonia	15	58	-	35	20	63	19	-	-	-	-	-	-
Sulfur	19	129	2	42	57	52	46	25	24	3	1	-74.9	
Benzene	8	-	-	51	4	-	7	7	5	-	13	-	-
Butadiene	25	36	26	41	60	70	37	37	17	16	23	42.5	
Styrene	15	-	-	3	18	-	15	13	3	-	-	-	-
Ethylene	24	13	53	18	9	48	6	16	1	-	-	-	-
Polyethylenes	84	100	66	52	91	50	36	33	12	1	...	-73.2	
Others	52	13	1	2	1	1	4	...	1	...	...	-	-
Imports	145	158	168	174	125	252	129	168	196	85	123	43.4	
Ammonia	10	5	34	28	-	-	-	-	17	75	79	5.6	
Toluene	14	35	31	-	-	77	11	12	22	-	3	-	-
Xylenes	30	32	24	-	8	82	24	3	3	-	3	-	-
Others	92	87	78	146	117	93	93	153	155	10	38	265.0	



INTERNATIONAL COMPARISONS



International Comparisons

2018

Mexico's world position

Proved crude oil reserves ^a	18
Proved gas reserves ^a	39
Crude oil production ^b	12
Natural gas production ^b	16
Atmospheric distillation capacity ^c	14

a. As of January 1, 2018.

b. As of December 31, 2017.

c. As of December 31, 2016.

9.1 Proved oil reserves 2018, selected countries ^a

Rank	Country	million barrels
1	Venezuela	302,250
2	Saudi Arabia	266,208
3	Canada	170,540
4	Iran	157,200
5	Iraq	148,766
6	Kuwait	101,500
7	United Arab Emirates	97,800
8	Russia	80,000
9	Libya	48,363
10	Nigeria	37,453
11	United States	35,427
12	Kazakhstan	30,000
13	China	25,627
14	Qatar	25,244
15	Brazil	12,634
16	Algeria	12,200
17	Angola	9,523
18	Mexico	5,807
	World total	1,651,850



a. As of January 1.

Source: Oil and Gas Journal and CNH.

9.2 Proved natural gas reserves 2018, selected countries ^a

Rank	Country	trillion cubic feet
1	Russia	1,688
2	Iran	1,191
3	Qatar	850
4	United States	311
5	Saudi Arabia	304
6	Turkmenistan	265
7	United Arab Emirates	215
8	Venezuela	203
9	Nigeria	193
10	China	192
11	Algeria	159
12	Iraq	135
13	Indonesia	101
14	Mozambique	100
15	Kazakhstan	85
16	Egypt	77
17	Canada	73
18	Australia	70
19	Uzbekistan	65
20	Kuwait	63
39	Mexico	9
	World total	6,955



a. As of January 1.

Source: Oil and Gas Journal and CNH.

9.3 Oil production 2017, selected countries

Rank	Country	thousand barrels per day
1	Russia	10,979
2	Saudi Arabia	9,964
3	United States	9,330
4	Iraq	4,468
5	Canada	3,973
6	China	3,849
7	Iran	3,801
8	United Arab Emirates	2,927
9	Kuwait	2,707
10	Brazil	2,633
11	Venezuela	1,953
12	Mexico	1,950
13	Kazakhstan	1,756
14	Angola	1,643
15	Norway	1,614
	World total	78,685



Source: Oil and Gas Journal and CNH.

9.4 Natural gas production 2017, selected countries

Rank	Country	billion cubic feet
1	United States	28,815
2	Russia	24,607
3	Qatar	7,922
4	Canada	5,859
5	Iran	5,580
6	China	5,505
7	Former USSR	5,382
8	Norway	4,453
9	Australia	3,953
10	Algeria	3,206
11	Saudi Arabia	3,000
12	Indonesia	2,616
13	Malaysia	2,527
14	United Arab Emirates	1,980
16	Mexico ^a	1,863
	World total	133,769



a. Includes nitrogen.

Source: Oil and Gas Journal and CNH.

9.5 Atmospheric distillation capacity 2016, top petroleum companies

Rank	Company	Country	thousand barrels per day
1	Sinopec	China	5,872
2	ExxonMobil	United States	4,907
3	CNPC	China	4,745
4	Saudi Aramco	Saudi Arabia	3,095
5	Royal Dutch Shell	United Kingdom / Netherlands	3,086
6	PDVSA	Venezuela	2,482
7	Petrobras	Brazil	2,373
8	Total	France	2,011
9	Rosneft	Russia	1,902
10	NIOC	Iran	1,901
11	BP	United Kingdom	1,880
12	Chevron	United States	1,793
13	Lukoil	Russia	1,649
14	Petróleos Mexicanos	Mexico	1,602
15	Gazprom	Russia	1,241



Source: Energy Intelligence Group. PIW Ranking 2017 -with information as of 2016- and Petróleos Mexicanos.

