

**INFORMATION ON OIL AND GAS
EXPLORATION AND PRODUCTION
ACTIVITIES
2016**



REPSOL, S.A. and Investees comprising the Repsol Group

INFORMATION ON OIL AND GAS EXPLORATION AND PRODUCTION ACTIVITIES

(Unaudited information)

This document contains information on the Repsol Group's oil and gas exploration and production activities. This information is published on an annual basis and is prepared in accordance with the criteria contained in Topic 932 of the "Financial Accounting Standards Boards" (FASB), which contains the principles that are generally applied in the oil and gas industry.

This information includes:

- **Accumulated investment** (Capitalized cost), which shows capitalized historical costs.
- **Investments of the year** (Cost incurred), which represent the amounts capitalized during the year.
- **Results of oil and gas exploration and production activities**, including revenue and expenses directly associated to this activity.
- **Net proven reserves**, which represent the volume of proven developed and undeveloped reserves of oil and gas.
- **Future net cash flows**, which represents an estimate of standardized measure of discounted future net cash flows relating to proven oil and gas reserves.
- **Changes in Future net cash flows**, which reflects the changes in standardized measure of discounted future net cash flows relating to proven oil and gas reserves with respect to those presented for the previous year.
- **Information on acreage and exploration and development activities.**

The financial information included in this document is consistent with that stated in the Group financial statements and management report (accessible at www.repsol.com), but there might be some differences due to the fact that the information included in the current document is presented in accordance with US GAAP (Topic 932 FASB) and the Group's official financial information is presented accordingly to International Financial Reporting Standards endorsed by the European Union (IFRS-UE).

Repsol Group estimates its proven reserves according to the standards established by the SPE-PRMS system.

The information here contained refers to the last three years (2014, 2015 and 2016). From 2016 on, the Group capitalizes the costs of geology and geophysics (G&G), net of tax benefits, in the exploratory phase; to facilitate the comparability of the information, data corresponding to previous years have been re-stated applying the same accounting standard (see Note 2.1 "Comparative information" of the Group's Consolidated Financial Statements 2016).

Capitalised costs

Capitalised costs represent the historical costs capitalised related to oil and gas exploration and production activities, including auxiliary equipment and facilities, and the related accumulated depreciation and accumulated impairment losses.

Millions of euros

| At December 31st 2014 | Total | Europe | Venezuela | Peru | United States | Rest of America | Africa | Asia | Oceania |
|---|---------------|------------|--------------|--------------|------------------|--------------------|--------------|------------|----------|
| Fully-consolidated entities | | | | | | | | | |
| Capitalised costs of proved oil and gas properties | 7,519 | 360 | 61 | 953 | 2,954 | 1,760 | 1,431 | - | - |
| Capitalised costs of unproved oil and gas properties | 3,420 | 150 | - | 82 | 2,410 | 155 | 470 | 150 | 3 |
| | 10,939 | 510 | 61 | 1,035 | 5,364 | 1,915 | 1,901 | 150 | 3 |
| Auxiliary equipment and facilities | 1,542 | 290 | 11 | - | 769 | 179 | 293 | - | - |
| Total capitalised costs | 12,481 | 800 | 72 | 1,035 | 6,133 | 2,094 | 2,194 | 150 | 3 |
| Accumulated depreciation and impairment losses | (5,281) | (560) | (13) | (135) | (2,413) | (1,156) | (1,004) | - | - |
| Net amount (1) | 7,200 | 240 | 59 | 900 | 3,720 | 938 | 1,190 | 150 | 3 |
| Equity-accounted investees | | | | | | | | | |
| Capitalised costs of proved oil and gas properties | 5,358 | - | 823 | - | - | 4,363 | - | 172 | - |
| Capitalised costs of unproved oil and gas properties | 896 | - | - | - | - | 821 | 24 | 51 | - |
| | 6,254 | - | 823 | - | - | 5,184 | 24 | 223 | - |
| Auxiliary equipment and facilities | 1,699 | - | 670 | - | - | 1,029 | - | - | - |
| Total capitalised costs | 7,953 | - | 1,493 | - | - | 6,213 | 24 | 223 | - |
| Accumulated depreciation and impairment losses | (3,355) | - | (374) | - | - | (2,926) | - | (55) | - |
| Net amount (1) | 4,598 | - | 1,119 | - | - | 3,287 | 24 | 168 | - |
| Total Net amounts (2) | 11,798 | 240 | 1,178 | 900 | 3,720 | 4,225 | 1,214 | 318 | 3 |

Translation of a report originally issued in Spanish.
In the event of a discrepancy, the Spanish language version prevails.

Millions of euros

At December 31st
2015

| | Total | Europe | Venezuela | Peru | United States | Rest of America | Africa | Asia | Oceania |
|--|---------------|--------------|--------------|--------------|---------------|-----------------|--------------|--------------|------------|
| Fully-consolidated entities | | | | | | | | | |
| Capitalised costs of proved oil and gas properties | 16,311 | 713 | 74 | 1,026 | 6,296 | 3,486 | 1,900 | 2,816 | - |
| Capitalised costs of unproved oil and gas properties | 10,102 | 156 | - | 71 | 4,250 | 2,847 | 373 | 1,963 | 442 |
| | 26,413 | 869 | 74 | 1,097 | 10,546 | 6,333 | 2,273 | 4,779 | 442 |
| Auxiliary equipment and facilities | 1,972 | 330 | 18 | 22 | 1,021 | 189 | 390 | 2 | - |
| Total capitalised costs | 28,385 | 1,199 | 92 | 1,119 | 11,567 | 6,522 | 2,663 | 4,781 | 442 |
| Accumulated depreciation and impairment losses | (9,665) | (768) | (72) | (192) | (4,129) | (2,192) | (1,440) | (753) | (119) |
| Net amount | 18,720 | 431 | 20 | 927 | 7,438 | 4,330 | 1,223 | 4,028 | 323 |
| Equity-accounted investees | | | | | | | | | |
| Capitalised costs of proved oil and gas properties | 7,524 | - | 1,243 | - | - | 6,102 | - | 179 | - |
| Capitalised costs of unproved oil and gas properties | 1,081 | - | - | - | - | 1,044 | - | 37 | - |
| | 8,605 | - | 1,243 | - | - | 7,146 | - | 216 | - |
| Auxiliary equipment and facilities | 2,362 | - | 1,139 | - | - | 1,223 | - | - | - |
| Total capitalised costs | 10,967 | - | 2,382 | - | - | 8,369 | - | 216 | - |
| Accumulated depreciation and impairment losses | (4,535) | - | (568) | - | - | (3,900) | - | (67) | - |
| Net amount | 6,432 | - | 1,814 | - | - | 4,469 | - | 149 | - |
| Total Net amounts (2) | 25,152 | 431 | 1,834 | 927 | 7,438 | 8,799 | 1,223 | 4,177 | 323 |

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Millions of euros

At December 31st
2016

| | Total | Europe | Venezuela | Peru | United States | Rest of America | Africa | Asia | Oceania |
|--|---------------|--------------|--------------|--------------|---------------|-----------------|--------------|--------------|------------|
| Fully-consolidated entities | | | | | | | | | |
| Capitalised costs of proved oil and gas properties | 17,527 | 812 | 77 | 1,112 | 6,748 | 3,592 | 2,261 | 2,925 | - |
| Capitalised costs of unproved oil and gas properties | 9,223 | 184 | - | 48 | 4,377 | 2,162 | 320 | 1,911 | 221 |
| | 26,750 | 996 | 77 | 1,160 | 11,125 | 5,754 | 2,581 | 4,836 | 221 |
| Auxiliary equipment and facilities | 1,890 | 340 | 22 | 19 | 1,074 | 32 | 399 | 4 | - |
| Total capitalised costs | 28,640 | 1,336 | 99 | 1,179 | 12,199 | 5,786 | 2,980 | 4,840 | 221 |
| Accumulated depreciation and impairment losses | (10,643) | (921) | (95) | (248) | (4,862) | (1,939) | (1,627) | (951) | - |
| Net amount | 17,997 | 415 | 4 | 931 | 7,337 | 3,847 | 1,353 | 3,889 | 221 |
| Equity-accounted investees | | | | | | | | | |
| Capitalised costs of proved oil and gas properties | 9,579 | 912 | 1,400 | - | - | 7,034 | - | 233 | - |
| Capitalised costs of unproved oil and gas properties | 1,664 | - | 67 | - | - | 1,543 | - | 54 | - |
| | 11,243 | 912 | 1,467 | - | - | 8,577 | - | 287 | - |
| Auxiliary equipment and facilities | 2,934 | - | 1,172 | - | - | 1,761 | - | 1 | - |
| Total capitalised costs | 14,177 | 912 | 2,639 | - | - | 10,338 | - | 288 | - |
| Accumulated depreciation and impairment losses | (6,032) | (324) | (924) | - | - | (4,682) | - | (102) | - |
| Net amount | 8,145 | 588 | 1,715 | - | - | 5,656 | - | 186 | - |
| Total Net amounts | 26,142 | 1,003 | 1,719 | 931 | 7,337 | 9,503 | 1,353 | 4,075 | 221 |

- (1) Does not include capitalised costs regarding non-current assets held for sale in 2014 amounting to €293.
(2) The tables for 2015 and 2014 have been restated as a result of a change in the Group's accounting principles. Total figures for 2015 and 2014 have accordingly increased by 84 million euros and 331 million euros, respectively.

Cost incurred

The costs incurred represent amounts capitalised during the year relating to acquisitions of properties and for exploration, development and production activities.

