

SUPPLEMENTARY INFORMATION ON OIL AND GAS EXPLORATION AND PRODUCTION ACTIVITIES (Unaudited information)

Below is presented the information on Repsol Group's oil and gas exploration and production activities.

This information includes the following disclosures:

- Capitalised cost, in relation with capitalized historical costs;
- Cost incurred: which represent the amounts capitalized or charged to profit during the year;
- Results of oil and gas exploration and production activities, including revenue and expenses associated directly to this activity;
- Estimated proved net developed and undeveloped oil and gas reserves;
- Standardized measure of discounted future net cash flows relating to proved oil and gas reserves, which represent the estimate of future net cash flows from proven reserves.
- Changes in Standardized measure of discounted future net cash flows relating to proved oil and gas reserves with respect to those presented for the previous year.

This information, which the Group performs and publishes annually, is prepared in accordance with the general accepted principles applied in the oil and gas industry and the benchmark principles used to prepare the information herein by Topic 932 in the "Financial Accounting Standards Boards" (FASB).

Until 2014, Repsol had been voluntarily applying the oil and gas reserves reporting and disclosure guidance and framework established by the Securities Exchange Commission (SEC) and the criteria established by the Society of Petroleum Engineers' Petroleum Resource Management System (SPE-PRMS) to estimate its probable and possible reserves. As from year-end 2015, in the wake of the acquisition of the Talisman group (which estimates its reserves using the Canadian Oil and Gas Evaluation Handbook "COGE Handbook", pursuant to the Canadian Administrator's National Instrument 51-101 Standards of Disclosure for Oil and Gas Activities) and in order to facilitate its integration and enable consistent reserve and resource management, the Repsol Group has decided to use the SPE-PRMS criteria for proved reserve reporting purposes (see Note 3 "Accounting estimates and judgements" of the 2015 consolidated financial statements).

## 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								
	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	Oceania
<u>At December 31<sup>st</sup>, 2013</u>									
<b>Fully-consolidated entities</b>									
Capitalised costs of proved oil and gas properties.....	6,350	342	47	786	2,421	1,545	1,209	-	-
Capitalised costs of unproved oil and gas properties.....	2,623	25	-	154	2,088	11	257	88	-
	<b>8,973</b>	<b>367</b>	<b>47</b>	<b>940</b>	<b>4,509</b>	<b>1,556</b>	<b>1,466</b>	<b>88</b>	-
Auxiliary equipment and facilities.....	1,049	285	10	-	386	128	240	-	-
<b>Total capitalised costs</b> .....	<b>10,022</b>	<b>652</b>	<b>57</b>	<b>940</b>	<b>4,895</b>	<b>1,684</b>	<b>1,706</b>	<b>88</b>	-
Accumulated depreciation and impairment losses .....	(3,852)	(501)	(12)	(83)	(1,428)	(1,024)	(804)	-	-
<b>Net amount (1)</b> .....	<b>6,170</b>	<b>151</b>	<b>45</b>	<b>857</b>	<b>3,467</b>	<b>660</b>	<b>902</b>	<b>88</b>	-
<b>Equity-accounted investees</b>									
Capitalised costs of proved oil and gas properties.....	3,804	-	768	-	-	2,785	-	251	-
Capitalised costs of unproved oil and gas properties.....	957	-	-	-	-	860	22	75	-
	<b>4,761</b>	-	<b>768</b>	-	-	<b>3,645</b>	<b>22</b>	<b>326</b>	-
Auxiliary equipment and facilities.....	1,300	-	246	-	-	1,054	-	-	-
<b>Total capitalised costs</b> .....	<b>6,061</b>	-	<b>1,014</b>	-	-	<b>4,699</b>	<b>22</b>	<b>326</b>	-
Accumulated depreciation and impairment losses .....	(2,489)	-	(290)	-	-	(2,160)	-	(39)	-
<b>Net amount (1)</b> .....	<b>3,572</b>	-	<b>724</b>	-	-	<b>2,539</b>	<b>22</b>	<b>287</b>	-

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	Millions of euros								
	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	Oceania
<u>At December 31<sup>st</sup>, 2014</u>									
<b>Fully-consolidated entities</b>									
Capitalised costs of proved oil and gas properties.....	7,500	360	61	950	2,954	1,759	1,416	-	-
Capitalised costs of unproved oil and gas properties.....	3,139	73	-	42	2,478	76	391	79	-
	<b>10,639</b>	<b>433</b>	<b>61</b>	<b>992</b>	<b>5,432</b>	<b>1,835</b>	<b>1,807</b>	<b>79</b>	-
Auxiliary equipment and facilities.....	1,542	290	11	-	769	179	293	-	-
<b>Total capitalised costs .....</b>	<b>12,181</b>	<b>723</b>	<b>72</b>	<b>992</b>	<b>6,201</b>	<b>2,014</b>	<b>2,100</b>	<b>79</b>	-
Accumulated depreciation and impairment losses .....	(5,266)	(560)	(13)	(135)	(2,413)	(1,156)	(989)	-	-
<b>Net amount (1).....</b>	<b>6,915</b>	<b>163</b>	<b>59</b>	<b>857</b>	<b>3,788</b>	<b>858</b>	<b>1,111</b>	<b>79</b>	-
<b>Equity-accounted investees</b>									
Capitalised costs of proved oil and gas properties.....	5,328	-	811	-	-	4,345	-	172	-
Capitalised costs of unproved oil and gas properties.....	873	-	-	-	-	798	24	51	-
	<b>6,201</b>	-	<b>811</b>	-	-	<b>5,143</b>	<b>24</b>	<b>223</b>	-
Auxiliary equipment and facilities.....	1,699	-	670	-	-	1,029	-	-	-
<b>Total capitalised costs .....</b>	<b>7,900</b>	-	<b>1,481</b>	-	-	<b>6,172</b>	<b>24</b>	<b>223</b>	-
Accumulated depreciation and impairment losses .....	(3,348)	-	(374)	-	-	(2,919)	-	(55)	-
<b>Net amount (1).....</b>	<b>4,552</b>	-	<b>1,107</b>	-	-	<b>3,253</b>	<b>24</b>	<b>168</b>	-

