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The Hague, February 28<sup>th</sup>, 2019

In accordance with Law of 23 December 2016, on market abuse, Repsol International Finance, B.V. (the “**Company**”) is filing the attached Report on Payments to Governments and Information on Oil&Gas activities of Repsol, S.A., the Guarantor of the Company’s Euro 10,000,000,000 Guaranteed Euro Medium Term Note Programme.

Both documents were filed today by Repsol, S.A. with the Spanish Securities Market Commission (*Comisión Nacional del Mercado de Valores*).

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REPSOL Group

**2018** Report on payments  
to governments  
on oil and gas  
exploration and  
production activities

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



## **(1) PRESENTATION**

Spanish<sup>1</sup> and European<sup>2</sup> regulations require that large undertakings and public interest entities which are active in the extractive industry prepare and publish an annual report on payments made to the Governments as a result of their Extractive Operations<sup>3</sup>.

The Report on Payments to Governments of Repsol, S.A. (the “Report”) which is presented below complies with said regulations and reflects the payments made in the scope of its hydrocarbon exploration and production activity. This Report, therefore, does not refer to the totality of taxes and payments to governments that Repsol makes in all of its activities. For more information on taxes paid, please see section 6.7 *Responsible tax policy* of the Integrated management report and section *Responsible Tax Policy* of our corporate website (<https://www.repsol.com>).

The Report has been approved by the Board of Directors of Repsol, S.A. at a meeting held on February 27, 2019.

## **(2) BASIS FOR THE ELABORATION OF THE INFORMATION**

### **2.1) Basis of presentation**

This Report discloses the payments made to Governments in 2018 as a result of its Extractive Operations, according to the definitions given below.

It includes payments made the Repsol Group, this is by Repsol, S.A. and its controlled<sup>4</sup> companies (hereinafter ‘Repsol’). This Report does not include payments made by companies over which Repsol, S.A. has ‘joint control’ or ‘significant influence’ (as such terms are defined by the International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB) adopted by the European Union).

This Report only includes payments made directly by Repsol to Governments.

When Repsol makes payments directly to a Government as an operator in a joint operation, the Report presents the payments in full, even where Repsol is proportionally reimbursed by its non-operating project partners through a partner billing process.

On the other hand, when Repsol is not the project operator and payments are made directly by the operator of the project, this amount is not included in this Report even if Repsol pays its proportionate share to the operating partner. Any other payment made by Repsol directly to the Government is included in the Report, even when it is not the operator of the project.

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<sup>1</sup> Tenth Additional Provision of Law 22/2015, of July 20, on Audit of Accounts.

<sup>2</sup> Chapter 10 of Directive 2013/34 / EU of the European Parliament and of the Council of 26 June 2013 on the annual financial statements, consolidated financial statements and related reports of certain types of undertakings, amending Directive 2006/43/EC of the European Parliament and of the Council and repealing Council Directives 78/660/EEC and 83/349/EEC.

<sup>3</sup> For further information on exploration and production activities, see section 5.1 *Upstream* of the Consolidated management report and the Information on oil and gas exploration and production activities, which can be found in the corporate website.

<sup>4</sup> Controlled companies are those which Repsol, S.A. directly or indirectly, controls and fully consolidates in the Consolidated financial statements of the Repsol Group. For further information on the Group’s consolidation scope, see Appendix I of the Repsol Group’s Consolidated financial statements.

The payments are presented in this Report by project when the payments have been attributed to a specific project. However, payments made by Repsol in relation to obligations imposed at company level are presented as the entity that made such payment.

Payments are reported on a cash basis. In-kind payments are converted to an equivalent cash value based on the most appropriate and relevant valuation method for each payment, which can be at cost or market value or such other value as stated in the contract. In-kind payments are reported in both volume and equivalent cash value.

This Report is presented in millions of euros to one decimal place. Payments made in currencies other than the Euro are converted for the purposes of this Report, using the cumulative average exchange rate for the period.

Below are presented the main exchange rates used in the preparation of this Report:

| <b>Currency</b>       | US Dollar<br>(USD) | Indonesian Rupee<br>(IDR) | Malaysian Ringgit<br>(MYR) | Vietnamese Dong<br>(VND) | Bolivian Peso<br>(BOB) | Peruvian Sol<br>(PES) |
|-----------------------|--------------------|---------------------------|----------------------------|--------------------------|------------------------|-----------------------|
| <b>Exch. vs. Euro</b> | 1.18               | 16,804.34                 | 4.76                       | 27,174.66                | 8.21                   | 3.88                  |

## 2.2) Definitions

### Extractive Operations

The Report includes payments to Governments made by Repsol, S.A. and its controlled companies whose activities consist, in whole or in part, of the exploration, prospection, discovery, development and extraction of minerals, oil, natural gas deposits or other materials (Extractive Operations).

### Government

Any national, regional or local authority of a country, including a department, agency or undertaking controlled by that authority.

### Project

Operational activities that are governed by a single contract, license, lease, concession or similar legal agreements and form the basis for payment liabilities with a government. Nonetheless, if multiple such agreements are substantially interconnected, this shall be considered a project.

### Payments

The payments included in the report are classified as follows:

- *Taxes*

Includes taxes levied on the income, profits or taxes levied on production and royalties linked to production. Excludes taxes levied on consumption such as value added taxes, personal income taxes or sales taxes. Payments are reported net of refunds.

- *Production Entitlements*

Share of production allocated to the Government of the country where the Extractive Operations derived from projects operated by the Group are carried out. This includes the government's share as a sovereign entity or through its participation as an equity or interest holder in projects within its sovereign jurisdiction.

Production entitlements arising from activities carried out by state oil companies outside of their respective home countries are excluded.

- *Signature, discovery and production bonuses*

Payments related to signature, discovery and production bonuses. These are usually paid upon the signing of an agreement or contract, or when a commercial discovery is declared, or production has commenced or reached a milestone.

- *Licence fees, rental fees, entry fees and other considerations for licenses and/or concessions*

Payments related to licence fees, rental fees, entry fees and other considerations for licenses or concessions. These are fees and other sums paid as consideration for acquiring a license in order to gain access to an area where extractive activities are being performed.

- *Other*

This heading includes dividends, royalties and payments for infrastructure improvements, grouped together for presentation purposes in this Report. All individual payments in this column are identified by their proper payment category.

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### (3) INFORMATION BY COUNTRY

Million euros

|                          | Taxes | Production entitlement | Signature, discovery and production bonuses | License fees, rental fees and other considerations for licenses and/or concessions | Other <sup>(1)</sup> | TOTAL   |
|--------------------------|-------|------------------------|---|--|----------------------|---------|
| <b>Africa</b>            | -     | -                      | -   | 0,1  | -                    | 0,1     |
| Algeria                  | -     | -                      | -   | 0,1  | -                    | 0,1     |
| <b>Asia</b>              | 394,7 | 792,2                  | 44,5  | 3,3  | -                    | 1.234,7 |
| Indonesia                | 193,3 | -                      | -   | 3,3  | -                    | 196,6   |
| Malaysia                 | 129,9 | 548,7                  | 29,0  | -  | -                    | 707,6   |
| Vietnam                  | 71,5  | 243,5                  | 15,5  | -  | -                    | 330,5   |
| <b>Europe</b>            | 4,8   | -                      | -   | (5,4)  | -                    | (0,6)   |
| Spain                    | 4,8   | -                      | -   | -  | -                    | 4,8     |
| Norway                   | -     | -                      | -   | (5,4)  | -                    | (5,4)   |
| <b>Latin America</b>     | 130,9 | 637,3                  | 168,7                                       | 4,5  | -                    | 941,4   |
| Bolivia                  | 11,7  | 562,1                  | -   | 1,6  | -                    | 575,4   |
| Brazil                   | -     | -                      | 20,9  | -  | -                    | 20,9    |
| Colombia                 | 2,9   | -                      | -   | -  | -                    | 2,9     |
| Ecuador                  | 87,3  | 75,2                   | -   | 0,9  | -                    | 163,4   |
| Guayana                  | -     | -                      | -   | 0,3  | -                    | 0,3     |
| Mexico                   | 4,9   | -                      | 147,8                                       | 1,7  | -                    | 154,4   |
| Peru                     | 24,1  | -                      | -   | -  | -                    | 24,1    |
| <b>North America</b>     | 66,2  | -                      | -   | 20,7   | 0,3                  | 87,2    |
| Canada                   | 17,0  | -                      | -   | 4,8  | -                    | 21,8    |
| United States Of America | 49,2  | -                      | -   | 15,9   | 0,3                  | 65,4    |
| <b>Oceania</b>           | -     | -                      | -   | 0,2  | -                    | 0,2     |
| Papua New Guinea         | -     | -                      | -   | 0,2  | -                    | 0,2     |
|                          | 596,6 | 1.429,5                | 213,2                                       | 23,4   | 0,3                  | 2.263,0 |

<sup>(1)</sup> The amount of 0.3 million of euros included in "Other" corresponds to payments for infrastructure improvements.

#### (4) INFORMATION PER PROJECT

Million euros

|   | Taxes        | Production entitlement | Signature, discovery and production bonuses | License fees, rental fees and other considerations for licenses and/or concessions | Other              | TOTAL        |
|---|--------------|------------------------|---|--|--------------------|--------------|
| <b>Algeria</b>                            |              |                        |   |  |                    |              |
| Illizi                                    | -            | -                      | -   | 0,1  | -                  | 0,1          |
| <b>Total</b>                              | <b>-</b>     | <b>-</b>               | <b>-</b>                                    | <b>0,1</b>   | <b>-</b>           | <b>0,1</b>   |
| <b>Bolivia</b>                            |              |                        |   |  |                    |              |
| Margarita (Caipipendi)/Huacaya            | -            | 551,5                  | -   | 1,2  | -                  | 552,7        |
| Surubi Noroeste (Mamore)                  | -            | 5,6                    | -   | 0,2  | -                  | 5,8          |
| Monteagudo                                | -            | 0,6                    | -   | -  | -                  | 0,6          |
| Paloma, Surubi y Surubi (Bloque Bajo)     | -            | 3,8                    | -   | 0,2  | -                  | 4,0          |
| Cambeiti                                  | -            | 0,6                    | -   | -  | -                  | 0,6          |
| Repsol E&P Bolivia, S.A.                  | 11,7         | -                      | -   | -  | -                  | 11,7         |
| <b>Total</b>                              | <b>11,7</b>  | <b>562,1</b>           | <b>-</b>                                    | <b>1,6</b>   | <b>-</b>           | <b>575,4</b> |
| <b>Brazil</b>                             |              |                        |   |  |                    |              |
| Repsol Exploração Brasil, Ltda.           | -            | -                      | 20,9  | -  | -                  | 20,9         |
| <b>Total</b>                              | <b>-</b>     | <b>-</b>               | <b>20,9</b>                                 | <b>-</b>   | <b>-</b>           | <b>20,9</b>  |
| <b>Canada</b>                             |              |                        |   |  |                    |              |
| Chauvin Alberta/Chauvin                   | 7,1          | -                      | -   | 1,3  | -                  | 8,4          |
| Duvernay                                  | 0,4          | -                      | -   | 0,4  | -                  | 0,8          |
| Greater Edson                             | 8,0          | -                      | -   | 3,1  | -                  | 11,1         |
| Repsol Oil & Gas Canada, Inc.             | 1,5          | -                      | -   | -  | -                  | 1,5          |
| <b>Total</b>                              | <b>17,0</b>  | <b>-</b>               | <b>-</b>                                    | <b>4,8</b>   | <b>-</b>           | <b>21,8</b>  |
| <b>Colombia</b>                           |              |                        |   |  |                    |              |
| Repsol Exploración Colombia, S.A.         | 0,2          | -                      | -   | -  | -                  | 0,2          |
| Talisman (Colombia) Oil & Gas, Ltd.       | 2,7          | -                      | -   | -  | -                  | 2,7          |
| <b>Total</b>                              | <b>2,9</b>   | <b>-</b>               | <b>-</b>                                    | <b>-</b>   | <b>-</b>           | <b>2,9</b>   |
| <b>Ecuador</b>                            |              |                        |   |  |                    |              |
| Bloque 16                                 | 70,0         | 63,7                   | -   | 0,7  | -                  | 134,4        |
| Tivacuno                                  | 5,3          | 11,5                   | -   | 0,2  | -                  | 17,0         |
| Repsol Ecuador, S.A.                      | 12,0         | -                      | -   | -  | -                  | 12,0         |
| <b>Total</b>                              | <b>87,3</b>  | <b>75,2</b>            | <b>-</b>                                    | <b>0,9</b>   | <b>-</b>           | <b>163,4</b> |
| <b>United States of America</b>           |              |                        |   |  |                    |              |
| Alaska North Slope                        | -            | -                      | -   | 2,2  | -                  | 2,2          |
| Eagle Ford                                | 9,8          | -                      | -   | -  | -                  | 9,8          |
| GOM                                       | -            | -                      | -   | 1,0  | -                  | 1,0          |
| Leon                                      | -            | -                      | -   | 0,3  | -                  | 0,3          |
| Marcellus                                 | 7,5          | -                      | -   | 12,4   | 0,3 <sup>(1)</sup> | 20,2         |
| Shenzi                                    | 32,0         | -                      | -   | -  | -                  | 32,0         |
| Repsol Louisiana Corporation              | (0,1)        | -                      | -   | -  | -                  | (0,1)        |
| <b>Total</b>                              | <b>49,2</b>  | <b>-</b>               | <b>-</b>                                    | <b>15,9</b>  | <b>0,3</b>         | <b>65,4</b>  |
| <b>Spain</b>                              |              |                        |   |  |                    |              |
| Repsol Investigaciones Petrolíferas, S.A. | 4,8          | -                      | -   | -  | -                  | 4,8          |
| <b>Total</b>                              | <b>4,8</b>   | <b>-</b>               | <b>-</b>                                    | <b>-</b>   | <b>-</b>           | <b>4,8</b>   |
| <b>Guyana</b>                             |              |                        |   |  |                    |              |
| Kanuku                                    | -            | -                      | -   | 0,3  | -                  | 0,3          |
| <b>Total</b>                              | <b>-</b>     | <b>-</b>               | <b>-</b>                                    | <b>0,3</b>   | <b>-</b>           | <b>0,3</b>   |
| <b>Indonesia</b>                          |              |                        |   |  |                    |              |
| Corridor                                  | 186,6        | -                      | -   | -  | -                  | 186,6        |
| Jambi Merang                              | 6,7          | -                      | -   | -  | -                  | 6,7          |
| Seram                                     | -            | -                      | -   | 3,3  | -                  | 3,3          |
| <b>Total</b>                              | <b>193,3</b> | <b>-</b>               | <b>-</b>                                    | <b>3,3</b>   | <b>-</b>           | <b>196,6</b> |

<sup>(1)</sup> The amount of 0.3 million of euros included in "Other" corresponds to payments for infrastructure improvements.