Millions of euros

At December 31st
2014

| | <u>Total</u> | <u>Europe</u> | <u>Venezuela</u> | <u>Peru</u> | <u>United States</u> | <u>Rest of America</u> | <u>Africa</u> | <u>Asia</u> | <u>Oceania</u> |
|------------------------------------|--------------|---------------|------------------|-------------|----------------------|------------------------|---------------|-------------|----------------|
| Fully-consolidated entities | | | | | | | | | |
| Acquisition of proved properties | 34 | - | - | - | 34 | - | - | - | - |
| Acquisition of unproved properties | 20 | - | - | - | 20 | - | - | - | - |
| Exploration costs | 1,288 | 213 | - | 68 | 373 | 170 | 309 | 147 | 8 |
| Development costs | 567 | 30 | 15 | (34) | 305 | 189 | 62 | - | - |
| Costs Incurred | 1,909 | 243 | 15 | 34 | 732 | 359 | 371 | 147 | 8 |
| Equity-accounted investees | | | | | | | | | |
| Acquisition of proved properties | - | - | - | - | - | - | - | - | - |
| Acquisition of unproved properties | - | - | - | - | - | - | - | - | - |
| Exploration costs | 95 | - | - | - | - | 93 | 1 | 1 | - |
| Development costs | 980 | - | 366 | - | - | 592 | - | 22 | - |
| Costs Incurred | 1,075 | - | 366 | - | - | 685 | 1 | 23 | - |
| Total Costs Incurred (1) | 2,984 | 243 | 381 | 34 | 732 | 1,044 | 372 | 170 | 8 |

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Millions of euros

At December 31st
2015 (2)

| | <u>Total</u> | <u>Europe</u> | <u>Venezuela</u> | <u>Peru</u> | <u>United States</u> | <u>Rest of America</u> | <u>Africa</u> | <u>Asia</u> | <u>Oceania</u> |
|------------------------------------|---------------|---------------|------------------|-------------|----------------------|------------------------|---------------|--------------|----------------|
| Fully-consolidated entities | | | | | | | | | |
| Acquisition of proved properties | 6,666 | 354 | - | - | 2,191 | 1,217 | 203 | 2,625 | 76 |
| Acquisition of unproved properties | 7,213 | 102 | - | - | 2,217 | 2,631 | 165 | 1,765 | 333 |
| Exploration costs | 1,287 | 179 | - | 34 | 552 | 111 | 261 | 133 | 17 |
| Development costs | 760 | 65 | 2 | (41) | 367 | 185 | 100 | 84 | (2) |
| Costs Incurred | 15,926 | 700 | 2 | (7) | 5,327 | 4,144 | 729 | 4,607 | 424 |
| Equity-accounted investees | | | | | | | | | |
| Acquisition of proved properties | 358 | - | - | - | - | 358 | - | - | - |
| Acquisition of unproved properties | 91 | - | - | - | - | 91 | - | - | - |
| Exploration costs | 118 | 12 | - | - | - | 104 | 1 | 1 | - |
| Development costs | 1,481 | 200 | 535 | - | - | 728 | - | 18 | - |
| Costs Incurred | 2,048 | 212 | 535 | - | - | 1,281 | 1 | 19 | - |
| Total Costs Incurred (1) | 17,974 | 912 | 537 | (7) | 5,327 | 5,425 | 730 | 4,626 | 424 |

Millions of euros

At December 31st
2016

| | <u>Total</u> | <u>Europe</u> | <u>Venezuela</u> | <u>Peru</u> | <u>United States</u> | <u>Rest of America</u> | <u>Africa</u> | <u>Asia</u> | <u>Oceania</u> |
|------------------------------------|--------------|---------------|------------------|-------------|----------------------|------------------------|---------------|-------------|----------------|
| Fully-consolidated entities | | | | | | | | | |
| Acquisition of proved properties | 54 | - | - | - | 2 | 52 | - | - | - |
| Acquisition of unproved properties | - | - | - | - | - | - | - | - | - |
| Exploration costs | 556 | 90 | - | 13 | 100 | 57 | 72 | 168 | 56 |
| Development costs | 1,085 | 20 | 2 | 56 | 274 | 256 | 225 | 257 | (5) |
| Costs Incurred | 1,695 | 110 | 2 | 69 | 376 | 365 | 297 | 425 | 51 |
| Equity-accounted investees | | | | | | | | | |
| Acquisition of proved properties | - | - | - | - | - | - | - | - | - |
| Acquisition of unproved properties | - | - | - | - | - | - | - | - | - |
| Exploration costs | 79 | 1 | - | - | - | 78 | - | - | - |
| Development costs | 1,091 | 145 | 107 | - | - | 822 | - | 17 | - |
| Costs Incurred | 1,170 | 146 | 107 | - | - | 900 | - | 17 | - |
| Total Costs Incurred | 2,865 | 256 | 109 | 69 | 376 | 1,265 | 297 | 442 | 51 |

- (1) The tables for 2015 and 2014 have been restated as a result of a change in the Group's accounting principles. Total figures for 2015 and 2014 have accordingly increased by 78 million euros and 58 million euros, respectively.
- (2) At December 31, 2015, this heading mainly includes the addition of exploration, development and producing assets related to the acquisition of Talisman Energy Inc. amounting to €14,178 million, of which €13,729 million correspond to fully-consolidated companies and €449 million to investees.

Results of oil and gas exploration and production activities

The following table shows the revenues and expenses associated directly with the Group's oil and gas exploration and production activities. It does not include any allocation of the finance costs or general expenses, except for the accretion expense, and, therefore, is not necessarily indicative of the contribution to consolidated net profit of the oil and gas activities.

Millions of euros

At December 31st
2014

| | Total | Europe | Venezuela | Peru | United States | Rest of America | Africa | Asia | Oceania |
|---|--------------|--------------|-------------|------------|---------------|-----------------|-------------|-------------|------------|
| Fully-consolidated entities | | | | | | | | | |
| Income | | | | | | | | | |
| Sales to non-Group companies | 662 | - | 10 | 260 | 90 | 277 | 25 | - | - |
| Sales between business segments and to Group Companies | 1,356 | 148 | - | 39 | 675 | 323 | 171 | - | - |
| Total income | 2,018 | 148 | 10 | 299 | 765 | 600 | 196 | - | - |
| Production costs (1) | (524) | (27) | (34) | (128) | (20) | (226) | (89) | - | - |
| Exploration expenses (2) | (785) | (204) | - | (3) | (174) | (116) | (198) | (89) | (1) |
| Other operating expenses | 244 | (7) | - | (1) | (1) | (5) | 258 | - | - |
| Depreciation and amortisation charge (3) | (1,187) | (60) | (2) | (65) | (723) | (231) | (105) | (1) | - |
| Profit (Loss) before taxes and charges | (234) | (150) | (26) | 102 | (153) | 22 | 62 | (90) | (1) |
| Taxes and charges | (14) | 56 | 6 | (35) | 53 | (1) | (119) | 32 | (6) |
| Results of oil and gas production activities | (248) | (94) | (20) | 67 | (100) | 21 | (57) | (58) | (7) |
| Equity-accounted investees | | | | | | | | | |
| Income | | | | | | | | | |
| Sales to non-Group companies.. | 1,705 | - | 409 | - | - | 1,136 | - | 160 | - |
| Sales between business segments and to Group Companies | 229 | - | - | - | - | 229 | - | - | - |
| Total income.. | 1,934 | - | 409 | - | - | 1,365 | - | 160 | - |
| Production costs (1) | (683) | - | (189) | - | - | (410) | - | (84) | - |
| Exploration expenses (2) | (85) | - | - | - | - | (85) | - | - | - |
| Other operating expenses | (7) | - | (2) | - | - | (4) | - | (1) | - |
| Depreciation and amortisation charge (3) | (414) | - | (43) | - | - | (327) | - | (44) | - |
| Profit (Loss) before taxes and charges . | 745 | - | 175 | - | - | 539 | - | 31 | - |
| Taxes and charges | (325) | - | (44) | - | - | (277) | - | (4) | - |
| Results of oil and gas production activities | 420 | - | 131 | - | - | 262 | - | 27 | - |
| Total results of oil and gas production activities (4) | 172 | (94) | 111 | 67 | (100) | 283 | (57) | (31) | (7) |

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Millions of euros

At December 31st
2015

| | Total | Europe | Venezuela | Peru | United States | Rest of America | Africa | Asia | Oceania |
|---|----------------|--------------|--------------|-------------|----------------|-----------------|--------------|--------------|------------|
| Fully-consolidated entities | | | | | | | | | |
| Income | | | | | | | | | |
| Sales to non-Group companies | 2,043 | 169 | 12 | 178 | 387 | 606 | 36 | 637 | 18 |
| Sales between business segments and to Group Companies | 698 | 63 | - | 30 | 383 | 130 | 92 | - | - |
| Total income | 2,741 | 232 | 12 | 208 | 770 | 736 | 128 | 637 | 18 |
| Production costs (1) | (1,316) | (180) | (63) | (147) | (184) | (353) | (81) | (292) | (16) |
| Exploration expenses (2) | (1,805) | (350) | - | (46) | (590) | (96) | (602) | (118) | (3) |
| Other operating expenses | (76) | (26) | - | - | (6) | (20) | (17) | (5) | (2) |
| Depreciation and amortisation charge (3) | (4,056) | (370) | (66) | (42) | (1,417) | (1,004) | (292) | (865) | - |
| Profit (Loss) before taxes and charges | (4,512) | (694) | (117) | (27) | (1,427) | (737) | (864) | (643) | (3) |
| Taxes and charges | 1,359 | 278 | 12 | 6 | 455 | 176 | 267 | 164 | 1 |
| Results of oil and gas production activities | (3,153) | (416) | (105) | (21) | (972) | (561) | (597) | (479) | (2) |
| Equity-accounted investees | | | | | | | | | |
| Income | | | | | | | | | |
| Sales to non-Group companies.. | 1,716 | 253 | 363 | - | - | 962 | - | 138 | - |
| Sales between business segments and to Group Companies | 294 | - | - | - | - | 294 | - | - | - |
| Total income.. | 2,010 | 253 | 363 | - | - | 1,256 | - | 138 | - |
| Production costs (1) | (1,457) | (249) | (386) | - | - | (741) | - | (81) | - |
| Exploration expenses (2) | (7) | (1) | - | - | - | 22 | (28) | - | - |
| Other operating expenses | (15) | - | (3) | - | - | (12) | - | - | - |
| Depreciation and amortisation charge (3) | (1,073) | (2) | (452) | - | - | (598) | - | (21) | - |
| Profit (Loss) before taxes and charges . | (542) | 1 | (478) | - | - | (73) | (28) | 36 | - |
| Taxes and charges | (56) | - | 50 | - | - | (107) | 8 | (7) | - |
| Results of oil and gas production activities | (598) | 1 | (428) | - | - | (180) | (20) | 29 | - |
| Total results of oil and gas production activities (4) | (3,751) | (415) | (533) | (21) | (972) | (741) | (617) | (450) | (2) |

