








Business  
areas

# Repsol worldwide



-  Upstream
-  LNG
-  Downstream
-  YPF
-  Gas Natural SDG

# Upstream Exploration and Production

## Income

Operating income from the Upstream division in 2008 was €2.258 billion, 20% higher in comparison with the 1.882 billion obtained a year earlier. EBITDA amounted to €2.864 billion in comparison with 2.631 billion in 2007. The improved results were mainly due to the increase in income as a result of higher average selling prices.

The average retail price of the Repsol liquids was US\$87.3/barrel (€59.3/barrel) against US\$61.5/barrel (€44.8/barrel) in 2007. The average price of gas was US\$4.2 per thousand cubic feet, an increase of 37% on 2007. These increases were driven by higher oil prices on the international markets. Oil played a major role in the 2008 economic scenario: after starting the year strongly, the price of oil continued

to climb, reaching a record US\$147/barrel in July. It then suffered a sharp fall to below US\$40/barrel in December.

Extraction lifting cost was US\$2.24/barrel, an increase of 1.8% compared to the US\$2.20/barrel of 2007. This trend is attributed to the decrease in production largely due to the deconsolidation of Andina in Bolivia and the end of operations in Dubai. Finding costs of proved reserves averaged US\$10.9/barrel in the 2003-2008 period.

## Activities by countries

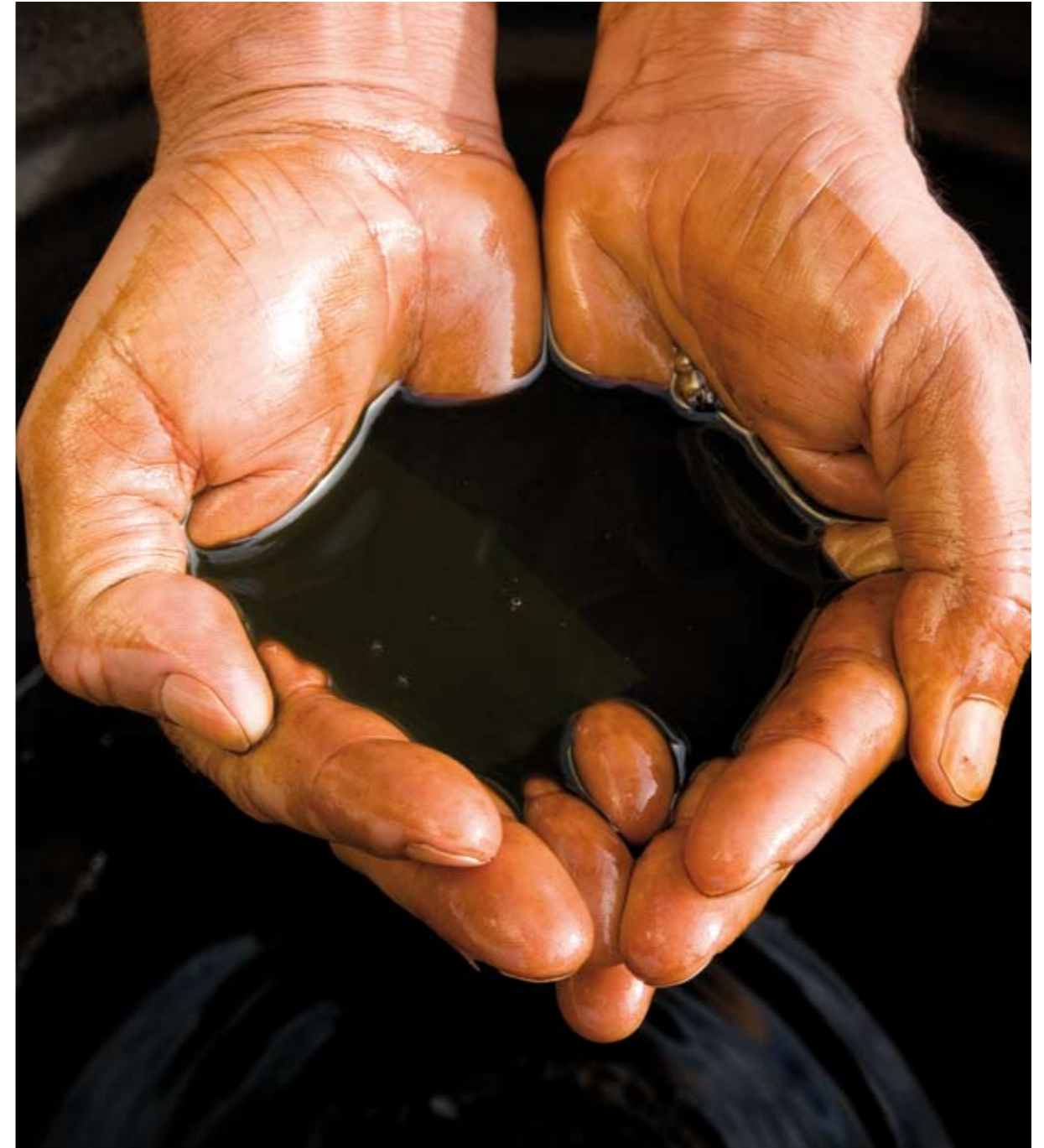
In 2008 major strides were made in the consolidation process of the Upstream business in key regions for the company, such as the Gulf of Mexico (United States), Brazil, Peru, North Africa and Trinidad and Tobago. To reinforce

the strategy of diversification and growth in OECD countries defined by Repsol, the first steps were taken in 2008 towards commencing operations in Canada and Norway. The objective is to ensure organic growth by maximizing asset profitability and boosting production and reserves over the 2008–2012 period.

## United States

Over the past three years, Repsol has significantly enhanced its presence in deep waters of the US Gulf of Mexico, participating in the major Shenzi oil development project and securing a large number of exploration blocks. This region is considered one of the most profitable with the greatest deepwater potential in the world.

The company holds a 28%



Oil extracted from a Repsol well in Libya.



A Repsol installation in Libya.

interest in the Shenzi field, one of the largest deepwater discoveries made to date in the Gulf of Mexico. Repsol commenced production of oil and gas in this field in March 2009. Development of the first phase of the project was completed ahead of schedule and on budget.

In Exploration Round 206 carried out in early 2008, Repsol obtained 32 new exploration blocks in the Gulf of Mexico which, together with others achieved in recent years, comprise a very sound exploration project portfolio. The company's participation in these rounds forms part of its strategy for diversification and growth in OECD countries. In March 2009 Repsol obtained a further 20 exploration blocks in Round 208.

Repsol is one of the leading companies in offshore mineral exploration acreage in the Santos, Campos and Espiritu Santo basins in Brazil, an area with an enormous potential at a world level

#### Africa

Repsol has a significant presence in North Africa, centred on Libya and Algeria, countries in which it has major ongoing projects which guarantee sustainable and profitable growth over the coming years.

In June 2008 production commenced in Libya at the I/R field situated in the prolific Murzuq basin in Blocks NC-186 and NC-115. Repsol participates in both of these blocks. Discovered in 2006, the I/R field is one of the most important exploration discoveries made in the history of the company and the largest in Libya in the last decade. With a production potential of 90,000 barrels/day, development of this field will give a major boost to the company's reserves and production in this country. This

field is one of the ten key growth projects defined by Repsol in its 2008–2012 Strategic Plan.

At the end of 2008, the Libyan National Oil Company NOC approved the development plans submitted for the "J" and "K" fields in block NC-186 (Repsol, Total, OMV and StatoilHydro). The development plan for field "E" in block NC-200 (Repsol and OMV) should be approved in the first half of 2009, thereby enabling production to commence in these three new fields. A new exploration discovery was also made in 2008 in block NC-186 with the Y1 well.

On 17 July, Repsol and NOC signed a new agreement extending the term of the oil exploration and production contracts in this country. The new agreement extends the term

of the contracts for blocks NC-115 and NC-186 until the year 2032, which represents an additional 15 years for the block NC-115 contract and another five to nine years, depending on the fields, for the block NC-186 contract. The agreement ensures that Repsol will be able to exploit the abundant resources discovered in both blocks, for which the exploration licenses were also extended for an additional five years.

In Algeria, 2008 saw two new gas discoveries in the Reggane basin in block 351c-352c operated by Repsol. These finds are in addition to those made in the same block in previous years. It is expected that Reggane will be declared commercially viable by Sonatrach in 2009, which will enable development of this major



## In January 2008 Repsol made an important discovery in Peru with the Kinteroni well



gas project to commence. Two other exploration discoveries were also made in this country in the M'Sari Akabli block, also operated by Repsol.

### Latin America

Brazil is one of the principal areas for the future growth of Repsol, one of the leading companies in offshore exploration mining acreages in the Santos, Campos and Espiritu Santo basins with a total of 21 exploration blocks (the company is an operator in 11 of these).

Repsol holds a 10% interest in the Albacora Leste field (Santos basin), which has been in production since April 2006. Output in this major Brazilian deepwater field was approximately 140,000 barrels/day in 2008. It has over 400 million barrels

of proved and probable crude oil reserves.

A new major discovery was made in the second quarter of 2008 in Brazilian deep waters in block BM-S-9 in the Santos basin with the Guara well. This find is in addition to the Carioca field, situated in the same block, discovered at the end of 2007. Preliminary appraisals indicate that both fields offer a great potential of high-quality oil resources. The Brazilian offshore region is proving to be one of the world's most high potential deepwater areas.

The exploration discoveries in block BM-S-9 reinforce the company's strategy in the Brazilian offshore region and represent one of the key growth projects in the Upstream area. In 2009 two additional wells are to be drilled in this block. One

of these, the Iguazu well, proved positive in April 2009.

In Bolivia, an agreement was signed in May 2008 with the Bolivian company YPFB for the sale of a 1.08% share of the company Andina. Following this transaction, the shareholder structure of Andina is YPFB (51.08%) and Repsol E&P Bolivia (48.92%). Similarly, the Shareholders Agreement was signed in October 2008 which will regulate the administration, operations and management of this company. This agreement came into force in November 2008. Repsol also discovered the Huacaya gas well in Bolivia.

In Trinidad and Tobago, Repsol is one of the leading private companies in terms of oil and gas production and reserves, together with BP, with which it shares

ownership of the company bpTT. The firm, in which Repsol holds a 30% stake, is the operator of an extensive offshore hydrocarbon production area in the country, which in 2008 reached an average production of more than 460,000 barrels of oil equivalent.

The Teak Blow Down gas compression project for domestic sales was completed in the fourth quarter of 2008, boosting gas production by 700,000m<sup>3</sup>/day as of January 2009.

The bbTT Mango and Cashmina fields, which commenced production in the fourth quarter of 2007, contributed to increasing production in 2008 as well as availability of gas for Train 4 at the Atlantic LNG liquefaction plant in which Repsol holds a 22.22% stake. In Peru, work continued in 2008

towards complete development of the Camisea field (blocks 56 and 88), in which Repsol holds a 10% interest. These blocks will supply natural gas to the future liquefied natural gas plant, part of the Peru LNG project, which is due to be operational in 2010 and in which Repsol holds a 20% stake. Two fields are being developed in block 88, San Martin (in production since 2004) and Cashiriari (currently under development), and in block 56 production in the Pagoreni field commenced in September 2008.

Also in Peru, in January 2008 Repsol made a major discovery with the Kinteroni well in block 57, which is located in the Ucayali-Madre de Dios basin in the country's central jungle, 50 km from the Camisea gas-condensate field. The presence of gas

and condensate in the Kinteroni field was confirmed with a significant resource potential that is currently being appraised. Repsol, with a 53.84% stake, is the operating company.

In Colombia, the Capachos Sur field in the Capachos block commenced production in April 2008. Repsol owns 100% of this 259 km<sup>2</sup> block situated in the Llanos basin.

### Alaska and Canada

In the first quarter of 2008 Repsol was awarded 93 blocks in Alaska in Exploration Round 93. These offshore blocks are located in the Chukchi Sea and cover a total area of 2,139 km<sup>2</sup>. The company's objective is to create a large project portfolio in this almost unexplored area which offers a high potential

# In 2008 Repsol made a total of ten new exploration discoveries in Brazil, Peru, Algeria, Colombia and Libya, in addition to six further discoveries made by YPF

The Stena Drillmax drill ship in the Gulf of Mexico, where exploration tasks have been carried out.



of undiscovered resources. In July 2007 Repsol reached an agreement with Shell Offshore Inc. and Eni Petroleum US LLC to explore 71 adjacent offshore blocks in the Beaufort Sea, north of the prolific Prudhoe Bay and the Kuparuk oil fields. Repsol holds a 20% stake in these blocks. In Canada, at the end of 2008 Repsol won exploration rights for three blocks in the Newfoundland (Terranova) and Labrador offshore areas. Two of these blocks are situated in the Central Ridge/ Flemish Pass area and the other is in the Jeanne d'Arc basin. Repsol's partners in these blocks, which have a combined area of 4,000 km<sup>2</sup>, are the Canadian companies Husky Oil and Petro-Canada. The awarded exploration rights represent a further step forward in the company's plans

to increase its presence in oil and gas exploration and production activities in OECD countries.

## Europe

In Norway, and again in line with the strategy of diversification and growth in OECD countries, an agreement was signed in September 2008 with the Norwegian company Det Norske Oljeselskap ASA (Det Norske) for the joint study of the areas available in Exploration Round 20. Repsol holds a 40% stake in this project, with Det Norske holding the remaining 60%. In November, a joint bid was submitted for four blocks. Repsol also presented a bid for 100% of another three blocks. The result of this round is expected to be announced in 2009.

Also in Norway, in October

2008 Repsol, jointly with Det Norske, Bayerngas and Svenska, presented a bid for four blocks situated between the Njord and Draugen (Norwegian Sea) blocks, in the APA Round 2008 (Award of Predefined Areas). Repsol obtained one exploration area.

## Discoveries

In 2008 Repsol made a total of 10 new exploration discoveries in Brazil, Peru, Algeria and Libya.

In Brazil, Repsol discovered a second oil field in June 2008 in block BM-S-9, in deep waters of the Santos basin in Brazil. The new field, known as Guara, is adjacent to the Carioca field discovered at the end of 2007 in the same block. Preliminary appraisals indicate that both fields contain a high potential of high-quality oil resources and

confirm this basin as one of the deepwater areas with the greatest potential worldwide.

The presence of light oil with a density of approximately 28°API was found in the new Guara field, discovered by the consortium formed by Petrobras (45% and the operator), BG (30%) and Repsol (25%), 310 km off the coast of the State of Sao Paulo, at a depth of 5,000 metres beneath over 2,000 metres of water.