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Million euros

|                                 | Taxes               | Production entitlement | Signature, discovery and production bonuses | License fees, rental fees and other considerations for licenses and/or concessions | Other      | TOTAL          |
|---------------------------------|---------------------|------------------------|---|--|------------|----------------|
| <b>Malaysia</b>                 |                     |                        |   |  |            |                |
| PM3-CAA                         | 49,6 <sup>(1)</sup> | 331,7 <sup>(5)</sup>   | 16,2  | -  | -          | 397,5          |
| PM305                           | 5,2 <sup>(2)</sup>  | 17,6 <sup>(6)</sup>    | -   | -  | -          | 22,8           |
| PM314                           | 0,4 <sup>(3)</sup>  | 2,1 <sup>(7)</sup>     | -   | -  | -          | 2,5            |
| SB1 Kinabalu Oil                | 76,3 <sup>(4)</sup> | 197,3 <sup>(8)</sup>   | 12,8  | -  | -          | 286,4          |
| Repsol Oil & Gas Malaysia, Ltd. | (1,6)               | -                      | -   | -  | -          | (1,6)          |
| <b>Total</b>                    | <b>129,9</b>        | <b>548,7</b>           | <b>29,0</b>                                 | <b>-</b>   | <b>-</b>   | <b>707,6</b>   |
| <b>Mexico</b>                   |                     |                        |   |  |            |                |
| Bloque 05                       | 0,4                 | -                      | -   | -  | -          | 0,4            |
| Bloque 10                       | 1,0                 | -                      | 24,6  | 0,8  | -          | 26,4           |
| Bloque 11                       | 0,5                 | -                      | -   | -  | -          | 0,5            |
| Bloque 12                       | 0,3                 | -                      | -   | -  | -          | 0,3            |
| Bloque 14                       | 1,1                 | -                      | -   | 0,9  | -          | 2,0            |
| Bloque 29                       | 1,6                 | -                      | 123,2                                       | -  | -          | 124,8          |
| <b>Total</b>                    | <b>4,9</b>          | <b>-</b>               | <b>147,8</b>                                | <b>1,7</b>   | <b>-</b>   | <b>154,4</b>   |
| <b>Norway</b>                   |                     |                        |   |  |            |                |
| Repsol Norge, AS                | -                   | -                      | -   | (5,4)  | -          | (5,4)          |
| <b>Total</b>                    | <b>-</b>            | <b>-</b>               | <b>-</b>                                    | <b>(5,4)</b>   | <b>-</b>   | <b>(5,4)</b>   |
| <b>Papua New Guinea</b>         |                     |                        |   |  |            |                |
| PDL 10                          | -                   | -                      | -   | 0,2  | -          | 0,2            |
| <b>Total</b>                    | <b>-</b>            | <b>-</b>               | <b>-</b>                                    | <b>0,2</b>   | <b>-</b>   | <b>0,2</b>     |
| <b>Peru</b>                     |                     |                        |   |  |            |                |
| Lote 56                         | 0,2                 | -                      | -   | -  | -          | 0,2            |
| Lote 57                         | 23,3                | -                      | -   | -  | -          | 23,3           |
| Lote 88                         | 0,3                 | -                      | -   | -  | -          | 0,3            |
| Repsol Exploración Perú, S.A.   | 0,3                 | -                      | -   | -  | -          | 0,3            |
| <b>Total</b>                    | <b>24,1</b>         | <b>-</b>               | <b>-</b>                                    | <b>-</b>   | <b>-</b>   | <b>24,1</b>    |
| <b>Vietnam</b>                  |                     |                        |   |  |            |                |
| Block 15-2/01 PC                | 34,1                | -                      | -   | -  | -          | 34,1           |
| Block 46 Cai Nuoc               | -                   | 2,9 <sup>(2)</sup>     | -   | -  | -          | 2,9            |
| PM3-CAA                         | 37,4 <sup>(1)</sup> | 240,6 <sup>(3)</sup>   | 15,5  | -  | -          | 293,5          |
| <b>Total</b>                    | <b>71,5</b>         | <b>243,5</b>           | <b>15,5</b>                                 | <b>-</b>   | <b>-</b>   | <b>330,5</b>   |
| <b>Total</b>                    | <b>596,6</b>        | <b>1.429,5</b>         | <b>213,2</b>                                | <b>23,4</b>  | <b>0,3</b> | <b>2.263,0</b> |

Malaysia:

- <sup>(1)</sup> Includes payments in kind amounting to 1.1 million barrels of oil equivalent (48.0 million euros).  
<sup>(2)</sup> Includes payments in kind amounting to 0.1 million barrels of oil equivalent (3.9 million euros).  
<sup>(3)</sup> Includes payments in kind amounting to 0.006 million barrels of oil equivalent (0.4 million euros).  
<sup>(4)</sup> Includes payments in kind amounting to 1.0 million barrels of oil equivalent 58.4 million euros).  
<sup>(5)</sup> Includes payments in kind amounting to 8.4 million barrels of oil equivalent (331.7 million euros).  
<sup>(6)</sup> Includes payments in kind amounting to 0.3 million barrels of oil equivalent (17.6 million euros).  
<sup>(7)</sup> Includes payments in kind amounting to 0.03 million barrels of oil equivalent (2.1 million euros).  
<sup>(8)</sup> Includes payments in kind amounting to 3.1 million barrels of oil equivalent (197.3 million euros).

Vietnam:

- <sup>(1)</sup> Includes payments in kind amounting to 1.1 million barrels of oil equivalent (37.4 million euros).  
<sup>(2)</sup> Includes payments in kind amounting to 0.04 million barrels of oil equivalent (2.9 million euros).  
<sup>(3)</sup> Includes payments in kind amounting to 5.4 million barrels of oil equivalent (240.6 million euros).



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## (5) INFORMATION PER GOVERNMENT

| Million euros   |             |                        |   |  |            |              |
|---|-------------|------------------------|---|--|------------|--------------|
|   | Taxes       | Production entitlement | Signature, discovery and production bonuses | License fees, rental fees and other considerations for licenses and/or concessions | Other      | TOTAL        |
| <b>Algeria</b>  |             |                        |   |  |            |              |
| DGE (Ministere des Finances)                            | -           | -                      | -   | 0,1  | -          | 0,1          |
| <b>Total</b>  | -           | -                      | -   | <b>0,1</b>   | -          | <b>0,1</b>   |
| <b>Bolivia</b>  |             |                        |   |  |            |              |
| Ministerio de Hidrocarburos y Energía                   | -           | 562,1                  | -   | -  | -          | 562,1        |
| Tributos Fiscales                                       | 11,7        | -                      | -   | -  | -          | 11,7         |
| Yacimientos Petrolíferos Fiscales Bolivianos (YPFB)     | -           | -                      | -   | 1,6  | -          | 1,6          |
| <b>Total</b>  | <b>11,7</b> | <b>562,1</b>           | -   | <b>1,6</b>   | -          | <b>575,4</b> |
| <b>Brazil</b>   |             |                        |   |  |            |              |
| Agência Nacional do Petróleo, Gás Natural e             | -           | -                      | 20,9  | -  | -          | 20,9         |
| <b>Total</b>  | -           | -                      | <b>20,9</b>                                 | -  | -          | <b>20,9</b>  |
| <b>Canada</b>   |             |                        |   |  |            |              |
| Alberta Energy Regulator                                | -           | -                      | -   | 2,9  | -          | 2,9          |
| Alberta Petroleum Marketing Commission                  | 7,2         | -                      | -   | -  | -          | 7,2          |
| Clearwater County                                       | -           | -                      | -   | 0,1  | -          | 0,1          |
| Government of Canada                                    | (11,7)      | -                      | -   | -  | -          | (11,7)       |
| Canada Revenue Agency                                   | 2,2         | -                      | -   | -  | -          | 2,2          |
| MD of Wainwright No 61                                  | -           | -                      | -   | 0,1  | -          | 0,1          |
| Ministry of Finance - Saskatchewan                      | 0,2         | -                      | -   | -  | -          | 0,2          |
| Minister of Finance of Quebec                           | -           | -                      | -   | 0,1  | -          | 0,1          |
| Minister of Finance, Province of Alberta                | -           | -                      | -   | 0,1  | -          | 0,1          |
| Province of Alberta                                     | -           | -                      | -   | 0,1  | -          | 0,1          |
| Province of BC, Energy Mines & Petr                     | 0,5         | -                      | -   | -  | -          | 0,5          |
| Government of Alberta                                   | 10,3        | -                      | -   | -  | -          | 10,3         |
| Government of Ontario                                   | 0,6         | -                      | -   | -  | -          | 0,6          |
| Provincial Treasurer of Alberta                         | 7,6         | -                      | -   | -  | -          | 7,6          |
| Receiver General  | 0,1         | -                      | -   | -  | -          | 0,1          |
| Sustainable Resource Development - Alberta              | -           | -                      | -   | 0,5  | -          | 0,5          |
| The Provincial Treasurer Of Alberta                     | -           | -                      | -   | 0,6  | -          | 0,6          |
| Town of Edson   | -           | -                      | -   | 0,1  | -          | 0,1          |
| Yellowhead County                                       | -           | -                      | -   | 0,2  | -          | 0,2          |
| <b>Total</b>  | <b>17,0</b> | -                      | -   | <b>4,8</b>   | -          | <b>21,8</b>  |
| <b>Colombia</b>   |             |                        |   |  |            |              |
| Administración de Impuestos y Aduanas Nacionales (DIAN) | 2,9         | -                      | -   | -  | -          | 2,9          |
| <b>Total</b>  | <b>2,9</b>  | -                      | -   | -  | -          | <b>2,9</b>   |
| <b>Ecuador</b>  |             |                        |   |  |            |              |
| Servicio de Rentas Internas                             | 87,3        | -                      | -   | -  | -          | 87,3         |
| Agencia de Regularizacion y Control                     | -           | -                      | -   | 0,3  | -          | 0,3          |
| Ministerio de Energía y Recursos Naturales              | -           | 75,2                   | -   | 0,1  | -          | 75,3         |
| Ministerio del Ambiente                                 | -           | -                      | -   | 0,3  | -          | 0,3          |
| Secretaría de Hidrocarburos                             | -           | -                      | -   | 0,2  | -          | 0,2          |
| <b>Total</b>  | <b>87,3</b> | <b>75,2</b>            | -   | <b>0,9</b>   | -          | <b>163,4</b> |
| <b>United States of America</b>                         |             |                        |   |  |            |              |
| Blossburg Municipal Authority                           | 0,9         | -                      | -   | 0,1  | -          | 1,0          |
| Bureau of Ocean Energy Management                       | 32,2        | -                      | -   | 1,4  | -          | 33,6         |
| City of Runge   | 0,1         | -                      | -   | -  | -          | 0,1          |
| Commissioner of the General Land                        | 0,4         | -                      | -   | -  | -          | 0,4          |
| Commonwealth of Pennsylvania                            | 6,1         | -                      | -   | 11,7   | -          | 17,8         |
| Department of Natural Resources                         | -           | -                      | -   | 2,3  | -          | 2,3          |
| Northeast Bradford School District                      | 0,2         | -                      | -   | -  | -          | 0,2          |
| Northern Tier Solid Waste Authority                     | 0,1         | -                      | -   | -  | -          | 0,1          |
| Pa Department of Transportation                         | -           | -                      | -   | -  | 0,3        | 0,3          |
| Pennsylvania Game Commission                            | 0,1         | -                      | -   | -  | -          | 0,1          |
| Texas Comptroller of Public Accounts                    | 9,2         | -                      | -   | -  | -          | 9,2          |
| Susquehanna River Basin Commission                      | -           | -                      | -   | 0,3  | -          | 0,3          |
| United States Geological Survey                         | -           | -                      | -   | 0,1  | -          | 0,1          |
| Louisiana Department of Revenue                         | (0,1)       | -                      | -   | -  | -          | (0,1)        |
| <b>Total</b>  | <b>49,2</b> | -                      | -   | <b>15,9</b>  | <b>0,3</b> | <b>65,4</b>  |

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

Million euros

|   | Taxes        | Production entitlement | Signature, discovery and production bonuses | License fees, rental fees and other considerations for licenses and/or concessions | Other      | TOTAL          |
|---|--------------|------------------------|---|--|------------|----------------|
| <b>Spain</b>                                      |              |                        |   |  |            |                |
| Tesoro Público                                    | 4,8          | -                      | -   | -  | -          | 4,8            |
| <b>Total</b>                                      | <b>4,8</b>   | -                      | -   | -  | -          | <b>4,8</b>     |
| <b>Guyana</b>                                     |              |                        |   |  |            |                |
| Guyana Geology and Mines Commission               | -            | -                      | -   | 0,3  | -          | 0,3            |
| <b>Total</b>                                      | -            | -                      | -   | <b>0,3</b>   | -          | <b>0,3</b>     |
| <b>Indonesia</b>                                  |              |                        |   |  |            |                |
| Directorate General Tax                           | 193,3        | -                      | -   | -  | -          | 193,3          |
| Direktorat Jenderal Minyak dan Gas                | -            | -                      | -   | 3,3  | -          | 3,3            |
| <b>Total</b>                                      | <b>193,3</b> | -                      | -   | <b>3,3</b>   | -          | <b>196,6</b>   |
| <b>Malaysia</b>                                   |              |                        |   |  |            |                |
| Inland Revenue Board                              | (1,7)        | -                      | -   | -  | -          | (1,7)          |
| PETRONAS  | 131,6        | 548,7                  | 29,0  | -  | -          | 709,3          |
| <b>Total</b>                                      | <b>129,9</b> | <b>548,7</b>           | <b>29,0</b>                                 | -  | -          | <b>707,6</b>   |
| <b>Mexico</b>                                     |              |                        |   |  |            |                |
| Comisión Nacional de Hidrocarburos                | -            | -                      | -   | 1,7  | -          | 1,7            |
| Fondo Mexicano de Petróleo                        | -            | -                      | 147,8                                       | -  | -          | 147,8          |
| Servicio de Administración Tributaria             | 4,9          | -                      | -   | -  | -          | 4,9            |
| <b>Total</b>                                      | <b>4,9</b>   | -                      | <b>147,8</b>                                | <b>1,7</b>   | -          | <b>154,4</b>   |
| <b>Norway</b>                                     |              |                        |   |  |            |                |
| Oljedirektoratet                                  | -            | -                      | -   | (5,4)  | -          | (5,4)          |
| Skatteetaten                                      | -            | -                      | -   | -  | -          | -              |
| <b>Total</b>                                      | -            | -                      | -   | <b>(5,4)</b>   | -          | <b>(5,4)</b>   |
| <b>Papua New Guinea</b>                           |              |                        |   |  |            |                |
| Department of Environment and Conservation        | -            | -                      | -   | 0,2  | -          | 0,2            |
| <b>Total</b>                                      | -            | -                      | -   | <b>0,2</b>   | -          | <b>0,2</b>     |
| <b>Peru</b>                                       |              |                        |   |  |            |                |
| SUNAT   | 0,2          | -                      | -   | -  | -          | 0,2            |
| Organismo de Evaluación y Fiscalización Ambiental | 0,2          | -                      | -   | -  | -          | 0,2            |
| OSINERGMIN  | 0,7          | -                      | -   | -  | -          | 0,7            |
| Perupetro S.A.                                    | 23,0         | -                      | -   | -  | -          | 23,0           |
| <b>Total</b>                                      | <b>24,1</b>  | -                      | -   | -  | -          | <b>24,1</b>    |
| <b>Vietnam</b>                                    |              |                        |   |  |            |                |
| Vietnam Oil and Gas Group                         | 37,4         | 243,5                  | 15,5  | -  | -          | 296,4          |
| Vietnam Tax Authority                             | 34,1         | -                      | -   | -  | -          | 34,1           |
| <b>Total</b>                                      | <b>71,5</b>  | <b>243,5</b>           | <b>15,5</b>                                 | -  | -          | <b>330,5</b>   |
| <b>Total</b>                                      | <b>596,6</b> | <b>1.429,5</b>         | <b>213,2</b>                                | <b>23,4</b>  | <b>0,3</b> | <b>2.263,0</b> |

Grupo REPSOL

**2018** Information on oil  
and gas exploration  
and production  
activities

*Translation of a report originally  
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## (1) About this report

This document contains information on the Repsol Group's oil and gas exploration and production activities. This unaudited 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:

- **Information on acreage.**
- **Exploration and development activities.**
- **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
- **Production of oil and gas of the year.**
- **Results of oil and gas exploration and production activities**, including revenue and expenses directly associated to this activity.
- **Accumulated investment** (capitalized cost), which shows capitalized historical costs.
- **Investments of the year** (cost incurred), which represent the amounts capitalized during the year, including the dismantling obligations.

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](http://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 (2018, 2017 and 2016).