9.6 Top petroleum companies by crude oil production 2016

Rank	Company	Country	thousand barrels per day
1	Saudi Aramco	Saudi Arabia	12,349
2	INOC	Iraq	4,648
3	NIOC	Iran	4,600
4	Rosneft	Russia	3,384
5	CNPC	China	3,264
6	KPC	Kuwait	3,165
7	PDVSA	Venezuela	2,571
8	ExxonMobil	United States	2,365
9	Petrobras	Brazil	2,199
10	Petróleos Mexicanos	Mexico	2,154
11	Adnoc	Abu Dhabi	2,154
12	BP	United Kingdom	2,048
13	Lukoil	Russia	1,875
14	Royal Dutch Shell	United Kingdom / Netherlands	1,838
15	Chevron	United States	1,719



Source: Energy Intelligence Group. PIW Ranking 2017 -with information as of 2016- and Petróleos Mexicanos.

9.7 Top petroleum companies by natural gas production 2016

Rank	Company	Country	million cubic feet per day
1	Gazprom	Russia	40,807
2	NIOC	Iran	19,583
3	QP	Qatar	12,148
4	CNPC	China	11,704
5	Royal Dutch Shell	United Kingdom / Netherlands	10,613
6	Saudi Aramco	Saudi Arabia	10,585
7	ExxonMobil	United States	10,127
8	Sonatrach	Algeria	8,103
9	BP	United Kingdom	7,075
10	Petronas	Malaysia	6,756
11	Total	France	6,447
12	Petróleos Mexicanos ^a	Mexico	5,792
13	PDVSA	Venezuela	5,666
14	Novatek	Russia	5,490
15	Chevron	United States	5,252



a. Includes nitrogen.

Source: Energy Intelligence Group. PIW Ranking 2017 -with information as of 2016- and Petróleos Mexicanos.

9.8 Top petroleum companies by sales 2016

Rank	Company	Country	million of U.S. dollars
1	Sinopec	China	267,518
2	China National Petroleum	China	262,573
3	Royal Dutch Shell	United Kingdom / Netherlands	240,033
4	ExxonMobil	United States	205,004
5	BP	United Kingdom	186,606
6	Total	France	127,925
7	Chevron	United States	107,567
8	Gazprom	Russia	91,382
9	Petrobras	Brazil	81,405
10	SK Holdings	South Korea	72,579
11	Phillips 66	United States	72,396
12	Lukoil	Russia	70,897
13	Valero Energy	United States	70,166
14	China National Offshore Oil	China	65,892
15	Petróleos Mexicanos ^a	Mexico	57,774
16	Rosneft Oil	Russia	56,553



a. For reference purposes, money exchange conversion from pesos to US dollar, was made to the 2016 exchange rate of Ps. 18.6641 = US\$1.00. Source: Banco de México.

Source: Fortune.

GLOSSARY AND NOMENCLATURE



Glosary and nomenclature

FIELD.

Area consisting of one or more clustered or related deposits.

PRODUCTION FIELDS.

Fields with wells in operation, ie, that are not plugged. Includes wells that are operating as producers or injectors, as well as closed wells with the possibility of exploitation.

REFINING CAPACITY.

Refers to capacity per day of operation in the production. Daily operating capacity means the maximum volume to be processed when the plant works without interruption.

CONDENSATES.

Natural gas liquids consisting mainly of pentanes and heavier hydrocarbon components remaining liquid at normal pressure and temperature conditions.

Condensates recover as a result of the handling and transport of natural gas.

DRILLING RIGS IN OPERATION.

The Daily average number of drilling rigs used for drilling wells or in related activities such as dismantlement, transport and maintenance.

FLOATING PRODUCTION STORAGE AND OFFLOADING (FPSO).

Floating Production Storage and Offloading vessel (also called a "unit" and a "system"). A floating tank system used by the offshore crude oil and gas industry designed to receive, process, and storage crude oil or natural gas produced from nearby platforms, until the product can be offloaded onto waiting tankers. Instead, the FSO are not equipped with process systems.

NATURAL GAS.

Mixture of hydrocarbons that exists in the deposits in gas phase, or in solution in oil, and which at atmospheric conditions remains in gas phase. This may include some impurities or substances that are not hydrocarbons (hydrogen sulfide, nitrogen or carbon dioxide). May be associated or non-associated gas.

ASSOCIATED GAS.

Natural gas that is in contact and / or dissolved in the crude oil of the deposit.

NON-ASSOCIATED GAS.

It is a natural gas that is found in deposits that do not contain crude oil at the original pressure and temperature conditions.