Millions of euros

At December 31st
2016

| | Total | Europe | Venezuela | Peru | United States | Rest of America | Africa | Asia | Oceania |
|---|--------------|--------------|--------------|-------------|---------------|-----------------|--------------|------------|--------------|
| Fully-consolidated entities | | | | | | | | | |
| Income | | | | | | | | | |
| Sales to non-Group companies | 2,445 | 366 | 11 | 210 | 464 | 538 | 20 | 828 | 8 |
| Sales between business segments and to Group Companies | 460 | 29 | - | 12 | 271 | 42 | 106 | - | - |
| Total income | 2,905 | 395 | 11 | 222 | 735 | 580 | 126 | 828 | 8 |
| Production costs (1) | (1,414) | (202) | (22) | (126) | (293) | (325) | (74) | (356) | (16) |
| Exploration expenses (2) | (541) | (133) | - | (60) | (103) | (10) | (140) | (6) | (89) |
| Other operating expenses | (100) | 107 | (113) | (1) | (7) | (76) | (19) | 14 | (5) |
| Depreciation and amortisation charge (3) | (1,548) | (137) | 42 | (50) | (604) | (354) | (159) | (286) | - |
| Profit (Loss) before taxes and charges | (698) | 30 | (82) | (15) | (272) | (185) | (266) | 194 | (102) |
| Taxes and charges | (41) | (151) | (137) | 4 | 264 | 28 | 86 | (139) | 4 |
| Results of oil and gas production activities | (739) | (121) | (219) | (11) | (8) | (157) | (180) | 55 | (98) |
| Equity-accounted investees | | | | | | | | | |
| Income | | | | | | | | | |
| Sales to non-Group companies.. | 1,686 | 322 | 480 | - | - | 752 | - | 132 | - |
| Sales between business segments and to Group Companies | 345 | - | - | - | - | 345 | - | - | - |
| Total income.. | 2,031 | 322 | 480 | - | - | 1,097 | - | 132 | - |
| Production costs (1) | (1,176) | (339) | (255) | - | - | (499) | - | (83) | - |
| Exploration expenses (2) | (36) | (2) | - | - | - | (34) | - | - | - |
| Other operating expenses | (9) | 27 | (25) | - | - | (10) | - | (1) | - |
| Depreciation and amortisation charge (3) | (821) | (9) | (326) | - | - | (470) | - | (16) | - |
| Profit (Loss) before taxes and charges . | (11) | (1) | (126) | - | - | 84 | - | 32 | - |
| Taxes and charges | (88) | - | (188) | - | - | 108 | - | (8) | - |
| Results of oil and gas production activities | (99) | (1) | (314) | - | - | 192 | - | 24 | - |
| Total results of oil and gas production activities | (838) | (122) | (533) | (11) | (8) | 35 | (180) | 79 | (98) |

(1) Production costs include local taxes, production taxes and other similar payments amounting to €361, €347 and €375 million in 2016, 2015 and 2014, respectively. It also includes transport and other costs totalling €345, €893 and €318 million in 2016, 2015 and 2014, respectively.

(2) Operating expenses include charges for the impairment of exploration assets of €74, €588 and €167 million in 2016, 2015 and 2014, respectively. This same heading also includes provisions for onerous drilling platform contracts in the amount of €109 and €174 million in 2016 and 2015, respectively.

(3) The depreciation and provisions heading includes charges for the impairment of producing and development assets and provisions for onerous contracts totalling €267, €2,933 and €539 million in 2016, 2015 and 2014, respectively. The amount for 2014 has been restated to include such provisions.

(4) The tables for 2015 and 2014 have been restated as a result of a change in the Group's accounting principles. Results for 2015 have accordingly decreased by 179 million euros, while results for 2014 have increased by 13 million euros.

Estimated proved net developed and undeveloped oil and gas reserves

The tables below reflect the net developed and undeveloped proved reserves of crude oil, condensates, LPG and natural gas, including the volume of reserves equivalent to the financial income obtained under certain production-sharing contracts in force as of December 31, 2016, 2015 and 2014, and the variations therein.

In determining net reserves, we exclude from our reported reserves royalties due to others, whether payable in cash or in kind, where the royalty owner has a direct interest in the underlying production and is able to make lifting and sales arrangements independently. By contrast, to the extent that royalty payments required to be made to a third party, whether payable in cash or in kind, are a financial obligation, or are substantially equivalent to a production or severance tax, the related reserves are not excluded from our reported reserves despite the fact that such payments are referred to as “royalties” under local rules. We follow the same methodology in reporting our production amounts.

Until 2014, Repsol had been voluntarily applying the oil and gas reserves reporting and disclosure guidance and framework established by the Securities Exchange Commission (SEC) and the criteria established by the Society of Petroleum Engineers’ Petroleum Resource Management System (SPE-PRMS) to estimate its probable and possible reserves. As from year-end 2015, in the wake of the acquisition of the Talisman group (which estimates its reserves using the Canadian Oil and Gas Evaluation Handbook "COGE Handbook", pursuant to the Canadian Administrator's National Instrument 51-101 Standards of Disclosure for Oil and Gas Activities) and in order to facilitate its integration and enable consistent reserve and resource management, the Repsol Group has decided to use the SPE-PRMS criteria for proved reserve reporting purposes. In accordance with these rules, proved oil and gas reserves are those quantities of oil and gas, which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be commercially recoverable – from a given date forward, from known reservoirs, and under existing economic conditions, operating methods, and government regulations – prior to the time at which contracts providing the right to operate expire, regardless of whether deterministic or probabilistic methods are used for the estimation. The project to extract the hydrocarbons must have commenced or the operator must be reasonable certain that it will commence the project within a reasonable time.

All of Repsol’s oil and gas reserves have been estimated by the company’s petroleum engineers.

To control the quality of reserves booked, Repsol has established a process that is integrated into Repsol’s internal control system. The process to manage reserves booking is centrally controlled by the Reserve Control Direction which is independent from the upstream activities and it is overseen by the Audit and Control Committee. Furthermore, the volumes booked are submitted to third party engineers for a reserves audit on a periodic basis (at least 95% of the reserves are externally audited on a three years cycle).

For those areas submitted to third party audit, Repsol’s proved reserves figures have to be within 7% of the third party reserves audit figures for Repsol to declare that the reserves information meets the third party reserves audit standards. In the event that the difference is greater than 7% tolerance, Repsol reestimates its proved reserves to achieve this tolerance level or discloses the third party reserves audit figures. In 2016, Repsol commissioned an external audit for various areas of South America and North America.

Proved developed and undeveloped reserves of crude oil, condensate GPL:

Millions of barrels

| | Total | Europe | Venezuela | Peru | United States | Rest of America | Africa | Asia | Oceania |
|--|--------------|---------------|------------------|-------------|----------------------|------------------------|---------------|-------------|----------------|
| Fully-consolidated entities | | | | | | | | | |
| Reserves at December 31st, 2013 (1) | 275 | 4 | - | 78 | 38 | 44 | 113 | - | - |
| Revisions of previous estimates | 20 | 1 | - | - | 18 | 3 | (2) | - | - |
| Improved recovery | - | - | - | - | - | - | - | - | - |
| Extensions and discoveries | 13 | - | - | 11 | - | 2 | - | - | - |
| Purchases of minerals in place | - | - | - | - | - | - | - | - | - |
| Sales of minerals in place | - | - | - | - | - | - | - | - | - |
| Production (1) | (31) | (2) | - | (4) | (10) | (9) | (6) | - | - |
| Reserves at December 31st, 2014 (1) | 278 | 3 | - | 84 | 45 | 40 | 105 | - | - |
| Revisions of previous estimates | 20 | 7 | - | - | 4 | 10 | (1) | 4 | (2) |
| Improved recovery | - | - | - | - | - | - | - | - | - |
| Extensions and discoveries | 17 | - | - | - | 10 | 6 | - | - | - |
| Purchases of minerals in place | 138 | 8 | - | - | 48 | 53 | 8 | 17 | 3 |
| Sales of minerals in place | (13) | - | - | - | (13) | - | - | - | - |
| Production (1) | (44) | (4) | - | (4) | (13) | (14) | (3) | (5) | - |
| Reserves at December 31st, 2015 (1) | 396 | 13 | - | 80 | 82 | 96 | 110 | 16 | - |
| Revisions of previous estimates | 28 | 9 | - | 4 | 1 | 3 | 1 | 10 | - |
| Improved recovery | - | - | - | - | - | - | - | - | - |
| Extensions and discoveries | 27 | - | - | 17 | 6 | 4 | - | - | - |
| Purchases of minerals in place | 1 | - | - | - | - | 1 | - | - | - |
| Sales of minerals in place | (20) | - | - | - | - | (19) | - | (1) | - |
| Production (1) | (51) | (8) | - | (5) | (12) | (16) | (3) | (7) | - |
| Reserves at December 31st, 2016 (1) | 380 | 14 | - | 96 | 77 | 68 | 107 | 18 | - |

Millions of barrels

| | Total | Europe | Venezuela | Peru | United States | Rest of America | Africa | Asia | Oceania |
|--|------------|-----------|-----------|-----------|---------------|-----------------|------------|-----------|----------|
| Equity-accounted investees | | | | | | | | | |
| Reserves at December 31st, 2013 (1) | 146 | - | 44 | - | - | 76 | - | 26 | - |
| Revisions of previous estimates | 22 | - | 3 | - | - | 10 | - | 8 | - |
| Improved recovery | - | - | - | - | - | - | - | - | - |
| Extensions and discoveries | 13 | - | - | - | - | 13 | - | - | - |
| Purchases of minerals in place | - | - | - | - | - | - | - | - | - |
| Sales of minerals in place | - | - | - | - | - | - | - | - | - |
| Production (1) | (18) | - | (5) | - | - | (9) | - | (4) | - |
| Reserves at December 31st, 2014 (1) | 163 | - | 42 | - | - | 90 | - | 30 | - |
| Revisions of previous estimates | 8 | (9) | 4 | - | - | 9 | - | 3 | - |
| Improved recovery | - | - | - | - | - | - | - | - | - |
| Extensions and discoveries | - | - | - | - | - | - | - | - | - |
| Purchases of minerals in place | 52 | 44 | - | - | - | 9 | - | - | - |
| Sales of minerals in place | - | - | - | - | - | - | - | - | - |
| Production (1) | (31) | (5) | (5) | - | - | (17) | - | (4) | - |
| Reserves at December 31st, 2015 (1) | 192 | 30 | 42 | - | - | 91 | - | 29 | - |
| Revisions of previous estimates | 30 | 18 | 11 | - | - | (3) | - | 4 | - |
| Improved recovery | 19 | - | - | - | - | 19 | - | - | - |
| Extensions and discoveries | - | - | - | - | - | - | - | - | - |
| Purchases of minerals in place | - | - | - | - | - | - | - | - | - |
| Sales of minerals in place | - | - | - | - | - | - | - | - | - |
| Production (1) | (38) | (8) | (5) | - | - | (21) | - | (4) | - |
| Reserves at December 31st, 2016 (1) | 204 | 40 | 48 | - | - | 87 | - | 29 | - |
| Total Fully-consolidated entities and Equity-accounted in | 584 | 54 | 48 | 96 | 77 | 155 | 107 | 47 | 0 |