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	Millions of euros								
	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	Oceania
<u>At December 31<sup>st</sup>, 2015</u>									
<b>Fully-consolidated entities</b>									
Capitalised costs of proved oil and gas properties.....	16,283	713	74	1,023	6,295	3,480	1,883	2,815	-
Capitalised costs of unproved oil and gas properties.....	10,080	150	-	40	4,399	2,815	318	1,918	440
	<b>26,363</b>	<b>863</b>	<b>74</b>	<b>1,063</b>	<b>10,694</b>	<b>6,295</b>	<b>2,201</b>	<b>4,733</b>	<b>440</b>
Auxiliary equipment and facilities.....	1,972	330	18	22	1,021	189	390	2	-
<b>Total capitalised costs .....</b>	<b>28,335</b>	<b>1,193</b>	<b>92</b>	<b>1,085</b>	<b>11,715</b>	<b>6,484</b>	<b>2,591</b>	<b>4,735</b>	<b>440</b>
Accumulated depreciation and impairment losses .....	(9,640)	(768)	(72)	(192)	(4,128)	(2,186)	(1,423)	(752)	(119)
<b>Net amount .....</b>	<b>18,695</b>	<b>425</b>	<b>20</b>	<b>893</b>	<b>7,587</b>	<b>4,298</b>	<b>1,168</b>	<b>3,983</b>	<b>321</b>
<b>Equity-accounted investees</b>									
Capitalised costs of proved oil and gas properties.....	7,491	-	1,230	-	-	6,082	-	179	-
Capitalised costs of unproved oil and gas properties.....	1,045	-	-	-	-	1,008	-	37	-
	<b>8,536</b>	<b>-</b>	<b>1,230</b>	<b>-</b>	<b>-</b>	<b>7,090</b>	<b>-</b>	<b>216</b>	<b>-</b>
Auxiliary equipment and facilities.....	2,362	-	1,139	-	-	1,223	-	-	-
<b>Total capitalised costs .....</b>	<b>10,898</b>	<b>-</b>	<b>2,369</b>	<b>-</b>	<b>-</b>	<b>8,313</b>	<b>-</b>	<b>216</b>	<b>-</b>
Accumulated depreciation and impairment losses .....	(4,525)	-	(568)	-	-	(3,890)	-	(67)	-
<b>Net amount .....</b>	<b>6,373</b>	<b>-</b>	<b>1,801</b>	<b>-</b>	<b>-</b>	<b>4,423</b>	<b>-</b>	<b>149</b>	<b>-</b>

(1) Does not include capitalised costs regarding non-current assets held for sale in 2014 and 2013 amounting to €293 and €155 million, respectively.

## Cost incurred

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

At December 31 <sup>st</sup> , 2013	Millions of euros								
	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	Oceania
<b>Fully-consolidated entities</b>									
Acquisition of proved properties.....	28	-	-	-	28	-	-	-	-
Acquisition of unproved properties.....	371	-	-	-	371	-	-	-	-
Exploration costs.....	770	164	-	34	247	110	89	104	22
Development costs.....	569	1	15	87	290	128	48	-	-
<b>TOTAL</b>	<b>1,738</b>	<b>165</b>	<b>15</b>	<b>121</b>	<b>936</b>	<b>238</b>	<b>137</b>	<b>104</b>	<b>22</b>
<b>Equity-accounted investees</b>									
Acquisition of proved properties.....	29	-	-	-	-	-	-	29	-
Acquisition of unproved properties.....	78	-	-	-	-	-	-	78	-
Exploration costs.....	213	-	-	-	-	209	4	-	-
Development costs.....	780	-	277	-	-	437	-	66	-
<b>TOTAL</b>	<b>1,100</b>	<b>-</b>	<b>277</b>	<b>-</b>	<b>-</b>	<b>646</b>	<b>4</b>	<b>173</b>	<b>-</b>

At December 31 <sup>st</sup> , 2014	Millions of euros								
	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	Oceania
<b>Fully-consolidated entities</b>									
Acquisition of proved properties.....	34	-	-	-	34	-	-	-	-
Acquisition of unproved properties.....	20	-	-	-	20	-	-	-	-
Exploration costs.....	1,346	211	-	67	442	167	306	145	8
Development costs.....	567	30	15	(34)	305	189	62	-	-
<b>TOTAL</b>	<b>1,967</b>	<b>241</b>	<b>15</b>	<b>33</b>	<b>801</b>	<b>356</b>	<b>368</b>	<b>145</b>	<b>8</b>
<b>Equity-accounted investees</b>									
Acquisition of proved properties.....	-	-	-	-	-	-	-	-	-
Acquisition of unproved properties.....	-	-	-	-	-	-	-	-	-
Exploration costs.....	95	-	-	-	-	93	1	1	-
Development costs.....	980	-	366	-	-	592	-	22	-
<b>TOTAL</b>	<b>1,075</b>	<b>-</b>	<b>366</b>	<b>-</b>	<b>-</b>	<b>685</b>	<b>1</b>	<b>23</b>	<b>-</b>

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	Millions of euros								
	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	Oceania
<u>At December 31<sup>st</sup>, 2015</u>									
<b>Fully-consolidated entities</b>									
Acquisition of proved properties (1).....	6,666	354	-	-	2,191	1,217	203	2,625	76
Acquisition of unproved properties (1).....	7,213	102	-	-	2,217	2,631	165	1,765	333
Exploration costs.....	1,365	176	-	33	644	108	257	130	17
Development costs.....	760	65	2	(41)	367	185	100	84	(2)
<b>TOTAL</b>	<b>16,004</b>	<b>697</b>	<b>2</b>	<b>(8)</b>	<b>5,419</b>	<b>4,141</b>	<b>725</b>	<b>4,604</b>	<b>424</b>
<b>Equity-accounted investees</b>									
Acquisition of proved properties (1).....	358	-	-	-	-	358	-	-	-
Acquisition of unproved properties (1).....	91	-	-	-	-	91	-	-	-
Exploration costs.....	118	12	-	-	-	104	1	1	-
Development costs.....	1,481	200	535	-	-	728	-	18	-
<b>TOTAL</b>	<b>2,048</b>	<b>212</b>	<b>535</b>	<b>-</b>	<b>-</b>	<b>1,281</b>	<b>1</b>	<b>19</b>	<b>-</b>

(1) At December 31, 2015, this heading mainly includes the addition of exploration, development and producing assets related to the acquisition of Talisman Energy Inc. amounting to €14,178 million, of which €13,729 million correspond to fully-consolidated companies and €449 million to investees.