## (2) Information on acreage

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

- Developed and undeveloped acreage: developed acreage consists of surface area that contains productive wells, while undeveloped acreage encompass surface area that does not contain productive wells or in which these do not allow for extraction of hydrocarbons.

| (km <sup>2</sup> )       | Developed and undeveloped acreage |                    |                      |                    |                      |                    |                      |                    |                      |                    |                      |                    |
|--------------------------|-----------------------------------|--------------------|----------------------|--------------------|----------------------|--------------------|----------------------|--------------------|----------------------|--------------------|----------------------|--------------------|
|                          | 2018                              |                    |                      |                    | 2017                 |                    |                      |                    | 2016                 |                    |                      |                    |
|                          | Developed                         |                    | Undeveloped          |                    | Developed            |                    | Undeveloped          |                    | Developed            |                    | Undeveloped          |                    |
|                          | Gross <sup>(1)</sup>              | Net <sup>(2)</sup> | Gross <sup>(1)</sup> | Net <sup>(2)</sup> | Gross <sup>(1)</sup> | Net <sup>(2)</sup> | Gross <sup>(1)</sup> | Net <sup>(2)</sup> | Gross <sup>(1)</sup> | Net <sup>(2)</sup> | Gross <sup>(1)</sup> | Net <sup>(2)</sup> |
| <b>Europe</b>            | <b>1,714</b>                      | <b>533</b>         | <b>34,353</b>        | <b>12,512</b>      | <b>1,816</b>         | <b>680</b>         | <b>37,775</b>        | <b>15,891</b>      | <b>1,892</b>         | <b>686</b>         | <b>60,186</b>        | <b>28,888</b>      |
| Norway                   | 555                               | 114                | 2,756                | 913                | 303                  | 107                | 4,609                | 1,660              | 303                  | 107                | 9,842                | 4,539              |
| United Kingdom           | 1,137                             | 402                | 472                  | 141                | 1,490                | 555                | 430                  | 105                | 1,567                | 561                | 699                  | 236                |
| Rest of Europe           | 22                                | 17                 | 31,126               | 11,457             | 22                   | 17                 | 32,736               | 14,126             | 22                   | 17                 | 49,645               | 24,113             |
| <b>Latin America</b>     | <b>3,007</b>                      | <b>682</b>         | <b>158,279</b>       | <b>95,105</b>      | <b>3,006</b>         | <b>688</b>         | <b>117,655</b>       | <b>51,550</b>      | <b>3,131</b>         | <b>715</b>         | <b>132,471</b>       | <b>57,207</b>      |
| Brazil                   | 838                               | 80                 | 4,737                | 1,837              | 838                  | 80                 | 2,236                | 316                | 838                  | 80                 | 2,448                | 363                |
| Colombia                 | 369                               | 72                 | 74,143               | 27,212             | 369                  | 78                 | 73,382               | 27,525             | 509                  | 112                | 74,956               | 28,036             |
| Peru                     | 238                               | 48                 | 52,431               | 51,220             | 238                  | 48                 | 12,755               | 10,348             | 225                  | 41                 | 21,748               | 13,346             |
| Trinidad & Tobago        | 151                               | 45                 | 3,653                | 1,076              | 151                  | 45                 | 3,653                | 1,076              | 152                  | 45                 | 6,238                | 2,109              |
| Venezuela                | 806                               | 192                | 2,185                | 661                | 806                  | 192                | 2,185                | 661                | 803                  | 192                | 2,187                | 661                |
| Rest of Latin America    | 606                               | 245                | 21,131               | 13,099             | 606                  | 245                | 23,443               | 11,624             | 604                  | 245                | 24,895               | 12,691             |
| <b>North America</b>     | <b>3,459</b>                      | <b>2,134</b>       | <b>25,204</b>        | <b>12,562</b>      | <b>6,028</b>         | <b>2,199</b>       | <b>17,213</b>        | <b>8,538</b>       | <b>5,606</b>         | <b>2,184</b>       | <b>35,745</b>        | <b>20,473</b>      |
| Canada                   | 2,498                             | 1,647              | 10,246               | 5,096              | 2,517                | 1,580              | 10,673               | 5,567              | 2,586                | 1,570              | 27,171               | 16,651             |
| United States            | 961                               | 487                | 5,305                | 2,624              | 3,511                | 620                | 5,947                | 2,615              | 3,020                | 614                | 8,574                | 3,822              |
| Rest of North America    | -                                 | -                  | 9,653                | 4,842              | -                    | -                  | 593                  | 356                | -                    | -                  | -                    | -                  |
| <b>Africa</b>            | <b>4,245</b>                      | <b>1,095</b>       | <b>31,980</b>        | <b>12,100</b>      | <b>4,347</b>         | <b>1,234</b>       | <b>51,793</b>        | <b>23,899</b>      | <b>2,566</b>         | <b>713</b>         | <b>87,592</b>        | <b>56,825</b>      |
| <b>Asia and Oceania</b>  | <b>2,377</b>                      | <b>1,051</b>       | <b>134,258</b>       | <b>100,052</b>     | <b>2,290</b>         | <b>982</b>         | <b>136,872</b>       | <b>99,721</b>      | <b>1,402</b>         | <b>564</b>         | <b>160,302</b>       | <b>113,633</b>     |
| Indonesia                | 615                               | 219                | 16,705               | 12,289             | 615                  | 219                | 15,583               | 12,261             | 661                  | 242                | 20,613               | 16,737             |
| Malaysia                 | 1,307                             | 598                | 4,023                | 2,528              | 1,221                | 560                | 4,108                | 2,566              | 414                  | 193                | 4,984                | 2,952              |
| Russia                   | 47                                | 23                 | 3,384                | 2,352              | 46                   | 23                 | 3,386                | 2,418              | 222                  | 109                | 4,692                | 4,135              |
| Rest of Asia and Oceania | 408                               | 210                | 110,146              | 82,884             | 408                  | 180                | 113,794              | 82,476             | 104                  | 20                 | 130,012              | 89,808             |
| <b>Total</b>             | <b>14,802</b>                     | <b>5,494</b>       | <b>384,074</b>       | <b>232,331</b>     | <b>17,487</b>        | <b>5,783</b>       | <b>361,308</b>       | <b>199,599</b>     | <b>14,598</b>        | <b>4,862</b>       | <b>476,297</b>       | <b>277,027</b>     |

- Acreage under development and exploration: acreage under development consist of surface area occupied by blocks under development and/or production, while acreage under exploration is surface area occupied by assets in the exploration phase.

| (km <sup>2</sup> )       | Acreage in development or exploration |                    |                      |                    |                      |                    |                      |                    |                      |                    |                      |                    |
|--------------------------|---------------------------------------|--------------------|----------------------|--------------------|----------------------|--------------------|----------------------|--------------------|----------------------|--------------------|----------------------|--------------------|
|                          | 2018                                  |                    |                      |                    | 2017                 |                    |                      |                    | 2016                 |                    |                      |                    |
|                          | Development                           |                    | Exploration          |                    | Development          |                    | Exploration          |                    | Development          |                    | Exploration          |                    |
|                          | Gross <sup>(1)</sup>                  | Net <sup>(2)</sup> | Gross <sup>(1)</sup> | Net <sup>(2)</sup> | Gross <sup>(1)</sup> | Net <sup>(2)</sup> | Gross <sup>(1)</sup> | Net <sup>(2)</sup> | Gross <sup>(1)</sup> | Net <sup>(2)</sup> | Gross <sup>(1)</sup> | Net <sup>(2)</sup> |
| <b>Europe</b>            | <b>2,818</b>                          | <b>1,122</b>       | <b>33,249</b>        | <b>11,922</b>      | <b>2,743</b>         | <b>1,199</b>       | <b>36,848</b>        | <b>15,373</b>      | <b>2,845</b>         | <b>1,230</b>       | <b>59,233</b>        | <b>28,344</b>      |
| Norway                   | 999                                   | 310                | 2,313                | 717                | 851                  | 324                | 4,062                | 1,444              | 876                  | 343                | 9,269                | 4,304              |
| United Kingdom           | 1,419                                 | 480                | 189                  | 63                 | 1,492                | 543                | 428                  | 117                | 1,570                | 555                | 695                  | 242                |
| Rest of Europe           | 400                                   | 331                | 30,748               | 11,143             | 400                  | 331                | 32,358               | 13,812             | 399                  | 332                | 49,269               | 23,798             |
| <b>Latin America</b>     | <b>16,560</b>                         | <b>4,827</b>       | <b>144,726</b>       | <b>90,959</b>      | <b>15,236</b>        | <b>4,475</b>       | <b>105,425</b>       | <b>47,763</b>      | <b>16,883</b>        | <b>4,736</b>       | <b>118,719</b>       | <b>53,186</b>      |
| Brazil                   | 1,691                                 | 250                | 3,884                | 1,667              | 973                  | 100                | 2,100                | 296                | 1,185                | 147                | 2,100                | 296                |
| Colombia                 | 1,684                                 | 270                | 72,828               | 27,014             | 1,357                | 219                | 72,394               | 27,383             | 2,196                | 375                | 73,270               | 27,773             |
| Peru                     | 1,693                                 | 292                | 50,975               | 50,975             | 1,413                | 141                | 11,580               | 10,255             | 2,020                | 202                | 19,952               | 13,185             |
| Trinidad & Tobago        | 3,804                                 | 1,121              | -                    | -                  | 3,804                | 1,121              | -                    | -                  | 3,804                | 1,121              | 2,585                | 1,034              |
| Venezuela                | 2,990                                 | 853                | -                    | -                  | 2,990                | 853                | -                    | -                  | 2,990                | 853                | -                    | -                  |
| Rest of Latin America    | 4,698                                 | 2,041              | 17,039               | 11,303             | 4,698                | 2,041              | 19,351               | 9,828              | 4,688                | 2,038              | 20,812               | 10,899             |
| <b>North America</b>     | <b>6,901</b>                          | <b>4,698</b>       | <b>21,762</b>        | <b>9,998</b>       | <b>10,252</b>        | <b>5,234</b>       | <b>12,989</b>        | <b>5,503</b>       | <b>10,881</b>        | <b>5,316</b>       | <b>30,470</b>        | <b>17,342</b>      |
| Canada                   | 4,837                                 | 3,434              | 7,907                | 3,309              | 5,180                | 3,779              | 8,009                | 3,368              | 5,549                | 3,813              | 24,208               | 14,408             |
| United States            | 2,064                                 | 1,264              | 4,202                | 1,847              | 5,072                | 1,455              | 4,387                | 1,780              | 5,332                | 1,503              | 6,262                | 2,934              |
| Rest of North America    | -                                     | -                  | 9,653                | 4,842              | -                    | -                  | 593                  | 356                | -                    | -                  | -                    | -                  |
| <b>Africa</b>            | <b>12,622</b>                         | <b>2,605</b>       | <b>23,602</b>        | <b>10,590</b>      | <b>12,725</b>        | <b>2,744</b>       | <b>43,416</b>        | <b>22,389</b>      | <b>12,725</b>        | <b>2,744</b>       | <b>77,434</b>        | <b>54,794</b>      |
| <b>Asia and Oceania</b>  | <b>7,276</b>                          | <b>2,951</b>       | <b>129,359</b>       | <b>98,152</b>      | <b>10,060</b>        | <b>4,105</b>       | <b>129,101</b>       | <b>96,598</b>      | <b>11,280</b>        | <b>4,638</b>       | <b>150,423</b>       | <b>109,560</b>     |
| Indonesia                | 3,124                                 | 1,011              | 14,196               | 11,496             | 3,124                | 1,011              | 13,074               | 11,469             | 4,279                | 1,589              | 16,996               | 15,391             |
| Malaysia                 | 2,324                                 | 1,022              | 3,005                | 2,104              | 2,324                | 1,022              | 3,005                | 2,104              | 2,393                | 1,041              | 3,005                | 2,104              |
| Russia                   | 346                                   | 169                | 3,085                | 2,206              | 346                  | 169                | 3,085                | 2,272              | 1,312                | 642                | 3,602                | 3,602              |
| Rest of Asia and Oceania | 1,482                                 | 749                | 109,071              | 82,345             | 4,267                | 1,902              | 109,935              | 80,754             | 3,297                | 1,365              | 126,820              | 88,463             |
| <b>Total</b>             | <b>46,178</b>                         | <b>16,203</b>      | <b>352,698</b>       | <b>221,621</b>     | <b>51,016</b>        | <b>17,757</b>      | <b>327,779</b>       | <b>187,625</b>     | <b>54,614</b>        | <b>18,664</b>      | <b>436,280</b>       | <b>263,226</b>     |

(1) Gross acreage surface area is the area in which Repsol owns an interest.

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

### (3) Exploration and development activities

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

|                          | Exploration wells completed and in progress <sup>(1)</sup> |      |      |          |      |      |                  |      |      |                 |      |      |             |      |      |
|--------------------------|--|------|------|----------|------|------|------------------|------|------|-----------------|------|------|-------------|------|------|
|                          | Positive   |      |      | Negative |      |      | Under assessment |      |      | Total completed |      |      | In progress |      |      |
|                          | 2018   | 2017 | 2016 | 2018     | 2017 | 2016 | 2018             | 2017 | 2016 | 2018            | 2017 | 2016 | 2018        | 2017 | 2016 |
| <b>Europe</b>            | -  | -    | -    | 3        | 2    | -    | 1                | -    | 1    | 4               | 2    | 1    | 1           | -    | 1    |
| Norway                   | -  | -    | -    | 1        | 1    | -    | 1                | -    | -    | 2               | 1    | -    | 1           | -    | -    |
| United Kingdom           | -  | -    | -    | -        | -    | -    | -                | -    | -    | -               | -    | -    | -           | -    | -    |
| Rest of Europe           | -  | -    | -    | 2        | 1    | -    | -                | -    | 1    | 2               | 1    | 1    | -           | -    | 1    |
| <b>Latin America</b>     | 4  | 3    | -    | 6        | 4    | 2    | -                | -    | -    | 10              | 7    | 2    | 1           | 5    | 1    |
| Brazil                   | -  | -    | -    | -        | -    | -    | -                | -    | -    | -               | -    | -    | -           | -    | -    |
| Colombia                 | 4  | -    | -    | 3        | 2    | 2    | -                | -    | -    | 7               | 2    | 2    | -           | 3    | -    |
| Peru                     | -  | -    | -    | -        | 1    | -    | -                | -    | -    | -               | 1    | -    | -           | -    | 1    |
| Trinidad & Tobago        | -  | 2    | -    | 1        | -    | -    | -                | -    | -    | 1               | 2    | -    | -           | -    | -    |
| Venezuela                | -  | -    | -    | -        | -    | -    | -                | -    | -    | -               | -    | -    | -           | -    | -    |
| Rest of Latin America    | -  | 1    | -    | 2        | 1    | -    | -                | -    | -    | 2               | 2    | -    | 1           | 2    | -    |
| <b>North America</b>     | -  | 1    | -    | 2        | -    | -    | -                | -    | -    | 2               | 1    | -    | -           | 2    | -    |
| Canada                   | -  | -    | -    | -        | -    | -    | -                | -    | -    | -               | -    | -    | -           | -    | -    |
| United States            | -  | 1    | -    | 2        | -    | -    | -                | -    | -    | 2               | 1    | -    | -           | 2    | -    |
| <b>Africa</b>            | -  | -    | -    | 3        | 1    | 1    | -                | -    | 1    | 3               | 1    | 2    | -           | 1    | -    |
| <b>Asia and Oceania</b>  | -  | 1    | -    | 2        | 2    | 6    | -                | -    | 2    | 2               | 3    | 8    | 1           | -    | -    |
| Indonesia                | -  | -    | -    | -        | 1    | 1    | -                | -    | 2    | -               | 1    | 3    | 1           | -    | -    |
| Malaysia                 | -  | -    | -    | 2        | -    | 3    | -                | -    | -    | 2               | -    | 3    | -           | -    | -    |
| Russia                   | -  | -    | -    | -        | 1    | -    | -                | -    | -    | -               | 1    | -    | -           | -    | -    |
| Rest of Asia and Oceania | -  | 1    | -    | -        | -    | 2    | -                | -    | -    | -               | 1    | 2    | -           | -    | -    |
| <b>Total</b>             | 4  | 5    | -    | 16       | 9    | 9    | 1                | -    | 4    | 21              | 14   | 13   | 3           | 8    | 2    |

(1) Excluding appraisal wells (2 in 2018: 1 positive and 1 in evaluation; 2 in 2017: 1 positive y 1 negative; 8 in 2016: 3 positive, 2 negative, 1 in evaluation and 2 still in progress. The Hendrix well was declared negative, although it was still in progress at December 31, 2017.