In 2009 Repsol and its partners in the block will continue to carry out the activities and investments necessary in order to more accurately determine the exact size of the Carioca and Guara fields and to define the future development plan. Two additional wells are to be drilled in 2009 (one of these proved positive in April 2009) and a production

test will be conducted in the Guara well. Development of these deepwater projects in the Santos basin is one of the ten key growth initiatives included by Repsol in its 2008–2012 Strategic Plan.

Two other major discoveries were also made in Brazil at the beginning of 2009 in deep waters of the Santos basin in the Piracuca and Panoramix fields.

In Peru, a significant exploration discovery was made in January 2008 in block 57, located in the Cuzco province at the Kinteroni exploration well. Repsol, with a 53.84% stake, is the operator of the consortium that will exploit the field (Petrobras holds the remaining 46.16%). Preliminary production tests registered flows of one million cubic metres of gas per day (0.365 bcm/year) and 198 cubic metres

per day of associated hydrocarbon liquids (72,270 m<sup>3</sup>/year).

In order to define a commercial and development plan for this discovery, a 3D seismic survey will be conducted on the Kinteroni structure and several delineation and exploration wells will be drilled in the block.

All these activities will enable a more accurate assessment of the resources discovered, which are initially estimated at around 2 TCF (56 bcm).

Kinteroni, next to the Camisea gas field in blocks 56 and 88 in which Repsol holds a 10% stake, will supply gas to one of the company's major Liquefied Natural Gas (LNG) projects: Peru LNG.

In Algeria, two new exploration discoveries were made with the

View of a Repsol production field in Libya



AZSE-2 (Azrafil SE) and KLS-1 (Kahlouche S) wells in block 351c-352c (Reggane Nord), located in the Reggane basin. Repsol, with a 33.75% stake, is the operator of the consortium, together with the Algerian state company Sonatrach (25%), Germany's RWE Dea (22.5%) and Italy's Edison (18.75%). Situated in the south-central part of the Algerian Sahara desert, the block covers an extensive area of 4,682 km<sup>2</sup>. This discovery is in addition to another four made in the same block, the first in 2005 (Reggane 5 well), another two in 2006 (with the Sali 1 and Kahlouche-2 wells) and the last in 2007 (with the Reggane 6 well).

Another two exploration discoveries were made in this North African country in the

M'Sari Akabli block with the TGFO-1 and OTLH-2 (Oued Talha) wells. Repsol holds a 33.75% stake and is the operator of this block, which covers a total surface area of 8,103 km<sup>2</sup>.

At the beginning of 2009, a discovery was announced in the Gassi Chergui area with the AL-2 well in the Berkine basin.

In Colombia, three new discoveries were made. Two of them were with the Cosecha Z and Cosecha Y Norte wells in the Cosecha block in the Llanos Orientales basin, in which Repsol holds a 25% stake and Oxy, the operator, holds the remaining 75%. The Cosecha block has a surface area of 2,856 km<sup>2</sup>. The third discovery was made with the Capachos Sur 1 well, in the Capachos block in which Repsol is

During 2008, there was an increase in hydrocarbons production mainly in Peru, Trinidad and Tobago and the United States.

the operator with a 100% stake.

In Libya, a new exploration discovery was made at the beginning of 2008 in the prolific NC-186 block with the Y1 well. With a 32% stake, Repsol is the operator of this 4,295 km<sup>2</sup> block in the Murzuq basin.

In the deep waters of the US Gulf of Mexico, a major oil discovery was made at the beginning of 2009 at the Buckskin well located in the Keathley Canyon area, 300 kilometres off the coast of Houston. Repsol is the exploration operator of the consortium which discovered this new field, in which a hydrocarbon column of around 100 metres has been discovered. The new well is 10,000 metres deep beneath 2,000 metres of water.

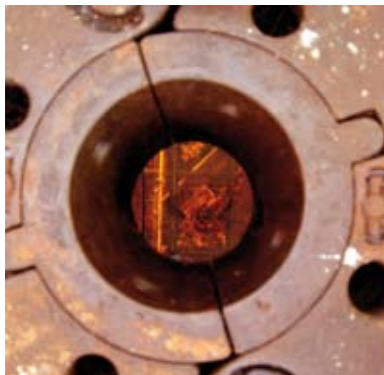
#### Production

Repsol's hydrocarbon production in 2008 stood at 332,721 barrels of oil equivalent per day, 14.6% less than in 2007. Excluding contractual variations in Dubai (5,000 boepd), Venezuela (3,200 boepd) and Bolivia (47,600 boepd), production levels were similar to those of the previous year. Production increased, particularly in the United States (1,200 boepd), thanks to the start of production of new wells in the Shenzi field; in Trinidad and Tobago (3,900 boepd); and in Peru (1,900 boepd), where the Pagoreni field in block 56 commenced production.

#### Investments

In 2008 the Upstream business area invested a total of €1.184 billion, 18% less than the 1.439 billion invested in 2007. These expenditures were mainly allocated to development of the Shenzi field in the United States and exploration activities in North Africa, Brazil and the Gulf of Mexico.

## Additional Upstream information



The Upstream area of the 2008–2012 Strategic Plan includes all Repsol's oil and natural gas exploration and production activities outside YPF. Management of the asset portfolio focuses on profitable, diversified, sustainable growth committed to safety and

the environment. This strategy is based on growth in production and reserves, geographical diversification of the business, operative excellence and profitability, with an increase in average unit margins.

In coming years Repsol's Upstream business area will focus on organic growth in three main areas: deep waters of the Gulf of Mexico, in the United States, and Brazil; North Africa; and northern Latin America and Trinidad and Tobago. Major strides were made in 2008 and the first months of 2009 in the consolidation process of the Upstream business in these key regions for the company. Repsol was awarded 32 new exploration blocks in the Gulf of Mexico in

2008 and a further 20 in 2009. An important discovery was made in the Santos basin (Brazil) with the Guara well in 2008 and Iguazu in 2009, while production commenced at the I/R field (Libya) and, in 2009, in Shenzi (United States), among other milestones. In 2008 the company participated in three of the world's five largest hydrocarbon discoveries and, to reinforce the objective of geographical diversification and growth in OECD countries, the first steps were taken towards commencing operations in Canada and Norway. In the first quarter of 2009, Repsol had already announced eight discoveries in the five key regions identified for exploration in the 2008–2012 Strategic Plan.



Repsol extracts hydrocarbons in harsh environments, such as deserts and deep waters.





Repsol exploration work in Libya.

## UPSTREAM

Millions of euros	2007					2008				
	1 Q	2 Q	3 Q	4 Q	TOTAL	1 Q	2 Q	3 Q	4 Q	TOTAL
<b>Operating income</b>	1,132	1,090	1,053	1,199	<b>4,474</b>	1,238	1,485	1,361	830	<b>4,914</b>
North America and Brazil	121	116	49	88	374	101	129	63	60	353
North Africa	284	409	465	511	1,669	518	616	538	235	1,907
Rest of the world	739	567	549	622	2,477	627	753	778	593	2,751
Adjustments	(12)	(2)	(10)	(22)	(46)	(8)	(13)	(18)	(58)	(97)
<b>Ebitda</b>	586	585	725	735	<b>2,631</b>	753	913	759	439	<b>2,864</b>
North America and Brazil	2	19	13	(14)	20	52	55	32	(5)	134
North Africa	242	364	375	438	1,419	356	473	384	158	1,371
Rest of the world	342	202	337	311	1,192	345	385	343	286	1,359
<b>Operating revenue</b>	459	428	529	466	<b>1,882</b>	576	751	672	259	<b>2,258</b>
North America and Brazil	39	(19)	13	(58)	(25)	–	32	24	(16)	40
North Africa	217	333	349	335	1,234	338	446	335	83	1,202
Rest of the world	203	114	167	189	673	238	273	313	192	1,016
<b>Inversiones</b>	564	255	297	323	<b>1,439</b>	242	240	376	326	<b>1,184</b>
North America and Brazil	362	54	117	77	610	110	116	123	129	478
North Africa	28	65	44	62	199	44	53	182	97	376
Rest of the world	174	136	136	184	630	88	71	71	100	330

At the close of the year, Repsol's Upstream area was participating, either directly or through its subsidiaries, in oil and gas exploration and production blocks in 23 countries and was the operator in 19 of these blocks. Repsol holds a stake in the Russian exploration and production company West Siberian Resources (WSR) and commenced exploration operations in Norway and Canada, taking the Upstream area's presence to 26 countries.

**Reserves**

As of 31 December 2008, the Repsol Group's proved reserves amounted to 2.21 billion barrels of oil equivalent, 60% of which correspond to proved developed reserves.

Proved reserves of liquids totalled 902 million barrels, 41% of the total of reserves. Gas reserves amounted to 7.34 trillion cubic feet and represent 59% of Repsol YPF's proved reserves.

The Repsol Group added 154 million boe in 2008. The additions of Argentina (75 million boe), Bolivia (21 million boe), Algeria (19 million boe) and Libya (18 million boe) were particularly significant.

The Group's reserves are mainly located in Argentina (25%) and Trinidad and Tobago (22%). 17% is located in the rest of the South American countries (Venezuela, Peru, Bolivia, Brazil, Ecuador and Colombia), 7% in North Africa (Algeria and Libya) and the remaining 2% in the Gulf of Mexico.

Repsol's Upstream area is currently present in 26 countries on four continents



## Upstream milestones

- In January 2008 an important gas discovery was made in Peru in block 57 with the Kinteroni well.
- In February 2008 exploration well Y1 in block NC-186 in Libya's Murzuq basin was completed with a positive result.
- February also saw an exploration discovery with the Capachos Sur 1 well in Colombia.
- Repsol was awarded 32 new exploration blocks in Exploration Round 206 carried out in the Gulf of Mexico at the beginning of 2008.
- In February 2008 production commenced at the second production well of the Shenzi-Genghis Khan (Manifold K, K1-2) megafield, an extension of Shenzi, through the neighbouring Marco Polo platform.
- In the first quarter of 2008, Repsol obtained 93 exploration blocks in Alaska in the Chukchi Sea, in an area with a high potential of resources to be discovered.
- In the second quarter of 2008 an important discovery was made in Brazilian deep waters, in block BM-S-9, in the Santos basin, with the Guara well.
- The I/R well in Libya commenced production on 3 June 2008. Eleven wells were already in production in this area at 31 December 2008.
- On 17 July, Repsol and the Libyan national oil company NOC signed a new agreement extending the oil exploration and production contracts in blocks NC-115 and NC-186 in Libya until 2032.
- Production at block 56 (Pagoreni field) in Peru commenced on 10 September. This block, together with block 88, in production since 2004 and in which Repsol also holds a 10% stake, make up the Camisea field, which forms part of the Peru LNG project. This will enable natural gas to be supplied to the future Pampa Melchorita liquefaction plant.
- Also in September 2008, the agreement for the sale of Repsol YPF Ecuador S.A.'s 25% stake in block 14 was signed with the company PetroOriental S.A. (CNPC).
- On 23 September 2008 an AMI (Area of Mutual Interest Agreement) was signed with the Norwegian company Det Norske Oljeselskap ASA ("Det Norske") for the joint study of the areas available in Exploration Round 20 in Norway. On 7 November a joint bid was submitted for four blocks and another for 100% of another three blocks. At the end of 2008, Repsol obtained an exploration area in Norway.
- In the fourth quarter of 2008, Repsol was awarded exploration rights for three blocks in the offshore area of Newfoundland (Terranova) and Labrador, in Canada.
- The Teak Blow Down gas compression project for domestic sales was completed at the end of 2008, boosting gas production by 700,000 m<sup>3</sup>/day as of January 2009.
- At the end of 2008, the national Libyan company NOC approved the development plans submitted for the "J" and "K" fields in block NC-186 (Repsol, Total, OMV and StatoilHydro), which will enable production to commence.
- At the beginning of 2009 three exploration discoveries were announced in Algeria, in the Reggane block (KLS-1), in the adjacent Ahnet basin (OTLH-2) and in the Gassi Chergui area (AL-2).
- At the beginning of 2009, the Panoramix and Piracuca wells, in the Brazilian Santos basin, were completed with a positive result.
- In February 2009 Repsol successfully commenced its operated drilling campaign in the deep waters of the Gulf of Mexico with the announcement of a discovery with the Buckskin well.
- In March 2009, Repsol reached a preliminary agreement with the Government of Ecuador on the terms of the company's presence in the country which will enable it to increase the value of its assets and provides for a reduction in the tax on excess profits from 99% to 70%.
- In March 2009 Repsol commenced production of oil and gas in the Shenzi field in deep waters of the US Gulf of Mexico, on a platform located in the Green Canyon 653 block.
- At the end of March 2009, Repsol discovered gas in the Tangiers-Larache exploration zone, 40 kilometres off the coast of Morocco.
- On 1 April 2009 a new gas discovery in Algeria was announced, the second find in the Ahnet basin and Repsol's eighth discovery in 2009.
- The third discovery in block BM-S-9, in the Brazilian Santos basin with the Iguazu well, was announced on 15 April 2009.
- On 21 April 2009, Repsol announced a new discovery of hydrocarbons in Libyan waters.

# Operations by countries

THE UPSTREAM AREA WORLDWIDE



- 🔍 Exploration block
- 🏠 Development/exploitation block

## Spain

At the close of 2008, the Upstream area held mineral rights on 393 blocks, with a net surface area of 243,113 km<sup>2</sup>. 327 of these blocks are exploration blocks, totalling a net surface area of 231,251 km<sup>2</sup>.

In 2008, Repsol completed 38 exploration drillings, ten of which proved positive. At the end of the year, ten exploration wells were in the drilling phase.

At the close of 2008, Repsol held mineral rights on 32 blocks in Spain: 20 exploration blocks, with a net area of 9,722 km<sup>2</sup>, and 12 exploitation blocks totalling a net area of 929 km<sup>2</sup>.

In 2008, Repsol produced a total of 0.7 Mboe (around 1,968 boepd) through its facilities in Casablanca, Rodaballo and Boqueron (Mediterranean Sea) and Gaviota (Cantabrian Sea). Proved net oil reserves at year-end were estimated at 2.4 Mboe.

The Royal Decree on the Awarding of Research Permits for Canary Island permits 1-9 remains suspended as a result of a Supreme Court ruling on an error in the wording of the text

of this decree. A new decree has been drafted by the Ministry for Industry to correct this error and is currently being processed. The first exploratory drilling, located at water depths of between 1,000-1,500 m, is ready to begin preparation for drilling operations as soon as the corresponding authorization is received.

No exploratory drillings were carried out in Spain in 2008, although 1,023 km<sup>2</sup> of 3D seismic were acquired.