Proved developed reserves of crude oil, condensate GPL:

| | Total | Europe | Venezuela | Peru | United States | Rest of America | Africa | Asia | Oceania |
|-------------------------------|------------|-----------|-----------|-----------|---------------|-----------------|-----------|-----------|---------|
| At December 31st, 2013 | 238 | 3 | 33 | 39 | 13 | 62 | 68 | 19 | - |
| Fully-consolidated entities | 162 | 3 | - | 39 | 13 | 38 | 68 | - | - |
| Equity-accounted investees | 76 | - | 33 | - | - | 24 | - | 19 | - |
| At December 31st, 2014 | 265 | 3 | 31 | 52 | 25 | 65 | 65 | 24 | - |
| Fully-consolidated entities | 181 | 3 | - | 52 | 25 | 36 | 65 | - | - |
| Equity-accounted investees | 84 | - | 31 | - | - | 29 | - | 24 | - |
| At December 31st, 2015 | 418 | 36 | 32 | 50 | 52 | 137 | 71 | 40 | - |
| Fully-consolidated entities | 283 | 13 | - | 50 | 52 | 82 | 71 | 15 | - |
| Equity-accounted investees | 135 | 23 | 32 | - | - | 55 | - | 25 | - |
| At December 31st, 2016 | 407 | 50 | 33 | 48 | 46 | 123 | 68 | 40 | - |
| Fully-consolidated entities | 250 | 13 | - | 48 | 46 | 59 | 68 | 17 | - |
| Equity-accounted investees | 157 | 37 | 33 | - | - | 64 | - | 23 | - |

Note: The aggregated changes in reserves and total reserves at December 31 may differ from the individual values shown because the calculations use more precise figures than those shown in the table.

(1) Total net proved developed and undeveloped reserves at December 31, 2016, 2015, 2014 and 2013 include an estimated volume of approximately 45, 45, 46 and 44 million barrels of oil equivalent, respectively, corresponding to royalty payments which, as described above, constitute a financial obligation or are substantially equivalent to a production or equivalent tax. Net production in 2016, 2015, 2014 and 2013 includes an estimated volume of 4, 4, 4 and 4 million barrels of oil equivalent, respectively, in connection with such payments.

Developed and undeveloped proved reserves of natural Gas:

Thousand Millions of Standard Cubic Feet

| | Total | Europe | Venezuela | Peru | United States | Rest of America | Africa | Asia | Oceania |
|--|--------------|-----------|-----------|--------------|---------------|-----------------|------------|------------|---------|
| Fully-consolidated entities | | | | | | | | | |
| Reserves at December 31st, 2013 (1) | 2,043 | - | 88 | 1,433 | 44 | 329 | 148 | - | - |
| Revisions of previous estimates | (9) | - | - | - | 52 | (38) | (24) | - | - |
| Improved recovery | - | - | - | - | - | - | - | - | - |
| Extensions and discoveries | 174 | - | - | 173 | - | 1 | - | - | - |
| Purchases of minerals in place | - | - | - | - | - | - | - | - | - |
| Sales of minerals in place | - | - | - | - | - | - | - | - | - |
| Production (1) | (120) | (1) | (6) | (53) | (14) | (36) | (11) | - | - |
| Reserves at December 31st, 2014 (1) | 2,088 | - | 82 | 1,553 | 83 | 256 | 113 | - | - |
| Revisions of previous estimates | 120 | 3 | (29) | 48 | (51) | 121 | 5 | 23 | - |
| Improved recovery | - | - | - | - | - | - | - | - | - |
| Extensions and discoveries | 278 | - | - | - | 194 | 85 | - | - | - |
| Purchases of minerals in place | 2,985 | 16 | - | - | 1,691 | 419 | - | 858 | - |
| Sales of minerals in place | (49) | - | - | - | (49) | - | - | - | - |
| Production (1) | (383) | (6) | (6) | (52) | (134) | (86) | (16) | (82) | - |
| Reserves at December 31st, 2015 (1) | 5,039 | 14 | 47 | 1,549 | 1,733 | 794 | 103 | 799 | - |
| Revisions of previous estimates | 247 | 24 | 2 | 106 | (28) | (7) | 11 | 140 | - |
| Improved recovery | - | - | - | - | - | - | - | - | - |
| Extensions and discoveries | 545 | - | - | 310 | 111 | 95 | - | 30 | - |
| Purchases of minerals in place | 15 | - | - | - | 10 | 4 | - | - | - |
| Sales of minerals in place | (198) | - | - | - | - | (6) | - | (192) | - |
| Production (1) | (533) | (16) | (5) | (68) | (180) | (124) | (16) | (124) | - |
| Reserves at December 31st, 2016 (1) | 5,116 | 21 | 44 | 1,897 | 1,646 | 757 | 98 | 653 | - |

Thousand Millions of Standard Cubic Feet

| | Total | Europe | Venezuela | Peru | United States | Rest of America | Africa | Asia | Oceania |
|---|---------------|-----------|--------------|--------------|---------------|-----------------|-----------|------------|---------|
| Equity-accounted investees | | | | | | | | | |
| Reserves at December 31st, 2013 (1) | 4,095 | - | 2,216 | - | - | 1,806 | - | 73 | - |
| Revisions of previous estimates | 315 | - | 4 | - | - | 315 | - | (4) | - |
| Improved recovery | - | - | - | - | - | - | - | - | - |
| Extensions and discoveries | - | - | - | - | - | - | - | - | - |
| Purchases of minerals in place | - | - | - | - | - | - | - | - | - |
| Sales of minerals in place | (2) | - | - | - | - | (2) | - | - | - |
| Production (1) | (332) | - | (42) | - | - | (276) | - | (14) | - |
| Reserves at December 31st, 2014 (1) | 4,076 | - | 2,177 | - | - | 1,844 | - | 55 | - |
| Revisions of previous estimates | 1,173 | 5 | 952 | - | - | 216 | - | - | - |
| Improved recovery | - | - | - | - | - | - | - | - | - |
| Extensions and discoveries | - | - | - | - | - | - | - | - | - |
| Purchases of minerals in place | 75 | 25 | - | - | - | 51 | - | - | - |
| Sales of minerals in place | - | - | - | - | - | - | - | - | - |
| Production (1) | (338) | (1) | (63) | - | - | (260) | - | (15) | - |
| Reserves at December 31st, 2015 (1) | 4,986 | 28 | 3,067 | - | - | 1,851 | - | 40 | - |
| Revisions of previous estimates | 369 | (1) | 86 | - | - | 253 | - | 32 | - |
| Improved recovery | 7 | - | - | - | - | 7 | - | - | - |
| Extensions and discoveries | - | - | - | - | - | - | - | - | - |
| Purchases of minerals in place | - | - | - | - | - | - | - | - | - |
| Sales of minerals in place | - | - | - | - | - | - | - | - | - |
| Production (1) | (385) | (1) | (124) | - | - | (247) | - | (14) | - |
| Reserves at December 31st, 2016 (1) | 4,977 | 26 | 3,029 | - | - | 1,864 | - | 58 | - |
| Total reserves ad Decemeber 31st, 2016 | 10,093 | 47 | 3,073 | 1,897 | 1,646 | 2,621 | 98 | 711 | - |

Translation of a report originally issued in Spanish.
In the event of a discrepancy, the Spanish language version prevails.

Proved developed reserves of natural gas:

Thousand Millions of Standard Cubic Feet

| | Total | Europe | Venezuela | Peru | United States | Rest of America | Africa | Asia | Oceania |
|-------------------------------|--------------|-----------|--------------|------------|---------------|-----------------|-----------|------------|---------|
| At December 31st, 2013 | 1,998 | 0 | 241 | 691 | 24 | 980 | 41 | 22 | - |
| Fully-consolidated entities | 997 | 0 | 43 | 691 | 24 | 199 | 41 | - | - |
| Equity-accounted investees | 1,001 | - | 198 | - | - | 781 | - | 22 | - |
| At December 31st, 2014 | 2,251 | - | 195 | 926 | 49 | 1,016 | 65 | - | - |
| Fully-consolidated entities | 1,262 | - | 37 | 926 | 49 | 218 | 32 | - | - |
| Equity-accounted investees | 989 | - | 158 | - | - | 798 | 33 | - | - |
| At December 31st, 2015 | 5,697 | 15 | 1,308 | 926 | 1,120 | 1,622 | 33 | 673 | - |
| Fully-consolidated entities | 3,475 | 14 | 47 | 926 | 1,120 | 681 | 33 | 654 | - |
| Equity-accounted investees | 2,222 | 1 | 1,261 | - | - | 941 | - | 19 | - |
| At December 31st, 2016 | 6,054 | 21 | 2,014 | 933 | 1,112 | 1,403 | 18 | 554 | - |
| Fully-consolidated entities | 3,249 | 19 | 44 | 933 | 1,112 | 596 | 18 | 528 | - |
| Equity-accounted investees | 2,805 | 2 | 1,971 | - | - | 807 | - | 26 | - |

Notes: The aggregated changes in reserves and total reserves at December 31 may differ from the individual values shown because the calculations use more precise figures than those shown in the table.