|                          | Completed development wells |      |      |          |      |      |                  |      |      |       |      |      |
|--------------------------|-----------------------------|------|------|----------|------|------|------------------|------|------|-------|------|------|
|                          | Positive                    |      |      | Negative |      |      | Under assessment |      |      | Total |      |      |
|                          | 2018                        | 2017 | 2016 | 2018     | 2017 | 2016 | 2018             | 2017 | 2016 | 2018  | 2017 | 2016 |
| <b>Europe</b>            | 4                           | 4    | 3    | -        | -    | -    | -                | -    | -    | 4     | 4    | 3    |
| Norway                   | 4                           | 3    | 1    | -        | -    | -    | -                | -    | -    | 4     | 3    | 1    |
| United Kingdom           | -                           | 1    | 2    | -        | -    | -    | -                | -    | -    | -     | 1    | 2    |
| Rest of Europe           | -                           | -    | -    | -        | -    | -    | -                | -    | -    | -     | -    | -    |
| <b>Latin America</b>     | 28                          | 69   | 52   | 1        | 2    | 2    | 3                | 3    | 7    | 32    | 74   | 61   |
| Brazil                   | 2                           | 3    | 4    | -        | -    | -    | -                | -    | -    | 2     | 3    | 4    |
| Colombia                 | 22                          | 25   | 3    | -        | -    | -    | 3                | 1    | 1    | 25    | 26   | 4    |
| Peru                     | -                           | -    | 3    | -        | -    | -    | -                | -    | 1    | -     | -    | 4    |
| Trinidad & Tobago        | 3                           | 17   | 8    | 1        | -    | -    | -                | 1    | 5    | 4     | 18   | 13   |
| Venezuela                | -                           | 17   | 25   | -        | -    | -    | -                | -    | -    | -     | 17   | 25   |
| Rest of Latin America    | 1                           | 7    | 9    | -        | 2    | 2    | -                | 1    | -    | 1     | 10   | 11   |
| <b>North America</b>     | 136                         | 153  | 150  | -        | -    | -    | -                | -    | -    | 136   | 153  | 150  |
| Canada                   | 48                          | 57   | 31   | -        | -    | -    | -                | -    | -    | 48    | 57   | 31   |
| United States            | 88                          | 96   | 119  | -        | -    | -    | -                | -    | -    | 88    | 96   | 119  |
| <b>Africa</b>            | 7                           | 12   | 8    | -        | 1    | 1    | -                | -    | 1    | 7     | 13   | 10   |
| <b>Asia and Oceania</b>  | 48                          | 31   | 46   | -        | 1    | -    | 1                | 3    | -    | 49    | 35   | 46   |
| Indonesia                | 2                           | -    | 1    | -        | -    | -    | -                | -    | -    | 2     | -    | 1    |
| Malaysia                 | 12                          | -    | -    | -        | -    | -    | 1                | 3    | -    | 13    | 3    | -    |
| Russia                   | 32                          | 25   | 45   | -        | 1    | -    | -                | -    | -    | 32    | 26   | 45   |
| Rest of Asia and Oceania | 2                           | 6    | -    | -        | -    | -    | -                | -    | -    | 2     | 6    | -    |
| <b>Total</b>             | 223                         | 269  | 259  | 1        | 4    | 3    | 4                | 6    | 8    | 228   | 279  | 270  |

#### **(4) Net proven 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 and service contracts in force as of December 31, 2018, 2017 and 2016, 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.

Repsol applies the criteria established by the Society of Petroleum Engineers’ Petroleum Resource Management System (SPE/WPC/AAPG/SPEE/SEG/SPWLA/EAGE) to estimate its proven and unproven reserves of oil and gas. See Note 3 “Accounting estimates and judgments” of the 2018 Consolidated Financial Statements.

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 2018, Repsol commissioned an external audit for various areas of South America, North America, Europe, Africa and Asia.



**Estimates of developed and undeveloped proved reserves of crude oil, condensate and GPL:**

Millions of barrels

|   | Total      | Europe    | Venezuela | Peru      | United States | Rest of America | Africa     | Asia and Oceania |
|---|------------|-----------|-----------|-----------|---------------|-----------------|------------|------------------|
| <b>Fully-consolidated entities</b>                    |            |           |           |           |               |                 |            |                  |
| <b>Reserves at December 31st, 2015 <sup>(1)</sup></b> | <b>396</b> | <b>13</b> | <b>-</b>  | <b>80</b> | <b>82</b>     | <b>96</b>       | <b>110</b> | <b>16</b>        |
| 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 <sup>(1)</sup>                             | (51)       | (8)       | -         | (5)       | (12)          | (16)            | (3)        | (7)              |
| <b>Reserves at December 31st, 2016 <sup>(1)</sup></b> | <b>380</b> | <b>14</b> | <b>-</b>  | <b>96</b> | <b>77</b>     | <b>68</b>       | <b>107</b> | <b>18</b>        |
| Revisions of previous estimates                       | 42         | 5         | -         | -         | (6)           | 10              | 13         | 19               |
| Improved recovery                                     | -          | -         | -         | -         | -             | -               | -          | -                |
| Extensions and discoveries                            | 19         | -         | -         | -         | 16            | 3               | -          | -                |
| Purchases of minerals in place                        | 2          | -         | -         | -         | -             | -               | -          | 2                |
| Sales of minerals in place                            | -          | -         | -         | -         | -             | -               | -          | -                |
| Production <sup>(1)</sup>                             | (52)       | (6)       | -         | (5)       | (10)          | (13)            | (12)       | (5)              |
| <b>Reserves at December 31st, 2017 <sup>(1)</sup></b> | <b>391</b> | <b>12</b> | <b>-</b>  | <b>92</b> | <b>77</b>     | <b>68</b>       | <b>108</b> | <b>34</b>        |
| Revisions of previous estimates                       | 46         | 24        | -         | (1)       | (2)           | 11              | 8          | 5                |
| Improved recovery                                     | 1          | -         | -         | -         | -             | 1               | -          | -                |
| Extensions and discoveries                            | 12         | -         | -         | -         | 8             | 4               | -          | -                |
| Purchases of minerals in place                        | 6          | 6         | -         | -         | -             | -               | -          | -                |
| Sales of minerals in place                            | (2)        | -         | -         | -         | (2)           | -               | -          | -                |
| Production <sup>(1)</sup>                             | (57)       | (7)       | -         | (5)       | (10)          | (13)            | (16)       | (7)              |
| <b>Reserves at December 31st, 2018 <sup>(1)</sup></b> | <b>397</b> | <b>36</b> | <b>-</b>  | <b>86</b> | <b>72</b>     | <b>71</b>       | <b>100</b> | <b>33</b>        |

Millions of barrels

|   | Total      | Europe    | Venezuela | Peru      | United States | Rest of America | Africa     | Asia and Oceania |
|---|------------|-----------|-----------|-----------|---------------|-----------------|------------|------------------|
| <b>Equity-accounted investees</b>                             |            |           |           |           |               |                 |            |                  |
| <b>Reserves at December 31st, 2015 <sup>(1)</sup></b>         | <b>192</b> | <b>30</b> | <b>42</b> | <b>-</b>  | <b>-</b>      | <b>91</b>       | <b>-</b>   | <b>29</b>        |
| 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 <sup>(1)</sup>                                     | (38)       | (8)       | (5)       | -         | -             | (21)            | -          | (4)              |
| <b>Reserves at December 31st, 2016 <sup>(1)</sup></b>         | <b>204</b> | <b>40</b> | <b>48</b> | <b>-</b>  | <b>-</b>      | <b>87</b>       | <b>-</b>   | <b>29</b>        |
| Revisions of previous estimates                               | 63         | 9         | 15        | -         | -             | 35              | -          | 4                |
| Improved recovery   | -          | -         | -         | -         | -             | -               | -          | -                |
| Extensions and discoveries                                    | -          | -         | -         | -         | -             | -               | -          | -                |
| Purchases of minerals in place                                | -          | -         | -         | -         | -             | -               | -          | -                |
| Sales of minerals in place                                    | -          | -         | -         | -         | -             | -               | -          | -                |
| Production <sup>(1)</sup>                                     | (41)       | (9)       | (5)       | -         | -             | (23)            | -          | (4)              |
| <b>Reserves at December 31st, 2017 <sup>(1)</sup></b>         | <b>226</b> | <b>40</b> | <b>59</b> | <b>-</b>  | <b>-</b>      | <b>99</b>       | <b>-</b>   | <b>29</b>        |
| Revisions of previous estimates                               | 52         | 15        | (5)       | -         | -             | 40              | -          | 2                |
| Improved recovery   | -          | -         | -         | -         | -             | -               | -          | -                |
| Extensions and discoveries                                    | 1          | -         | -         | -         | -             | 1               | -          | 1                |
| Purchases of minerals in place                                | -          | -         | -         | -         | -             | -               | -          | -                |
| Sales of minerals in place                                    | -          | -         | -         | -         | -             | -               | -          | -                |
| Production <sup>(1)</sup>                                     | (38)       | (10)      | (3)       | -         | -             | (22)            | -          | (3)              |
| <b>Reserves at December 31st, 2018 <sup>(1)</sup></b>         | <b>241</b> | <b>45</b> | <b>51</b> | <b>-</b>  | <b>-</b>      | <b>117</b>      | <b>-</b>   | <b>28</b>        |
| <b>Total fully-consolidated and equity-accounted entities</b> | <b>638</b> | <b>81</b> | <b>51</b> | <b>86</b> | <b>72</b>     | <b>188</b>      | <b>100</b> | <b>61</b>        |

**Estimates of developed proved reserves of crude oil, condensate and GPL:**

*Millions of barrels*

|                               | <b>Total</b> | <b>Europe</b> | <b>Venezuela</b> | <b>Peru</b> | <b>United States</b> | <b>Rest of America</b> | <b>Africa</b> | <b>Asia and Oceania</b> |
|-------------------------------|--------------|---------------|------------------|-------------|----------------------|------------------------|---------------|-------------------------|
| <b>At December 31st, 2015</b> | <b>418</b>   | <b>36</b>     | <b>32</b>        | <b>50</b>   | <b>52</b>            | <b>137</b>             | <b>71</b>     | <b>40</b>               |
| Fully-consolidated entities   | 283          | 13            | -                | 50          | 52                   | 82                     | 71            | 15                      |
| Equity-accounted investees    | 135          | 23            | 32               | -           | -                    | 55                     | -             | 25                      |
| <b>At December 31st, 2016</b> | <b>407</b>   | <b>50</b>     | <b>33</b>        | <b>48</b>   | <b>46</b>            | <b>123</b>             | <b>68</b>     | <b>40</b>               |
| Fully-consolidated entities   | 250          | 13            | -                | 48          | 46                   | 59                     | 68            | 17                      |
| Equity-accounted investees    | 157          | 37            | 33               | -           | -                    | 64                     | -             | 23                      |
| <b>At December 31st, 2017</b> | <b>430</b>   | <b>47</b>     | <b>37</b>        | <b>60</b>   | <b>38</b>            | <b>148</b>             | <b>63</b>     | <b>37</b>               |
| Fully-consolidated entities   | 248          | 11            | -                | 60          | 38                   | 61                     | 63            | 16                      |
| Equity-accounted investees    | 182          | 36            | 37               | -           | -                    | 88                     | -             | 21                      |
| <b>At December 31st, 2018</b> | <b>438</b>   | <b>55</b>     | <b>33</b>        | <b>55</b>   | <b>37</b>            | <b>164</b>             | <b>59</b>     | <b>36</b>               |
| Fully-consolidated entities   | 242          | 14            | -                | 55          | 37                   | 63                     | 59            | 15                      |
| Equity-accounted investees    | 195          | 41            | 33               | -           | -                    | 102                    | -             | 20                      |

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, 2018, 2017, 2016 and 2015 include an estimated volume of approximately 47, 47, 45 and 45 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 2018, 2017, 2016 and 2015 includes an estimated volume of 5, 5, 4 and 4 million barrels of oil equivalent, respectively, in connection with such payments.

**Estimates of developed and undeveloped proved reserves of natural Gas:**

*Thousand Millions of Standard Cubic Feet*

|   | <b>Total</b> | <b>Europe</b> | <b>Venezuela</b> | <b>Peru</b>  | <b>United States</b> | <b>Rest of America</b> | <b>Africa</b> | <b>Asia and Oceania</b> |
|---|--------------|---------------|------------------|--------------|----------------------|------------------------|---------------|-------------------------|
| <b>Fully-consolidated entities</b>                    |              |               |                  |              |                      |                        |               |                         |
| <b>Reserves at December 31st, 2015 <sup>(1)</sup></b> | <b>5,039</b> | <b>14</b>     | <b>47</b>        | <b>1,549</b> | <b>1,733</b>         | <b>794</b>             | <b>103</b>    | <b>799</b>              |
| 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 <sup>(1)</sup>                             | (533)        | (16)          | (5)              | (68)         | (180)                | (124)                  | (16)          | (124)                   |
| <b>Reserves at December 31st, 2016 <sup>(1)</sup></b> | <b>5,116</b> | <b>21</b>     | <b>44</b>        | <b>1,897</b> | <b>1,646</b>         | <b>757</b>             | <b>98</b>     | <b>653</b>              |
| Revisions of previous estimates                       | 59           | 11            | 4                | -            | (87)                 | 39                     | 20            | 72                      |
| Improved recovery                                     | -            | -             | -                | -            | -                    | -                      | -             | -                       |
| Extensions and discoveries                            | 387          | -             | -                | -            | 343                  | 44                     | -             | -                       |
| Purchases of minerals in place                        | 13           | -             | -                | -            | 1                    | 4                      | -             | 8                       |
| Sales of minerals in place                            | (17)         | -             | -                | -            | (5)                  | (12)                   | -             | (1)                     |
| Production <sup>(1)</sup>                             | (494)        | (13)          | (5)              | (67)         | (174)                | (116)                  | (8)           | (111)                   |
| <b>Reserves at December 31st, 2017 <sup>(1)</sup></b> | <b>5,064</b> | <b>20</b>     | <b>42</b>        | <b>1,830</b> | <b>1,724</b>         | <b>717</b>             | <b>110</b>    | <b>620</b>              |
| Revisions of previous estimates                       | 460          | 15            | (7)              | (24)         | 214                  | 176                    | 82            | 5                       |
| Improved recovery                                     | -            | -             | -                | -            | -                    | -                      | -             | -                       |
| Extensions and discoveries                            | 248          | -             | -                | -            | 203                  | 41                     | -             | 4                       |
| Purchases of minerals in place                        | 124          | 93            | -                | -            | 31                   | -                      | -             | -                       |
| Sales of minerals in place                            | (41)         | -             | -                | -            | (41)                 | -                      | -             | -                       |
| Production <sup>(1)</sup>                             | (530)        | (23)          | (4)              | (68)         | (179)                | (120)                  | (26)          | (108)                   |
| <b>Reserves at December 31st, 2018 <sup>(1)</sup></b> | <b>5,325</b> | <b>105</b>    | <b>31</b>        | <b>1,737</b> | <b>1,951</b>         | <b>812</b>             | <b>166</b>    | <b>521</b>              |