Q Exploration block



Q Exploration block  
 A Development/exploitation block



## Saudi Arabia

As of 31 December 2008, Repsol YPF held mineral rights to an exploration block (block C) in the country's Rub Al'Khali basin, with a net area of 15,420 km<sup>2</sup>.

On 7 March 2004, Repsol signed a contract with Saudi Arabia's Ministry of Petroleum and Mineral Resources granting exploration of non-associated natural gas in block C to the consortium formed by Repsol (30%), Eni (50% and the operator) and Saudi Aramco (20%). In 2007 the drilling of the Ubaylah 2 well was completed. In 2008 drilling of two wells was concluded with a negative result and the remainder of the wells will be completed in 2009.

In November 2008, the partners decided to carry out a 3,000 km<sup>2</sup> 3D seismic survey in order to reevaluate the exploratory

potential of the northern sector of the block and define the conditions for the fourth exploration well to be performed in block C. To complete this campaign an 18-month extension of the contract has been requested.

## Algeria

At the close of 2008, Repsol held mineral rights on 5 blocks in Algeria: 3 exploration blocks, with a net area of 7,789 km<sup>2</sup>, and 2 development blocks with a net area of 581 km<sup>2</sup>.

The year's net production was 1.8 Mbbbl of liquids and 21.2 bscf of natural gas, with an equivalent net production of 5.5 Mboe (15,138 boepd), originating mainly from the TFT block (operated jointly by Sonatrach and Total) and, to a lesser extent, from the Issaouane block operated by Repsol. Net proved reserves of liquids and natural gas were estimated at 42.3 Mboe at the end of the year.

Over the year 8 exploration wells were completed, 4 of which gave positive results (2 in the Reggane block, AZSE-2 and KLS-1, and two others in the M'Sari Akabli block,

TGFO-1 and OTLH-2).

The contract for the Gassi Touil Integrated Project was unilaterally terminated by Sonatrach, the state Algerian company, on 13 August 2007. Sonatrach and Repsol are currently in a process of arbitration.

In 2008 197 km of 2D seismic and 870 km<sup>2</sup> of 3D seismic were acquired in Algeria.

### 2008 Milestones

- Two new exploration discoveries were made in block 351c-352c (Reggane Nord) in the Reggane basin with the AZSE-2 (Azrafil SE) and KLS-1 (Kahlouche S) wells, the second of which was announced in 2009. With a 33.75% stake, Repsol is the operator of the consortium, together with the national Algerian company

Sonatrach (25%), Germany's RWE Dea (22.5%) and Italy's Edison (18.75%). Located in the central-southern part of the Algerian Sahara, the block covers an area of 4,682 km<sup>2</sup>. This discovery is in addition to four other discoveries made in the same block, the first in 2005 (Reggane 5 well), another two in 2006 (Sali 1 and Kahlouche-2) and the fourth in 2007 (Reggane 6 well). Sonatrach is expected to declare Reggane commercially viable in 2009, which will enable development of this important gas project to commence, a project which is included in the 2008-2012 Strategic Plan as one of the company's key initiatives.

- Two further exploration discoveries were made in the M'Sari Akabli block with the

TGFO-1 and OTLH-2 wells (Oued Talha), announced in 2009. Repsol holds a 33.75% stake and is the operator of this block which has a surface area of 8,103 km<sup>2</sup>.

At the beginning of 2009 three exploration discoveries were announced in Algeria, in the Reggane block (KLS-1), the adjacent Ahnet basin (OTLH-2) and in the Gassi Chergui area (AL-2).

A new gas discovery in Algeria was announced on 1 April 2009, the second find in the Ahnet basin and Repsol's eighth discovery in 2009.



Q Exploration block  
 A Development/exploitation block



## Bolivia

As of 31 December 2008, Repsol held mineral rights on 31 blocks in Bolivia: 6 exploration blocks, with a net area of 7,022 km<sup>2</sup>, and 25 exploitation blocks, with a net area of 1,489 km<sup>2</sup>, located in the Beni, Pie de Monte, Subandino Sur and Subandino Norte basins.

The year's net production was 2.4 Mbbbl of oil, including condensates and liquids separated from natural gas, and 53.4 bscf of natural gas. Total equivalent net production was 11.9 Mboe (32,425 boepd), concentrated mainly in the fields operated by Andina and in the Mamore block. Proved hydrocarbon reserves corresponding to Repsol at the close of the year were 91.8 Mboe. Analysis of the data and information generated during the drilling and formation tests of the

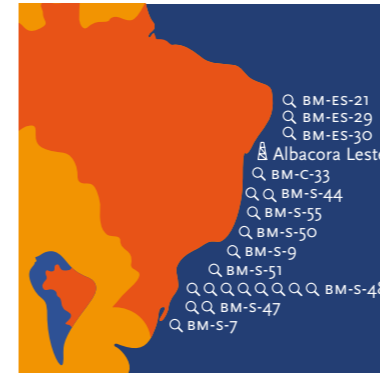
Huacaya discovery commenced in 2008 in order to select the best technical-economic alternative for assessing the discovery and establishing the future development plan. The Huacaya X-1 exploratory discovery was made at the end of 2007. The declaration of commercial viability for the area corresponding to the structure discovered has already been presented to the competent body. The remaining exploration area was returned to YPFB.

Work continued in 2008 on full development of the important Margarita gas and condensate field, located in the Caipipendi block, to the north of the Tarija province. The contract for this block, which is operated by a consortium formed by Repsol (37.5% and the operator), BG

(37.5%) and PAE (25%), came into effect on 2 May 2007 and is for a term of 24 years.

### 2008 Milestones

- In May 2008 an agreement was signed with the Bolivian company YPFB for the sale of a 1.08% stake in Andina. Following this transaction, the shareholder structure of Andina is broken down into YPFB (51.08%) and Repsol E&P Bolivia (48.92%). In addition, the Shareholders Agreement was signed in October 2008 which will regulate the administration, operation and government of the company. This agreement came into force in November 2008.



Q Exploration block  
 A Development/exploitation block

## Brasil

At the close of 2008, Repsol held mineral rights on 22 blocks in Brazil: 21 exploration blocks (net area of 3,925 km<sup>2</sup>) and one development block (51 km<sup>2</sup>), located in the Santos, Espiritu Santo and Campos basins. Repsol is the operator in 11 of these blocks.

The year's net production was 4.8 Mbbbl of liquids and 1.2 bscf of natural gas, with a total net equivalent production of 5 Mboe (13,732 boepd), from the Albacora Leste block. Net proved reserves for this block were estimated at 26.3 Mboe at 31 December 2008. During the year, 3 exploration surveys were completed, one of which produced a positive result (Guara).

Repsol is one of the leading private companies in offshore exploration mineral areas in the



Santos, Campos and Espiritu Santo basins. It also holds a 10% stake in the Albacora Leste field, which commenced production in April 2006 in the Campos basin. In 2008 this important Brazilian deepwater oil field produced around 140,000 bopd, a figure which is expected to increase to 180,000 bopd. The field's total proved and probable reserves were estimated at 423.3 Mbbbl at the close of the year.

### 2008 Milestones

- In June 2008 Repsol discovered a second oil field in deep waters of the Santos basin. The new well, called Guara, is located in block BM-S-9 and is adjacent to the Carioca field discovered at the end of 2007 in the same block. Preliminary evaluations indicate

that both offer a high potential of high-quality oil resources and confirm this basin as one of the world's deepwater areas with the greatest potential. In 2009, Repsol and its partners in the block will continue to carry out the activities and investments necessary in order to more accurately determine the size of the Carioca and Guara fields and define the future development plan. In 2009 two additional drillings will be completed (one of which is the Iguazu well) and a production test will be carried out at the Guara well.

- Three important discoveries were made at the beginning of 2009 in the Santos basin with the Piracuca, Panoramix and Iguazu wells.



Q Exploration block  
 A Development/exploitation block

## Colombia

At the end of 2008, Repsol held mineral rights on 9 blocks in Colombia: 7 exploration blocks, with a net area of 4,278 km<sup>2</sup>, and 2 exploitation blocks (Capachos and Cravo Norte), with a net area of 268 km<sup>2</sup>. The year's net production was 2.6 Mbbl (7,218 bopd) of oil. Net proved reserves of this hydrocarbon at the close of the year were estimated at 4.4 Mbbl.

8 exploration wells were completed in 2008: 5 proved negative and 3 positive (Capachos Sur-1, Cosecha Z and Cosecha Y Norte). 200 km of 2D seismic were also acquired.

### 2008 Milestones

- In 2008 three new discoveries were made in Colombia, two with the Cosecha Z and Cosecha Y



## Canada

Norte wells, in the Cosecha block in the Llanos Orientales basin, in which Repsol has a 25% stake and Oxy, the operator, holds the remaining 75%. The Cosecha block has a surface area of 2,856 km<sup>2</sup>. The third discovery was made with the Capachos Sur 1 well, in the Capachos block in which, with a 100% stake, Repsol is the operator.

- In April 2008, the Capachos Sur field in the Capachos block commenced production. Repsol owns 100% of this 259 km<sup>2</sup> block situated in the Llanos basin.

At the end of 2008, Repsol successfully bid for exploration rights in three blocks in Canada located in the offshore area of Newfoundland (Terranova) and Labrador. Two of these blocks are located in the Central Ridge/ Flemish Pass area and the other is in the Jeanne d'Arc Basin. Repsol's partners in these blocks, which have a total area of 4,000 km<sup>2</sup>, are the Canadian companies Husky Oil and Petro-Canada. The awarded exploration rights represent a further step forward in the company's plans to increase its presence in oil and gas exploration and production activities in OECD countries.

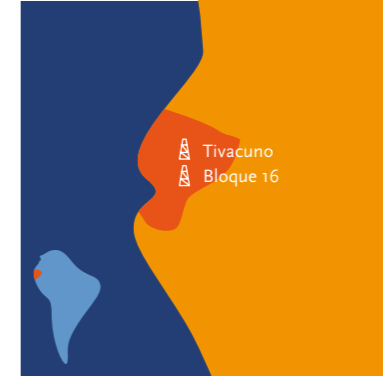


Q Exploration block

## Cuba

At the end of 2008, Repsol held mineral rights on an offshore exploration block off Cuba that covers six exploration areas (N 25/26/27/28/29/36), plus area 35, awarded at the beginning of 2005. The areas total a net area of 4,512 km<sup>2</sup> and are all included under the same contract.

No exploration wells were drilled in Cuba in 2008.

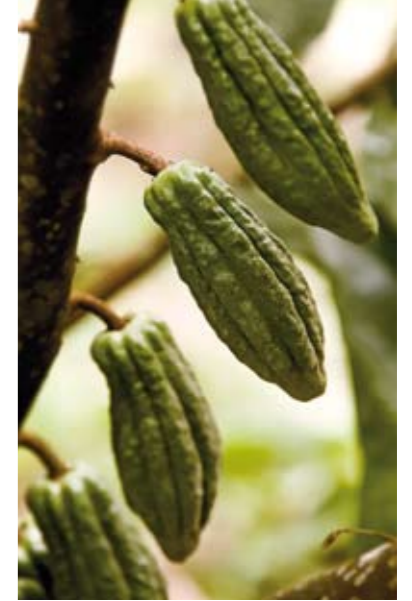


A Development/exploitation block

## Ecuador

At the close of 2008, Repsol held mineral rights on 2 development blocks in Ecuador with a net area of 770 km<sup>2</sup>. The year's net production was 5.2 Mbbl (14,135 bopd) of oil, the majority obtained from block 16. Net proved oil reserves at the end of the year were estimated at 11.2 Mbbl.

No exploration wells were completed in Ecuador in 2007. On 4 October 2007, President Rafael Correa signed an Executive Decree whereby the state's share in excess revenues was increased from 50% to 99%. In March 2009 Repsol reached a significant agreement with the Government of Ecuador which will enable the company to establish a stable contractual framework within a year. This agreement



extends the exploitation period of block 16 by six years, from 2012 to 2018 and establishes a transitory period of one year during which the Government of Ecuador will reduce the tax on excess profits from 99% to 70%. During this one-year period both parties will negotiate a long-term services provision contract which will govern Repsol's activities in this country.

### 2008 Milestones

- On 10 September 2008 the agreement for the sale of Repsol YPF Ecuador S.A.'s 25% stake in block 14 was signed with the company PetroOriental S.A. (CNPC).



Q Exploration block



## United States

As of 31 December 2008, Repsol's Upstream area held mineral rights on 236 blocks in the United States in the Green Canyon, Atwater Valley, Beechey Point, Harrison Bay, Karo, Keathley Canyon, Mississippi Canyon, Posey, Unnamed and Walker Ridge areas. 230 of these are exploration blocks, with a net area of 3,505 km<sup>2</sup>, and the other 6 are exploitation blocks (39 km<sup>2</sup>) and correspond to Shenzi. The year's net total production was 0.6 Mboe. Net proved reserves at the close of the year were estimated at 48.9 Mboe.

An exploration well was completed in 2008 with a negative result, 205 km<sup>2</sup> of 3D seismic were carried out and 122 km of

2D seismic and 14,061 km<sup>2</sup> of 3D seismic were purchased.

In recent years Repsol has significantly enhanced its presence in deep waters of the US Gulf of Mexico, participating in the major Shenzi oil development project and securing a large number of new exploration blocks. This region is considered one of the world's most profitable deepwater areas with a high exploratory potential.

In 2007 Repsol launched the Kaleidoscope project, an ambitious research and development programme which has enabled the company to develop its own cutting edge technology for interpreting seismic data, providing Repsol with a competitive advantage

which will be of great help in enhancing its presence in the Gulf of Mexico.

In July 2007 Repsol reached an agreement in Alaska with the companies Shell Offshore Inc. and Eni Petroleum US LLC to explore 71 adjacent offshore blocks in the Beaufort Sea, just to the north of the prolific Prudhoe Bay and the Kuparuk oil fields. Repsol holds a 20% stake in these blocks.

### 2008 Milestones

- The second production well in the western area of the Shenzi field (previously known as Genghis Khan) commenced production in February 2008 through the neighbouring Marco Polo platform. Shenzi is one of

the largest discoveries to date in this region's deep waters.

- In Exploration Round 206, carried out in the Gulf of Mexico at the beginning of 2008, Repsol obtained 32 new exploration blocks which, together with those achieved in recent years, create a sound portfolio of exploration projects. The company's participation in these rounds forms part of its strategy of diversification and growth in OECD countries.

- In the first quarter of 2008, Repsol obtained 93 blocks in Alaska in Exploration Round 193. These blocks are located in the Chukchi Sea and cover

an area of 2,139 km<sup>2</sup>. The company's objective is to create an extensive project portfolio in this almost unexplored area with a high potential of undiscovered resources.