(1) Total net proved developed and undeveloped reserves at December 31, 2016, 2015, 2014 and 2013 include an estimated volume of approximately 1,273 1,264, 1,144 and 1,052 billion cubic feet of gas, respectively, corresponding to royalty payments which, as described above, constitute a financial obligation or are substantially equivalent to a production or equivalent tax. Net production in 2016, 2015, 2014 and 2013 includes an estimated volume of 64, 47, 32 and 40 billion cubic feet of gas, respectively, in connection with such payments.

Proved developed and undeveloped reserves of crude oil, condensate, natural gas liquids and natural gas:

Millions of Barrels of Oil Equivalent

| | Total | Europe | Venezuela | Peru | United States | Rest of America | Africa | Asia | Oceania |
|--|--------------|-----------|-----------|------------|---------------|-----------------|------------|------------|---------|
| Fully-consolidated entities | | | | | | | | | |
| Reserves at December 31st, 2013 (1) | 639 | 4 | 16 | 333 | 45 | 103 | 139 | - | - |
| Revisions of previous estimates | 19 | 1 | - | - | 27 | (3) | (6) | - | - |
| Improved recovery | - | - | - | - | - | - | - | - | - |
| Extensions and discoveries | 44 | - | - | 42 | - | 3 | - | - | - |
| Purchases of minerals in place | - | - | - | - | - | - | - | - | - |
| Sales of minerals in place | - | - | - | - | - | - | - | - | - |
| Production (1) | (52) | (2) | (1) | (14) | (13) | (15) | (8) | - | - |
| Reserves at December 31st, 2014 (1) | 650 | 3 | 15 | 361 | 60 | 86 | 125 | - | - |
| Revisions of previous estimates | 42 | 7 | (5) | 9 | (5) | 31 | - | 8 | (2) |
| Improved recovery | - | - | - | - | - | - | - | - | - |
| Extensions and discoveries | 66 | - | - | - | 45 | 21 | - | - | - |
| Purchases of minerals in place | 669 | 11 | - | - | 350 | 128 | 8 | 170 | 3 |
| Sales of minerals in place | (22) | - | - | - | (22) | - | - | - | - |
| Production (1) | (112) | (6) | (1) | (13) | (37) | (30) | (5) | (20) | - |
| Reserves at December 31st, 2015 (1) | 1,293 | 16 | 8 | 356 | 390 | 237 | 128 | 158 | - |
| Revisions of previous estimates | 72 | 13 | - | 23 | (4) | 2 | 3 | 35 | - |
| Improved recovery | - | - | - | - | - | - | - | - | - |
| Extensions and discoveries | 124 | - | - | 72 | 25 | 21 | - | 6 | - |
| Purchases of minerals in place | 4 | - | - | - | 2 | 1 | - | - | - |
| Sales of minerals in place | (55) | - | - | - | - | (20) | - | (35) | - |
| Production (1) | (146) | (11) | (1) | (17) | (44) | (38) | (6) | (29) | - |
| Reserves at December 31st, 2016 (1) | 1,291 | 17 | 8 | 434 | 370 | 203 | 125 | 135 | - |

Translation of a report originally issued in Spanish.
In the event of a discrepancy, the Spanish language version prevails.

Millions of Barrels of Oil Equivalent

| | Total | Europe | Venezuela | Peru | United States | Rest of America | Africa | Asia | Oceania |
|--|--------------|-----------|------------|------------|---------------|-----------------|------------|------------|---------|
| Equity-accounted investees | | | | | | | | | |
| Reserves at December 31st, 2013 (1) | 875 | - | 438 | - | - | 398 | - | 39 | - |
| Revisions of previous estimates | 78 | - | 4 | - | - | 67 | - | 7 | - |
| Improved recovery | - | - | - | - | - | - | - | - | - |
| Extensions and discoveries | 13 | - | - | - | - | 13 | - | - | - |
| Purchases of minerals in place | - | - | - | - | - | - | - | - | - |
| Sales of minerals in place | - | - | - | - | - | - | - | - | - |
| Production (1) | (77) | - | (12) | - | - | (58) | - | (6) | - |
| Reserves at December 31st, 2014 (1) | 889 | - | 430 | - | - | 419 | - | 40 | - |
| Revisions of previous estimates | 216 | (8) | 174 | - | - | 47 | - | 3 | - |
| Improved recovery | - | - | - | - | - | - | - | - | - |
| Extensions and discoveries | - | - | - | - | - | - | - | - | - |
| Purchases of minerals in place | 66 | 48 | - | - | - | 18 | - | - | - |
| Sales of minerals in place | - | - | - | - | - | - | - | - | - |
| Production (1) | (92) | (5) | (16) | - | - | (63) | - | (7) | - |
| Reserves at December 31st, 2015 (1) | 1,080 | 35 | 588 | - | - | 420 | - | 36 | - |
| Revisions of previous estimates | 96 | 18 | 27 | - | - | 42 | - | 9 | - |
| Improved recovery | 21 | - | - | - | - | 21 | - | - | - |
| Extensions and discoveries | - | - | - | - | - | - | - | - | - |
| Purchases of minerals in place | - | - | - | - | - | - | - | - | - |
| Sales of minerals in place | - | - | - | - | - | - | - | - | - |
| Production (1) | (106) | (8) | (27) | - | - | (65) | - | (7) | - |
| Reserves at December 31st, 2016 (1) | 1,090 | 45 | 588 | - | - | 419 | - | 39 | - |
| Total Fully-consolidated entities and Equity-accounted in | 2,382 | 62 | 595 | 434 | 370 | 622 | 125 | 174 | - |

Proved developed reserves of crude oil, condensate, natural gas liquids and natural gas

Millions of Barrels of Oil Equivalent

| | Total | Europe | Venezuela | Peru | United States | Rest of America | Africa | Asia | Oceania |
|-------------------------------|--------------|-----------|------------|------------|---------------|-----------------|------------|------------|---------|
| At December 31st, 2013 | 594 | 3 | 76 | 162 | 18 | 237 | 75 | 22 | - |
| Fully-consolidated entities | 340 | 3 | 8 | 162 | 18 | 74 | 75 | - | - |
| Equity-accounted investees | 254 | - | 68 | - | - | 163 | - | 22 | - |
| At December 31st, 2014 | 666 | 3 | 66 | 217 | 33 | 245 | 102 | - | - |
| Fully-consolidated entities | 405 | 3 | 7 | 217 | 33 | 74 | 71 | - | - |
| Equity-accounted investees | 261 | - | 59 | - | - | 171 | 31 | - | - |
| At December 31st, 2015 | 1,430 | 38 | 264 | 214 | 251 | 426 | 77 | 160 | - |
| Fully-consolidated entities | 901 | 15 | 8 | 214 | 251 | 204 | 77 | 132 | - |
| Equity-accounted investees | 529 | 23 | 256 | - | - | 222 | - | 28 | - |
| At December 31st, 2016 | 1,485 | 53 | 392 | 214 | 244 | 373 | 71 | 139 | - |
| Fully-consolidated entities | 829 | 16 | 8 | 214 | 244 | 165 | 71 | 111 | - |
| Equity-accounted investees | 656 | 37 | 384 | - | - | 208 | - | 28 | - |

Notes: The aggregated changes in reserves and total reserves at December 31 may differ from the individual values shown because the calculations use more precise figures than those shown in the table.

(1) Total net proved developed and undeveloped reserves at December 31, 2016, 2015, 2014 and 2013 include an estimated volume of approximately 272, 271, 250 and 231 million barrels of oil equivalent, respectively, corresponding to royalty payments which, as described above, constitute a financial obligation or are substantially equivalent to a production or equivalent tax. Net production in 2016, 2015, 2014 and 2013 includes an estimated volume of 15, 12, 10 and 11 million barrels of oil equivalent, respectively, in connection with such payments.

Information on acreage and exploration activities

The following tables disclose details of Repsol's acreage and exploration and development activities by geographical region:

| (km ²) | Developed and undeveloped acreage | | | | | | | | | | | |
|--------------------------|-----------------------------------|--------------------|----------------------------|--------------------|--------------------------|--------------------|----------------------------|--------------------|--------------------------|--------------------|----------------------------|--------------------|
| | 2016 | | | | 2015 | | | | 2014 | | | |
| | Developed ⁽¹⁾ | | Undeveloped ⁽²⁾ | | Developed ⁽¹⁾ | | Undeveloped ⁽²⁾ | | Developed ⁽¹⁾ | | Undeveloped ⁽²⁾ | |
| | Gross ⁽³⁾ | Net ⁽⁴⁾ | Gross ⁽³⁾ | Net ⁽⁴⁾ | Gross ⁽³⁾ | Net ⁽⁴⁾ | Gross ⁽³⁾ | Net ⁽⁴⁾ | Gross ⁽³⁾ | Net ⁽⁴⁾ | Gross ⁽³⁾ | Net ⁽⁴⁾ |
| Europe | 1,892 | 686 | 60,186 | 28,888 | 1,428 | 525 | 68,862 | 32,409 | 22 | 17 | 64,744 | 28,735 |
| Norway | 303 | 107 | 9,842 | 4,539 | 324 | 92 | 10,676 | 4,608 | - | - | 11,776 | 3,834 |
| United Kingdom | 1,567 | 561 | 699 | 236 | 1,082 | 416 | 2,148 | 684 | - | - | - | - |
| Rest of Europe | 22 | 17 | 49,645 | 24,113 | 22 | 17 | 56,038 | 27,117 | 22 | 17 | 52,968 | 24,901 |
| Latin America | 3,131 | 715 | 132,471 | 57,207 | 2,974 | 698 | 142,580 | 61,725 | 1,945 | 534 | 115,292 | 48,896 |
| Brazil | 838 | 80 | 2,448 | 363 | 549 | 36 | 2,736 | 407 | 121 | 11 | 3,164 | 432 |
| Colombia | 509 | 112 | 74,956 | 28,036 | 651 | 134 | 73,357 | 27,460 | 68 | 5 | 33,078 | 12,866 |
| Peru | 225 | 41 | 21,748 | 13,346 | 200 | 28 | 21,772 | 13,359 | 197 | 26 | 27,743 | 11,966 |
| Trinidad & Tobago | 152 | 45 | 6,238 | 2,109 | 180 | 66 | 7,973 | 3,327 | 181 | 66 | 7,972 | 3,327 |
| Venezuela | 803 | 192 | 2,187 | 661 | 789 | 189 | 2,200 | 664 | 783 | 187 | 2,207 | 666 |
| Rest of Latin America | 604 | 245 | 24,895 | 12,691 | 605 | 245 | 34,542 | 16,508 | 595 | 239 | 41,128 | 19,639 |
| North America | 5,606 | 2,184 | 35,745 | 20,473 | 5,435 | 2,358 | 44,054 | 24,540 | 1,907 | 172 | 29,439 | 9,140 |
| Canada | 2,586 | 1,570 | 27,171 | 16,651 | 2,518 | 1,747 | 27,730 | 17,400 | - | - | 12,438 | 2,599 |
| United States | 3,020 | 614 | 8,574 | 3,822 | 2,917 | 611 | 16,324 | 7,140 | 1,907 | 172 | 17,001 | 6,541 |
| Africa | 2,566 | 713 | 87,592 | 56,825 | 2,670 | 673 | 97,921 | 59,966 | 803 | 204 | 93,713 | 56,053 |
| Asia and Oceania | 1,402 | 564 | 160,302 | 113,633 | 1,759 | 724 | 144,956 | 91,872 | 220 | 108 | 67,590 | 45,454 |
| Indonesia | 661 | 242 | 20,613 | 16,737 | 1,010 | 390 | 27,940 | 23,818 | - | - | 42,512 | 29,252 |
| Malaysia | 414 | 193 | 4,984 | 2,952 | 414 | 199 | 8,456 | 4,162 | - | - | - | - |
| Russia | 222 | 109 | 4,692 | 4,135 | 221 | 108 | 10,771 | 9,670 | 220 | 108 | 10,477 | 9,529 |
| Rest of Asia and Oceania | 104 | 20 | 130,012 | 89,808 | 114 | 27 | 97,789 | 54,222 | - | - | 14,601 | 6,673 |
| Total | 14,598 | 4,862 | 476,297 | 277,027 | 14,266 | 4,978 | 498,373 | 270,512 | 4,898 | 1,035 | 370,777 | 188,278 |