*Thousand Millions of Standard Cubic Feet*

|   | <b>Total</b> | <b>Europe</b> | <b>Venezuela</b> | <b>Peru</b>  | <b>United States</b> | <b>Rest of America</b> | <b>Africa</b> | <b>Asia and Oceania</b> |
|---|--------------|---------------|------------------|--------------|----------------------|------------------------|---------------|-------------------------|
| <b>Equity-accounted investees</b>                             |              |               |                  |              |                      |                        |               |                         |
| <b>Reserves at December 31st, 2015 <sup>(1)</sup></b>         | <b>4,986</b> | <b>28</b>     | <b>3,067</b>     | <b>-</b>     | <b>-</b>             | <b>1,851</b>           | <b>-</b>      | <b>40</b>               |
| 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 <sup>(1)</sup>                                     | (385)        | (1)           | (124)            | -            | -                    | (247)                  | -             | (14)                    |
| <b>Reserves at December 31st, 2016 <sup>(1)</sup></b>         | <b>4,977</b> | <b>26</b>     | <b>3,029</b>     | <b>-</b>     | <b>-</b>             | <b>1,864</b>           | <b>-</b>      | <b>58</b>               |
| Revisions of previous estimates                               | 177          | (1)           | (33)             | -            | -                    | 205                    | -             | 6                       |
| Improved recovery   | -            | -             | -                | -            | -                    | -                      | -             | -                       |
| Extensions and discoveries                                    | -            | -             | -                | -            | -                    | -                      | -             | -                       |
| Purchases of minerals in place                                | -            | -             | -                | -            | -                    | -                      | -             | -                       |
| Sales of minerals in place                                    | (53)         | -             | -                | -            | -                    | -                      | -             | (53)                    |
| Production <sup>(1)</sup>                                     | (407)        | (4)           | (125)            | -            | -                    | (267)                  | -             | (11)                    |
| <b>Reserves at December 31st, 2017 <sup>(1)</sup></b>         | <b>4,693</b> | <b>20</b>     | <b>2,871</b>     | <b>-</b>     | <b>-</b>             | <b>1,802</b>           | <b>-</b>      | <b>-</b>                |
| Revisions of previous estimates                               | (167)        | 3             | (195)            | -            | -                    | 25                     | -             | -                       |
| Improved recovery   | -            | -             | -                | -            | -                    | -                      | -             | -                       |
| Extensions and discoveries                                    | 104          | -             | -                | -            | -                    | 104                    | -             | -                       |
| Purchases of minerals in place                                | -            | -             | -                | -            | -                    | -                      | -             | -                       |
| Sales of minerals in place                                    | -            | -             | -                | -            | -                    | -                      | -             | -                       |
| Production <sup>(1)</sup>                                     | (400)        | (8)           | (106)            | -            | -                    | (287)                  | -             | -                       |
| <b>Reserves at December 31st, 2018 <sup>(1)</sup></b>         | <b>4,230</b> | <b>15</b>     | <b>2,570</b>     | <b>-</b>     | <b>-</b>             | <b>1,644</b>           | <b>-</b>      | <b>-</b>                |
| <b>Total fully-consolidated and equity-accounted entities</b> | <b>9,554</b> | <b>120</b>    | <b>2,601</b>     | <b>1,737</b> | <b>1,951</b>         | <b>2,456</b>           | <b>166</b>    | <b>521</b>              |

**Estimates of developed proved reserves of natural gas:**

*Thousand Millions of Standard Cubic Feet*

|                               | <b>Total</b> | <b>Europe</b> | <b>Venezuela</b> | <b>Peru</b>  | <b>United States</b> | <b>Rest of America</b> | <b>Africa</b> | <b>Asia and Oceania</b> |
|-------------------------------|--------------|---------------|------------------|--------------|----------------------|------------------------|---------------|-------------------------|
| <b>At December 31st, 2015</b> | <b>5,697</b> | <b>15</b>     | <b>1,308</b>     | <b>926</b>   | <b>1,120</b>         | <b>1,622</b>           | <b>33</b>     | <b>673</b>              |
| Fully-consolidated entities   | 3,475        | 14            | 47               | 926          | 1,120                | 681                    | 33            | 654                     |
| Equity-accounted investees    | 2,222        | 1             | 1,261            | -            | -                    | 941                    | -             | 19                      |
| <b>At December 31st, 2016</b> | <b>6,054</b> | <b>21</b>     | <b>2,014</b>     | <b>933</b>   | <b>1,112</b>         | <b>1,403</b>           | <b>18</b>     | <b>554</b>              |
| Fully-consolidated entities   | 3,249        | 19            | 44               | 933          | 1,112                | 596                    | 18            | 528                     |
| Equity-accounted investees    | 2,805        | 2             | 1,971            | -            | -                    | 807                    | -             | 26                      |
| <b>At December 31st, 2017</b> | <b>6,212</b> | <b>35</b>     | <b>1,945</b>     | <b>1,163</b> | <b>1,158</b>         | <b>1,447</b>           | <b>11</b>     | <b>452</b>              |
| Fully-consolidated entities   | 3,486        | 16            | 39               | 1,163        | 1,158                | 646                    | 11            | 452                     |
| Equity-accounted investees    | 2,726        | 19            | 1,906            | -            | -                    | 801                    | -             | -                       |
| <b>At December 31st, 2018</b> | <b>6,442</b> | <b>109</b>    | <b>1,814</b>     | <b>1,093</b> | <b>1,190</b>         | <b>1,701</b>           | <b>150</b>    | <b>385</b>              |
| Fully-consolidated entities   | 3,658        | 95            | 29               | 1,093        | 1,190                | 715                    | 150           | 385                     |
| Equity-accounted investees    | 2,784        | 14            | 1,784            | -            | -                    | 986                    | -             | -                       |

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, 2018, 2017, 2016 and 2015 include an estimated volume of approximately 1,127, 1,248, 1,273 and 1,264 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 2018, 2017, 2016 and 2015 includes an estimated volume of 73, 50, 64 and 47 billion cubic feet of gas, respectively, in connection with such payments.

**Estimates of developed and undeveloped proved 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 and Oceania |
|---|--------------|-----------|-----------|------------|---------------|-----------------|------------|------------------|
| <b>Fully-consolidated entities</b>                    |              |           |           |            |               |                 |            |                  |
| <b>Reserves at December 31st, 2015 <sup>(1)</sup></b> | <b>1,293</b> | <b>16</b> | <b>8</b>  | <b>356</b> | <b>390</b>    | <b>237</b>      | <b>128</b> | <b>158</b>       |
| 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 <sup>(1)</sup>                             | (146)        | (11)      | (1)       | (17)       | (44)          | (38)            | (6)        | (29)             |
| <b>Reserves at December 31st, 2016 <sup>(1)</sup></b> | <b>1,291</b> | <b>17</b> | <b>8</b>  | <b>434</b> | <b>370</b>    | <b>203</b>      | <b>125</b> | <b>135</b>       |
| Revisions of previous estimates                       | 52           | 7         | 1         | -          | (21)          | 17              | 17         | 32               |
| Improved recovery                                     | -            | -         | -         | -          | -             | -               | -          | -                |
| Extensions and discoveries                            | 88           | -         | -         | -          | 77            | 11              | -          | -                |
| Purchases of minerals in place                        | 5            | -         | -         | -          | -             | 1               | -          | 3                |
| Sales of minerals in place                            | (3)          | -         | -         | -          | (1)           | (2)             | -          | -                |
| Production <sup>(1)</sup>                             | (140)        | (9)       | (1)       | (17)       | (41)          | (34)            | (14)       | (25)             |
| <b>Reserves at December 31st, 2017 <sup>(1)</sup></b> | <b>1,293</b> | <b>15</b> | <b>8</b>  | <b>417</b> | <b>384</b>    | <b>196</b>      | <b>128</b> | <b>145</b>       |
| Revisions of previous estimates                       | 128          | 27        | (1)       | (5)        | 36            | 43              | 22         | 6                |
| Improved recovery                                     | 1            | -         | -         | -          | -             | 1               | -          | -                |
| Extensions and discoveries                            | 56           | -         | -         | -          | 45            | 11              | -          | 1                |
| Purchases of minerals in place                        | 28           | 23        | -         | -          | 5             | -               | -          | -                |
| Sales of minerals in place                            | (9)          | -         | -         | -          | (9)           | -               | -          | -                |
| Production <sup>(1)</sup>                             | (151)        | (11)      | (1)       | (17)       | (41)          | (35)            | (21)       | (26)             |
| <b>Reserves at December 31st, 2018 <sup>(1)</sup></b> | <b>1,345</b> | <b>54</b> | <b>6</b>  | <b>395</b> | <b>419</b>    | <b>216</b>      | <b>129</b> | <b>126</b>       |

Millions of Barrels of Oil Equivalent

|   | Total        | Europe     | Venezuela  | Peru       | United States | Rest of America | Africa     | Asia and Oceania |
|---|--------------|------------|------------|------------|---------------|-----------------|------------|------------------|
| <b>Equity-accounted investees</b>                             |              |            |            |            |               |                 |            |                  |
| <b>Reserves at December 31st, 2015 <sup>(1)</sup></b>         | <b>1,080</b> | <b>35</b>  | <b>588</b> | -          | -             | <b>420</b>      | -          | <b>36</b>        |
| 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 <sup>(1)</sup>                                     | (106)        | (8)        | (27)       | -          | -             | (65)            | -          | (7)              |
| <b>Reserves at December 31st, 2016 <sup>(1)</sup></b>         | <b>1,090</b> | <b>45</b>  | <b>588</b> | -          | -             | <b>419</b>      | -          | <b>39</b>        |
| Revisions of previous estimates                               | 95           | 9          | 9          | -          | -             | 71              | -          | 5                |
| Improved recovery   | -            | -          | -          | -          | -             | -               | -          | -                |
| Extensions and discoveries                                    | -            | -          | -          | -          | -             | -               | -          | -                |
| Purchases of minerals in place                                | -            | -          | -          | -          | -             | -               | -          | -                |
| Sales of minerals in place                                    | (9)          | -          | -          | -          | -             | -               | -          | (9)              |
| Production <sup>(1)</sup>                                     | (114)        | (10)       | (27)       | -          | -             | (71)            | -          | (6)              |
| <b>Reserves at December 31st, 2017 <sup>(1)</sup></b>         | <b>1,062</b> | <b>43</b>  | <b>570</b> | -          | -             | <b>420</b>      | -          | <b>29</b>        |
| Revisions of previous estimates                               | 22           | 15         | (39)       | -          | -             | 44              | -          | 2                |
| Improved recovery   | -            | -          | -          | -          | -             | -               | -          | -                |
| Extensions and discoveries                                    | 20           | -          | -          | -          | -             | 19              | -          | 1                |
| Purchases of minerals in place                                | -            | -          | -          | -          | -             | -               | -          | -                |
| Sales of minerals in place                                    | -            | -          | -          | -          | -             | -               | -          | -                |
| Production <sup>(1)</sup>                                     | (110)        | (11)       | (22)       | -          | -             | (73)            | -          | (3)              |
| <b>Reserves at December 31st, 2018 <sup>(1)</sup></b>         | <b>994</b>   | <b>48</b>  | <b>509</b> | -          | -             | <b>410</b>      | -          | <b>28</b>        |
| <b>Total fully-consolidated and equity-accounted entities</b> | <b>2,340</b> | <b>102</b> | <b>514</b> | <b>395</b> | <b>419</b>    | <b>625</b>      | <b>129</b> | <b>154</b>       |

**Estimates of developed proved reserves of crude oil, condensate, natural gas liquids and natural gas**

*Millions of Barrels of Oil Equivalent*

|                               | <b>Total</b> | <b>Europe</b> | <b>Venezuela</b> | <b>Peru</b> | <b>United States</b> | <b>Rest of America</b> | <b>Africa</b> | <b>Asia and Oceania</b> |
|-------------------------------|--------------|---------------|------------------|-------------|----------------------|------------------------|---------------|-------------------------|
| <b>At December 31st, 2015</b> | <b>1,430</b> | <b>38</b>     | <b>264</b>       | <b>214</b>  | <b>251</b>           | <b>426</b>             | <b>77</b>     | <b>160</b>              |
| Fully-consolidated entities   | 901          | 15            | 8                | 214         | 251                  | 204                    | 77            | 132                     |
| Equity-accounted investees    | 529          | 23            | 256              | -           | -                    | 222                    | -             | 28                      |
| <b>At December 31st, 2016</b> | <b>1,485</b> | <b>53</b>     | <b>392</b>       | <b>214</b>  | <b>244</b>           | <b>373</b>             | <b>71</b>     | <b>139</b>              |
| Fully-consolidated entities   | 829          | 16            | 8                | 214         | 244                  | 165                    | 71            | 111                     |
| Equity-accounted investees    | 656          | 37            | 384              | -           | -                    | 208                    | -             | 28                      |
| <b>At December 31st, 2017</b> | <b>1,536</b> | <b>53</b>     | <b>383</b>       | <b>267</b>  | <b>244</b>           | <b>406</b>             | <b>65</b>     | <b>118</b>              |
| Fully-consolidated entities   | 869          | 13            | 7                | 267         | 244                  | 176                    | 65            | 97                      |
| Equity-accounted investees    | 667          | 40            | 376              | -           | -                    | 230                    | -             | 21                      |
| <b>At December 31st, 2018</b> | <b>1,585</b> | <b>75</b>     | <b>356</b>       | <b>249</b>  | <b>249</b>           | <b>467</b>             | <b>85</b>     | <b>104</b>              |
| Fully-consolidated entities   | 894          | 31            | 5                | 249         | 249                  | 190                    | 85            | 84                      |
| Equity-accounted investees    | 691          | 43            | 350              | -           | -                    | 277                    | -             | 20                      |

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, 2018, 2017, 2016 and 2015 include an estimated volume of approximately 247, 269, 272 and 271 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 2018, 2017, 2016 and 2015 includes an estimated volume of 18, 14, 15 and 12 million barrels of oil equivalent, respectively, in connection with such payments.

## **(5) Standardized future cash flows**

### **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/SEG/SPWLA/EAGE 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.

Millions of euros  
At December 31st 2016

|  | Total         | Europe         | Venezuela    | Peru         | United States | Rest of America | Africa       | Asia and Oceania |
|--|---------------|----------------|--------------|--------------|---------------|-----------------|--------------|------------------|
| <b>Fully-consolidated entities</b>                     |               |                |              |              |               |                 |              |                  |
| 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)          |
| <b>Future net cash flows after taxes</b>               | <b>21,324</b> | <b>298</b>     | <b>53</b>    | <b>4,007</b> | <b>8,807</b>  | <b>3,104</b>    | <b>2,760</b> | <b>2,295</b>     |
| 10% annual discount for estimated timing of cash flows | (11,361)      | (477)          | (25)         | (2,677)      | (5,335)       | (1,178)         | (1,044)      | (625)            |
| <b>Discounted future net cash flows</b>                | <b>9,963</b>  | <b>(179)</b>   | <b>28</b>    | <b>1,330</b> | <b>3,472</b>  | <b>1,926</b>    | <b>1,716</b> | <b>1,670</b>     |
| <b>Equity-accounted investees</b>                      |               |                |              |              |               |                 |              |                  |
| 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)            |
| <b>Future net cash flows after taxes</b>               | <b>7,011</b>  | <b>(3,261)</b> | <b>6,283</b> | <b>-</b>     | <b>-</b>      | <b>3,420</b>    | <b>-</b>     | <b>569</b>       |
| 10% annual discount for estimated timing of cash flows | (2,784)       | 1,874          | (3,675)      | -            | -             | (728)           | -            | (255)            |
| <b>Discounted future net cash flows</b>                | <b>4,227</b>  | <b>(1,387)</b> | <b>2,608</b> | <b>-</b>     | <b>-</b>      | <b>2,692</b>    | <b>-</b>     | <b>314</b>       |
| <b>Total discounted future net cash flows</b>          | <b>14,190</b> | <b>(1,566)</b> | <b>2,636</b> | <b>1,330</b> | <b>3,472</b>  | <b>4,618</b>    | <b>1,716</b> | <b>1,984</b>     |