DRY GAS.

Natural gas containing smaller amounts of hydrocarbons heavier than methane. Dry natural gas is obtained from wells and also from gas processing complexes. It is marketed under the name of natural gas.

SOUR GAS.

Natural gas containing hydrocarbons, hydrogen sulfide and carbon dioxide (the later in concentrations greater than 50 ppm).

SWEET GAS.

Natural gas containing hydrogen sulfide and carbon dioxide (these latter in concentrations below 50 ppm).

WET GAS.

Natural gas whose content of components heavier than methane is in quantities that allows its commercial process. It can be bitter or sweet.

NATURAL GASOLINE (NAPHTHA).

Highly volatile mixture of hydrocarbons, mainly pentane and heavier which forms part of natural gas liquids. Natural gasoline is used as a petrochemical feedstock.

LIQUEFIED PETROLEUM GAS (LPG).

A gaseous mixture of propane and butane obtained during the fractionation of natural liquids or during the fractionation of refined products. It is the lighter fraction of crude oil utilized for domestic use and carburation.

CRUDE OIL.

Mixture of hydrogen carbides that exists in the liquid phase in the deposits and remains thus in original conditions of pressure and temperature. May include small amounts of substances other than hydrogen carbides. Excludes the production of condensates and that of natural gas liquids. Crude oil produced is considered heavy or light according to the following criteria:

Heavy. crude oil with API gravity less or equal to 27°.

Light. crude oil with API gravity between 27° to 38°.

Lighter. crude oil with API gravity greater than 38°.

Three varieties of crude oil are exported with the following typical qualities:

Maya. Heavy crude oil with API gravity of 21-22° and 3.4-3.8% sulfur by weight.

Istmo. Light crude oil with API gravity of 32-33° and 1.8% sulfur by weight.

Olmecha. Lighter crude oil with API gravity of 39.3° and 0.8% sulfur by weight.

Altamira. Heavy crude oil with API gravity of 15.5-16.5° and 5.5-6.0% sulfur by weight.

Talam. Heavy crude oil with API gravity of 15.8° and 4.760% sulfur by weight.

In this document the Altamira and Talam Crude are included in the Maya Crude in terms of volume and value of exports.

WELLS.

Wells are classified according to their purpose or function, into exploration (including wells by stratigraphic probe) and development (including injection wells). According to the degree of completion, wells are classified as drilled or completed.

Drilled wells. Are those with completed operations with the rotary drill and cemented casing, but have not entered into subsequent operations that allow hydrocarbon production.

Completed wells. Are those with completed operations regarding: installation of production pipelines; shots to the pipeline lining to allow communication between the interior of the well and the storing rock; and cleaning and stimulation of the rock to enhance the flow of hydrocarbons.

Successful exploration wells. The relationship of currently producing exploration wells that incorporate reserves, divided by total completed wells. Since 2007, Pemex Exploration and Production adopted the definition of Exploratory Commercial Success derived from international practices which evaluates the performance of exploration activities from an economic point of view.

PEMEX INDUSTRIAL TRANSFORMATION PROCESSES.

GAS PROCESSING COMPLEXES.

Sweetening. Process by means of which the sulfur compounds of the natural gas are eliminated.

Liquefaction recovery. Process used to separate from the wet gas sweet most of the heavier components than methane. In this way natural gas is obtained dry and on the other hand, liquefiable. The most used processes are cryogenic and absorption.

Fractionation of liquids. Process for the separation of reclaimed liquids in ethane, liquefied gas and natural gasoline (naphtha).

NATIONAL REFINING SYSTEM.

Alkylation. Process by which an isoparafine (of short chain) combines chemically with an olefin through a catalyst to form another isoparafine (of long chain), called alkylate. It's a major aspect of the upgrading of petroleum since it's formed of high-octane compound.

Cracking. Process to break large molecules of crude oil into smaller ones: known as thermal cracking when the process is reached by the application of heat; catalytic cracking when a catalyst is used; and hydrocracking, when the process is carried out in a hydrogen atmosphere.

Distillation. Process consisting on heating a liquid mixture until the most volatile components pass to the vapor phase, then the vapor is cooled

down to recover these components by condensation. The main objectives of distillation are to separate a mixture of several components taking advantage of their different boiling points, or to separate the volatile materials of the non-volatile ones.

Fractionation. Distillation process that separates small fractions of a hydrocarbon mixture.

Hydrodesulfurization. Process that eliminates sulfur by transforming it to hydrogen sulfide in the gaseous stream, which can be easily separated and converted to elemental sulfur.

Isomerization. Process that alters the fundamental arrangement of the atoms of a molecule without adding or subtracting anything to the original molecule. Butane is rearranged as isobutane to be used in the alkylation of isobutene and other olefins for high octane hydrocarbon production.