- A major oil discovery was made in early 2009 in deep waters of the Gulf of Mexico with the Buckskin well in the Keathley Canyon area, 300 kilometres off the coast of Houston. Repsol is the exploration operator of this new field where a hydrocarbon column of around 100 metres has been discovered which it is estimated could be even greater at the top of the structure. The new well is at a depth of 10,000 metres beneath 2,000 metres of water.

- In March 2009, ahead of schedule, Repsol commenced oil

and gas production at the Shenzi field with its own platform. The company holds a 28% share in this unified field. The production platform was installed in the summer of 2008.

- Repsol obtained 20 new exploration blocks in Exploration Round 208, held in March 2009.



Q Exploration block

## Equatorial Guinea

As of 31 December 2008, Repsol held mineral rights on one exploration block in this country with a net area of 689 km<sup>2</sup>.

In 2007 the Langosta-1 exploration well was drilled in block C, where Repsol holds a 35% stake, and was completed on 3 December 2007. The results obtained are currently in the evaluation process.



Q Exploration block

## Guyana

At the close of 2008, Repsol held mineral rights on an offshore exploration block off Guyana with a net area of 8,625 km<sup>2</sup>.

No exploration wells were drilled in 2008, but 1,715 km<sup>2</sup> of 3D seismic were acquired. In September 2007, the International Court of Maritime Laws issued its ruling on the litigation regarding the border issue of the Georgetown block (in which Repsol holds a 75% share) between Guyana and Surinam. According to the ruling, 100% of this block is located in territorial waters of Guyana.



Q Exploration block

## Iran

As of 31 December 2008, Repsol held mineral rights on 2 exploration blocks totalling a net area of 14,638 km<sup>2</sup>.

An exploration well in the offshore Mehr block was completed in 2008 with a negative result (BKH-4N).

In 2004, Repsol and Shell signed an agreement with the National Iranian Oil Company (NIOC) to develop the integrated LNG project, Persian LNG. The final decision regarding investment



in the liquefaction plant and commencement of exploration and development operations has not yet been taken.

With regards to the Band E Karkhek-2 well, located in the onshore Mehr block discovered in 2005, NIOC announced its commercial viability in January 2007. This was officially confirmed in June 2007. The viability of developing the field is currently being analysed.

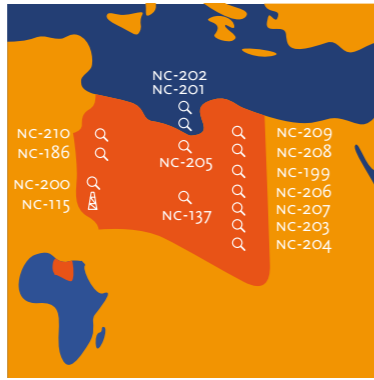
## Kazakhstan

In the last quarter of 2006 Repsol acquired a 25% stake in the company Zhambay LLP, which owns the Zhambay exploration block, from KazMunaiGaz, the country's state hydrocarbon company. The block is located in the Caspian Sea near the border with Russia and the mouth of the River Volga. Repsol's partners in this project are KazMunaiGaz (50%) and the Russian oil company Lukoil (25%). The agreement for participation in the Zhambay block, which is of great exploration interest due to its location and the high potential detected, was signed in 2005.

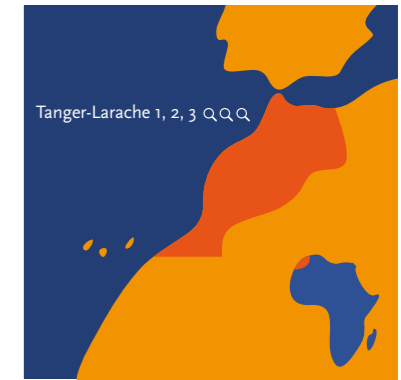
In the second half of 2007 the reprocessing of the 1,100 km of 2D seismic acquired in the block between 2002 and 2005 started. A geological survey of the block and the adjacent area in the north of the Caspian Sea was also commenced.

In 2008 the project partners requested a new extension of the contract for a two-year period. Drilling of the first well is expected to be carried out in 2010 or 2011. In 2009 a decision will be taken regarding the most suitable site and drilling equipment for this operation.





Q Exploration block  
A Development/exploitation block



Q Exploration block

## Liberia

As of 31 December 2008 Repsol held mineral rights in Liberia on 3 exploration blocks (LB 15, LB 16 and LB 17) with a net area of 1,711 km<sup>2</sup>.

In the first international bidding process carried out by the Liberian government in 2005, Repsol was awarded the exploration and development rights on block 16, located in this African country's territorial waters. In the summer of 2004 the company had already obtained the rights to block 17 through direct negotiation. This block is adjacent to block 16 and borders the blocks previously signed in territorial waters of Sierra Leone (blocks 6 and 7).

## Libya

At the end of 2008 Repsol held mineral rights on 15 blocks in Libya. 14 of these are exploration blocks (including block NC-186 which, although officially classified as an exploration block, has fields in production) with a net area of 58,224 km<sup>2</sup>. The only exploitation block (NC-115) has a net area of 874 km<sup>2</sup>. The year's net production was 18.4 Mbbl of oil (50,197 bopd), obtained from blocks NC-115 (El-Sharara field) and NC-186, in the Murzuq basin. In 2008 total production of the two blocks in production in Libya amounted to 302,000 bopd. Net proved reserves of oil at the close of the year were estimated at 115.9 Mbbl.

11 exploration wells were completed in the country (one, Y1 NC-186, proved positive) and

3,976 km of 2D seismic and 2,563 km<sup>2</sup> of 3D seismic were acquired.

In 2007, Repsol and its partners in Libya began a revision process of contractual conditions with the national company NOC. This process finalized in July 2008.

### 2008 Milestones

- At the beginning of 2008 a new discovery was made in the prolific NC-186 block with the Y-1 well. With a surface area of 4,295 km<sup>2</sup>, this block is located in the Murzuq basin and is operated by Repsol through the company's 32% stake.
- In June 2008 production commenced in blocks NC-186 and NC-115 in the I/R field, also located in the Murzuq basin. Repsol holds stakes in both of these blocks. Discovered in

2006, this field is one of the most important oil finds in the company's history and the most important in Libya in the last decade. With a production potential of 90,000 barrels per day, development of this field will enable the company to significantly increase reserves and production in this country. The I/R field is one of the 10 key projects defined in Repsol's 2008-2012 Strategic Plan.

- On 17 July, Repsol and NOC, Libya's national oil company, signed a new agreement extending the oil exploration and production contracts for blocks NC-115 and NC-186 until 2032. The new agreement extends the term of the contracts for these blocks in the Murzuq basin, with 15 additional years in the

contract for the first block and 5 or 9 years, depending on the fields, for the second block. The agreement guarantees Repsol exploitation of the numerous resources discovered in both blocks. Repsol and its partners also extended their exploration licenses for these blocks by 5 years, which may increase oil production and reserves.

- At the end of 2008 NOC approved the development plans submitted for the "J" and "K" fields in block NC-186 (Repsol, Total, OMV and StatoilHydro). The development plan for field "E" in block NC-200 (Repsol and OMV) is expected to be approved in the first half of 2009, thereby enabling production to commence in these three fields.

## Morocco

At the close of 2008 Repsol held mineral rights on 3 exploration blocks in Morocco located in the Rharb basin and totalling a net area of 4,396 km<sup>2</sup>.

No exploration wells were drilled in 2008.

### 2008 Milestones

- At the end of March 2009, Repsol discovered gas in the Tangiers-Larache exploration area, 40 kilometres off the coast of Morocco, with the Anchois well. Repsol has a 48% interest and is the operator of the Tangiers-Larache 1-2-3 exploration blocks. In 2008 preparations were made for this well, which was commenced in January 2009.



Q Exploration block

## Mauritania

As of 31 December 2008 Repsol held mineral rights in Mauritania on 2 exploration blocks with a net area of 45,439 km<sup>2</sup>.

In 2005 the Mauritanian authorities awarded Repsol exploration blocks TA-9 and TA-10 located in the Taoudenni basin. The company is the operator of these blocks and controls a 70% share, with RWE Dea holding the remaining 30%.

No exploration wells were drilled in 2008, but 1,194 km of 2D seismic were acquired.



A Development/exploitation block

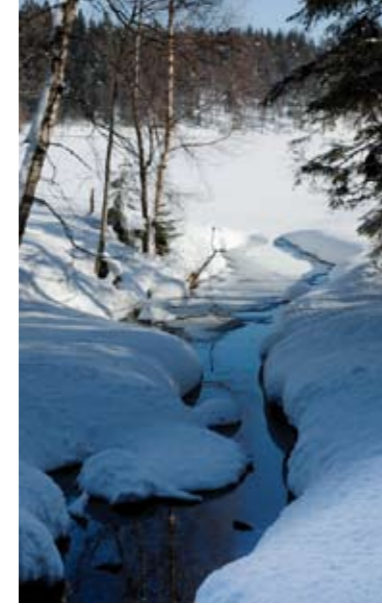
## Mexico

At the close of 2008 Repsol held a multiple services contract for the Reynosa-Monterrey development block located in the Burgos basin in the north of the country. The company took charge of this operation in March 2004. The area already had 16 gas fields that had been discovered and were in production, and the aim was to substantially increase output of these fields through additional development investment. The contract was awarded in 2003 as part of the first international tender held by



the Mexican national company Pemex for participation in gas field development and production activities in the country. With this contract Repsol became the first international company to participate in hydrocarbon development and exploitation activities in Mexico.

When Repsol took over the operation, production was 10.5 Mscfd. At the end of 2004 a level of 18.2 Mscfd was reached and a year later production of 39.6 Mscfd was achieved. In 2006 the average was 37.8 Mscfd

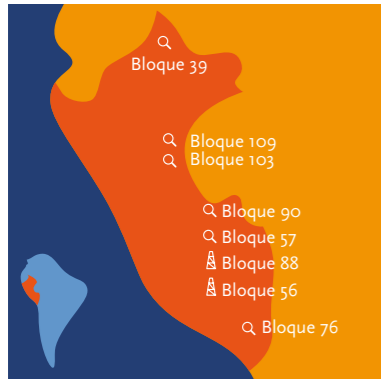


## Norway

In September 2008, in line with the company's strategy of diversification and growth in OECD countries, an AMI (Area of Mutual Interest) was signed with the Norwegian company Det Norske Oljeselskap ASA (Det Norske) for the joint study of the areas available in Exploration Round 20. Repsol holds a 40% interest in this project, with Det Norske holding the remaining 60%. In November a joint bid was submitted for four blocks. Repsol also presented a bid for 100% of another three blocks. The result of this round is expected to be announced by mid 2009.



Also in Norway, in October 2008 Repsol, together with Det Norske, Bayerngas and Svenska, submitted a bid for four blocks located between the Njord and Draugen fields (Norwegian Sea), in the 2008 APA (Award of Predefined Areas) Round. Repsol obtained one exploration area.



- 🔍 Exploration block
- 🏠 Development/exploitation block

## Peru

At 31 December 2008, Repsol held mineral rights on 8 blocks in Peru: 6 exploration blocks, with a net area of 31,395 km<sup>2</sup>, and 2 development blocks, with a net area of 202 km<sup>2</sup>. Net production of hydrocarbons in 2008 was 3.2 Mboe (8,722 boepd), from block 88 (Camisea field). Net production of crude oil, including condensates and liquids, was 1.5 Mbbl and natural gas 9.3 bscf. Net proved reserves of crude oil and gas were estimated at 113.5 Mboe at the close of the year.

589 km of 2D seismic were acquired in 2008.

In 2008 work continued on schedule for complete development of the Camisea oil field (blocks 56 and 88) in which Repsol holds a 10% stake. These blocks will supply natural gas to



the future Pampa Melchorita LNG plant which forms part of the Peru LNG project. This facility, in which Repsol holds a 20% interest, is expected to be operative in 2010. There are two fields in block 88, San Martin (in production since 2004) and Cashiriari (currently in production) and the Pagoreni field in block 56 which commenced production in September 2008.

### 2008 Milestones

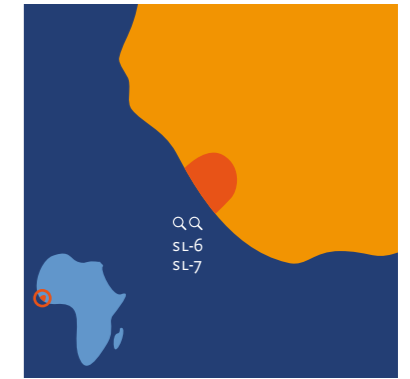
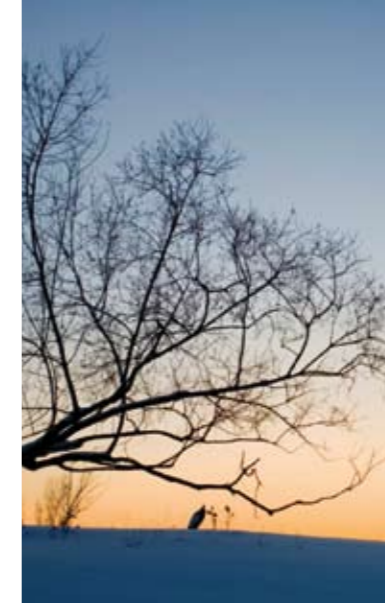
- In January 2008 a significant exploration discovery was made in Peru in block 57, located in the Cuzco province, with the Kinteroni exploration well. Repsol is the operator of the consortium which will exploit this field, and holds a stake of 53.84%. The remaining 46.16% is owned by Petrobras. Preliminary production tests

## Russia

In February 2006 Repsol reached a strategic agreement with West Siberian Resources (WSR) through which it acquired a 10% stake in the company. The agreement includes an industrial alliance for joint development of hydrocarbon exploration and production projects in Russia, where WSR holds a significant portfolio of assets. The alliance with this company enabled Repsol to enter the hydrocarbon sector in Russia and represents an excellent opportunity to gain presence in this region.

showed flows of one million cubic metres of gas per day (0.365 bcm/year) and 198 cubic meters per day of associated liquid hydrocarbons (72,270 cubic metres/year). In order to define a commercial and development plan for this discovery, a 3D seismic campaign will be conducted at the Kinteroni structure and several delineation and exploration wells will be drilled in the block. All these activities will enable a more accurate assessment of the resources discovered, which are initially estimated at around 2 TCF (56 bcm).