⁽¹⁾ Developed acreage is the number of acres that are allocated or assignable to productive wells. The figures shown reflect operating acreage.

⁽²⁾ Undeveloped acreage is acreage on which wells have not been drilled or completed to a point that would permit the production of commercial quantities of oil and gas, regardless of whether or not the acreage contains proved reserves.. Also includes exploration surface area.

⁽³⁾ Gross acreage is the total acres in which Repsol owns an interest.

⁽⁴⁾ Net acreage is the total of the fractional interest in the gross acreage position.

Translation of a report originally issued in Spanish.
In the event of a discrepancy, the Spanish language version prevails.

| | Acreage | | | | | | | | | | | |
|--------------------------|--|---------------|---------------|----------------|----------------|----------------|--|---------------|---------------|----------------|----------------|----------------|
| | Gross area (km ²) ⁽¹⁾ | | | | | | Net area (km ²) ⁽¹⁾ | | | | | |
| | Development | | | Exploration | | | Development | | | Exploration | | |
| | 2016 | 2015 | 2014 | 2016 | 2015 | 2014 | 2016 | 2015 | 2014 | 2016 | 2015 | 2014 |
| Europe | 2,845 | 2,882 | 399 | 59,233 | 67,408 | 64,367 | 1,230 | 1,312 | 332 | 28,344 | 31,622 | 28,420 |
| Norway | 876 | 853 | - | 9,269 | 10,147 | 11,776 | 343 | 411 | - | 4,304 | 4,289 | 3,834 |
| United Kingdom | 1,570 | 1,630 | - | 695 | 1,600 | - | 555 | 569 | - | 242 | 531 | - |
| Rest of Europe | 399 | 399 | 399 | 49,269 | 55,661 | 52,591 | 332 | 332 | 332 | 23,798 | 26,802 | 24,586 |
| Latin America | 16,883 | 18,119 | 17,547 | 118,719 | 127,435 | 99,690 | 4,736 | 5,884 | 5,759 | 53,186 | 56,539 | 43,671 |
| Brazil | 1,185 | 1,185 | 1,185 | 2,100 | 2,100 | 2,100 | 147 | 147 | 147 | 296 | 296 | 296 |
| Colombia | 2,196 | 1,647 | 1,075 | 73,270 | 72,360 | 32,071 | 375 | 276 | 151 | 27,773 | 27,318 | 12,720 |
| Peru | 2,020 | 2,020 | 2,020 | 19,952 | 19,952 | 25,920 | 202 | 202 | 202 | 13,185 | 13,185 | 11,790 |
| Trinidad & Tobago | 3,804 | 5,579 | 5,579 | 2,585 | 2,574 | 2,574 | 1,121 | 2,363 | 2,363 | 1,034 | 1,030 | 1,030 |
| Venezuela | 2,990 | 2,990 | 2,990 | - | - | - | 853 | 853 | 853 | - | - | - |
| Rest of Latin America | 4,688 | 4,698 | 4,698 | 20,812 | 30,449 | 37,025 | 2,038 | 2,043 | 2,043 | 10,899 | 14,710 | 17,835 |
| North America | 10,881 | 16,205 | 10,168 | 30,470 | 33,284 | 21,178 | 5,316 | 6,442 | 919 | 17,342 | 20,456 | 8,393 |
| Canada | 5,549 | 5,934 | - | 24,208 | 24,314 | 12,438 | 3,813 | 4,375 | - | 14,408 | 14,772 | 2,599 |
| United States | 5,332 | 10,271 | 10,168 | 6,262 | 8,970 | 8,740 | 1,503 | 2,067 | 919 | 2,934 | 5,684 | 5,794 |
| Africa | 12,725 | 12,846 | 12,059 | 77,434 | 87,745 | 82,457 | 2,744 | 2,709 | 2,564 | 54,794 | 57,930 | 53,693 |
| Asia and Oceania | 11,280 | 10,328 | 2,082 | 150,423 | 136,387 | 65,728 | 4,638 | 4,319 | 1,022 | 109,560 | 88,277 | 44,540 |
| Indonesia | 4,279 | 4,837 | - | 16,996 | 24,113 | 42,512 | 1,589 | 1,809 | - | 15,391 | 22,399 | 29,252 |
| Malaysia | 2,393 | 2,311 | - | 3,005 | 6,559 | - | 1,041 | 1,014 | - | 2,104 | 3,347 | - |
| Russia | 1,312 | 1,411 | 2,082 | 3,602 | 9,581 | 8,615 | 642 | 691 | 1,022 | 3,602 | 9,088 | 8,615 |
| Rest of Asia and Oceania | 3,297 | 1,769 | - | 126,820 | 96,134 | 14,601 | 1,365 | 805 | - | 88,463 | 53,443 | 6,673 |
| Total | 54,614 | 60,380 | 42,255 | 436,280 | 452,259 | 333,420 | 18,664 | 20,666 | 10,596 | 263,226 | 254,824 | 178,717 |

⁽¹⁾ Gross acreage surface area is the area in which Repsol owns an interest. Net acreage surface area is the sum of the gross surface areas of each acreage, in respect of Repsol's respective interests.

The following tables show Repsol's completed exploratory wells by geographical region:

| | Exploration wells, ⁽¹⁾ completed and in progress | | | | | | | | | | | | | | |
|--------------------------|---|------|------|----------|------|------|------------------|------|------|-------|------|------|-------------|------|------|
| | Positive | | | Negative | | | Under assessment | | | Total | | | In progress | | |
| | 2016 | 2015 | 2014 | 2016 | 2015 | 2014 | 2016 | 2015 | 2014 | 2016 | 2015 | 2014 | 2016 | 2015 | 2014 |
| Europe | - | - | - | - | 6 | 1 | 1 | - | 1 | 1 | 6 | 2 | 1 | 1 | 3 |
| Norway | - | - | - | - | 4 | 1 | - | - | 1 | - | 4 | 2 | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Rest of Europe | - | - | - | - | 2 | - | 1 | - | - | 1 | 2 | - | 1 | 1 | 3 |
| Latin America | - | - | 1 | 2 | 2 | 3 | - | 1 | 2 | 2 | 3 | 6 | 1 | 1 | 2 |
| Brazil | - | - | 1 | - | - | 1 | - | 1 | - | - | 1 | 2 | - | - | 1 |
| Colombia | - | - | - | 2 | - | 1 | - | - | 1 | 2 | - | 2 | - | 1 | - |
| Peru | - | - | - | - | 2 | - | - | - | - | - | 2 | - | 1 | - | 1 |
| Trinidad & Tobago | - | - | - | - | - | 1 | - | - | 1 | - | - | 2 | - | - | - |
| Venezuela | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Rest of Latin America | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| North America | - | 1 | 1 | - | 2 | 1 | - | - | 1 | - | 3 | 3 | - | - | 2 |
| Canada | - | - | - | - | 1 | - | - | - | - | - | 1 | - | - | - | 1 |
| United States | - | 1 | 1 | - | 1 | 1 | - | - | 1 | - | 2 | 3 | - | - | 1 |
| Africa | - | 2 | - | 1 | 3 | 7 | 1 | - | 2 | 2 | 5 | 9 | - | - | 2 |
| Asia and Oceania | - | 1 | 2 | 6 | - | 2 | 2 | 1 | - | 8 | 2 | 4 | - | 2 | 1 |
| Indonesia | - | - | - | 1 | - | - | 2 | - | - | 3 | - | - | - | 2 | - |
| Malaysia | - | - | - | 3 | - | - | - | 1 | - | 3 | 1 | - | - | - | - |
| Russia | - | 1 | 2 | - | - | - | - | - | - | - | 1 | 2 | - | - | 1 |
| Rest of Asia and Oceania | - | - | - | 2 | - | 2 | - | - | - | 2 | - | 2 | - | - | - |
| Total | - | 4 | 4 | 9 | 13 | 14 | 4 | 2 | 6 | 13 | 19 | 24 | 2 | 4 | 10 |

⁽¹⁾ Excluding appraisal wells. In 2016, 6 appraisal wells were completed – 3 positive, 2 negative, 1 under assessment – and 2 appraisal drilling projects were in progress. Also excluding the Piscuri 4000 well in Romania, which at year-end had been suspended. The Mashira-6X well was declared negative, although it was still in progress at December 31, 2016.