## Results of oil and gas exploration and production activities

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

	Millions of euros								
	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	Oceania
<b>2013</b>									
<b>Fully-consolidated entities</b>									
Income									
Sales to non-Group companies.....	503	-	8	203	39	223	30	-	-
Sales between business segments and to Group Companies.....	1,722	197	-	105	729	376	315	-	-
Other income.....	620	-	-	-	-	27	593	-	-
<b>Total income.....</b>	<b>2,845</b>	<b>197</b>	<b>8</b>	<b>308</b>	<b>768</b>	<b>626</b>	<b>938</b>	<b>-</b>	<b>-</b>
Production costs (1).....	(584)	(22)	(22)	(137)	(37)	(261)	(105)	-	-
Exploration expenses .....	(433)	(152)	-	(6)	(59)	(108)	(58)	(28)	(22)
Other operating expenses.....	(34)	(5)	-	-	(1)	(26)	(2)	-	-
Depreciation and amortisation charge (3).....	(581)	(120)	(2)	(21)	(305)	(86)	(46)	(1)	-
<b>Profit (Loss) before taxes and charges .....</b>	<b>1,213</b>	<b>(102)</b>	<b>(16)</b>	<b>144</b>	<b>366</b>	<b>145</b>	<b>727</b>	<b>(29)</b>	<b>(22)</b>
Taxes and charges .....	(722)	62	(11)	(43)	(145)	(55)	(529)	(2)	1
<b>Results of oil and gas production activities .....</b>	<b>491</b>	<b>(40)</b>	<b>(27)</b>	<b>101</b>	<b>221</b>	<b>90</b>	<b>198</b>	<b>(31)</b>	<b>(21)</b>
<b>Equity-accounted investees</b>									
Income									
Sales to non-Group companies.....	1,410	-	452	-	-	771	-	187	-
Sales between business segments and to Group Companies.....	469	-	-	-	-	469	-	-	-
Other income.....	7	-	-	-	-	7	-	-	-
<b>Total income.....</b>	<b>1,886</b>	<b>-</b>	<b>452</b>	<b>-</b>	<b>-</b>	<b>1,247</b>	<b>-</b>	<b>187</b>	<b>-</b>
Production costs (1).....	(689)	-	(200)	-	-	(372)	-	(117)	-
Exploration expenses .....	(186)	-	-	-	-	(183)	(3)	-	-
Other operating expenses.....	8	-	(2)	-	-	10	-	-	-
Depreciation and amortisation charge (3).....	(323)	-	(42)	-	-	(250)	-	(31)	-
<b>Profit (Loss) before taxes and charges .....</b>	<b>696</b>	<b>-</b>	<b>208</b>	<b>-</b>	<b>-</b>	<b>452</b>	<b>(3)</b>	<b>39</b>	<b>-</b>
Taxes and charges .....	(368)	-	(73)	-	-	(286)	1	(10)	-
<b>Results of oil and gas production activities .....</b>	<b>328</b>	<b>-</b>	<b>135</b>	<b>-</b>	<b>-</b>	<b>166</b>	<b>(2)</b>	<b>29</b>	<b>-</b>
<b>Total results of oil and gas production activities .....</b>	<b>819</b>	<b>(40)</b>	<b>108</b>	<b>101</b>	<b>221</b>	<b>256</b>	<b>196</b>	<b>(2)</b>	<b>(21)</b>

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	Millions of euros								
	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	Oceania
<b>2014</b>									
<b>Fully-consolidated entities</b>									
Income									
Sales to non-Group companies.....	662	-	10	260	90	277	25	-	-
Sales between business segments and to Group Companies.....	1,356	148	-	39	675	323	171	-	-
Other income.....	260	-	-	-	-	-	260	-	-
<b>Total income.....</b>	<b>2,278</b>	<b>148</b>	<b>10</b>	<b>299</b>	<b>765</b>	<b>600</b>	<b>456</b>	<b>-</b>	<b>-</b>
Production costs (1).....	(524)	(27)	(34)	(128)	(20)	(226)	(89)	-	-
Exploration expenses (2).....	(811)	(228)	-	(21)	(128)	(118)	(214)	(120)	18
Other operating expenses.....	(16)	(7)	-	(1)	(1)	(5)	(2)	-	-
Depreciation and amortisation charge (3).....	(1,173)	(60)	(2)	(65)	(723)	(231)	(91)	(1)	-
<b>Profit (Loss) before taxes and charges .....</b>	<b>(246)</b>	<b>(174)</b>	<b>(26)</b>	<b>84</b>	<b>(107)</b>	<b>20</b>	<b>60</b>	<b>(121)</b>	<b>18</b>
Taxes and charges .....	(11)	65	6	(29)	36	-	(124)	41	(6)
<b>Results of oil and gas production activities .....</b>	<b>(257)</b>	<b>(109)</b>	<b>(20)</b>	<b>55</b>	<b>(71)</b>	<b>20</b>	<b>(64)</b>	<b>(80)</b>	<b>12</b>
<b>Equity-accounted investees</b>									
Income									
Sales to non-Group companies.....	1,705	-	409	-	-	1,136	-	160	-
Sales between business segments and to Group Companies.....	229	-	-	-	-	229	-	-	-
Other income.....	-	-	-	-	-	-	-	-	-
<b>Total income.....</b>	<b>1,934</b>	<b>-</b>	<b>409</b>	<b>-</b>	<b>-</b>	<b>1,365</b>	<b>-</b>	<b>160</b>	<b>-</b>
Production costs (1).....	(683)	-	(189)	-	-	(410)	-	(84)	-
Exploration expenses (2).....	(92)	-	-	-	-	(92)	-	-	-
Other operating expenses.....	(7)	-	(2)	-	-	(4)	-	(1)	-
Depreciation and amortisation charge (3).....	(413)	-	(43)	-	-	(326)	-	(44)	-
<b>Profit (Loss) before taxes and charges .....</b>	<b>739</b>	<b>-</b>	<b>175</b>	<b>-</b>	<b>-</b>	<b>533</b>	<b>-</b>	<b>31</b>	<b>-</b>
Taxes and charges .....	(323)	-	(44)	-	-	(275)	-	(4)	-
<b>Results of oil and gas production activities .....</b>	<b>416</b>	<b>-</b>	<b>131</b>	<b>-</b>	<b>-</b>	<b>258</b>	<b>-</b>	<b>27</b>	<b>-</b>
<b>Total results of oil and gas production activities .....</b>	<b>159</b>	<b>(109)</b>	<b>111</b>	<b>55</b>	<b>(71)</b>	<b>278</b>	<b>(64)</b>	<b>(53)</b>	<b>12</b>



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	Millions of euros								
	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	Oceania
<b>2015</b>									
<b>Fully-consolidated entities</b>									
Income									
Sales to non-Group companies.....	2,089	169	12	178	387	652	36	637	18
Sales between business segments and to Group Companies.....	698	63	-	30	383	130	92	-	-
Other income.....	(14)	-	-	-	-	-	(14)	-	-
<b>Total income.....</b>	<b>2,773</b>	<b>232</b>	<b>12</b>	<b>208</b>	<b>770</b>	<b>782</b>	<b>114</b>	<b>637</b>	<b>18</b>
Production costs (1).....	(1,362)	(180)	(63)	(147)	(184)	(399)	(81)	(292)	(16)
Exploration expenses (2).....	(1,529)	(276)	-	(30)	(522)	(42)	(566)	(91)	(2)
Other operating expenses.....	(62)	(26)	-	-	(6)	(20)	(3)	(5)	(2)
Depreciation and amortisation charge (3).....	(4,048)	(370)	(66)	(42)	(1,416)	(998)	(292)	(864)	-
<b>Profit (Loss) before taxes and charges .....</b>	<b>(4,228)</b>	<b>(620)</b>	<b>(117)</b>	<b>(11)</b>	<b>(1,358)</b>	<b>(677)</b>	<b>(828)</b>	<b>(615)</b>	<b>(2)</b>
Taxes and charges .....	1,259	236	12	2	430	162	261	155	1
<b>Results of oil and gas production activities .....</b>	<b>(2,969)</b>	<b>(384)</b>	<b>(105)</b>	<b>(9)</b>	<b>(928)</b>	<b>(515)</b>	<b>(567)</b>	<b>(460)</b>	<b>(1)</b>
<b>Equity-accounted investees</b>									
Income									
Sales to non-Group companies.....	1,463	-	363	-	-	962	-	138	-
Sales between business segments and to Group Companies.....	294	-	-	-	-	294	-	-	-
Other income.....	253	253	-	-	-	-	-	-	-
<b>Total income.....</b>	<b>2,010</b>	<b>253</b>	<b>363</b>	<b>-</b>	<b>-</b>	<b>1,256</b>	<b>-</b>	<b>138</b>	<b>-</b>
Production costs (1).....	(1,457)	(249)	(386)	-	-	(741)	-	(81)	-
Exploration expenses (2).....	(16)	(1)	-	-	-	13	(28)	-	-
Other operating expenses.....	(15)	-	(3)	-	-	(12)	-	-	-
Depreciation and amortisation charge (3).....	(1,071)	(2)	(452)	-	-	(596)	-	(21)	-
<b>Profit (Loss) before taxes and charges .....</b>	<b>(549)</b>	<b>1</b>	<b>(478)</b>	<b>-</b>	<b>-</b>	<b>(80)</b>	<b>(28)</b>	<b>36</b>	<b>-</b>
Taxes and charges .....	(54)	-	50	-	-	(105)	8	(7)	-
<b>Results of oil and gas production activities .....</b>	<b>(603)</b>	<b>1</b>	<b>(428)</b>	<b>-</b>	<b>-</b>	<b>(185)</b>	<b>(20)</b>	<b>29</b>	<b>-</b>
<b>Total results of oil and gas production activities .....</b>	<b>(3,572)</b>	<b>(383)</b>	<b>(533)</b>	<b>(9)</b>	<b>(928)</b>	<b>(700)</b>	<b>(587)</b>	<b>(431)</b>	<b>(1)</b>