- On 10 September production commenced at block 56 (Pagoreni). Together, this block and block 88, in which Repsol also controls 10%, make up the Camisea field.



- 🔍 Exploration block

## Sierra Leone

At the end of 2008, Repsol held mineral rights in Sierra Leone on 2 offshore exploration blocks totalling a net area of 2,625 km<sup>2</sup>. The company was awarded these blocks (SL-6 and SL-7), in which it holds a 25% stake, in January 2003 following a bidding round. Its partners are Anadarko (50%) and Woodside (25%). The water depth of the blocks ranges from 100 to 3,800 metres. No exploration wells were drilled in 2008.

In December 2007 WSR signed an MOU (Memorandum of Understanding) to merge with the Russian company Alliance Oil, whose main assets are the Khavarsk refinery, which has a capacity of 4 Mta, 156 service stations in the Russian Far East, storage terminals and two production licenses in Kazakhstan and Tatarstan, with 100 Mbbl of proved and probable reserves. The merger process was completed in 2008. During the year the integrated company produced 48,000 bopd and refined around 66,500 bopd. Total proved and probable reserves amounted to 489 Mbbl at the close of 2008.



Q Exploration block

## Suriname

At the end of 2008 Repsol held mineral rights in this country on one exploration block with a net area of 5,574 km<sup>2</sup>.

Repsol YPF Surinam is the operator of the block with a 40% stake. Its partners are Noble Energy Suriname (30%), Noble Energy Caribbean (15%) and Petro Hunt Suriname (15%). In 2008 the West Tapir-1 well was drilled, where findings showed the amounts of hydrocarbons to be insufficient to be commercially viable.



A Development/exploitation block

## Trinidad and Tobago

At the close of 2008 Repsol held mineral rights on 7 offshore exploitation blocks with a net area of 2,363 km<sup>2</sup>, including 30% of the company bpTT's offshore exploration and production assets in Trinidad and Tobago, through its stake in the company BPRY. The year's net production was 6.5 Mbbl of liquids and 274.9 bscf of natural gas, with net equivalent production of 55.4 Mboe (151,436 boepd). Net proved reserves of oil and natural gas were estimated at 488 Mboe at 31 December 2008. No exploration wells were drilled in the country in 2008.

Repsol is one of the two largest private companies in the country in terms of oil and gas production and reserves together with BP with which it shares ownership of the company bpTT. This company, in



which Repsol holds a 30% stake, operates an extensive offshore hydrocarbon production area off Trinidad and Tobago and in 2008 reached an average daily production of over 460,000 barrels of oil equivalent.

In the fourth quarter of 2007 bbTT's Mango and Cashmina fields commenced production, providing increased production in 2008 and availability of gas for train 4 of the Atlantic LNG liquefaction plant, in which Repsol holds a 22.22% share.

### 2008 Milestones

- The Teak Blow Down gas compression project for domestic sales was completed in the fourth quarter of 2008, increasing gas production by 700,000 cubic metres per day as of January 2009.



Q Exploration block  
A Development/exploitation block

## Venezuela

At 31 December 2008 Repsol held mineral rights in Venezuela on 7 blocks: 2 exploration blocks, with a net area of 669 km<sup>2</sup>, and 5 exploitation blocks, with a net area of 757 km<sup>2</sup>. The year's net production was 2.7 Mbbl of oil and liquids separated from natural gas, and 60.1 bscf of gas, with an equivalent total of 13.4 Mboe (36,542 boepd), mainly obtained from the Quiriquire, Barrancas, Mene Grande and Yucal Placer blocks. Net proved reserves of liquids and natural gas were estimated at 122.9 Mboe at the close of the year. No exploration wells were drilled in 2008.

On 1 April 2008 Repsol and PDVSA agreed on the final conditions for the process



of migrating from operative agreements to joint ventures. This agreement reflects the new stakes – PDVSA (60%) and Repsol (40%) – for the Mene Grande and Quiriquire Somero crude oil fields, and for the Quiriquire Profundo gas field – Repsol (60%) and PDVSA (40%). The agreement also establishes a 20-year extension of the Quiriquire and Mene Grande concessions, and establishes an increase in sale prices and the possibility of accessing new business in the country.

In May 2007 Repsol signed a Memorandum of Understanding (MOU) with PDVSA, with the conditions for including the Barua and Motatan fields within

the Petroquiriquire joint venture, in which Repsol YPF holds a 40% stake. At the end of 2008 the agreement was pending approval by the National Assembly of Venezuela. Work continued in 2008 on securing Repsol's participation in one of the new heavy crude oil projects in the Orinoco Strip and the company continued to collaborate with PDVSA on evaluation of the Junin 7 block.

# Liquefied Natural Gas (LNG)

## Revenues

Operating revenue from the LNG activity in 2008 was €125 million against the previous year's €107 million, an increase of 17%. EBITDA increased to €173 million in comparison with €146 million in 2007.

Prices of the main commodities saw an upward trend in the first half of 2008, followed by a decline in the second half of the year. Throughout 2007 and the first part of 2008 natural gas prices increased in all markets due to record crude oil prices, growing demand in both new and established markets, and significant delays in investments. Despite steep prices during this period, demand in large importing markets, such as Spain and Asian countries, did not decline, showing a sharp upward trend

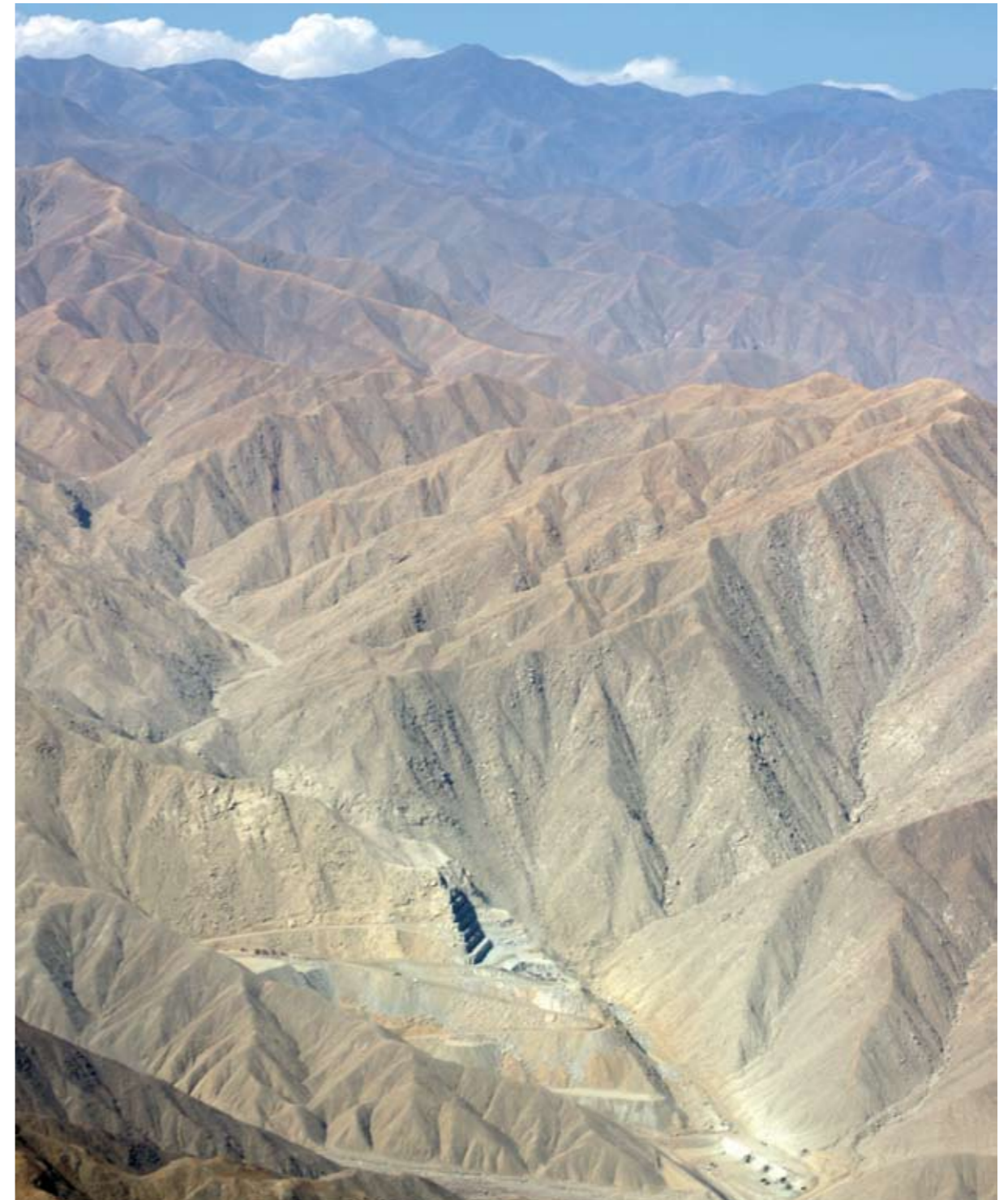
in the first half of the year. In the second half of the year, however, the global financial crisis and shrinking demand contributed to reversing this trend with prices falling back to the levels of some years ago.

In the first half of 2008, the average price of Henry Hub, the main reference index for natural gas, was \$10.1/MBtu, 36.5% higher than for the same period in 2007. The average for the year as a whole was lower, \$8.9/MBtu, an increase of 25.3% over the previous year. It should also be noted that in addition to the high prices in the first half of the year, Asian markets, unlike the European and North American markets, were paying a premium, with prices linked to oil product prices. As a result, the industry diverted shipments



from the Pacific and Atlantic basins to this market since it was more profitable.

With regards to the electricity generation market, the average accumulated price of the Spanish electricity pool in 2008 was €64.4/MWh, 63.9% higher than in 2007. This increase is attributable, among other factors, to increased demand, the rise in international commodity prices, and the higher cost of CO<sub>2</sub> emission rights. The trading volume in the Spanish



Quarry used in the Peru LNG project.



Repsol LNG installations in Trinidad and Tobago.

electricity system daily market was much higher: 232 TWh in 2008 in comparison with 200 TWh in 2007.

On the other hand, income from the businesses within the LNG area is generally in US dollars. The year-on-year 7.4% depreciation of this currency against the euro had a negative impact on 2008 earnings.

#### Projects

In the LNG sector, Repsol is carrying out a policy aimed at strengthening its competitive position in this business, which plays a key role in its medium and long term growth.

Repsol is involved in an integrated LNG project in Trinidad and Tobago, where together with BP and BG, as well as other companies, it holds a stake in

the Atlantic LNG liquefaction plant. The strategic geographical location of this plant enables it to supply markets in the Atlantic Basin (Europe, United States and the Caribbean) at highly advantageous economic conditions.

This plant has four operational liquefaction trains with a combined capacity of 15 million tonnes per year. Repsol holds a 20% stake in Train 1, 25% in trains 2 and 3 and 22.22% in Train 4. Production capacity of Train 4, one of the largest in the world, is 5.4 million tonnes per year. In addition to its participation in the liquefaction trains, Repsol is a leading player in gas supply and one of the main purchasers of LNG (approximately 3.2 million tonnes per year).

#### Commencement of operations in Trinidad and Tobago

This plant commenced production operations in April 1999. On 1 January 2000, Repsol acquired 10% of bpTT, a company with production assets in Trinidad and Tobago, from BP. In January 2003, the company exercised a purchase option for an additional 20%, taking its stake to 30%.

Most of the natural gas for the trains comes from the bpTT marine fields. Train 2 commenced operations in 2002 and Train 3 in 2003. Their combined capacity amounts to 7 million tonnes/year. Repsol has long-term contracts for 2.7 bcm per year for these trains.

On 15 December 2005, a few months ahead of schedule, the fourth liquefaction train of the Atlantic LNG plant commenced operations. This project included

The Canaport (Canada) plant will commence operations in mid 2009, enabling a significant increase in the volumes of gas marketed in Canada and north-eastern United States

construction of a second dock and a fourth LNG storage tank.

#### Canaport

Repsol, together with Irving Oil, holds a stake in the Canaport project for the construction and operation of the first LNG regasification plant on Canada's east coast. Located in Saint John (New Brunswick) and with an initial supply capacity of 10 bcm/year (1 billion cubic feet per day, which could be extended to 2 billion cubic feet per day), the Canaport terminal is one of the largest in North America and will supply markets on the east coast of Canada and north-eastern United States. Repsol, with a 75% stake, will operate the plant and supply the LNG for the terminal, and will be entitled to the entire regasification capacity. The plant

is scheduled to commence operations in the first half of 2009.

Construction work at the plant in 2008 continued with slight delays to the planned schedule. The onshore part of the project for the two tanks included in the initial project is 92% complete. Work on the third tank, which was approved subsequently by the consortium and which will make it possible to receive supplies from the largest LNG tankers built to date, is 72% complete. Construction of the offshore terminal is practically finished. In addition, the New Brunswick (Canada) and Maine (United States) gas pipelines are ready to transport natural gas delivered to the Canaport plant to markets in the north-eastern United States.

In 2008, Repsol began marketing



activities in New England and other parts of the north-eastern United States. These markets will see a significant expansion in 2009 when the Canaport terminal commences operations. Gas from Repsol's exploration and production activities in the Gulf of Mexico will also be marketed.

In Peru, the integrated liquefied natural gas project, Peru LNG, is currently being developed. Together with the Canaport project, Peru LNG is one of the

**OPERATIONAL MAGNITUDES**

	2006	2007	2008	2008 / 2007
<b>Net production of LNG (*) (Bcma)</b>				variation %
Trinidad	3.0	3.3	3.5	4.7
(*) Equity gas: does not include production of LNG by companies accounted for using the equity method				
<b>LNG marketing</b>				
Loads (n°)	42	66	65	(1)
Volume marketed (Bcma)	3.2	4.5	4.7	4.2

Conversion factor: 1 Bcma (billion m³/year) = 39.68 Tbtu.

**LIQUEFIED NATURAL GAS (LNG)**

Millions of euros	2007					2008				
	1 Q	2 Q	3 Q	4 Q	TOTAL	1 Q	2 Q	3 Q	4 Q	TOTAL
Operating income	266	221	291	145	923	308	393	472	371	1,544
EBITDA	28	21	50	47	146	40	35	51	47	173
Operating profit	27	19	27	34	107	32	18	38	37	125
Investments	124	58	108	97	387	78	67	78	19	242



major initiatives envisioned in the 2008-2012 Strategic Plan and a key project for the company's growth. Repsol has been involved in this project, in which it holds a 20% stake, since 2005, in partnership with Hunt Oil (50%), SK (20%) and Marubeni (10%).