Millions of euros  
At December 31st 2017

|  | Total         | Europe         | Venezuela    | Peru         | United States | Rest of America | Africa       | Asia and Oceania |
|--|---------------|----------------|--------------|--------------|---------------|-----------------|--------------|------------------|
| <b>Fully-consolidated entities</b>                     |               |                |              |              |               |                 |              |                  |
| Future cash inflows                                    | 40,133        | 796            | 91           | 9,185        | 11,091        | 5,141           | 7,674        | 6,155            |
| Future production costs                                | (12,634)      | (510)          | (33)         | (4,278)      | (3,126)       | (2,014)         | (956)        | (1,717)          |
| Future development and abandonment costs               | (7,408)       | (1,209)        | (10)         | (428)        | (1,918)       | (2,220)         | (565)        | (1,058)          |
| Future income tax expenses                             | (5,627)       | 1,144          | (19)         | (1,343)      | (275)         | (194)           | (3,694)      | (1,246)          |
| <b>Future net cash flows after taxes</b>               | <b>14,464</b> | <b>221</b>     | <b>29</b>    | <b>3,136</b> | <b>5,772</b>  | <b>713</b>      | <b>2,459</b> | <b>2,134</b>     |
| 10% annual discount for estimated timing of cash flows | (6,494)       | (451)          | (16)         | (2,056)      | (2,895)       | 351             | (852)        | (575)            |
| <b>Discounted future net cash flows</b>                | <b>7,970</b>  | <b>(230)</b>   | <b>13</b>    | <b>1,080</b> | <b>2,877</b>  | <b>1,064</b>    | <b>1,607</b> | <b>1,559</b>     |
| <b>Equity-accounted investees</b>                      |               |                |              |              |               |                 |              |                  |
| Future cash inflows                                    | 30,323        | 2,658          | 15,157       | -            | -             | 11,006          | -            | 1,502            |
| Future production costs                                | (12,713)      | (2,247)        | (4,616)      | -            | -             | (4,912)         | -            | (938)            |
| Future development and abandonment costs               | (6,284)       | (3,349)        | (902)        | -            | -             | (1,926)         | -            | (107)            |
| Future income tax expenses                             | (3,954)       | 1,038          | (3,780)      | -            | -             | (1,130)         | -            | (82)             |
| <b>Future net cash flows after taxes</b>               | <b>7,372</b>  | <b>(1,900)</b> | <b>5,859</b> | <b>-</b>     | <b>-</b>      | <b>3,038</b>    | <b>-</b>     | <b>375</b>       |
| 10% annual discount for estimated timing of cash flows | (2,789)       | 1,278          | (3,257)      | -            | -             | (617)           | -            | (193)            |
| <b>Discounted future net cash flows</b>                | <b>4,583</b>  | <b>(622)</b>   | <b>2,602</b> | <b>-</b>     | <b>-</b>      | <b>2,421</b>    | <b>-</b>     | <b>182</b>       |
| <b>Total discounted future net cash flows</b>          | <b>12,553</b> | <b>(852)</b>   | <b>2,615</b> | <b>1,080</b> | <b>2,877</b>  | <b>3,485</b>    | <b>1,607</b> | <b>1,741</b>     |



Millions of euros  
At December 31st 2018

|  | <b>Total</b>  | <b>Europe</b>  | <b>Venezuela</b> | <b>Peru</b>  | <b>United States</b> | <b>Rest of America</b> | <b>Africa</b> | <b>Asia and Oceania</b> |
|--|---------------|----------------|------------------|--------------|----------------------|------------------------|---------------|-------------------------|
| <b>Fully-consolidated entities</b>                     |               |                |                  |              |                      |                        |               |                         |
| Future cash inflows                                    | 45,648        | 3,146          | 88               | 11,465       | 12,079               | 5,277                  | 7,709         | 5,884                   |
| Future production costs                                | (16,013)      | (1,543)        | (33)             | (4,964)      | (4,127)              | (2,370)                | (1,221)       | (1,755)                 |
| Future development and abandonment costs               | (8,202)       | (1,811)        | (9)              | (449)        | (1,978)              | (2,292)                | (625)         | (1,038)                 |
| Future income tax expenses                             | (7,135)       | 302            | (18)             | (1,910)      | (568)                | (185)                  | (3,673)       | (1,083)                 |
| <b>Future net cash flows after taxes</b>               | <b>14,298</b> | <b>94</b>      | <b>28</b>        | <b>4,142</b> | <b>5,406</b>         | <b>430</b>             | <b>2,190</b>  | <b>2,008</b>            |
| 10% annual discount for estimated timing of cash flows | (5,731)       | (2)            | (10)             | (2,639)      | (2,405)              | 571                    | (670)         | (576)                   |
| <b>Discounted future net cash flows</b>                | <b>8,567</b>  | <b>92</b>      | <b>18</b>        | <b>1,503</b> | <b>3,001</b>         | <b>1,001</b>           | <b>1,520</b>  | <b>1,432</b>            |
| <b>Equity-accounted investees</b>                      |               |                |                  |              |                      |                        |               |                         |
| Future cash inflows                                    | 32,495        | 3,270          | 14,813           | -            | -                    | 12,889                 | -             | 1,523                   |
| Future production costs                                | (13,839)      | (2,653)        | (4,370)          | -            | -                    | (5,930)                | -             | (886)                   |
| Future development and abandonment costs               | (5,729)       | (2,542)        | (1,031)          | -            | -                    | (2,047)                | -             | (109)                   |
| Future income tax expenses                             | (4,334)       | 881            | (3,807)          | -            | -                    | (1,316)                | -             | (92)                    |
| <b>Future net cash flows after taxes</b>               | <b>8,593</b>  | <b>(1,044)</b> | <b>5,605</b>     | <b>-</b>     | <b>-</b>             | <b>3,596</b>           | <b>-</b>      | <b>436</b>              |
| 10% annual discount for estimated timing of cash flows | (3,251)       | 943            | (3,135)          | -            | -                    | (866)                  | -             | (193)                   |
| <b>Discounted future net cash flows</b>                | <b>5,342</b>  | <b>(101)</b>   | <b>2,470</b>     | <b>-</b>     | <b>-</b>             | <b>2,730</b>           | <b>-</b>      | <b>243</b>              |
| <b>Total discounted future net cash flows</b>          | <b>13,909</b> | <b>(9)</b>     | <b>2,488</b>     | <b>1,503</b> | <b>3,001</b>         | <b>3,731</b>           | <b>1,520</b>  | <b>1,675</b>            |

## 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 2016, 2017 and 2018 as follows:

Millions of euros

|   | Total          | Europe       | Venezuela   | Peru         | United States | Rest of America | Africa       | Asia and Oceania |
|---|----------------|--------------|-------------|--------------|---------------|-----------------|--------------|------------------|
| <b>Fully-consolidated entities</b>  |                |              |             |              |               |                 |              |                  |
| <b>Balance at December 31st, 2015</b>   | <b>8,695</b>   | <b>(140)</b> | <b>38</b>   | <b>874</b>   | <b>3,016</b>  | <b>1,466</b>    | <b>1,613</b> | <b>1,828</b>     |
| 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)        | (127)            |
| Oil and gas sales and transfers in the period   | (1,273)        | (41)         | (12)        | (50)         | (436)         | (246)           | (36)         | (452)            |
| 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           | 108              |
| Effect of discounting to a different date and exchange rate effect                      | 1,119          | (18)         | 3           | 137          | 399           | 200             | 220          | 178              |
| Other non-specific changes  | -              | -            | -           | -            | -             | -               | -            | -                |
| Changes in income tax   | 313            | (49)         | 5           | (146)        | 357           | 28              | 46           | 72               |
| <b>Net change</b>   | <b>1,268</b>   | <b>(39)</b>  | <b>(10)</b> | <b>456</b>   | <b>456</b>    | <b>460</b>      | <b>103</b>   | <b>(158)</b>     |
| <b>Balance at December 31st, 2016</b>   | <b>9,963</b>   | <b>(179)</b> | <b>28</b>   | <b>1,330</b> | <b>3,472</b>  | <b>1,926</b>    | <b>1,716</b> | <b>1,670</b>     |
| Changes due to sale or transfer prices of future production costs                       | (2,528)        | 50           | (20)        | (368)        | (791)         | (438)           | (463)        | (498)            |
| Changes in future development costs   | 424            | 532          | (2)         | (2)          | 45            | (191)           | (19)         | 61               |
| Oil and gas sales and transfers in the period   | (1,807)        | (133)        | -           | (116)        | (528)         | (289)           | (215)        | (526)            |
| Net changes due to extensions, discoveries and improvements in the recovery of reserves | 619            | -            | -           | -            | 574           | 45              | -            | -                |
| Net changes due to purchases/sales of assets  | 33             | -            | -           | -            | (5)           | (6)             | -            | 44               |
| Net changes due to revisions in quantity estimates                                      | 237            | (208)        | 4           | (47)         | (238)         | 37              | 200          | 489              |
| Previously estimated development costs incurred in the year                             | 773            | 65           | -           | 106          | 232           | 36              | 134          | 200              |
| Effect of discounting to a different date and exchange rate effect                      | (336)          | 1            | -           | (30)         | (114)         | (73)            | (51)         | (69)             |
| Other non-specific changes  | -              | -            | -           | -            | -             | -               | -            | -                |
| Changes in income tax   | 592            | (358)        | 3           | 207          | 230           | 17              | 305          | 188              |
| <b>Net change</b>   | <b>(1,993)</b> | <b>(51)</b>  | <b>(15)</b> | <b>(250)</b> | <b>(595)</b>  | <b>(862)</b>    | <b>(109)</b> | <b>(111)</b>     |
| <b>Balance at December 31st, 2017</b>   | <b>7,970</b>   | <b>(230)</b> | <b>13</b>   | <b>1,080</b> | <b>2,877</b>  | <b>1,064</b>    | <b>1,607</b> | <b>1,559</b>     |
| Changes due to sale or transfer prices of future production costs                       | (468)          | 69           | 6           | 655          | (591)         | (374)           | (122)        | (111)            |
| Changes in future development costs   | 304            | 496          | (1)         | (18)         | (60)          | (5)             | (12)         | (96)             |
| Oil and gas sales and transfers in the period   | (2,266)        | (124)        | 1           | (119)        | (494)         | (308)           | (639)        | (583)            |
| Net changes due to extensions, discoveries and improvements in the recovery of reserves | 325            | -            | -           | -            | 256           | 63              | -            | 6                |
| Net changes due to purchases/sales of assets  | 66             | 70           | -           | -            | (4)           | -               | -            | -                |
| Net changes due to revisions in quantity estimates                                      | 707            | 52           | (3)         | (62)         | 386           | 293             | 199          | (158)            |
| Previously estimated development costs incurred in the year                             | 933            | 82           | 1           | 32           | 257           | 115             | 73           | 373              |
| Effect of discounting to a different date and exchange rate effect                      | 1,104          | (33)         | 1           | 162          | 405           | 137             | 211          | 221              |
| Other non-specific changes  | -              | -            | -           | -            | -             | -               | -            | -                |
| Changes in income tax   | (108)          | (290)        | -           | (227)        | (31)          | 16              | 203          | 221              |
| <b>Net change</b>   | <b>597</b>     | <b>322</b>   | <b>5</b>    | <b>423</b>   | <b>124</b>    | <b>(63)</b>     | <b>(87)</b>  | <b>(127)</b>     |
| <b>Balance at December 31<sup>st</sup>, 2018</b>  | <b>8,567</b>   | <b>92</b>    | <b>18</b>   | <b>1,503</b> | <b>3,001</b>  | <b>1,001</b>    | <b>1,520</b> | <b>1,432</b>     |

Millions of euros

|   | Total         | Europe         | Venezuela    | Peru         | United States | Rest of America | Africa       | Asia and Oceania |
|---|---------------|----------------|--------------|--------------|---------------|-----------------|--------------|------------------|
| <b>Equity-accounted investees</b>   |               |                |              |              |               |                 |              |                  |
| <b>Balance at December 31st, 2015</b>   | <b>3,185</b>  | <b>(1,610)</b> | <b>2,487</b> | -            | -             | <b>2,064</b>    | -            | <b>244</b>       |
| 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               |
| <b>Net change</b>   | <b>1,042</b>  | <b>223</b>     | <b>121</b>   | -            | -             | <b>628</b>      | -            | <b>70</b>        |
| <b>Balance at December 31st, 2016</b>   | <b>4,227</b>  | <b>(1,387)</b> | <b>2,608</b> | -            | -             | <b>2,692</b>    | -            | <b>314</b>       |
| Changes due to sale or transfer prices of future production costs                       | (603)         | 230            | 16           | -            | -             | (722)           | -            | (127)            |
| Changes in future development costs   | 861           | 599            | 51           | -            | -             | 237             | -            | (26)             |
| Oil and gas sales and transfers in the period   | (1,201)       | (144)          | (302)        | -            | -             | (699)           | -            | (56)             |
| Net changes due to extensions, discoveries and improvements in the recovery of reserves | -             | -              | -            | -            | -             | -               | -            | -                |
| Net changes due to purchases/sales of assets  | (1)           | -              | -            | -            | -             | -               | -            | (1)              |
| Net changes due to revisions in quantity estimates                                      | 791           | (150)          | 119          | -            | -             | 777             | -            | 45               |
| Previously estimated development costs incurred in the year                             | 615           | 201            | 89           | -            | -             | 307             | -            | 18               |
| Effect of discounting to a different date and exchange rate effect                      | (213)         | 6              | (101)        | -            | -             | (112)           | -            | (6)              |
| Other non-specific changes  | -             | -              | -            | -            | -             | -               | -            | -                |
| Changes in income tax   | 107           | 23             | 122          | -            | -             | (59)            | -            | 21               |
| <b>Net change</b>   | <b>356</b>    | <b>765</b>     | <b>(6)</b>   | -            | -             | <b>(271)</b>    | -            | <b>(132)</b>     |
| <b>Balance at December 31st, 2017</b>   | <b>4,583</b>  | <b>(622)</b>   | <b>2,602</b> | -            | -             | <b>2,421</b>    | -            | <b>182</b>       |
| Changes due to sale or transfer prices of future production costs                       | 369           | 75             | 220          | -            | -             | 45              | -            | 29               |
| Changes in future development costs   | 662           | 805            | (56)         | -            | -             | (95)            | -            | 8                |
| Oil and gas sales and transfers in the period   | (1,382)       | (136)          | (332)        | -            | -             | (877)           | -            | (37)             |
| Net changes due to extensions, discoveries and improvements in the recovery of reserves | 117           | -              | -            | -            | -             | 112             | -            | 5                |
| Net changes due to purchases/sales of assets  | -             | -              | -            | -            | -             | -               | -            | -                |
| Net changes due to revisions in quantity estimates                                      | (122)         | (108)          | (579)        | -            | -             | 542             | -            | 23               |
| Previously estimated development costs incurred in the year                             | 499           | 125            | 62           | -            | -             | 300             | -            | 12               |
| Effect of discounting to a different date and exchange rate effect                      | 621           | (79)           | 360          | -            | -             | 313             | -            | 27               |
| Other non-specific changes  | -             | -              | -            | -            | -             | -               | -            | -                |
| Changes in income tax   | (5)           | (161)          | 193          | -            | -             | (31)            | -            | (6)              |
| <b>Net change</b>   | <b>759</b>    | <b>521</b>     | <b>(132)</b> | -            | -             | <b>309</b>      | -            | <b>61</b>        |
| <b>Balance at December 31<sup>st</sup>, 2018</b>  | <b>5,342</b>  | <b>(101)</b>   | <b>2,470</b> | -            | -             | <b>2,730</b>    | -            | <b>243</b>       |
| <b>Total fully-consolidated and equity-accounted entities</b>                           | <b>13,909</b> | <b>(9)</b>     | <b>2,488</b> | <b>1,503</b> | <b>3,001</b>  | <b>3,731</b>    | <b>1,520</b> | <b>1,675</b>     |