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Completed development wells

| | Positive | | | Negative | | | Under assessment | | | Total | | |
|--------------------------|---------------|------------|------------|----------|----------|----------|------------------|-----------|----------|------------|------------|------------|
| | 2016 | 2015 | 2014 | 2016 | 2015 | 2014 | 2016 | 2015 | 2014 | 2016 | 2015 | 2014 |
| | Europe | 3 | 4 | - | - | - | - | - | - | - | 3 | 4 |
| Norway | 1 | 3 | - | - | - | - | - | - | - | 1 | 3 | - |
| United Kingdom | 2 | 1 | - | - | - | - | - | - | - | 2 | 1 | - |
| Rest of Europe | - | - | - | - | - | - | - | - | - | - | - | - |
| Latin America | 52 | 62 | 78 | 2 | 3 | 5 | 7 | 5 | 8 | 61 | 70 | 91 |
| Brazil | 4 | 10 | 9 | - | - | - | - | 1 | - | 4 | 11 | 9 |
| Colombia | 3 | 20 | 26 | - | - | - | 1 | - | 1 | 4 | 20 | 27 |
| Peru | 3 | - | 1 | - | - | - | 1 | - | - | 4 | - | 1 |
| Trinidad & Tobago | 8 | 3 | 5 | - | - | - | 5 | 2 | 2 | 13 | 5 | 7 |
| Venezuela | 25 | 22 | 28 | - | 2 | 3 | - | - | 5 | 25 | 24 | 36 |
| Rest of Latin America | 9 | 7 | 9 | 2 | 1 | 2 | - | 2 | - | 11 | 10 | 11 |
| North America | 150 | 282 | 471 | - | 1 | 1 | - | 16 | 1 | 150 | 299 | 473 |
| Canada | 31 | 30 | - | - | - | - | - | 6 | - | 31 | 36 | - |
| United States | 119 | 252 | 471 | - | 1 | 1 | - | 10 | 1 | 119 | 263 | 473 |
| Africa | 8 | 2 | 8 | 1 | 1 | - | 1 | - | - | 10 | 3 | 8 |
| Asia and Oceania | 46 | 43 | 34 | - | 3 | 3 | - | - | - | 46 | 46 | 37 |
| Indonesia | 1 | 1 | - | - | - | - | - | - | - | 1 | 1 | - |
| Malaysia | - | - | - | - | - | - | - | - | - | - | - | - |
| Russia | 45 | 42 | 34 | - | 2 | 3 | - | - | - | 45 | 44 | 37 |
| Rest of Asia and Oceania | - | - | - | - | 1 | - | - | - | - | - | 1 | - |
| Total | 259 | 393 | 591 | 3 | 8 | 9 | 8 | 21 | 9 | 270 | 422 | 609 |

Standardized measure of discounted future net cash flows and changes therein relating to proved oil and gas reserves

Projected net cash flows were estimated in accordance with the criteria established by the “SPE/WPC/AAPG/SPEE Petroleum Resources Management System, commonly referred to by its acronym, SPE-PRMS (SPE standing for the Society of Petroleum Engineers)”. Oil and gas prices and other financial assumptions regarding the outlook for costs reflect the Company's best estimates for the purposes of valuing its assets. These assumptions are applied to estimated future production in respect of its proved oil and gas reserves as of the most recent reporting date, less estimated future development and production costs (based on current costs) in respect of these same proved reserves, all of which assuming that prevailing economic conditions are sustained.

Future production costs were estimated on based on the cost structure at the end of the year and are projected on the basis of the above-mentioned assumptions. Future development costs were calculated on the basis of technical studies conducted by Repsol and by the operators holding joint title with Repsol. The taxes projected for each of the future years were determined under the contractual and tax regime prevailing at the end of the year. The rate used to discount the future net revenues was 10%.

The present value of the future net cash flows estimated on the basis of the aforementioned assumptions is not intended to be interpreted, and should not be interpreted, as the fair value of the Group's oil and gas reserves. An estimation of the fair value of these reserves should also include the future exploitation of reserves not yet classified as proved reserves and costs and a discount rate which represents the time value of money at the calculation date and the uncertainties inherent to estimating the reserves.

The following table shows the present value of the future net revenues relating to proved oil and gas reserves, calculated on the basis of the aforementioned assumptions.

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Millions of euros

At December 31st

| 2014 | Total | Europe | Venezuela | Peru | United States | Rest of America | Africa | Asia | Oceania |
|---|--------------|-------------|--------------|--------------|---------------|-----------------|--------------|------------|---------|
| Fully-consolidated entities | | | | | | | | | |
| Future cash inflows | 24,601 | 265 | 198 | 7,437 | 3,708 | 3,555 | 9,438 | - | - |
| Future production costs | (7,358) | (127) | (75) | (3,769) | (593) | (1,784) | (1,010) | - | - |
| Future development and abandonment costs | (2,706) | (207) | (25) | (973) | (661) | (369) | (471) | - | - |
| Future income tax expenses | (6,529) | 22 | (9) | (799) | (563) | (268) | (4,912) | - | - |
| Future net cash flows after taxes | 8,008 | (47) | 89 | 1,896 | 1,891 | 1,134 | 3,045 | - | - |
| 10% annual discount for estimated timing of cash flows | (3,002) | 117 | (42) | (1,123) | (522) | (264) | (1,168) | - | - |
| Standardized measure of discounted future net cash flows | 5,006 | 70 | 47 | 773 | 1,369 | 870 | 1,877 | - | - |
| Equity-accounted investees | | | | | | | | | |
| Future cash inflows | 24,360 | - | 10,364 | - | - | 12,160 | - | 1,836 | - |
| Future production costs | (9,922) | - | (3,983) | - | - | (4,978) | - | (961) | - |
| Future development and abandonment costs | (3,732) | - | (1,009) | - | - | (2,634) | - | (89) | - |
| Future income tax expenses | (3,087) | - | (1,750) | - | - | (1,161) | - | (176) | - |
| Future net cash flows after taxes | 7,619 | - | 3,622 | - | - | 3,387 | - | 610 | - |
| 10% annual discount for estimated timing of cash flows | (3,291) | - | (2,147) | - | - | (865) | - | (279) | - |
| Standardized measure of discounted future net cash flows | 4,328 | - | 1,475 | - | - | 2,522 | - | 331 | - |
| Total Standardized measure of discounted future net cash flows | 9,334 | 70 | 1,522 | 773 | 1,369 | 3,392 | 1,877 | 331 | - |

Millions of euros

At December 31st

| 2015 | Total | Europe | Venezuela | Peru | United States | Rest of America | Africa | Asia | Oceania |
|---|---------------|----------------|--------------|--------------|---------------|-----------------|--------------|--------------|-------------|
| Fully-consolidated entities | | | | | | | | | |
| Future cash inflows | 47,888 | 792 | 123 | 8,255 | 14,679 | 8,570 | 8,521 | 6,948 | - |
| Future production costs | (17,649) | (648) | (32) | (3,731) | (6,047) | (4,405) | (1,131) | (1,655) | - |
| Future development and abandonment costs | (8,115) | (1,477) | (1) | (969) | (2,017) | (2,744) | (404) | (467) | (36) |
| Future income tax expenses | (6,433) | 1,622 | (28) | (1,136) | (448) | (242) | (4,197) | (2,005) | 1 |
| Future net cash flows after taxes | 15,691 | 289 | 62 | 2,419 | 6,167 | 1,179 | 2,789 | 2,821 | (35) |
| 10% annual discount for estimated timing of cash flows | (6,996) | (429) | (24) | (1,545) | (3,151) | 287 | (1,176) | (962) | 4 |
| Standardized measure of discounted future net cash flows | 8,695 | (140) | 38 | 874 | 3,016 | 1,466 | 1,613 | 1,859 | (31) |
| Equity-accounted investees | | | | | | | | | |
| Future cash inflows | 29,182 | 2,149 | 16,313 | - | - | 9,153 | - | 1,567 | - |
| Future production costs | (12,127) | (2,293) | (5,315) | - | - | (3,642) | - | (877) | - |
| Future development and abandonment costs | (7,488) | (4,249) | (951) | - | - | (2,187) | - | (101) | - |
| Future income tax expenses | (3,740) | 997 | (3,904) | - | - | (690) | - | (143) | - |
| Future net cash flows after taxes | 5,827 | (3,396) | 6,143 | - | - | 2,634 | - | 446 | - |
| 10% annual discount for estimated timing of cash flows | (2,642) | 1,786 | (3,656) | - | - | (570) | - | (202) | - |
| Standardized measure of discounted future net cash flows | 3,185 | (1,610) | 2,487 | - | - | 2,064 | - | 244 | - |
| Total Standardized measure of discounted future net cash flows | 11,880 | (1,750) | 2,525 | 874 | 3,016 | 3,530 | 1,613 | 2,103 | (31) |

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Millions of euros

At December 31st
2016

| | Total | Europe | Venezuela | Peru | United States | Rest of America | Africa | Asia | Oceania |
|---|---------------|----------------|--------------|--------------|---------------|-----------------|--------------|--------------|----------|
| Fully-consolidated entities | | | | | | | | | |
| Future cash inflows | 48,018 | 1,014 | 120 | 11,673 | 12,744 | 7,195 | 8,969 | 6,303 | - |
| Future production costs | (11,034) | (602) | (34) | (5,048) | (1,845) | (877) | (1,086) | (1,542) | - |
| Future development and abandonment costs | (7,938) | (1,650) | (6) | (607) | (1,141) | (2,987) | (682) | (865) | - |
| Future income tax expenses | (7,722) | 1,536 | (27) | (2,011) | (951) | (227) | (4,441) | (1,601) | - |
| Future net cash flows after taxes | 21,324 | 298 | 53 | 4,007 | 8,807 | 3,104 | 2,760 | 2,295 | - |
| 10% annual discount for estimated timing of cash flows | (11,361) | (477) | (25) | (2,677) | (5,335) | (1,178) | (1,044) | (625) | - |
| Standardized measure of discounted future net cash flows | 9,963 | (179) | 28 | 1,330 | 3,472 | 1,926 | 1,716 | 1,670 | - |
| Equity-accounted investees | | | | | | | | | |
| Future cash inflows | 33,358 | 3,166 | 17,310 | - | - | 11,167 | - | 1,715 | - |
| Future production costs | (13,832) | (2,967) | (5,826) | - | - | (4,129) | - | (910) | - |
| Future development and abandonment costs | (8,139) | (4,480) | (1,041) | - | - | (2,495) | - | (123) | - |
| Future income tax expenses | (4,376) | 1,020 | (4,160) | - | - | (1,123) | - | (113) | - |
| Future net cash flows after taxes | 7,011 | (3,261) | 6,283 | - | - | 3,420 | - | 569 | - |
| 10% annual discount for estimated timing of cash flows | (2,784) | 1,874 | (3,675) | - | - | (728) | - | (255) | - |
| Standardized measure of discounted future net cash flows | 4,227 | (1,387) | 2,608 | - | - | 2,692 | - | 314 | - |
| Total Standardized measure of discounted future net cash flows | 14,190 | (1,566) | 2,636 | 1,330 | 3,472 | 4,618 | 1,716 | 1,984 | - |