(1) Production costs include local taxes, production taxes and other similar payments amounting to €347, €375 and €490 million in 2015, 2014 and 2013, respectively. It also includes transport and other costs totalling €893, €318 and €311 million in 2015, 2014 and 2013, respectively.

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

(3) The depreciation and provisions heading includes charges for the impairment of producing and development assets and provisions for onerous contracts totalling €2,933, €539 and €6 million in 2015, 2014 and 2013, respectively. The amounts for 2014 and 2013 have been restated to include such provisions.

### Estimated proved net developed and undeveloped oil and gas reserves

The tables below reflect the net developed and undeveloped proved reserves of crude oil, condensates, LPG and natural gas, including the volume of reserves equivalent to the financial income obtained under certain production-sharing contracts in force as of December 31, 2015, 2014 and 2013, and the variations therein.

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

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

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

To control the quality of reserves booked, Repsol has established a process that is integrated into Repsol’s internal control system. The process to manage reserves booking is centrally controlled by the Reserve Control Direction which is independent from the upstream activities and it is

overseen by the Audit and Control Committee. Furthermore, the volumes booked are submitted to third party engineers for a reserves audit on a periodic basis (100% of the reserves 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 2015, Repsol commissioned an external audit for various areas of South America, North America, Europe, Northern Africa and Asia.

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

	Millions of barrels								
	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	Oceania
<b>Fully-consolidated entities</b>									
Reserves at December 31 <sup>st</sup> , 2012 (1) .....	290	5	-	62	46	51	125	-	-
Revisions of previous estimates.....	22	1	-	19	2	2	(1)	-	-
Improved recovery.....	-	-	-	-	-	-	-	-	-
Extensions and discoveries .....	-	-	-	-	-	-	-	-	-
Purchases of minerals in place .....	-	-	-	-	-	-	-	-	-
Sales of minerals in place .....	-	-	-	-	-	-	-	-	-
Production (1) .....	(36)	(2)	-	(4)	(10)	(9)	(11)	-	-
Reserves at December 31 <sup>st</sup> , 2013 (1) .....	275	4	-	78	38	44	113	-	-
Revisions of previous estimates.....	20	1	-	-	18	3	(2)	-	-
Improved recovery.....	-	-	-	-	-	-	-	-	-
Extensions and discoveries .....	13	-	-	11	-	2	-	-	-
Purchases of minerals in place .....	-	-	-	-	-	-	-	-	-
Sales of minerals in place .....	-	-	-	-	-	-	-	-	-
Production (1) .....	(31)	(2)	-	(4)	(10)	(9)	(6)	-	-
Reserves at December 31 <sup>st</sup> , 2014 (1) .....	278	3	-	84	45	40	105	-	-
Revisions of previous estimates.....	20	7	-	-	4	10	(1)	4	(2)
Improved recovery.....	-	-	-	-	-	-	-	-	-
Extensions and discoveries .....	17	-	-	-	10	6	-	-	-
Purchases of minerals in place .....	138	8	-	-	48	53	8	17	3
Sales of minerals in place .....	(13)	-	-	-	(13)	-	-	-	-
Production (1) .....	(44)	(4)	-	(4)	(13)	(14)	(3)	(5)	-
Reserves at December 31 <sup>st</sup> , 2015 (1) .....	396	13	-	80	82	96	110	16	-

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	Millions of barrels								
	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	Oceania
<b>Equity-accounted investees</b>									
Reserves at December 31 <sup>st</sup> , 2012 (1) .....	138	-	45	-	-	71	-	23	-
Revisions of previous estimates.....	13	-	3	-	-	3	-	6	-
Improved recovery.....	-	-	-	-	-	-	-	-	-
Extensions and discoveries .....	10	-	1	-	-	8	-	1	-
Purchases of minerals in place .....	-	-	-	-	-	-	-	-	-
Sales of minerals in place .....	-	-	-	-	-	-	-	-	-
Production (1) .....	(15)	-	(5)	-	-	(6)	-	(4)	-
Reserves at December 31 <sup>st</sup> , 2013 (1) .....	146	-	44	-	-	76	-	26	-
Revisions of previous estimates.....	22	-	3	-	-	10	-	8	-
Improved recovery.....	-	-	-	-	-	-	-	-	-
Extensions and discoveries .....	13	-	-	-	-	13	-	-	-
Purchases of minerals in place .....	-	-	-	-	-	-	-	-	-
Sales of minerals in place .....	-	-	-	-	-	-	-	-	-
Production (1) .....	(18)	-	(5)	-	-	(9)	-	(4)	-
Reserves at December 31 <sup>st</sup> , 2014 (1) .....	163	-	42	-	-	90	-	30	-
Revisions of previous estimates.....	8	(9)	4	-	-	9	-	3	-
Improved recovery.....	-	-	-	-	-	-	-	-	-
Extensions and discoveries .....	-	-	-	-	-	-	-	-	-
Purchases of minerals in place .....	52	44	-	-	-	9	-	-	-
Sales of minerals in place .....	-	-	-	-	-	-	-	-	-
Production (1) .....	(31)	(5)	(5)	-	-	(17)	-	(4)	-
Reserves at December 31 <sup>st</sup> , 2015 (1) .....	192	30	42	-	-	91	-	29	-
<b>Total Fully-consolidated entities and Equity-accounted investees</b>	<b>588</b>	<b>43</b>	<b>42</b>	<b>80</b>	<b>82</b>	<b>186</b>	<b>110</b>	<b>45</b>	<b>-</b>