Reforming. Process that improves the antiknock quality of gasoline fractions by modifying their molecular structure: known as thermal reforming when is carried out by heat; and as catalytic reforming when catalyst is used.

PETROCHEMICALS.

These products are made from raw materials that originate in crude oil and natural gas, most of which are inputs for industrial use.

In addition, Petróleos Mexicanos has petrochemical by-products and other products which, according to the generally adopted convention, are not petrochemicals but are elaborated in its petrochemical areas.

This document reports the gross production of these products.

REFINED PRODUCTS.

Products obtained from the oil refining or natural gas processing mainly used as fuels such as gasoline, diesel, kerosene, fuel oil and liquefied petroleum gas, among others, other than petrochemicals.

REGION.

A geographical area corresponding to the administrative division of Pemex Exploration and Production until 2016. The regional heads are located along the Gulf of Mexico Coast: Poza Rica, Veracruz (Northern Region), Villahermosa, Tabasco (Southern Region) and Ciudad del Carmen, Campeche (Northeastern Marine Region and Southwestern Marine Region).

BLOCK

Geographical area corresponding to the administrative division of Pemex Exploration and Production. These are located along the Gulf of Mexico Coast: Poza Rica, Veracruz. (North Blocks), Villahermosa, Tabasco. (South Blocks) and Ciudad del Carmen, Campeche. (Shallow water blocks AS01 y AS02).

Integral Asset. An administrative subdivision of each region. Are maintained the integral assets: ATG, Burgos and Veracruz in the Northern Region, and the other integral assets change their name to productive assets:

Shallow water blocks AS01: Block AS01-01 and block AS01-02 (productive assets).

Northeastern Marine Region: Cantarell and Ku-Maloob-Zaap (productive assets).

Shallow water blocks AS02: Block AS02-03 and block AS02-04 (productive assets).

Southwestern Marine Region: Abkatún-Pol-Chuc and Litoral de Tabasco (productive assets).

South Blocks: Block S01, block S02, block S03 and block S04 (productive assets).

Southern Region: Bellota-Jujo, Cinco Presidentes, Macuspana-Muspac and Samaria-Luna (productive assets).

North Blocks: Block N01, block N02 and block N03 (productive assets).

Northern Region: Burgos, Veracruz and ATG (integral assets) and Poza Rica-Altamira (productive assets).

RESERVES.

Estimated amount of hydrocarbons that can be commercially recovered from well-known formations at a specific date. It is worth mentioning all estimated reserves involve some grade of uncertainty.

Proved Reserves. Volume of hydrocarbons or associated substances evaluated at atmospheric conditions, which by geological and engineering data analysis are estimated with reasonable certainty that they will be commercially recoverable from a given date, from known depositis and under current economic conditions, operational methods and government regulations.

Probable Reserves. Those reserves which analysis of geological and engineering data suggests are more likely to be recovered than to not being recoverable.

Possible Reserves. Those hydrocarbon reserves which analysis of geological and engineering data suggests are less likely to be recoverable than probable reserves.

DOMESTIC SALES.

Sales that Petróleos Mexicanos bills to its distributors in Mexican territory or that it carries out directly to national clients for intermediate and end use. The sales value excludes taxes (STPS and VAT) and commissions to distributors.

Does not include sales between Productive Subsidiaries Enterprises.

NOMENCLATURE

°C Celsius degrees

kg/cm² Kilogram per square centimeter

km	Kilometer
m	Meter
bd	Barrels per day
Mbd	Thousand barrels per day
MMboe	Million barrels of crude oil equivalent
MMMcft	Billion cubic feet
MMcf	Million cubic feet
MMcf/d	Million cubic feet per day
MMt	Million tonnes
Mt	Thousand tonnes
t	Tonne
MMUS\$	Million U.S. dollars
MTBE	Methyl tertiary butyl ether
STPS	Special Tax on Production and Services
Ps.	Mexican pesos
COV	Volatile Organic Compounds
VAT	Value Added Tax
OPEC	Organization of the Petroleum Exporting Countries
PEP	Pemex Exploration and Production
PPS	Pemex Drilling and Services
PST	Total Suspended Particles
ULS	Ultra Low Sulfur
ppm	Parts per million
US\$/b	Dollars per barrel
...	Negligible figure
-	Null value

Notas

- Annual variations are determined based on the original figures before rounding.
- Figures may not coincide with the total due to rounding.
- Operating figures can be modified by adjustments and complaints that are solved after the accounting settlement. So they can represent variations with respect to these latter.
- International trade figures only include operations related with the Petróleos Mexicanos system.

The Statistical Yearbook contains Petróleos Mexicanos information as of December 31, 2017.



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