Changes in Standardized measure of discounted future net cash flows relating to proved oil and gas reserves

The detail of the changes in the standardized measure of discounted future net cash flows for 2013, 2014 and 2015 is as follows:

Millions of euros

| | Total | Europe | Venezuela | Peru | United States | Rest of America | Africa | Asia | Oceania |
|---|--------------|--------------|-----------|--------------|---------------|-----------------|--------------|--------------|-------------|
| Fully-consolidated entities | | | | | | | | | |
| Balance at December 31st, 2013 | 4,852 | 93 | 27 | 845 | 1,268 | 872 | 1,747 | - | - |
| Changes due to sale or transfer prices of future production costs | (774) | 4 | (1) | 11 | (303) | (197) | (288) | - | - |
| Changes in future development costs | (165) | 34 | - | (133) | (8) | 12 | (70) | - | - |
| Oil and gas sales and transfers in the period | (2,248) | (77) | (2) | (162) | (625) | (356) | (1,026) | - | - |
| Net changes due to extensions, discoveries and improvements in the recovery of reserves | 112 | - | - | 65 | - | 47 | - | - | - |
| Net changes due to purchases/sales of assets | - | - | - | - | - | - | - | - | - |
| Net changes due to revisions in quantity estimates | 857 | 11 | (4) | (147) | 682 | 58 | 257 | - | - |
| Previously estimated development costs incurred in the year | 490 | 13 | 16 | 15 | 193 | 111 | 142 | - | - |
| Effect of discounting to a different date and exchange rate effect | 1,035 | 12 | 9 | 175 | 264 | 188 | 387 | - | - |
| Other non-specific changes | - | - | - | - | - | - | - | - | - |
| Changes in income tax | 847 | (20) | 2 | 104 | (102) | 135 | 728 | - | - |
| Net change | 154 | (23) | 20 | (72) | 101 | (2) | 130 | - | - |
| Balance at December 31st, 2014 | 5,006 | 70 | 47 | 773 | 1,369 | 870 | 1,877 | - | - |
| Changes due to sale or transfer prices of future production costs | (4,465) | (67) | 4 | (65) | (942) | (847) | (2,251) | (286) | (11) |
| Changes in future development costs | 210 | (7) | 7 | 113 | 78 | (33) | 52 | - | - |
| Oil and gas sales and transfers in the period | (2,032) | (82) | (4) | (129) | (852) | (485) | (91) | (405) | 16 |
| Net changes due to extensions, discoveries and improvements in the recovery of reserves | 460 | - | - | - | 324 | 136 | - | - | - |
| Net changes due to purchases/sales of assets | 5,204 | 163 | - | - | 1,729 | 920 | 190 | 2,239 | (37) |
| Net changes due to revisions in quantity estimates | 340 | 12 | (33) | (31) | 231 | 288 | (174) | 47 | - |
| Previously estimated development costs incurred in the year | 1,270 | 104 | 17 | 62 | 474 | 336 | 153 | 122 | 2 |
| Effect of discounting to a different date and exchange rate effect | 1,084 | 6 | 11 | 170 | 296 | 180 | 386 | 35 | - |
| Other non-specific changes | - | - | - | - | - | - | - | - | - |
| Changes in income tax | 1,618 | (339) | (11) | (19) | 309 | 101 | 1,471 | 107 | (1) |
| Net change | 3,689 | (210) | (9) | 101 | 1,647 | 596 | (264) | 1,859 | (31) |
| Balance at December 31st, 2015 | 8,695 | (140) | 38 | 874 | 3,016 | 1,466 | 1,613 | 1,859 | (31) |
| Changes due to sale or transfer prices of future production costs | (352) | 71 | (6) | 69 | (255) | (261) | (83) | 113 | - |
| Changes in future development costs | (477) | (162) | (2) | 161 | (105) | (50) | (192) | (140) | 13 |
| Oil and gas sales and transfers in the period | (1,273) | (41) | (12) | (50) | (436) | (246) | (36) | (465) | 13 |
| Net changes due to extensions, discoveries and improvements in the recovery of reserves | 642 | - | - | 311 | 198 | 120 | - | 13 | - |
| Net changes due to purchases/sales of assets | (195) | 5 | - | - | 21 | 23 | - | (244) | - |
| Net changes due to revisions in quantity estimates | 871 | 108 | 1 | (90) | 61 | 525 | 85 | 181 | - |
| Previously estimated development costs incurred in the year | 620 | 47 | 1 | 64 | 216 | 121 | 63 | 97 | 11 |
| Effect of discounting to a different date and exchange rate effect | 1,119 | (18) | 3 | 137 | 399 | 200 | 220 | 184 | (6) |
| Other non-specific changes | - | - | - | - | - | - | - | - | - |
| Changes in income tax | 313 | (49) | 5 | (146) | 357 | 28 | 46 | 72 | - |
| Net change | 1,268 | (39) | (10) | 456 | 456 | 460 | 103 | (189) | 31 |
| Balance at December 31st, 2016 | 9,963 | (179) | 28 | 1,330 | 3,472 | 1,926 | 1,716 | 1,670 | - |

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Millions of euros

| | Total | Europe | Venezuela | Peru | United States | Rest of America | Africa | Asia | Oceania |
|---|---------------|----------------|--------------|--------------|---------------|-----------------|--------------|--------------|---------|
| Equity-accounted investees | | | | | | | | | |
| Balance at December 31st, 2013 | 3,493 | - | 1,234 | - | - | 2,063 | - | 196 | - |
| Changes due to sale or transfer prices of future production costs | (529) | - | (148) | - | - | (403) | - | 22 | - |
| Changes in future development costs | (445) | - | (138) | - | - | (329) | - | 22 | - |
| Oil and gas sales and transfers in the period | (1,185) | - | (239) | - | - | (877) | - | (69) | - |
| Net changes due to extensions, discoveries and improvements in the recovery of reserves | 143 | - | - | - | - | 143 | - | - | - |
| Net changes due to purchases/sales of assets | (4) | - | - | - | - | (4) | - | - | - |
| Net changes due to revisions in quantity estimates | 1,091 | - | 78 | - | - | 935 | - | 78 | - |
| Previously estimated development costs incurred in the year | 604 | - | 265 | - | - | 291 | - | 48 | - |
| Effect of discounting to a different date and exchange rate effect | 846 | - | 314 | - | - | 477 | - | 55 | - |
| Other non-specific changes | - | - | - | - | - | - | - | - | - |
| Changes in income tax | 314 | - | 109 | - | - | 226 | - | (21) | - |
| Net change | 835 | - | 241 | - | - | 459 | - | 135 | - |
| Balance at December 31st, 2014 | 4,328 | - | 1,475 | - | - | 2,522 | - | 331 | - |
| Changes due to sale or transfer prices of future production costs | (2,120) | (236) | 120 | - | - | (1,843) | - | (161) | - |
| Changes in future development costs | 304 | - | 111 | - | - | 201 | - | (8) | - |
| Oil and gas sales and transfers in the period | (1,662) | 25 | (282) | - | - | (1,317) | - | (88) | - |
| Net changes due to extensions, discoveries and improvements in the recovery of reserves | - | - | - | - | - | - | - | - | - |
| Net changes due to purchases/sales of assets | (1,355) | (1,624) | - | - | - | 269 | - | - | - |
| Net changes due to revisions in quantity estimates | 1,748 | 98 | 1,111 | - | - | 492 | - | 47 | - |
| Previously estimated development costs incurred in the year | 1,235 | 196 | 318 | - | - | 701 | - | 20 | - |
| Effect of discounting to a different date and exchange rate effect | 914 | (29) | 358 | - | - | 517 | - | 68 | - |
| Other non-specific changes | - | - | - | - | - | - | - | - | - |
| Changes in income tax | (208) | (40) | (724) | - | - | 521 | - | 35 | - |
| Net change | (1,144) | (1,610) | 1,012 | - | - | (459) | - | (87) | - |
| Balance at December 31st, 2015 | 3,185 | (1,610) | 2,487 | - | - | 2,064 | - | 244 | - |
| Changes due to sale or transfer prices of future production costs | 236 | 184 | (84) | - | - | 104 | - | 32 | - |
| Changes in future development costs | (617) | (141) | (182) | - | - | (275) | - | (19) | - |
| Oil and gas sales and transfers in the period | (992) | 85 | (355) | - | - | (681) | - | (41) | - |
| Net changes due to extensions, discoveries and improvements in the recovery of reserves | 579 | - | - | - | - | 579 | - | - | - |
| Net changes due to purchases/sales of assets | - | - | - | - | - | - | - | - | - |
| Net changes due to revisions in quantity estimates | 510 | (8) | 152 | - | - | 335 | - | 31 | - |
| Previously estimated development costs incurred in the year | 1,031 | 292 | 231 | - | - | 493 | - | 15 | - |
| Effect of discounting to a different date and exchange rate effect | 481 | (160) | 328 | - | - | 281 | - | 32 | - |
| Other non-specific changes | - | - | - | - | - | - | - | - | - |
| Changes in income tax | (186) | (29) | 31 | - | - | (208) | - | 20 | - |
| Net change | 1,042 | 223 | 121 | - | - | 628 | - | 70 | - |
| Balance at December 31st, 2016 | 4,227 | (1,387) | 2,608 | - | - | 2,692 | - | 314 | - |
| TOTAL | 14,190 | (1,566) | 2,636 | 1,330 | 3,472 | 4,618 | 1,716 | 1,984 | - |