**Other key initiatives**

The Peru LNG project entails the construction and operation of a liquefaction plant in Pampa Melchorita, in which Repsol holds

a 20% stake, and a gas pipeline that will connect with the existing pipeline in Ayacucho. Natural gas will be supplied to the plant by the Camisea consortium, in which Repsol also has a stake.

The project also includes exclusive marketing by Repsol of the liquefaction plant's entire production, estimated at over 4.5 million tonnes per year. The term of the gas purchase agreement signed with Peru LNG is 18 years from commencement of commercial operations. In terms of volume, this is the largest LNG acquisition ever made by Repsol.

In September 2007, Repsol was awarded the international public tender offered by the Federal Electricity Commission (Comisión Federal de Electricidad, CFE) to supply LNG to the natural gas

terminal at the port of Manzanillo on Mexico's Pacific coast. The contract envisages the supply of over 67 bcm of LBG to the Mexican plant for a 15-year period. The Manzanillo plant, which will supply gas to CFE's power plants in the central-western region of Mexico, will be fed with gas from the LNG Peru project.

At the end of 2008, construction work on the onshore part of the liquefaction plant was 68% complete, after advancing 41% over the course of the year. The offshore installations were 72% complete, and the gas pipeline 62% complete. The plant is expected to commence operations in mid-2010. The finance agreements for this project were established in December 2007 and concluded on 26 June 2008.

**THE LNG AREA WORLDWIDE**



The first financing instalment was made in November 2008.

**Regasification plant**

In Spain, Repsol holds a 25% stake in Bahía Bizkaia Gas, S.L. (BBG). This company owns a regasification plant with unloading facilities for LNG tankers of up to 140,000 m³, two 150,000 m³ LNG storage tanks, and a vaporization capacity of 800,000 Nm³/hour. BBG is the operator of this plant which has a regasification capacity of 7 bcma, forms part of the Spanish gas system, and is remunerated by the National Energy Commission (Comisión Nacional de la Energía, CNE) by means of tariffs, tolls and fees. The plant is located in the harbour of Bilbao and has three other partners (BP, EVE and

The Pampa Melchorita plant (Peru) is expected to commence operations in 2010

Iberdrola) each holding a 25% stake. Expansion of this facility is currently being appraised. This would involve the construction of a third tank, also with a 150,000 m³ capacity, and the addition of a further 400,000 Nm³/hour regasification capacity. In 2008, the regasification plant had an availability rate of 96% and a load factor of over 68%, both figures higher than those for 2007 and the average in Spain, where the average load factor is 52%.

Repsol also holds a 25% stake in Bahía de Bizkaia Electricidad, S.L. (BBE), a company which owns a combined cycle power plant with an installed capacity of 800 MWe. The plant uses natural gas delivered by BBG as its main fuel. Electricity generated at this plant is fed to the grid for residential,

# The Repsol-Gas Natural LNG (Stream) joint venture, in which both companies hold a 50% stake, is one of the world's leading companies in marketing and transport of LNG

commercial and industrial consumption. Situated in the harbour of Bilbao, this facility has the same partners as BBG. In 2008, the availability rate of the plant was 97% and the load factor over 66%, both figures higher than those for 2007.

In Iran, Repsol and Shell, together with NIOC, are continuing work on the integrated Persian LNG project. The final investment decision on the liquefaction plant has not yet been taken.

In December 2007, Repsol and Gas Natural signed a shareholders agreement with Sonangol Gas Natural (SONAGAS) to carry out initial development of an integrated gas project in Angola. This initiative involves entails evaluation of gas reserves to determine the investments that would be required for developing



and, if appropriate, exporting these reserves in the form of liquefied natural gas. The services contract and the decree law for concession of the areas of interest, approved by Angola's Council of Ministers in July 2008, are pending ratification by the National Assembly. Seismic tests and other procedures were carried out in 2008 and a well is expected to be drilled in 2009.

## LNG transport and marketing

The Repsol-Gas Natural LNG (Stream) joint venture, in which both companies hold a 50% share, is one of the world's leading companies in LNG marketing and transport and one of the largest operators in the Atlantic Basin. One of this company's missions is to ensure optimized management of both partners' fleet, which comprises a total of 11 LNG tankers. In 2008 Repsol, with management support from Stream, marketed 4.7 bcm of LNG and handled 65 cargoes, mostly from Trinidad and Tobago with Spain as the main destination.

At the close of 2008, Repsol's fleet consisted of three LNG tankers under time charter agreements, with a total capacity of 416,700 m<sup>3</sup>. The company also



had another fourth tanker, the Sestao-Knutsen, which can carry up to 138,000 m<sup>3</sup> of gas and is owned 50-50% by Repsol and Gas Natural. At the beginning of the second half of 2009, the fleet will be increased with the addition of the new Iberica Knutsen Tanker, which Repsol and Gas Natural will share on a 50-50% basis.

Additionally, in early 2007, Repsol signed time charter agreements for four new LNG transport vessels, one from Naviera Elcano and three from Knutsen OAS. The four vessels are scheduled to commence operations in 2010 and are equipped with the latest technology and have a nominal capacity of 173,000 m<sup>3</sup> of LNG. The vessels will be used mainly for transporting supplies associated with the contract between Repsol and Peru LNG.

## Investments

In 2008 investments in the LNG business totalled €242 million, 37% less than the €387 million invested in 2007. These investments were mainly applied in the construction of the Canaport regasification plant (Canada) and the Peru LNG liquefaction project. This last project was financed with capital contributions from the partners until November 2008, at which time the first external financing disbursement was made.

## LNG Milestones

- In 2008 the final construction work on the Canaport regasification plant, which will supply the north-eastern coast of North America, was carried out.
- In 2008 Repsol commenced marketing activities in the New England area and the north-eastern United States. These markets will expand significantly in 2009 when the Canaport terminal commences operations.
- At the end of 2008, construction work on the onshore part of the Peru LNG liquefaction plant was 68% complete, after advancing 41% over the course of the year.
- The Trinidad and Tobago liquefaction trains increased production in comparison with 2007. Both the volume of LNG marketed and the unit margin also increased.





# Downstream

Refining  
Marketing  
LPG  
Trading  
Chemicals

## Revenues

Operating revenue in the Downstream business area was €1.111 billion, down 49.6% in comparison with 2.204 billion in 2007. This drop was mainly due to the following factors:

- a) Lower non-recurring income, for a value of €329 million, mostly due to capital gains (€315 million) on the sale of a 10% stake in CLH in 2007.
- b) The negative trend of the accounting effect of inventories



of raw materials and products (-€495 million) in comparison with the positive effect recorded in 2007 (€234 million).

- c) Lower income from the Chemical business (-352 million) in comparison with 2007 (€100 million). This drop was mainly the result of a fall in sales (16.4%) due to falling demand and a reduction in stock in the manufacturing and distribution chain; and because of narrower margins, affected by high naphtha prices in the first half of the year and the sale and depreciation of stocks in the second half of the year.

Excluding the effects of non-recurring income and inventory valuations in the last two years, the drop would have been 2.1%, from €1.657 billion in 2007 to 1.622 billion in 2008.

If the contribution of the chemical business in both years is also excluded, income would have increased by 22.7%, from €1.565 billion in 2007 to 1.92 billion in 2008, reflecting the positive performance of the other Downstream businesses (Refining, Marketing, LPG and Trading) in comparison with 2007 (on a like-for-like basis, excluding the impact of non-recurring items and inventories).

## Refining

The capacity of Repsol's five refineries in Spain (Cartagena, A Coruña, Petronor, Puertollano and Tarragona) increased by 30,000 bbl/day in 2008 thanks to the investments made to eliminate bottlenecks. This enabled installed capacity in Spain to increase from 740,000 bbl/day to 770,000 bbl/day. Installed capacity at the La



Pampilla refinery (Peru), in which Repsol holds a 51.03% stake and is the operator, is 102,000 bbl/day. In 2008, Repsol sold its 31.13% stake in the Brazilian Manguinhos refinery, maintaining its 30% holding in the Refap refinery, also in Brazil.

In 2008, the Repsol refineries within the Downstream division processed 39 million tonnes of crude oil, slightly less than the figure for 2007.

The refining margin in Spain in 2008 was \$7.4/bbl, 15% higher than in 2007, thanks to the strength of middle distillates and fuel oil and despite weaker petrol performance. The higher dollar/euro exchange rate reduced this advantage and, consequently, the euro/barrel margin in 2008 was fairly similar to the 2007 margin.

The new European specifications

on automotive petrols and diesels came into force on 1 January 2009 by which the sulphur content is reduced from 50 ppm to 10 ppm. Repsol's Spanish refineries completed the necessary investments and are prepared to manufacture according to these new specifications.

With the aim of consolidating its leadership in Spain, Repsol is currently implementing an ambitious investment plan to increase the refining capacity and conversion level, while also enhancing safety, environmental protection and the efficiency of its facilities. The project for expanding the Cartagena refinery and for conversion at the Petronor refinery in Bilbao are key aspects of this plan. Progress was made in 2008 towards developing these projects according to plan.

## Marketing

Repsol markets its range of products through an extensive network of service stations under a multi-brand strategy: Repsol, Campsa and Petronor in Spain, and Repsol in other countries where the Downstream business operates. The marketing activity also includes other sales channels and the marketing of a wide range of products such as lubricants, asphalts, coke and derivatives.

Total oil product sales (excluding LPG) amounted to 42.86 million tonnes, 7.75 less than in the previous year. This drop was due to weaker demand and to the sale of the marketing business in Ecuador and Brazil and of the marketing business in Chile in 2007. Sales in Europe were down 2.4% and 29.3% in the rest of the world. With regards to sales

## The capacity of Repsol's five refineries in Spain (Cartagena, A Coruña, Petronor, Puertollano and Tarragona) increased by 30,000 barrels per day

### OPERATIONAL MAGNITUDES (REFINING, MARKETING AND LPG)

	2007	2008 (1)	2008 / 2007
	Variation %		
<b>Processed materials</b> (millions of tonnes)			
Crude	40.1	39.0	(2.7)
Other loads and raw materials	6.5	5.1	(20.8)
<b>Total</b>	<b>46.6</b>	<b>44.1</b>	<b>(5.2)</b>
<b>Production</b> (thousands of tonnes)			
Middle distillates	20,906	19,994	(4.4)
Petrols	7,820	7,235	(7.5)
Fuel oils	7,337	7,308	(0.4)
LPG	1,017	1,013	(0.4)
Asphalts	1,741	1,558	(10.5)
Lubricants	249	212	(14.8)
Others (excluding petrochemical)	1,627	1,674	2.9
<b>Total</b>	<b>40,696</b>	<b>38,995</b>	<b>(4.2)</b>
<b>Sales of petrol products</b> (thousands of tonnes)			
Gas oils/Kerosene	25,853	23,723	(8.2)
Petrols	7,757	6,775	(12.7)
Fuel oils	7,397	7,234	(2.2)
LPG	3,405	3,223	(5.3)
Rest	5,448	5,130	(5.8)
<b>Total</b>	<b>49,860</b>	<b>46,085</b>	<b>(7.6)</b>
<b>Sales by areas</b> (thousands of tonnes)			
Europe	39,156	38,183	(2.5)
Rest of the world	10,704	7,902	(26.2)
<b>Total</b>	<b>49,860</b>	<b>46,085</b>	<b>(7.6)</b>

(1) Does not include Refap since July

to the company's own network, light product sales in Spain fell by 5.8% due to a fall in demand, and in other countries sales were 22.7% lower mainly because of the previously mentioned divestments.

At the end of 2008, Repsol had a network of 4,399 service stations in countries in which the Downstream business area operates. The network in Spain consists of 3,590 sales points, 75% of which have strong concessionary links to the company, and 946 of which are company managed. Service stations in other countries were located in Portugal (441), Italy (133) and Peru (235).

In June 2008, as part of its non-core asset divestment strategy, Repsol sold its liquid fuel marketing business in Ecuador to Primax for \$47 million. The sale included the network of 123 service



Distillation tower at the Tarragona refinery (Spain),

stations, as well as the industrial sales business, commercial and logistics infrastructure, and the aviation and lubricants activities.

In December 2008, Repsol also sold its liquid fuel marketing business in Brazil for \$55 million to the Brazilian group AleSat. The sale included the network of 327 service stations as well as the commercial and logistics infrastructure and other complementary business such as the convenience stores, direct sales and asphalts.

Throughout 2008, Repsol continued with its policy aimed at improving service quality, particularly in company managed service stations. By the end of the year, 243 facilities had been adapted to the new Sprint store concept, with over 60 m<sup>2</sup> of commercial floor space, more

than 1,300 product references, and annual sales per store of over €300,000.

Customer loyalty programmes through the use of specific cards are an essential part of Repsol's marketing strategy. At the end of 2007 the company launched a new card, Solred MÁXIMA, offering clients 5% discounts on all services and products in the stores and a 1% discount on fuels. This card can also be used for payment at repair shops and motorways and offers a wide range of advantages. Solred MÁXIMA is accepted at more than 4,000 Repsol, Campsa and Petronor service stations in Spain and Portugal.

Respect for the environment forms part of the policy and strategy of the company, which focuses all its efforts on

## A project which creates wealth and employment

The expansion of the **Cartagena** refinery is one of the key initiatives in the 2008–2012 Strategic Plan. An investment of €3.262 billion will make this complex one of the most modern in the world and will double its capacity to 220,000 bbl/day. The project includes, as the main units, a hydrocracker, a coker, atmospheric and vacuum distillation units and desulphurisation and hydrogen plants.

In 2008 the administrative permits necessary for the extension were obtained. This initiative has met with a highly favourable response from both the region and the administrations, as it will boost the economy of the Region of Murcia. Around 1,000 people are already employed in the works, which are forecast to be completed on schedule.

This project will enable production of clean transport fuels to be maximized and will provide employment to over 6,000 people during the construction phase. Once operative, it will create around 700 jobs. Over 50% of the products produced in the complex will be middle distillates, which will play a significant role in reducing the shortage of these products in Spain.



developing environmentally-friendly and advanced technology products. Repsol sells a wide range of latest generation fuels that comply with the strictest quality standards: Efitec 95 and 98 petrol, Diesel e+ and Diesel e +10. In keeping with its commitment to society, Repsol continued to promote projects for the integration of people with disabilities, who at the end of 2008 amounted to 230 employees in the Marketing division, more than 3% of its workforce.

**Liquefied Petroleum Gas**

Repsol is one of the world's leading retail distribution companies of LPG and the market leader in Spain and Latin America. The company is present in ten countries in Europe, North Africa and Latin America.