## (6) Production of oil and gas

The next table shows the productions in volume and the number of Repsol's productive wells by geographic area:

|                          | Net Production of liquids and natural gas by area |           |           |                   |            |            |              |            |            | Productive wells by area |              |              |              |              |              |
|--------------------------|---|-----------|-----------|-------------------|------------|------------|--------------|------------|------------|--------------------------|--------------|--------------|--------------|--------------|--------------|
|                          | Liquids (Mbbbl)                                   |           |           | Natural gas (bcf) |            |            | Total (Mbep) |            |            | Oil                      |              |              | Gas          |              |              |
|                          | 2018  | 2017      | 2016      | 2018              | 2017       | 2016       | 2018         | 2017       | 2016       | 2018                     | 2017         | 2016         | 2018         | 2017         | 2016         |
| <b>Europe</b>            | <b>16</b>   | <b>16</b> | <b>16</b> | <b>31</b>         | <b>17</b>  | <b>17</b>  | <b>22</b>    | <b>19</b>  | <b>19</b>  | <b>231</b>               | <b>222</b>   | <b>236</b>   | <b>12</b>    | <b>6</b>     | <b>3</b>     |
| Norway                   | 6   | 6         | 7         | 23                | 13         | 16         | 10           | 8          | 10         | 61                       | 55           | 60           | 9            | 3            | 1            |
| United Kingdom           | 10  | 9         | 8         | 8                 | 4          | 1          | 11           | 10         | 8          | 161                      | 157          | 166          | 2            | 2            | 1            |
| Rest of Europe           | -   | 1         | 1         | -                 | -          | -          | 1            | 1          | 1          | 9                        | 10           | 10           | 1            | 1            | 1            |
| <b>Latin America</b>     | <b>36</b>   | <b>38</b> | <b>39</b> | <b>504</b>        | <b>498</b> | <b>486</b> | <b>125</b>   | <b>127</b> | <b>125</b> | <b>771</b>               | <b>873</b>   | <b>953</b>   | <b>227</b>   | <b>241</b>   | <b>216</b>   |
| Brazil                   | 16  | 17        | 14        | 7                 | 9          | 5          | 18           | 18         | 15         | 29                       | 30           | 28           | -            | -            | -            |
| Colombia                 | 5   | 5         | 5         | 8                 | 7          | 11         | 7            | 6          | 7          | 440                      | 398          | 395          | -            | -            | -            |
| Peru                     | 5   | 5         | 5         | 68                | 67         | 68         | 17           | 17         | 17         | -                        | -            | -            | 28           | 27           | 27           |
| Trinidad & Tobago        | 1   | 1         | 4         | 238               | 217        | 188        | 43           | 40         | 37         | 1                        | 1            | -            | 66           | 73           | 55           |
| Venezuela                | 3   | 5         | 5         | 110               | 130        | 129        | 23           | 28         | 28         | 106                      | 247          | 324          | 32           | 32           | 32           |
| Rest of Latin America    | 6   | 5         | 6         | 73                | 68         | 85         | 17           | 17         | 21         | 195                      | 197          | 206          | 101          | 109          | 102          |
| <b>North America</b>     | <b>17</b>   | <b>18</b> | <b>20</b> | <b>261</b>        | <b>256</b> | <b>262</b> | <b>64</b>    | <b>63</b>  | <b>67</b>  | <b>1,439</b>             | <b>2,657</b> | <b>2,924</b> | <b>2,795</b> | <b>2,219</b> | <b>2,610</b> |
| Canada                   | 8   | 8         | 8         | 82                | 82         | 82         | 22           | 22         | 23         | 1,163                    | 1,098        | 1,126        | 1,564        | 1,055        | 1,574        |
| United States            | 9   | 10        | 12        | 178               | 174        | 180        | 42           | 41         | 44         | 276                      | 1,559        | 1,798        | 1,231        | 1,164        | 1,036        |
| <b>Africa</b>            | <b>16</b>   | <b>12</b> | <b>3</b>  | <b>26</b>         | <b>8</b>   | <b>16</b>  | <b>21</b>    | <b>14</b>  | <b>6</b>   | <b>94</b>                | <b>248</b>   | <b>128</b>   | <b>93</b>    | <b>84</b>    | <b>79</b>    |
| <b>Asia and Oceania</b>  | <b>10</b>   | <b>9</b>  | <b>11</b> | <b>108</b>        | <b>122</b> | <b>137</b> | <b>29</b>    | <b>31</b>  | <b>36</b>  | <b>625</b>               | <b>606</b>   | <b>621</b>   | <b>82</b>    | <b>78</b>    | <b>91</b>    |
| Indonesia                | 1   | -         | 1         | 82                | 80         | 94         | 15           | 15         | 18         | 6                        | 6            | 55           | 44           | 42           | 45           |
| Malaysia                 | 4   | 3         | 4         | 25                | 30         | 28         | 8            | 8          | 9          | 75                       | 75           | 90           | 38           | 33           | 38           |
| Russia                   | 3   | 4         | 4         | -                 | 11         | 14         | 3            | 6          | 7          | 505                      | 472          | 448          | -            | -            | 8            |
| Rest of Asia and Oceania | 2   | 2         | 2         | 1                 | 1          | 1          | 3            | 2          | 2          | 39                       | 53           | 28           | -            | 3            | -            |
| <b>Total</b>             | <b>95</b>   | <b>93</b> | <b>89</b> | <b>930</b>        | <b>901</b> | <b>918</b> | <b>261</b>   | <b>254</b> | <b>253</b> | <b>3,160</b>             | <b>4,606</b> | <b>4,862</b> | <b>3,209</b> | <b>2,628</b> | <b>2,999</b> |

## (7) 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  
2016

|   | Total        | Europe       | Venezuela    | Peru        | United States | Rest of America | Africa       | Asia and Oceania |
|---|--------------|--------------|--------------|-------------|---------------|-----------------|--------------|------------------|
| <b>Fully-consolidated entities</b>                            |              |              |              |             |               |                 |              |                  |
| Income  |              |              |              |             |               |                 |              |                  |
| Sales to non-Group companies                                  | 2,445        | 366          | 11           | 210         | 464           | 538             | 20           | 836              |
| Sales between business segments and to Group Companies        | 460          | 29           | -            | 12          | 271           | 42              | 106          | -                |
| <b>Total income</b>   | <b>2,905</b> | <b>395</b>   | <b>11</b>    | <b>222</b>  | <b>735</b>    | <b>580</b>      | <b>126</b>   | <b>836</b>       |
| Production costs <sup>(1)</sup>                               | (1,525)      | (223)        | (22)         | (152)       | (317)         | (375)           | (70)         | (366)            |
| Exploration expenses <sup>(2)</sup>                           | (541)        | (133)        | -            | (60)        | (103)         | (10)            | (140)        | (95)             |
| Other operating expenses                                      | 11           | 128          | (113)        | 25          | 17            | (26)            | (23)         | 3                |
| Depreciation and amortisation charge <sup>(3)</sup>           | (1,548)      | (137)        | 42           | (50)        | (604)         | (354)           | (159)        | (286)            |
| <b>Profit (Loss) before taxes and charges</b>                 | <b>(698)</b> | <b>30</b>    | <b>(82)</b>  | <b>(15)</b> | <b>(272)</b>  | <b>(185)</b>    | <b>(266)</b> | <b>92</b>        |
| Taxes and charges   | (41)         | (151)        | (137)        | 4           | 264           | 28              | 86           | (135)            |
| <b>Results of oil and gas production activities</b>           | <b>(739)</b> | <b>(121)</b> | <b>(219)</b> | <b>(11)</b> | <b>(8)</b>    | <b>(157)</b>    | <b>(180)</b> | <b>(43)</b>      |
| <b>Equity-accounted investees</b>                             |              |              |              |             |               |                 |              |                  |
| Income  |              |              |              |             |               |                 |              |                  |
| Sales to non-Group companies                                  | 1,686        | 322          | 480          | -           | -             | 752             | -            | 132              |
| Sales between business segments and to Group Companies        | 345          | -            | -            | -           | -             | 345             | -            | -                |
| <b>Total income</b>   | <b>2,031</b> | <b>322</b>   | <b>480</b>   | <b>-</b>    | <b>-</b>      | <b>1,097</b>    | <b>-</b>     | <b>132</b>       |
| Production costs <sup>(1)</sup>                               | (1,296)      | (358)        | (255)        | -           | -             | (600)           | -            | (83)             |
| Exploration expenses <sup>(2)</sup>                           | (36)         | (2)          | -            | -           | -             | (34)            | -            | -                |
| Other operating expenses                                      | 111          | 46           | (25)         | -           | -             | 91              | -            | (1)              |
| Depreciation and amortisation charge <sup>(3)</sup>           | (821)        | (9)          | (326)        | -           | -             | (470)           | -            | (16)             |
| <b>Profit (Loss) before taxes and charges</b>                 | <b>(11)</b>  | <b>(1)</b>   | <b>(126)</b> | <b>-</b>    | <b>-</b>      | <b>84</b>       | <b>-</b>     | <b>32</b>        |
| Taxes and charges   | (88)         | -            | (188)        | -           | -             | 108             | -            | (8)              |
| <b>Results of oil and gas production activities</b>           | <b>(99)</b>  | <b>(1)</b>   | <b>(314)</b> | <b>-</b>    | <b>-</b>      | <b>192</b>      | <b>-</b>     | <b>24</b>        |
| <b>Total results of oil and gas activities <sup>(4)</sup></b> | <b>(838)</b> | <b>(122)</b> | <b>(533)</b> | <b>(11)</b> | <b>(8)</b>    | <b>35</b>       | <b>(180)</b> | <b>(19)</b>      |

Millions of euros

At December 31st  
2017

|   | Total        | Europe      | Venezuela    | Peru       | United States | Rest of America | Africa     | Asia and Oceania |
|---|--------------|-------------|--------------|------------|---------------|-----------------|------------|------------------|
| <b>Fully-consolidated entities</b>                            |              |             |              |            |               |                 |            |                  |
| Income  |              |             |              |            |               |                 |            |                  |
| Sales to non-Group companies                                  | 2,577        | 347         | 2            | 283        | 560           | 528             | 6          | 851              |
| Sales between business segments and to Group Companies        | 688          | 32          | -            | 8          | 312           | 61              | 275        | -                |
| <b>Total income</b>   | <b>3,265</b> | <b>379</b>  | <b>2</b>     | <b>291</b> | <b>872</b>    | <b>589</b>      | <b>281</b> | <b>851</b>       |
| Production costs <sup>(1)</sup>                               | (1,394)      | (181)       | (15)         | (159)      | (326)         | (320)           | (100)      | (293)            |
| Exploration expenses <sup>(2)</sup>                           | (547)        | (136)       | -            | 43         | (145)         | (135)           | (54)       | (120)            |
| Other operating expenses                                      | 328          | 20          | (2)          | 20         | (60)          | 5               | 310        | 35               |
| Depreciation and amortisation charge <sup>(3)</sup>           | (1,152)      | (99)        | (67)         | (42)       | (556)         | 81              | (102)      | (367)            |
| <b>Profit (Loss) before taxes and charges</b>                 | <b>500</b>   | <b>(17)</b> | <b>(82)</b>  | <b>153</b> | <b>(215)</b>  | <b>220</b>      | <b>335</b> | <b>106</b>       |
| Taxes and charges   | (880)        | (57)        | 22           | (7)        | (236)         | (292)           | (239)      | (71)             |
| <b>Results of oil and gas production activities</b>           | <b>(380)</b> | <b>(74)</b> | <b>(60)</b>  | <b>146</b> | <b>(451)</b>  | <b>(72)</b>     | <b>96</b>  | <b>35</b>        |
| <b>Equity-accounted investees</b>                             |              |             |              |            |               |                 |            |                  |
| Income  |              |             |              |            |               |                 |            |                  |
| Sales to non-Group companies                                  | 2,226        | 431         | 525          | -          | -             | 1,106           | -          | 164              |
| Sales between business segments and to Group Companies        | 494          | -           | -            | -          | -             | 494             | -          | -                |
| <b>Total income</b>   | <b>2,720</b> | <b>431</b>  | <b>525</b>   | <b>-</b>   | <b>-</b>      | <b>1,600</b>    | <b>-</b>   | <b>164</b>       |
| Production costs <sup>(1)</sup>                               | (1,363)      | (325)       | (164)        | -          | -             | (786)           | -          | (88)             |
| Exploration expenses <sup>(2)</sup>                           | (27)         | -           | -            | -          | -             | (17)            | -          | (10)             |
| Other operating expenses                                      | 693          | 902         | (265)        | -          | -             | 62              | -          | (6)              |
| Depreciation and amortisation charge <sup>(3)</sup>           | (1,353)      | (103)       | (638)        | -          | -             | (598)           | -          | (14)             |
| <b>Profit (Loss) before taxes and charges</b>                 | <b>670</b>   | <b>905</b>  | <b>(542)</b> | <b>-</b>   | <b>-</b>      | <b>261</b>      | <b>-</b>   | <b>46</b>        |
| Taxes and charges   | 56           | -           | 146          | -          | -             | (74)            | -          | (16)             |
| <b>Results of oil and gas production activities</b>           | <b>726</b>   | <b>905</b>  | <b>(396)</b> | <b>-</b>   | <b>-</b>      | <b>187</b>      | <b>-</b>   | <b>30</b>        |
| <b>Total results of oil and gas activities <sup>(4)</sup></b> | <b>346</b>   | <b>831</b>  | <b>(456)</b> | <b>146</b> | <b>(451)</b>  | <b>115</b>      | <b>96</b>  | <b>65</b>        |

Millions of euros

At December 31st  
2018

|   | Total        | Europe      | Venezuela    | Peru       | United States | Rest of America | Africa       | Asia and Oceania |
|---|--------------|-------------|--------------|------------|---------------|-----------------|--------------|------------------|
| <b>Fully-consolidated entities</b>                            |              |             |              |            |               |                 |              |                  |
| Income  |              |             |              |            |               |                 |              |                  |
| Sales to non-Group companies                                  | 3,643        | 531         | 4            | 381        | 590           | 481             | 666          | 990              |
| Sales between business segments and to Group Companies        | 907          | 28          | -            | 12         | 339           | 97              | 393          | 38               |
| <b>Total income</b>   | <b>4,550</b> | <b>559</b>  | <b>4</b>     | <b>393</b> | <b>929</b>    | <b>578</b>      | <b>1,059</b> | <b>1,028</b>     |
| Production costs <sup>(1)</sup>                               | (1,563)      | (209)       | (16)         | (203)      | (338)         | (378)           | (145)        | (274)            |
| Exploration expenses <sup>(2)</sup>                           | (627)        | (213)       | -            | 1          | (64)          | (80)            | (146)        | (125)            |
| Other operating expenses                                      | (118)        | 116         | (290)        | 26         | (50)          | 90              | 7            | (17)             |
| Depreciation and amortisation charge <sup>(3)</sup>           | (1,471)      | (73)        | (1)          | (37)       | (599)         | (239)           | (131)        | (391)            |
| <b>Profit (Loss) before taxes and charges</b>                 | <b>771</b>   | <b>180</b>  | <b>(303)</b> | <b>180</b> | <b>(122)</b>  | <b>(29)</b>     | <b>644</b>   | <b>221</b>       |
| Taxes and charges   | (909)        | (259)       | (21)         | (138)      | 32            | (84)            | (701)        | 262              |
| <b>Results of oil and gas production activities</b>           | <b>(138)</b> | <b>(79)</b> | <b>(324)</b> | <b>42</b>  | <b>(90)</b>   | <b>(113)</b>    | <b>(57)</b>  | <b>483</b>       |
| <b>Equity-accounted investees</b>                             |              |             |              |            |               |                 |              |                  |
| Income  |              |             |              |            |               |                 |              |                  |
| Sales to non-Group companies                                  | 2,488        | 619         | 424          | -          | -             | 1,280           | -            | 165              |
| Sales between business segments and to Group Companies        | 663          | 20          | -            | -          | -             | 643             | -            | -                |
| <b>Total income</b>   | <b>3,151</b> | <b>639</b>  | <b>424</b>   | <b>-</b>   | <b>-</b>      | <b>1,923</b>    | <b>-</b>     | <b>165</b>       |
| Production costs <sup>(1)</sup>                               | (1,384)      | (328)       | (115)        | -          | -             | (860)           | -            | (81)             |
| Exploration expenses <sup>(2)</sup>                           | (43)         | (1)         | -            | -          | -             | (37)            | 1            | (6)              |
| Other operating expenses                                      | 507          | 330         | 148          | -          | -             | 39              | -            | (10)             |
| Depreciation and amortisation charge <sup>(3)</sup>           | (1,129)      | (153)       | (391)        | -          | -             | (575)           | -            | (10)             |
| <b>Profit (Loss) before taxes and charges</b>                 | <b>1,102</b> | <b>487</b>  | <b>66</b>    | <b>-</b>   | <b>-</b>      | <b>490</b>      | <b>1</b>     | <b>58</b>        |
| Taxes and charges   | (95)         | 208         | (50)         | -          | -             | (240)           | -            | (13)             |
| <b>Results of oil and gas production activities</b>           | <b>1,007</b> | <b>695</b>  | <b>16</b>    | <b>-</b>   | <b>-</b>      | <b>250</b>      | <b>1</b>     | <b>45</b>        |
| <b>Total results of oil and gas activities <sup>(4)</sup></b> | <b>869</b>   | <b>616</b>  | <b>(308)</b> | <b>42</b>  | <b>(90)</b>   | <b>137</b>      | <b>(56)</b>  | <b>528</b>       |

(1) Production costs include local taxes, production taxes and other similar payments amounting to €712, €526 and €361 million in 2018, 2017 and 2016, respectively. It also includes transport and other costs totalling €889, €808 and €856 million in 2018, 2017 and 2016, respectively.