**Proved developed reserves of crude oil, condensate GPL:**

At December 31 <sup>st</sup> , 2012 .....	254	5	35	42	20	57	80	16	-
Fully-consolidated entities	187	5	-	42	20	40	80	-	-
Equity-accounted investees	67	-	35	-	-	17	-	16	-
At December 31 <sup>st</sup> , 2013 .....	238	3	33	39	13	62	68	19	-
Fully-consolidated entities	162	3	-	39	13	38	68	-	-
Equity-accounted investees	76	-	33	-	-	24	-	19	-
At December 31 <sup>st</sup> , 2014 .....	265	3	31	52	25	65	65	24	-
Fully-consolidated entities	181	3	-	52	25	36	65	-	-
Equity-accounted investees	84	-	31	-	-	29	-	24	-
At December 31 <sup>st</sup> , 2015 .....	418	36	32	50	52	137	71	40	-
Fully-consolidated entities	283	13	-	50	52	82	71	15	-
Equity-accounted investees	135	23	32	-	-	55	-	25	-

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, 2015, 2014, 2013 and 2012 include an estimated volume of approximately 45, 46, 44 and 39 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 2015, 2014 and 2013 includes an estimated volume of 4, 4 and 4 million barrels of oil equivalent, respectively, in connection with such payments.

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**Developed and undeveloped proved reserves of natural Gas:**

	Thousand Millions of Standard Cubic Feet								
	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	Oceania
<b>Fully-consolidated entities</b>									
Reserves at December 31st, 2012 (1) .....	<b>1,891</b>	-	<b>114</b>	<b>1,235</b>	<b>40</b>	<b>350</b>	<b>152</b>	-	-
Revisions of previous estimates.....	246	1	(21)	238	13	7	7	-	-
Improved recovery.....	-	-	-	-	-	-	-	-	-
Extensions and discoveries .....	-	-	-	-	-	-	-	-	-
Purchases of minerals in place .....	-	-	-	-	-	-	-	-	-
Sales of minerals in place .....	-	-	-	-	-	-	-	-	-
Production (1) .....	(94)	(1)	(5)	(40)	(9)	(28)	(11)	-	-
Reserves at December 31st, 2013 (1) .....	<b>2,043</b>	-	<b>88</b>	<b>1,433</b>	<b>44</b>	<b>329</b>	<b>148</b>	-	-
Revisions of previous estimates.....	(9)	-	-	-	52	(38)	(24)	-	-
Improved recovery.....	-	-	-	-	-	-	-	-	-
Extensions and discoveries .....	174	-	-	173	-	1	-	-	-
Purchases of minerals in place .....	-	-	-	-	-	-	-	-	-
Sales of minerals in place .....	-	-	-	-	-	-	-	-	-
Production (1) .....	(120)	(1)	(6)	(53)	(14)	(36)	(11)	-	-
Reserves at December 31st, 2014 (1) .....	<b>2,088</b>	-	<b>82</b>	<b>1,553</b>	<b>83</b>	<b>256</b>	<b>113</b>	-	-
Revisions of previous estimates.....	120	3	(29)	48	(51)	121	5	23	-
Improved recovery.....	-	-	-	-	-	-	-	-	-
Extensions and discoveries .....	278	-	-	-	194	85	-	-	-
Purchases of minerals in place .....	2,985	16	-	-	1,691	419	-	858	-
Sales of minerals in place .....	(49)	-	-	-	(49)	-	-	-	-
Production (1) .....	(383)	(6)	(6)	(52)	(134)	(86)	(16)	(82)	-
Reserves at December 31st, 2015 (1) .....	<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>	-
<b>Equity-accounted investees</b>									
Reserves at December 31st, 2012 (1) .....	<b>2,969</b>	-	<b>986</b>	-	-	<b>1,828</b>	-	<b>155</b>	-
Revisions of previous estimates.....	252	-	136	-	-	111	-	5	-
Improved recovery.....	-	-	-	-	-	-	-	-	-
Extensions and discoveries .....	1,282	-	1,135	-	-	148	-	-	-
Purchases of minerals in place .....	-	-	-	-	-	-	-	-	-
Sales of minerals in place .....	(79)	-	-	-	-	-	-	(79)	-
Production (1) .....	(330)	-	(42)	-	-	(280)	-	(8)	-
Reserves at December 31st, 2013 (1) .....	<b>4,095</b>	-	<b>2,216</b>	-	-	<b>1,806</b>	-	<b>73</b>	-
Revisions of previous estimates.....	315	-	4	-	-	315	-	(4)	-
Improved recovery.....	-	-	-	-	-	-	-	-	-
Extensions and discoveries .....	-	-	-	-	-	-	-	-	-
Purchases of minerals in place .....	-	-	-	-	-	-	-	-	-
Sales of minerals in place .....	(2)	-	-	-	-	(2)	-	-	-
Production (1) .....	(332)	-	(42)	-	-	(276)	-	(14)	-
Reserves at December 31st, 2014 (1) .....	<b>4,076</b>	-	<b>2,177</b>	-	-	<b>1,844</b>	-	<b>55</b>	-
Revisions of previous estimates.....	1,173	5	952	-	-	216	-	-	-
Improved recovery.....	-	-	-	-	-	-	-	-	-
Extensions and discoveries .....	-	-	-	-	-	-	-	-	-
Purchases of minerals in place .....	75	25	-	-	-	51	-	-	-
Sales of minerals in place .....	-	-	-	-	-	-	-	-	-
Production (1) .....	(338)	(1)	(63)	-	-	(260)	-	(15)	-
Reserves at December 31st, 2015 (1) .....	<b>4,986</b>	<b>28</b>	<b>3,067</b>	-	-	<b>1,851</b>	-	<b>40</b>	-
<b>Total Fully-consolidated entities and Equity-accounted investees</b>	<b>10,026</b>	<b>42</b>	<b>3,114</b>	<b>1,549</b>	<b>1,733</b>	<b>2,645</b>	<b>103</b>	<b>839</b>	-

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	Thousand Millions of Standard Cubic Feet								
	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	Oceania
<b>Proved developed reserves of natural gas:</b>									
At December 31st, 2012 .....	<b>2,133</b>	<b>0</b>	<b>267</b>	<b>764</b>	<b>18</b>	<b>985</b>	<b>46</b>	<b>54</b>	-
Fully-consolidated entities	1,036	0	38	764	18	170	46	-	-
Equity-accounted investees	1,097	-	229	-	-	814	-	54	-
At December 31st, 2013 .....	<b>1,998</b>	<b>0</b>	<b>241</b>	<b>691</b>	<b>24</b>	<b>980</b>	<b>41</b>	<b>22</b>	-
Fully-consolidated entities	997	0	43	691	24	199	41	-	-
Equity-accounted investees	1,001	-	198	-	-	781	-	22	-
At December 31st, 2014 .....	<b>2,251</b>	-	<b>195</b>	<b>926</b>	<b>49</b>	<b>1,016</b>	<b>65</b>	-	-
Fully-consolidated entities	1,262	-	37	926	49	218	32	-	-
Equity-accounted investees	989	-	158	-	-	798	33	-	-
At December 31st, 2015 .....	<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	-

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, 2015, 2014, 2013 and 2012 include an estimated volume of approximately 1,264 1,144, 1,052 and 767 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 2015, 2014 and 2013 includes an estimated volume of 47, 32 and 40 billion cubic feet of gas, respectively, in connection with such payments.