Total LPG sales in 2008 amounted to 3.22 million tonnes, a decrease of 5.3% in comparison with the previous year. In Peru, LPG sales increased 93% thanks to development of the market. Sales in Spain fell 1.9% compared to the previous year.

In Spain, Repsol distributes bottled, bulk and piped LPG through collective distribution networks and has more than 10 million bottled LPG customers supplied through a network of 522 distribution agencies. Bulk LPG sales accounted for 39% of total retail LPG sales in 2008.

To reinforce its leadership position on the Spanish market, improve service quality and guarantee supply, the company implemented an efficiency plan for factories in Spain over the 2007-2009 period.

Investments in the Downstream area increased by 64% in 2008



**OPERATIONAL MAGNITUDES (CHEMICALS)**

Thousands of tonnes	2007	2008	2008 / 2007
			Variation %
<b>Capacity</b>			
Basic petrochemical	2,664	2,679	0.6
Derivative petrochemical	2,937	2,927	(0.3)
<b>Total</b>	<b>5,601</b>	<b>5,606</b>	<b>0.1</b>
<b>Sales by products</b>			
Basic petrochemical	772	629	(18.6)
Derivative petrochemical	2,341	1,973	(15.7)
<b>Total</b>	<b>3,113</b>	<b>2,602</b>	<b>(16.4)</b>
<b>Sales by markets</b>			
Europe	2,776	2,348	(15.4)
Rest of the world	337	254	(24.6)
<b>Total</b>	<b>3,113</b>	<b>2,602</b>	<b>(16.4)</b>

In Portugal, Repsol distributes bottled and bulk LPG to end customers and supplies other operators. Sales in 2008 reached 184,199 tonnes, making the company the third operator, with a 21% market share.

In Latin America, Repsol is the leading LPG distributor in Argentina, Ecuador, Peru and Chile. It markets bottled and bulk LPG on the Argentinean retail market to the domestic, commercial and industrial sectors, with sales totalling 325,836 tonnes.

In November 2008, the company sold its 51% stake in Repsol YPF Gas de Bolivia S.A., abandoning the bottling and bulk marketing activities in this country.

**Chemicals**

The company's chemical business, which forms part of

the Downstream area, incurred an operating loss of €352 million compared to an operating profit of €100 million in 2007. This was mainly due to a decrease in sales as a result of shrinking global demand and the reduction in stocks in the entire transformation and distribution chain, as well as narrower margins due to high naphtha prices in the first half of the year and depreciation of stocks in the second half of the year.

Sales to third parties in 2008 stood at 2.60 million tonnes, 16.4% less than the 2007 figure of 3.11 million tonnes.

The project for the extension of the Sines complex (Portugal), which aims to double output and increase competitiveness through greater integration and energy efficiency, was approved in June 2008. The project

includes three new plants –one for linear polyethylene, one for polypropylene and a third for cogeneration– as well as extension of cracker capacity by more than 40%, to 570,000 tonnes/year. The new linear polyethylene and polypropylene plants will be in a highly competitive position thanks to both their size and latest generation technology.

**Investments**

Investments in the Downstream area increased by 64%, totalling €1.534 billion in comparison with €936 million the previous year. Most of this amount was allocated to ongoing refinery projects, particularly in Spain, and to operation improvements, installations and fuel quality, as well as safety and the environment.

## Additional Downstream information

The Downstream area comprises the following activities: refining, logistics, crude oil and product trading and marketing of fuels, including liquefied petroleum gas (LPG) and chemicals, on both the wholesale and retail markets. Repsol YPF is the largest oil refiner in Spain and Peru and is also present in Brazil.

With regards to marketing activities, the Group markets products through its service stations distributed over five countries. It is the leader on the Spanish and Argentinean markets and one of the reference companies in Peru.

### Improvements in refining

Excluding YPF, Repsol operates five refineries in Spain and another in Peru with a total

installed capacity of 872,000 barrels per day. It also holds a stake in the Refap refinery (Brazil).

The company has introduced a number of improvements in recent years. In 2002 it installed a hydrocracking unit in the Tarragona refinery and in mid-2004 a mild hydrocracker commenced production in the Puertollano refinery. In 2005 a new FCC hydrotreatment unit commenced operations in the A Coruña refinery, an isomerisation unit in Tarragona and an FCC Naphtha desulphurization unit in Bilbao, where in mid-2006 a middle distillates desulphurization unit was installed. In 2008 Repsol's Spanish refineries finalized the investments necessary for manufacturing automotive fuels with the quality

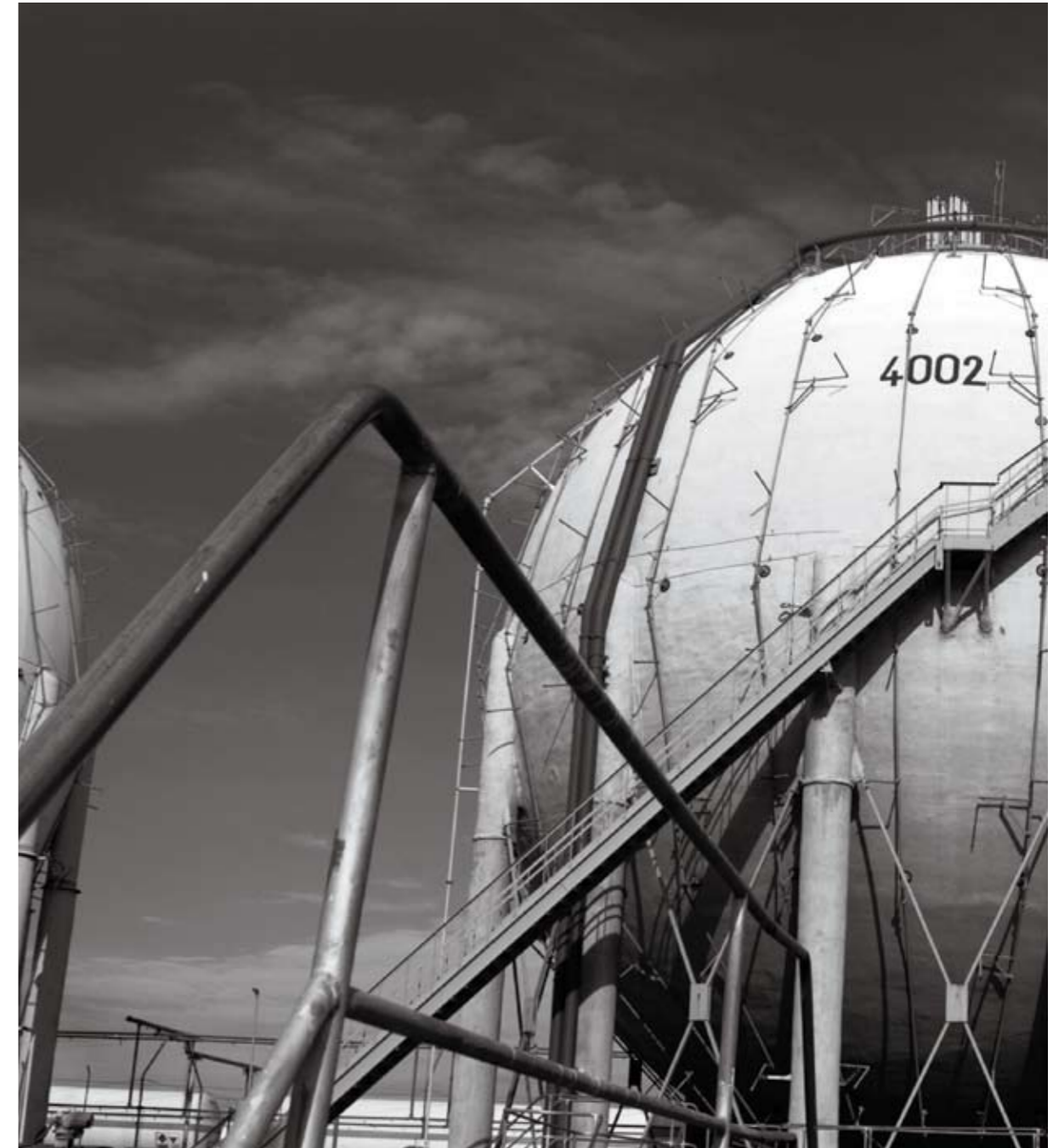
specifications adopted in the European Union.

Repsol's international supply and marketing activities are centralized through the company Repsol YPF Trading y Transporte (RYTTSA), which has offices in Madrid, Buenos Aires, Houston and Singapore.

### Logistics

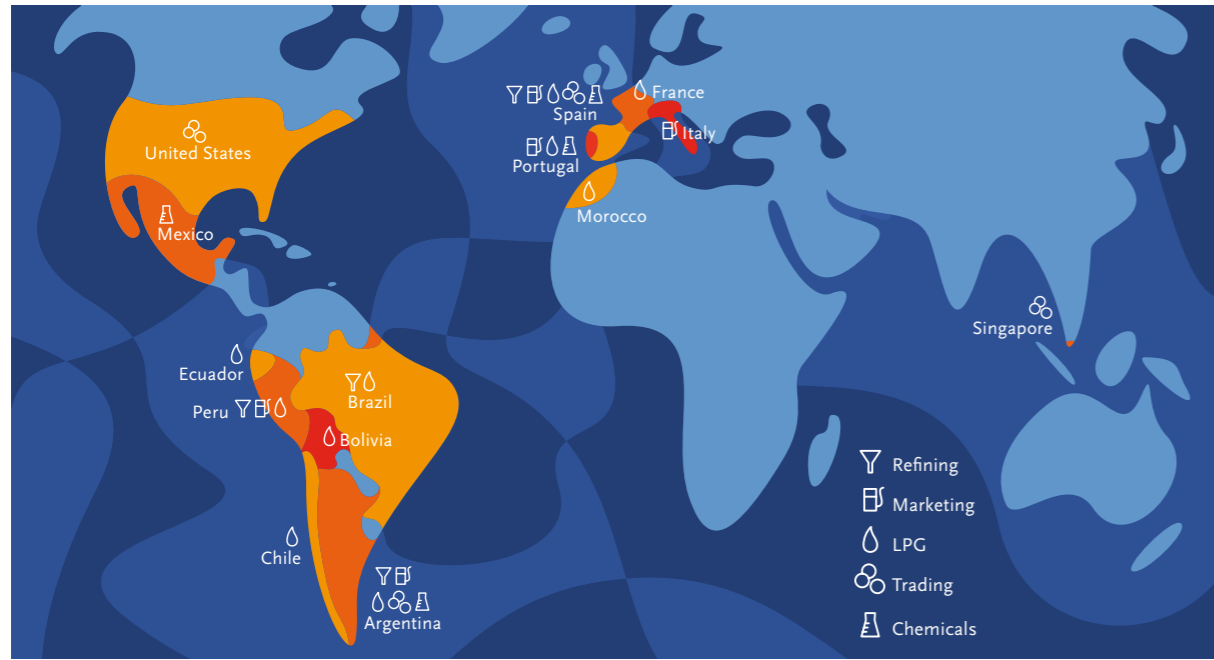
Most of the distribution of products refined in Spain is handled by the Compañía Logística de Hidrocarburos (CLH), in which Repsol holds a 15% stake.

At 31 December 2008, the company's transport network consisted of 3,835 km of oil pipelines and two tankers. CLH also has 38 storage facilities –all connected to the oil pipeline



Liquefied petroleum gas tank at one of the Repsol industrial complexes.

DOWNSTREAM WORLDWIDE - REPSOL GROUP



network, with the exception of Gijón, Motril and the four facilities in the Balearic Islands – and 28 airport installations which, together, represent a total capacity of approximately 6.6 million m<sup>3</sup>.

In Peru there is a contracted storage capacity of 125,000 m<sup>3</sup>.

**LPG Marketing**

The Group supplies liquefied petroleum gases mainly through

the refineries in Spain and acquisitions from third parties on the international markets. Nearly a third of its requirements are met with the group's own production. In Europe and North

Africa, Repsol is present in Spain, Portugal, the south of France and Morocco. The strategy followed in all these countries consists of offering clients a top quality product combined with excellent service.

Repsol Butano is the largest bottled LPG distribution company in Europe, in terms of both revenues and volume. It also distributes bulk propane via individual installations (Personalised Plan) or collective distribution networks (piped propane installations and town pipelines) to domestic, commercial and industrial clients. These sales represent 34.3% of total sales.

In 2007 the Administration liberalized maximum prices

Downstream Milestones

- In 2008 the administrative permits necessary for extension of the Cartagena refinery were obtained. The project, which is the largest industrial investment in the history of Spain (€3.262 billion), will make this industrial complex one of the most modern in the world.
- Within the framework of the strategy of divestment of non-strategic assets, Repsol sold its 31.13% stake in the Manguinhos refinery in Brazil. In December, the company sold the liquid fuel marketing activities in Brazil to the Brazilian group AleSat for 55 million dollars.
- In February 2008 the company divested the polymethyl methacrylate (PMMA) business with the sale of the Bronderslev (Denmark) and Polivar (Italy) subsidiaries.

- In June 2008 Repsol signed an agreement with the company Primax for the sale of the Ecuadorian companies Recesa and Oiltrader for a sum of \$47 million (€32 million). In the case of lubricants, Repsol will maintain a marketing and distribution contract with Primax and, in the case of aviation, a technical-commercial contract.
- In September 2008 commencement of the extension works of the Sines petrochemical complex (Portugal) was announced. This project includes the construction of new linear polyethylene and polypropylene units which will triple the current capacity of this industrial complex.