(2) Operating expenses include charges for the impairment of exploration assets of €312, €339 and €74 million in 2018, 2017 and 2016, respectively. This same heading also includes provisions for onerous drilling platform contracts in the amount of €109 in 2016.

(3) The depreciation and provisions heading includes charges for the impairment of producing and development assets and provisions for onerous contracts totaling €717, €335 and €267 million in 2018, 2017 and 2016, respectively.

(4) Results generated for divestments are not included

## (8) Investments

### Investments of the year (cost incurred)

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

Millions of euros  
At December 31st 2016

|                                    | Total        | Europe     | Venezuela  | Peru      | United States | Rest of America | Africa     | Asia and Oceania |
|------------------------------------|--------------|------------|------------|-----------|---------------|-----------------|------------|------------------|
| <b>Fully-consolidated entities</b> |              |            |            |           |               |                 |            |                  |
| Acquisition of proved properties   | 54           | -          | -          | -         | 2             | 52              | -          | -                |
| Acquisition of unproved properties | -            | -          | -          | -         | -             | -               | -          | -                |
| Exploration costs                  | 556          | 90         | -          | 13        | 100           | 57              | 72         | 224              |
| Development costs                  | 1,085        | 20         | 2          | 56        | 274           | 256             | 225        | 252              |
| <b>Costs incurred</b>              | <b>1,695</b> | <b>110</b> | <b>2</b>   | <b>69</b> | <b>376</b>    | <b>365</b>      | <b>297</b> | <b>476</b>       |
| <b>Equity-accounted investees</b>  |              |            |            |           |               |                 |            |                  |
| Acquisition of proved properties   | -            | -          | -          | -         | -             | -               | -          | -                |
| Acquisition of unproved properties | -            | -          | -          | -         | -             | -               | -          | -                |
| Exploration costs                  | 79           | 1          | -          | -         | -             | 78              | -          | -                |
| Development costs                  | 1,091        | 145        | 107        | -         | -             | 822             | -          | 17               |
| <b>Costs incurred</b>              | <b>1,170</b> | <b>146</b> | <b>107</b> | <b>-</b>  | <b>-</b>      | <b>900</b>      | <b>-</b>   | <b>17</b>        |
| <b>Total costs incurred</b>        | <b>2,865</b> | <b>256</b> | <b>109</b> | <b>69</b> | <b>376</b>    | <b>1,265</b>    | <b>297</b> | <b>493</b>       |

Millions of euros  
At December 31st 2017

|                                    | Total        | Europe      | Venezuela | Peru      | United States | Rest of America | Africa     | Asia and Oceania |
|------------------------------------|--------------|-------------|-----------|-----------|---------------|-----------------|------------|------------------|
| <b>Fully-consolidated entities</b> |              |             |           |           |               |                 |            |                  |
| Acquisition of proved properties   | 5            | -           | -         | -         | -             | -               | -          | 5                |
| Acquisition of unproved properties | -            | -           | -         | -         | -             | -               | -          | -                |
| Exploration costs                  | 528          | 104         | -         | 1         | 74            | 186             | 48         | 115              |
| Development costs                  | 968          | 56          | 1         | 32        | 376           | 194             | 168        | 141              |
| <b>Costs incurred</b>              | <b>1,501</b> | <b>160</b>  | <b>1</b>  | <b>33</b> | <b>450</b>    | <b>380</b>      | <b>216</b> | <b>261</b>       |
| <b>Equity-accounted investees</b>  |              |             |           |           |               |                 |            |                  |
| Acquisition of proved properties   | -            | -           | -         | -         | -             | -               | -          | -                |
| Acquisition of unproved properties | -            | -           | -         | -         | -             | -               | -          | -                |
| Exploration costs                  | 48           | (1)         | -         | -         | -             | 35              | -          | 14               |
| Development costs                  | 534          | (27)        | 26        | -         | -             | 522             | -          | 13               |
| <b>Costs incurred</b>              | <b>582</b>   | <b>(28)</b> | <b>26</b> | <b>-</b>  | <b>-</b>      | <b>557</b>      | <b>-</b>   | <b>27</b>        |
| <b>Total costs incurred</b>        | <b>2,083</b> | <b>132</b>  | <b>27</b> | <b>33</b> | <b>450</b>    | <b>937</b>      | <b>216</b> | <b>288</b>       |



Millions of euros  
At December 31st 2018

|                                    | <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 and Oceania</u> |
|------------------------------------|--------------|---------------|------------------|-------------|----------------------|------------------------|---------------|-------------------------|
| <b>Fully-consolidated entities</b> |              |               |                  |             |                      |                        |               |                         |
| Acquisition of proved properties   | 174          | 158           | -                | -           | 13                   | 3                      | -             | -                       |
| Acquisition of unproved properties | -            | -             | -                | -           | -                    | -                      | -             | -                       |
| Exploration costs                  | 531          | 110           | -                | (1)         | 47                   | 279                    | 31            | 65                      |
| Development costs                  | 926          | 124           | -                | 97          | 437                  | 38                     | 142           | 88                      |
| <b>Costs incurred</b>              | <b>1,631</b> | <b>392</b>    | <b>-</b>         | <b>96</b>   | <b>497</b>           | <b>320</b>             | <b>173</b>    | <b>153</b>              |
| <b>Equity-accounted investees</b>  |              |               |                  |             |                      |                        |               |                         |
| Acquisition of proved properties   | -            | -             | -                | -           | -                    | -                      | -             | -                       |
| Acquisition of unproved properties | -            | -             | -                | -           | -                    | -                      | -             | -                       |
| Exploration costs                  | 70           | -             | -                | -           | -                    | 53                     | -             | 17                      |
| Development costs                  | 120          | (44)          | 3                | -           | -                    | 149                    | -             | 12                      |
| <b>Costs incurred</b>              | <b>190</b>   | <b>(44)</b>   | <b>3</b>         | <b>-</b>    | <b>-</b>             | <b>202</b>             | <b>-</b>      | <b>29</b>               |
| <b>Total costs incurred</b>        | <b>1,821</b> | <b>348</b>    | <b>3</b>         | <b>96</b>   | <b>497</b>           | <b>522</b>             | <b>173</b>    | <b>182</b>              |

## Accumulated investments (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 2016

|  | Total         | Europe       | Venezuela    | Peru         | United States | Rest of America | Africa       | Asia and Oceania |
|--|---------------|--------------|--------------|--------------|---------------|-----------------|--------------|------------------|
| <b>Fully-consolidated entities</b>                   |               |              |              |              |               |                 |              |                  |
| 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          | 2,132            |
| <b>Total capitalised costs</b>                       | <b>26,750</b> | <b>996</b>   | <b>77</b>    | <b>1,160</b> | <b>11,125</b> | <b>5,754</b>    | <b>2,581</b> | <b>5,057</b>     |
| Auxiliary equipment and facilities                   | 1,890         | 340          | 22           | 19           | 1,074         | 32              | 399          | 4                |
| <b>Total capitalised costs</b>                       | <b>28,640</b> | <b>1,336</b> | <b>99</b>    | <b>1,179</b> | <b>12,199</b> | <b>5,786</b>    | <b>2,980</b> | <b>5,061</b>     |
| Accumulated depreciation and impairment losses       | (10,643)      | (921)        | (95)         | (248)        | (4,862)       | (1,939)         | (1,627)      | (951)            |
| <b>Net amount</b>                                    | <b>17,997</b> | <b>415</b>   | <b>4</b>     | <b>931</b>   | <b>7,337</b>  | <b>3,847</b>    | <b>1,353</b> | <b>4,110</b>     |
| <b>Equity-accounted investees</b>                    |               |              |              |              |               |                 |              |                  |
| 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               |
| <b>Total capitalised costs</b>                       | <b>11,243</b> | <b>912</b>   | <b>1,467</b> | <b>-</b>     | <b>-</b>      | <b>8,577</b>    | <b>-</b>     | <b>287</b>       |
| Auxiliary equipment and facilities                   | 2,934         | -            | 1,172        | -            | -             | 1,761           | -            | 1                |
| <b>Total capitalised costs</b>                       | <b>14,177</b> | <b>912</b>   | <b>2,639</b> | <b>-</b>     | <b>-</b>      | <b>10,338</b>   | <b>-</b>     | <b>288</b>       |
| Accumulated depreciation and impairment losses       | (6,032)       | (324)        | (924)        | -            | -             | (4,682)         | -            | (102)            |
| <b>Net amount</b>                                    | <b>8,145</b>  | <b>588</b>   | <b>1,715</b> | <b>-</b>     | <b>-</b>      | <b>5,656</b>    | <b>-</b>     | <b>186</b>       |
| <b>Total Net amounts</b>                             | <b>26,142</b> | <b>1,003</b> | <b>1,719</b> | <b>931</b>   | <b>7,337</b>  | <b>9,503</b>    | <b>1,353</b> | <b>4,296</b>     |

Millions of euros  
At December 31st 2017

|  | Total         | Europe       | Venezuela    | Peru         | United States | Rest of America | Africa       | Asia and Oceania |
|--|---------------|--------------|--------------|--------------|---------------|-----------------|--------------|------------------|
| <b>Fully-consolidated entities</b>                   |               |              |              |              |               |                 |              |                  |
| Capitalised costs of proved oil and gas properties   | 14,525        | 776          | 67           | 521          | 6,374         | 2,679           | 1,520        | 2,588            |
| Capitalised costs of unproved oil and gas properties | 8,282         | 174          | -            | 20           | 3,534         | 2,551           | 278          | 1,725            |
| <b>Total capitalised costs</b>                       | <b>22,807</b> | <b>950</b>   | <b>67</b>    | <b>541</b>   | <b>9,908</b>  | <b>5,230</b>    | <b>1,798</b> | <b>4,313</b>     |
| Auxiliary equipment and facilities                   | 3,784         | 303          | 36           | 526          | 1,025         | 754             | 955          | 185              |
| <b>Total capitalised costs</b>                       | <b>26,591</b> | <b>1,253</b> | <b>103</b>   | <b>1,067</b> | <b>10,933</b> | <b>5,984</b>    | <b>2,753</b> | <b>4,498</b>     |
| Accumulated depreciation and impairment losses       | (10,547)      | (919)        | (99)         | (265)        | (4,706)       | (1,836)         | (1,525)      | (1,197)          |
| <b>Net amount</b>                                    | <b>16,044</b> | <b>334</b>   | <b>4</b>     | <b>802</b>   | <b>6,227</b>  | <b>4,148</b>    | <b>1,228</b> | <b>3,301</b>     |
| <b>Equity-accounted investees</b>                    |               |              |              |              |               |                 |              |                  |
| Capitalised costs of proved oil and gas properties   | 8,665         | 829          | 1,561        | -            | -             | 6,096           | -            | 179              |
| Capitalised costs of unproved oil and gas properties | 2,136         | 1,154        | -            | -            | -             | 866             | -            | 116              |
| <b>Total capitalised costs</b>                       | <b>10,801</b> | <b>1,983</b> | <b>1,561</b> | <b>-</b>     | <b>-</b>      | <b>6,962</b>    | <b>-</b>     | <b>295</b>       |
| Auxiliary equipment and facilities                   | 3,156         | 351          | 757          | -            | -             | 2,047           | -            | 1                |
| <b>Total capitalised costs</b>                       | <b>13,957</b> | <b>2,334</b> | <b>2,318</b> | <b>-</b>     | <b>-</b>      | <b>9,009</b>    | <b>-</b>     | <b>296</b>       |
| Accumulated depreciation and impairment losses       | (6,909)       | (795)        | (1,389)      | -            | -             | (4,652)         | -            | (73)             |
| <b>Net amount</b>                                    | <b>7,048</b>  | <b>1,539</b> | <b>929</b>   | <b>-</b>     | <b>-</b>      | <b>4,357</b>    | <b>-</b>     | <b>223</b>       |
| <b>Total Net amounts</b>                             | <b>23,092</b> | <b>1,873</b> | <b>933</b>   | <b>802</b>   | <b>6,227</b>  | <b>8,505</b>    | <b>1,228</b> | <b>3,524</b>     |

Millions of euros  
At December 31st 2018

|   | <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 and Oceania</u> |
|---|---------------|---------------|------------------|--------------|----------------------|------------------------|---------------|-------------------------|
| <b>Fully-consolidated entities</b>                |               |               |                  |              |                      |                        |               |                         |
| Capitalised costs                                 |               |               |                  |              |                      |                        |               |                         |
| of proved oil and gas properties <sup>(1)</sup>   | 20,727        | 938           | 71               | 556          | 8,539                | 5,362                  | 1,722         | 3,539                   |
| Capitalised costs                                 |               |               |                  |              |                      |                        |               |                         |
| of unproved oil and gas properties <sup>(1)</sup> | 2,152         | 92            | -                | 0            | 837                  | 368                    | 112           | 743                     |
|   | <b>22,879</b> | <b>1,030</b>  | <b>71</b>        | <b>556</b>   | <b>9,376</b>         | <b>5,730</b>           | <b>1,834</b>  | <b>4,282</b>            |
| Auxiliary equipment and facilities                | 4,576         | 465           | 33               | 662          | 1,065                | 830                    | 1,108         | 413                     |
| <b>Total capitalised costs</b>                    | <b>27,455</b> | <b>1,495</b>  | <b>104</b>       | <b>1,218</b> | <b>10,441</b>        | <b>6,560</b>           | <b>2,942</b>  | <b>4,695</b>            |
| Accumulated depreciation and impairment losses    | (11,093)      | (1,001)       | (100)            | (315)        | (4,100)              | (2,199)                | (1,745)       | (1,633)                 |
| <b>Net amount</b>                                 | <b>16,362</b> | <b>494</b>    | <b>4</b>         | <b>903</b>   | <b>6,341</b>         | <b>4,361</b>           | <b>1,197</b>  | <b>3,062</b>            |
| <b>Equity-accounted investees</b>                 |               |               |                  |              |                      |                        |               |                         |
| Capitalised costs                                 |               |               |                  |              |                      |                        |               |                         |
| of proved oil and gas properties <sup>(1)</sup>   | 10,736        | 2,036         | 1,559            | -            | -                    | 6,959                  | -             | 182                     |
| Capitalised costs                                 |               |               |                  |              |                      |                        |               |                         |
| of unproved oil and gas properties <sup>(1)</sup> | 802           | -             | (1)              | -            | -                    | 708                    | -             | 95                      |
|   | <b>11,538</b> | <b>2,036</b>  | <b>1,558</b>     | <b>-</b>     | <b>-</b>             | <b>7,667</b>           | <b>-</b>      | <b>277</b>              |
| Auxiliary equipment and facilities                | 3,094         | 357           | 833              | -            | -                    | 1,902                  | -             | 2                       |
| <b>Total capitalised costs</b>                    | <b>14,632</b> | <b>2,393</b>  | <b>2,391</b>     | <b>-</b>     | <b>-</b>             | <b>9,569</b>           | <b>-</b>      | <b>279</b>              |
| Accumulated depreciation and impairment losses    | (8,311)       | (991)         | (1,827)          | -            | -                    | (5,420)                | -             | (73)                    |
| <b>Net amount</b>                                 | <b>6,321</b>  | <b>1,402</b>  | <b>564</b>       | <b>-</b>     | <b>-</b>             | <b>4,149</b>           | <b>-</b>      | <b>206</b>              |
| <b>Total Net amounts</b>                          | <b>22,683</b> | <b>1,896</b>  | <b>568</b>       | <b>903</b>   | <b>6,341</b>         | <b>8,510</b>           | <b>1,197</b>  | <b>3,268</b>            |

(1) In 2018, "Costs capitalized in properties with unproved reserves" only include investments in exploration assets (in previous years, this also included the purchase price of assets allocated to unproven reserves and are now included in "Costs capitalized in properties with proved reserves"). In 2018, it was decided to prospectively change this disclosure criteria in line with other companies in the sector and based on the information used for accounting purposes in the change in estimation related to the depreciation of certain assets outlined in note 3 "Accounting estimates and judgments" of the Consolidated Financial Statements of the Repsol Group.