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

	Millions of Barrels of Oil Equivalent								
	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	Oceania
<b>Fully-consolidated entities</b>									
Reserves at December 31st, 2012 (1) .....	<b>626</b>	<b>5</b>	<b>20</b>	<b>282</b>	<b>53</b>	<b>114</b>	<b>152</b>	-	-
Revisions of previous estimates.....	66	1	(4)	62	4	3	-	-	-
Improved recovery.....	-	-	-	-	-	-	-	-	-
Extensions and discoveries .....	-	-	-	-	-	-	-	-	-
Purchases of minerals in place .....	-	-	-	-	-	-	-	-	-
Sales of minerals in place .....	-	-	-	-	-	-	-	-	-
Production (1) .....	(53)	(3)	(1)	(11)	(11)	(14)	(13)	-	-
Reserves at December 31st, 2013 (1) .....	<b>639</b>	<b>4</b>	<b>16</b>	<b>333</b>	<b>45</b>	<b>103</b>	<b>139</b>	-	-
Revisions of previous estimates.....	19	1	-	-	27	(3)	(6)	-	-
Improved recovery.....	-	-	-	-	-	-	-	-	-
Extensions and discoveries .....	44	-	-	42	-	3	-	-	-
Purchases of minerals in place .....	-	-	-	-	-	-	-	-	-
Sales of minerals in place .....	-	-	-	-	-	-	-	-	-
Production (1) .....	(52)	(2)	(1)	(14)	(13)	(15)	(8)	-	-
Reserves at December 31st, 2014 (1) .....	<b>650</b>	<b>3</b>	<b>15</b>	<b>361</b>	<b>60</b>	<b>86</b>	<b>125</b>	-	-
Revisions of previous estimates.....	42	7	(5)	9	(5)	31	-	8	(2)
Improved recovery.....	-	-	-	-	-	-	-	-	-
Extensions and discoveries .....	66	-	-	-	45	21	-	-	-
Purchases of minerals in place .....	669	11	-	-	350	128	8	170	3
Sales of minerals in place .....	(22)	-	-	-	(22)	-	-	-	-
Production (1) .....	(112)	(6)	(1)	(13)	(37)	(30)	(5)	(20)	-
Reserves at December 31st, 2015 (1) .....	<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>	-
<b>Equity-accounted investees</b>									
Reserves at December 31st, 2012 (1) .....	<b>667</b>	-	<b>220</b>	-	-	<b>396</b>	-	<b>50</b>	-
Revisions of previous estimates.....	57	-	28	-	-	23	-	7	-
Improved recovery.....	-	-	-	-	-	-	-	-	-
Extensions and discoveries .....	238	-	203	-	-	34	-	1	-
Purchases of minerals in place .....	-	-	-	-	-	-	-	-	-
Sales of minerals in place .....	(14)	-	-	-	-	-	-	(14)	-
Production (1) .....	(73)	-	(12)	-	-	(56)	-	(5)	-
Reserves at December 31st, 2013 (1) .....	<b>875</b>	-	<b>438</b>	-	-	<b>398</b>	-	<b>39</b>	-
Revisions of previous estimates.....	78	-	4	-	-	67	-	7	-
Improved recovery.....	-	-	-	-	-	-	-	-	-
Extensions and discoveries .....	13	-	-	-	-	13	-	-	-
Purchases of minerals in place .....	-	-	-	-	-	-	-	-	-
Sales of minerals in place .....	-	-	-	-	-	-	-	-	-
Production (1) .....	(77)	-	(12)	-	-	(58)	-	(6)	-
Reserves at December 31st, 2014 (1) .....	<b>889</b>	-	<b>430</b>	-	-	<b>419</b>	-	<b>40</b>	-
Revisions of previous estimates.....	216	(8)	174	-	-	47	-	3	-
Improved recovery.....	-	-	-	-	-	-	-	-	-
Extensions and discoveries .....	-	-	-	-	-	-	-	-	-
Purchases of minerals in place .....	66	48	-	-	-	18	-	-	-
Sales of minerals in place .....	-	-	-	-	-	-	-	-	-
Production (1) .....	(92)	(5)	(16)	-	-	(63)	-	(7)	-
Reserves at December 31st, 2015 (1) .....	<b>1,080</b>	<b>35</b>	<b>588</b>	-	-	<b>420</b>	-	<b>36</b>	-
<b>Total Fully-consolidated entities and Equity-accounted investees</b>	<b>2,373</b>	<b>51</b>	<b>596</b>	<b>356</b>	<b>390</b>	<b>657</b>	<b>128</b>	<b>194</b>	-

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	Millions of Barrels of Oil Equivalent								
	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	
<b>Proved developed reserves of crude oil, condensate, natural gas liquids and natural gas</b>									
At December 31st, 2012 .....	<b>634</b>	<b>5</b>	<b>82</b>	<b>178</b>	<b>24</b>	<b>233</b>	<b>88</b>	<b>25</b>	-
Fully-consolidated entities	372	5	7	178	24	71	88	-	-
Equity-accounted investees	262	-	75	-	-	162	-	25	-
At December 31st, 2013 .....	<b>594</b>	<b>3</b>	<b>76</b>	<b>162</b>	<b>18</b>	<b>237</b>	<b>75</b>	<b>22</b>	-
Fully-consolidated entities	340	3	8	162	18	74	75	-	-
Equity-accounted investees	254	-	68	-	-	163	-	22	-
At December 31st, 2014 .....	<b>666</b>	<b>3</b>	<b>66</b>	<b>217</b>	<b>33</b>	<b>245</b>	<b>102</b>	-	-
Fully-consolidated entities	405	3	7	217	33	74	71	-	-
Equity-accounted investees	261	-	59	-	-	171	31	-	-
At December 31st, 2015 .....	<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	-

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, 2015, 2014, 2013 and 2012 include an estimated volume of approximately 271, 250, 231 and 176 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 2015, 2014 and 2013 includes an estimated volume of 12, 10 and 11 million barrels of oil equivalent, respectively, in connection with such payments.



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

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

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

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

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

Translation of a report originally issued in Spanish.  
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	Millions of euros								
	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	Oceania
<b>At December 31<sup>st</sup>, 2013</b>									
<b>Fully-consolidated entities</b>									
Future cash inflows.....	24,182	304	181	6,714	3,626	3,684	9,673	-	-
Future production costs.....	(7,233)	(146)	(69)	(3,678)	(558)	(1,668)	(1,114)	-	-
Future development and abandonment costs.....	(2,040)	(239)	(39)	(322)	(540)	(398)	(502)	-	-
Future income tax expenses.....	(6,619)	50	(8)	(825)	(366)	(388)	(5,082)	-	-
Future net cash flows after taxes.....	8,290	(31)	65	1,889	2,162	1,230	2,975	-	-
10% annual discount for estimated timing of cash flows.....	(3,438)	124	(38)	(1,044)	(894)	(358)	(1,228)	-	-
Standardized measure of discounted future net cash flows.....	<b>4,852</b>	<b>93</b>	<b>27</b>	<b>845</b>	<b>1,268</b>	<b>872</b>	<b>1,747</b>	-	-
<b>Equity-accounted investees</b>									
Future cash inflows.....	20,576	-	9,393	-	-	10,057	-	1,126	-
Future production costs.....	(8,375)	-	(3,604)	-	-	(4,249)	-	(522)	-
Future development and abandonment costs.....	(2,798)	-	(980)	-	-	(1,673)	-	(145)	-
Future income tax expenses.....	(2,878)	-	(1,622)	-	-	(1,154)	-	(102)	-
Future net cash flows after taxes.....	6,525	-	3,187	-	-	2,981	-	357	-
10% annual discount for estimated timing of cash flows.....	(3,032)	-	(1,953)	-	-	(918)	-	(161)	-
Standardized measure of discounted future net cash flows.....	<b>3,493</b>	-	<b>1,234</b>	-	-	<b>2,063</b>	-	<b>196</b>	-
<b>Total Standardized measure of discounted future net cash flows</b>	<b>8,345</b>	<b>93</b>	<b>1,261</b>	<b>845</b>	<b>1,268</b>	<b>2,935</b>	<b>1,747</b>	<b>196</b>	-

	Millions of euros								
	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	Oceania
<b>At December 31<sup>st</sup>, 2014</b>									
<b>Fully-consolidated entities</b>									
Future cash inflows.....	24,601	265	198	7,437	3,708	3,555	9,438	-	-
Future production costs.....	(7,358)	(127)	(75)	(3,769)	(593)	(1,784)	(1,010)	-	-
Future development and abandonment costs.....	(2,706)	(207)	(25)	(973)	(661)	(369)	(471)	-	-
Future income tax expenses.....	(6,529)	22	(9)	(799)	(563)	(268)	(4,912)	-	-
Future net cash flows after taxes.....	8,008	(47)	89	1,896	1,891	1,134	3,045	-	-
10% annual discount for estimated timing of cash flows.....	(3,002)	117	(42)	(1,123)	(522)	(264)	(1,168)	-	-
Standardized measure of discounted future net cash flows.....	<b>5,006</b>	<b>70</b>	<b>47</b>	<b>773</b>	<b>1,369</b>	<b>870</b>	<b>1,877</b>	-	-
<b>Equity-accounted investees</b>									
Future cash inflows.....	24,360	-	10,364	-	-	12,160	-	1,836	-
Future production costs.....	(9,922)	-	(3,983)	-	-	(4,978)	-	(961)	-
Future development and abandonment costs.....	(3,732)	-	(1,009)	-	-	(2,634)	-	(89)	-
Future income tax expenses.....	(3,087)	-	(1,750)	-	-	(1,161)	-	(176)	-
Future net cash flows after taxes.....	7,619	-	3,622	-	-	3,387	-	610	-
10% annual discount for estimated timing of cash flows.....	(3,291)	-	(2,147)	-	-	(865)	-	(279)	-
Standardized measure of discounted future net cash flows.....	<b>4,328</b>	-	<b>1,475</b>	-	-	<b>2,522</b>	-	<b>331</b>	-
<b>Total Standardized measure of discounted future net cash flows</b>	<b>9,334</b>	<b>70</b>	<b>1,522</b>	<b>773</b>	<b>1,369</b>	<b>3,392</b>	<b>1,877</b>	<b>331</b>	-

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	Millions of euros								
	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	Oceania
<b>At December 31<sup>st</sup>, 2015</b>									
<b>Fully-consolidated entities</b>									
Future cash inflows.....	47,888	792	123	8,255	14,679	8,570	8,521	6,948	-
Future production costs.....	(17,649)	(648)	(32)	(3,731)	(6,047)	(4,405)	(1,131)	(1,655)	-
Future development and abandonment costs.....	(8,115)	(1,477)	(1)	(969)	(2,017)	(2,744)	(404)	(467)	(36)
Future income tax expenses.....	(6,433)	1,622	(28)	(1,136)	(448)	(242)	(4,197)	(2,005)	1
Future net cash flows after taxes.....	15,691	289	62	2,419	6,167	1,179	2,789	2,821	(35)
10% annual discount for estimated timing of cash flows.....	(6,996)	(429)	(24)	(1,545)	(3,151)	287	(1,176)	(962)	4
Standardized measure of discounted future net cash flows.....	<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>1,859</b>	<b>(31)</b>
<b>Equity-accounted investees</b>									
Future cash inflows.....	29,673	2,640	16,313	-	-	9,153	-	1,567	-
Future production costs.....	(12,281)	(2,447)	(5,315)	-	-	(3,642)	-	(877)	-
Future development and abandonment costs.....	(4,169)	(930)	(951)	-	-	(2,187)	-	(101)	-
Future income tax expenses.....	(3,740)	997	(3,904)	-	-	(690)	-	(143)	-
Future net cash flows after taxes.....	9,483	260	6,143	-	-	2,634	-	446	-
10% annual discount for estimated timing of cash flows.....	(6,298)	(1,870)	(3,656)	-	-	(570)	-	(202)	-
Standardized measure of discounted future net cash flows.....	<b>3,185</b>	<b>(1,610)</b>	<b>2,487</b>	-	-	<b>2,064</b>	-	<b>244</b>	-
<b>Total Standardized measure of discounted future net cash flows</b>	<b>11,880</b>	<b>(1,750)</b>	<b>2,525</b>	<b>874</b>	<b>3,016</b>	<b>3,530</b>	<b>1,613</b>	<b>2,103</b>	<b>(31)</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 2013, 2014 and 2015 is as follows:

### Changes in the standardized measure of discounted future net cash flows

	Millions of euros								
	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	Oceania
<b>Fully-consolidated entities</b>									
<b>Balance at December 31<sup>st</sup>, 2012</b>	<b>5,644</b>	<b>161</b>	<b>18</b>	<b>837</b>	<b>1,521</b>	<b>966</b>	<b>2,141</b>	-	-
Changes due to sale or transfer prices of future production costs .....	(48)	(22)	2	272	35	(116)	(219)	-	-
Changes in future development costs .....	(242)	38	(25)	(54)	(128)	(44)	(29)	-	-
Oil and gas sales and transfers in the period.....	(2,327)	(127)	(4)	(230)	(603)	(274)	(1,089)	-	-
Net changes due to extensions, discoveries and improvements in the recovery of reserves....	-	-	-	-	-	-	-	-	-
Net changes due to purchases/sales of assets.....	-	-	-	-	-	-	-	-	-
Net changes due to revisions in quantity estimates .....	155	13	-	(57)	162	119	(82)	-	-
Previously estimated development costs incurred in the year.....	416	14	29	46	140	121	66	-	-
Effect of discounting to a different date and exchange rate effect.....	196	(2)	4	31	42	42	79	-	-
Other non-specific changes.....	-	-	-	-	-	-	-	-	-
Changes in income tax.....	1,058	18	3	-	99	58	880	-	-
Net change.....	(792)	(68)	9	8	(253)	(94)	(394)	-	-
<b>Balance at December 31<sup>st</sup>, 2013</b>	<b>4,852</b>	<b>93</b>	<b>27</b>	<b>845</b>	<b>1,268</b>	<b>872</b>	<b>1,747</b>	-	-
Changes due to sale or transfer prices of future production costs .....	(774)	4	(1)	11	(303)	(197)	(288)	-	-
Changes in future development costs .....	(165)	34	-	(133)	(8)	12	(70)	-	-
Oil and gas sales and transfers in the period.....	(2,248)	(77)	(2)	(162)	(625)	(356)	(1,026)	-	-
Net changes due to extensions, discoveries and improvements in the recovery of reserves....	112	-	-	65	-	47	-	-	-
Net changes due to purchases/sales of assets.....	-	-	-	-	-	-	-	-	-
Net changes due to revisions in quantity estimates .....	857	11	(4)	(147)	682	58	257	-	-
Previously estimated development costs incurred in the year.....	490	13	16	15	193	111	142	-	-
Effect of discounting to a different date and exchange rate effect.....	1,035	12	9	175	264	188	387	-	-
Other non-specific changes.....	-	-	-	-	-	-	-	-	-
Changes in income tax.....	847	(20)	2	104	(102)	135	728	-	-
Net change.....	154	(23)	20	(72)	101	(2)	130	-	-
<b>Balance at December 31<sup>st</sup>, 2014</b>	<b>5,006</b>	<b>70</b>	<b>47</b>	<b>773</b>	<b>1,369</b>	<b>870</b>	<b>1,877</b>	-	-
Changes due to sale or transfer prices of future production costs .....	(4,465)	(67)	4	(65)	(942)	(847)	(2,251)	(286)	(11)
Changes in future development costs .....	210	(7)	7	113	78	(33)	52	-	-
Oil and gas sales and transfers in the period.....	(2,032)	(82)	(4)	(129)	(852)	(485)	(91)	(405)	16
Net changes due to extensions, discoveries and improvements in the recovery of reserves....	460	-	-	-	324	136	-	-	-
Net changes due to purchases/sales of assets.....	5,204	163	-	-	1,729	920	190	2,239	(37)
Net changes due to revisions in quantity estimates .....	340	12	(33)	(31)	231	288	(174)	47	-
Previously estimated development costs incurred in the year.....	1,270	104	17	62	474	336	153	122	2
Effect of discounting to a different date and exchange rate effect.....	1,084	6	11	170	296	180	386	35	-
Other non-specific changes.....	-	-	-	-	-	-	-	-	-
Changes in income tax.....	1,618	(339)	(11)	(19)	309	101	1,471	107	(1)
Net change.....	3,689	(210)	(9)	101	1,647	596	(264)	1,859	(31)
<b>Balance at December 31<sup>st</sup>, 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>1,859</b>	<b>(31)</b>

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	Millions of euros								
	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	Oceania
<b>Equity-accounted investees</b>									
<b>Balance at December 31<sup>st</sup>, 2012</b>	<b>2,886</b>	-	<b>824</b>	-	-	<b>1,914</b>	-	<b>148</b>	-
Changes due to sale or transfer prices of future production costs .....	(203)	-	212	-	-	(425)	-	10	-
Changes in future development costs .....	(129)	-	(111)	-	-	26	-	(44)	-
Oil and gas sales and transfers in the period.....	(796)	-	(242)	-	-	(493)	-	(61)	-
Net changes due to extensions, discoveries and improvements in the recovery of reserves....	750	-	509	-	-	230	-	11	-
Net changes due to purchases/sales of assets.....	(5)	-	-	-	-	-	-	(5)	-
Net changes due to revisions in quantity estimates .....	414	-	153	-	-	201	-	60	-
Previously estimated development costs incurred in the year.....	591	-	183	-	-	333	-	75	-
Effect of discounting to a different date and exchange rate effect.....	138	-	44	-	-	84	-	10	-
Other non-specific changes.....	-	-	-	-	-	-	-	-	-
Changes in income tax.....	(153)	-	(338)	-	-	193	-	(8)	-
Net change.....	607	-	410	-	-	149	-	48	-
<b>Balance at December 31<sup>st</sup>, 2013</b>	<b>3,493</b>	-	<b>1,234</b>	-	-	<b>2,063</b>	-	<b>196</b>	-
Changes due to sale or transfer prices of future production costs .....	(529)	-	(148)	-	-	(403)	-	22	-
Changes in future development costs .....	(445)	-	(138)	-	-	(329)	-	22	-
Oil and gas sales and transfers in the period.....	(1,185)	-	(239)	-	-	(877)	-	(69)	-
Net changes due to extensions, discoveries and improvements in the recovery of reserves....	143	-	-	-	-	143	-	-	-
Net changes due to purchases/sales of assets.....	(4)	-	-	-	-	(4)	-	-	-
Net changes due to revisions in quantity estimates .....	1,091	-	78	-	-	935	-	78	-
Previously estimated development costs incurred in the year.....	604	-	265	-	-	291	-	48	-
Effect of discounting to a different date and exchange rate effect.....	846	-	314	-	-	477	-	55	-
Other non-specific changes.....	-	-	-	-	-	-	-	-	-
Changes in income tax.....	314	-	109	-	-	226	-	(21)	-
Net change.....	835	-	241	-	-	459	-	135	-
<b>Balance at December 31<sup>st</sup>, 2014</b>	<b>4,329</b>	-	<b>1,475</b>	-	-	<b>2,523</b>	-	<b>331</b>	-
Changes due to sale or transfer prices of future production costs .....	(2,120)	(236)	120	-	-	(1,843)	-	(161)	-
Changes in future development costs .....	304	-	111	-	-	201	-	(8)	-
Oil and gas sales and transfers in the period.....	(1,662)	25	(282)	-	-	(1,317)	-	(88)	-
Net changes due to extensions, discoveries and improvements in the recovery of reserves....	-	-	-	-	-	-	-	-	-
Net changes due to purchases/sales of assets.....	(1,355)	(1,624)	-	-	-	269	-	-	-
Net changes due to revisions in quantity estimates .....	1,748	98	1,111	-	-	492	-	47	-
Previously estimated development costs incurred in the year.....	1,235	196	318	-	-	701	-	20	-
Effect of discounting to a different date and exchange rate effect.....	914	(29)	358	-	-	517	-	68	-
Other non-specific changes.....	-	-	-	-	-	-	-	-	-
Changes in income tax.....	(208)	(40)	(724)	-	-	521	-	35	-
Net change.....	(1,144)	(1,610)	1,012	-	-	(459)	-	(87)	-
<b>Balance at December 31<sup>st</sup>, 2015</b>	<b>3,185</b>	<b>(1,610)</b>	<b>2,487</b>	-	-	<b>2,064</b>	-	<b>244</b>	-