DOWNSTREAM

Millions of euros	2007					2008				
	1 Q	2 Q	3 Q	4 Q	TOTAL	1 Q	2 Q	3 Q	4 Q	TOTAL
<b>Operating income</b>	9,114	9,955	10,457	11,272	<b>40,798</b>	11,556	12,245	11,502	7,144	<b>42,447</b>
Europe	8,287	9,034	9,393	10,334	37,048	10,848	11,431	10,971	6,653	39,903
Rest of the world	1,233	1,365	1,521	1,528	5,647	1,390	1,570	1,142	674	4,776
Adjustments	(406)	(444)	(457)	(590)	(1,897)	(682)	(756)	(611)	(183)	(2,232)
<b>EBITDA</b>	574	803	574	450	<b>2,401</b>	709	816	633	(383)	<b>1,775</b>
Europe	506	696	530	398	2,130	682	741	591	(268)	1,746
Rest of the world	68	107	44	52	271	27	75	42	(115)	29
<b>Operating profit</b>	515	633	393	663	<b>2,204</b>	482	643	415	(429)	<b>1,111</b>
Europe	466	552	378	599	1,995	482	594	396	(345)	1,127
Rest of the world	49	81	15	64	209	–	49	19	(84)	(16)
<b>Investments</b>	198	170	220	348	<b>936</b>	315	315	309	595	<b>1,534</b>
Europe	152	152	212	328	844	299	293	296	581	1,469
Rest of the world	46	18	8	20	92	16	22	13	14	65

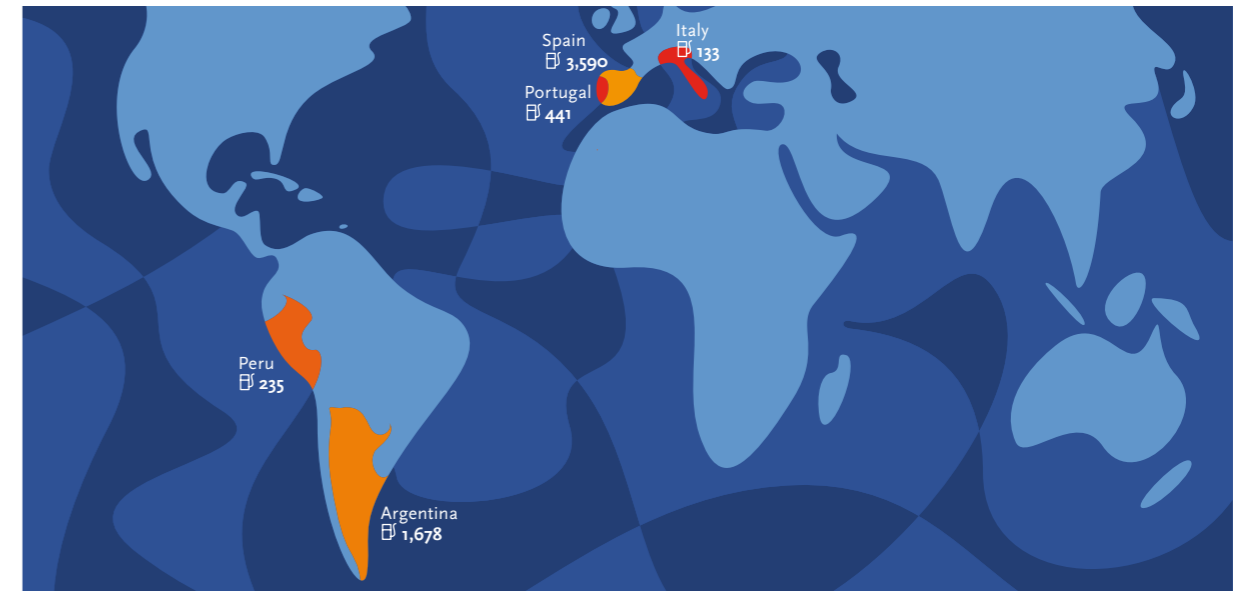
REPSOL REFINERIES IN SPAIN



LOGISTICS IN SPAIN



REPSOL GROUP SERVICE STATION NETWORK



for LPG in the case of cylinders weighing over 20 kg and for use as a fuel. Only LPG in cylinders of between 8 and 20 kg is subject to a maximum price, which still represents 91% of total sales of bottled LPG, as well as piped LPG with quarterly and monthly updates. Prices for bulk supplies are not fixed.

Repsol has been present in Portugal since 1993. The last two years have seen the effective



integration of logistics and distribution networks in this country, while the brand image has been unified with the launch of cylinders in new colours and a common valve for all types of bottles.

In France, where Repsol distributes bottled and bulk LPG, sales in 2008 reached 16 kt, under a mixed distribution model of cylinders at the sales point and a home delivery service. The bulk business focuses on small clients and domestic use with commercial formulas similar to the Personalised Plan.

The French and Portuguese markets are totally liberalized and operators establish the price freely based on international prices of raw materials, internal distribution costs and the level of competition.

Repsol is present in Morocco through National Gaz, a bottled LPG distribution company which recorded sales of 40 kt in 2008. Distribution is shared between direct sales and exclusive distributors. The price of bottled LPG is subsidized and regulated by the Administration, which establishes the margin of each element of the distribution channel from the producer or importer to the sales point.

**Leader in Latin America**

Repsol YPF is the leader in LPG distribution in Argentina, Ecuador, Peru and Chile. This position, together with the production sources located in Argentina, Bolivia and Peru, represents a strong competitive advantage, as it strengthens vertical integration.

Repsol is the leader in LPG distribution in Argentina, Ecuador, Peru and Chile.

Lipigas, a company in which Repsol holds a 45% stake, is the leader on the Chilean market, with a 37.6% market share and sales in 2008 of 430 kt.

In Peru, Repsol participates in the LPG market through the brand Solgas Repsol and is the leading company in terms of prestige and quality, with a 38.5% market share. Sales in 2008 amounted to 408 kt.

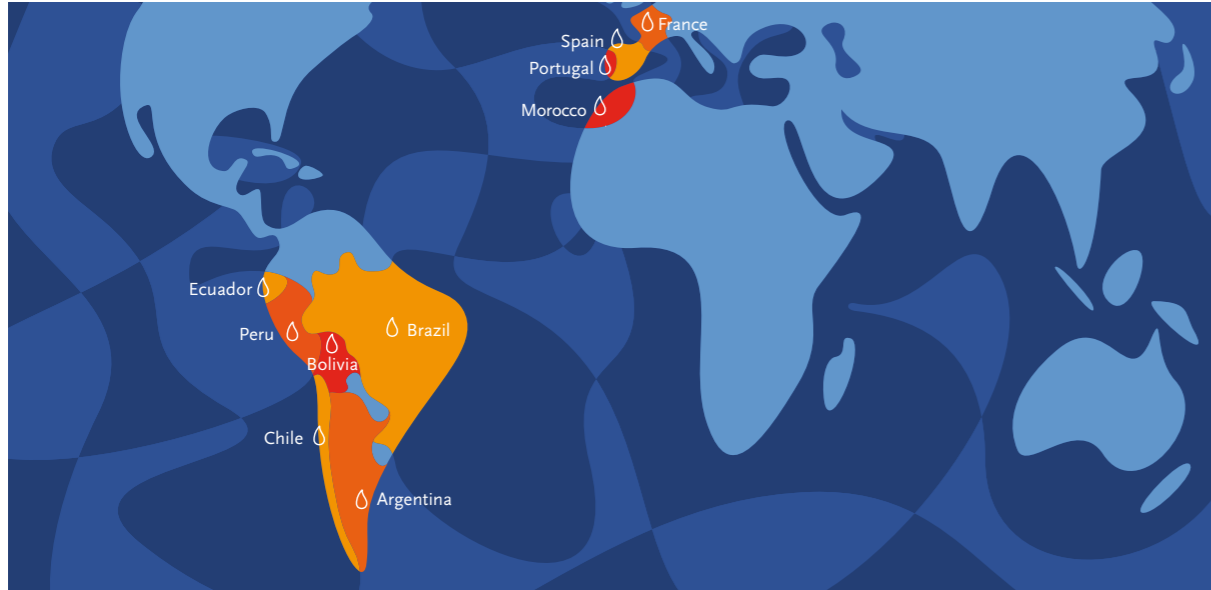
The Chilean and Peruvian markets are totally liberalized. Distribution of bottled LPG is carried out through distributors (both exclusive and non-exclusive) who in turn resell the product to the sales points.

In Ecuador, Repsol participates through Duragas, the leading LPG distribution company which operates nationwide with a market



share of 38.9%. In 2008, Duragas marketed 390 kt of LPG. The sale price of bottled LPG in Ecuador is heavily subsidized by the state. Marketing is carried out through a network of exclusive distributors. In Bolivia, since YPF assumed control of natural resources, pursuant to a decree law on nationalization of hydrocarbons, product availability has been drastically reduced, resulting in a decrease in sales volume. Despite

LPG REPSOL GROUP



this, sales in the retail segment stood at 22 kt of LPG and market share was 6%.

Repsol commenced marketing LPG in Brazil in 2004 in the bulk segment and through wholesale sales. In 2008 sales amounted to 21 kt.

**High level of integration**

The Repsol Group produces, distributes and markets petrochemical products directly. This activity is mainly carried out in Spain (Tarragona and Puertollano), Argentina (Ensenada, Bahia Blanca and Plaza Huincul) and Portugal (Sines). The most important markets are Europe and the Mercosur countries.

Most of the units share the industrial complex with the Repsol refineries, thereby enabling a

The company is the market leader in basic and derivative petrochemical products in Spain

high level of integration between both activities.

The Group's basic petrochemicals production focuses on obtaining olefins and aromatics. In derivatives, the three main petrochemical products are polyolefins, intermediate products and industrial products.

**Chemicals in Spain**

Repsol is the market leader in basic and derivative petrochemical products in Spain, where its main assets are located at the Tarragona and Puertollano industrial complexes. These plants have an olefin cracker and polyolefin and intermediate product production units. This enables a high level of integration between basic and derivative chemicals, as well as a high level of integration with the refining activities.

CHEMICALS - REPSOL GROUP



Through a joint venture with Dynasol (50%), Repsol produces synthetic rubber at the Santander plant. In Spain it also produces styrene-derived plastics and polyolefin compounds as well as specialised chemical products (accelerants and agrochemicals, for example).

**Other countries**

In Portugal, Repsol carries out chemical activities at the

Sines complex, around 160 km south of Lisbon. This complex has production plants similar to those of the Puertollano and Tarragona complexes and consists of an olefin cracker, two polyethylene plants and an energy plant which provides power to the complex. The expansion of these installations will enable production to double and increase competitiveness thanks to greater integration and energy efficiency.

In Mexico, Repsol has a plant at Altamira which produces synthetic rubber through the previously mentioned joint venture with Dynasol (50%).

**Marketing**

Repsol markets its chemical production directly. Sales of derivative petrochemical products are carried out through a commercial network divided into five regions: Atlantic, Mediterranean, Northern Europe, Southern Europe and South America. The company is also a charter member of the ChemConnect website, the leader in e-commerce of chemical products.



# YPF

YPF operating revenue amounted to €1.159 billion in 2008, 5.6% less than in 2007. This drop was due to the international crisis, which intensified in the last few months of the year.

On 21 February 2008, Repsol concluded the sale of a 14.9% stake in YPF to the Petersen Group for 2.235 billion dollars. This transaction, which values YPF at 15 billion dollars, forms part of the company's strategy of enhancing the geographical distribution of its assets and implementing global management with a local focus. The agreement also allows for the Petersen Group to increase its YPF holding to 25% through an option to purchase an additional 10.1%. The Petersen Group has already exercised an option for an additional 0.1% stake.

## Extension of concessions

In 2008, YPF investments amounted to €1.508 billion compared with 1.374 billion the previous year. Nearly 80% of these expenditures were allocated to oil and gas development and exploration projects, including the agreement for extending the concession in the Neuquen province.

Average annual production in Argentina was 617,100 barrels of oil equivalent per day (boepd) versus 649,200 in 2007, a decrease of 4.8%. Output was affected by labour strikes and a fall in demand for gas. Without taking these effects into account, average annual production would have reached 628,300 boepd.

Operating costs increased in 2008, mainly because of taxes - which rose from €179 million

to €685 million in 2008 due to the effect of withholdings -, amortization, purchases from third parties, environmental and legal contingencies, and severance pay and compensation.

Although international prices were higher than in 2007, they fell sharply in the last quarter of 2008. This affected both domestic and foreign market prices although in the latter case this was curtailed by withholdings, which were higher than in 2007 following the implementation of Resolution 394 which affects oil and crude oil product exports, and Resolution 127, which affects natural gas and liquefied natural gas exports.

With the exception of petrol for the internal market, 2008 saw a fall in demand mainly as a result of the international crisis and other factors, such as the farmers'







The Lujan de Cuyo refinery (Argentina), with the Andes in the background.

strike and the drought.

On the internal market, the company collaborated with the Government of Argentina on the Total Energy Plan (TEP), participating in programmes to supply diesel and replace natural gas with liquid fuels.

The contribution from YPF associated companies was lower than in the previous year due to the following factors:

- The company Mega was affected by the impact of the resolutions on petrol and LPG export prices and by the fall in the price of ethane.
- The fall in the price of urea in the last quarter, which had an impact on sale prices of the company Profertil and devalued its stocks.
- The company Refinor saw its

profits reduced by the application of Resolution 394 which affected the price of its exports.

• YPF Holding's earnings were affected by higher provisions for environmental contingencies, although this was partly offset by the commencement of production of Neptuno.

Operating profits from YPF's Exploration and Production business stood at €441 million, 55% down on the previous year due to higher costs in the industry, the effect of regulated oil prices in the Argentinean market and strikes.

In 2008, YPF's hydrocarbon production was 226 million barrels of oil equivalent, 4.9% less than in 2007, 114 million of which were liquids and the remainder

gas. Labour disputes and weaker demand for gas in the last third of the year reduced output by 4.8 million barrels.

#### Investment in exploration

In 2008, YPF made five oil discoveries and one gas discovery, out of a total of 17 wells drilled. Of the six positive wells, four are in the Neuquina basin (El Orejano x-1, Borde Sur del Payun e-4, Puesto Cacho x-1 and Los Reyes Norte x-1), the fifth is located in the Austral basin (Las Flechas x-2001) and the sixth in the Gulf of San Jorge (El Balcon x-1). Total investments in exploration amounted to €122 million.

Seismic activity focused on the Rio Barrancas block in the province of Neuquen, and also on the Tamberias block in the

# In 2008, YPF made five oil discoveries and another gas discovery, out of a total of 17 wells drilled

province of San Juan. In 2008 only the province of Chaco offered new mineral concessions.

With regards to field development activities, 602 development wells were drilled which, together with secondary, repair and infrastructure activities, involved an investment of €868 million.

Within the framework of the 1.215 billion-euro global investment plan, €55 million were allocated to the Asset Development Plan (Plan de Desarrollo de Activos, PLDA) for rejuvenating mature fields. Launched in 2007, this initiative forms part of the company's strategy aimed at progressing towards a leadership position in the exploitation of mature fields and basins. The objective is to define integral development and rejuvenation plans for all YPF

fields based on current technology and focusing efforts on enhanced subsoil knowledge.

The work carried out in recent years within the framework of the Asset Development Plan enabled YPF to incorporate proved reserves, both within and outside Argentina, totalling 75 million barrels of oil equivalent in 2008, mostly oil. In addition, the milestone of replacement of 120% of oil reserves was achieved in the Chubut and Santa Cruz areas, in the southern basin of Argentina.

We should also highlight the results obtained in mature fields, such as Perales, Barranca Baya and Manantiales Berth. Together with the activity in the Maurek area and particularly in the Cañadon Yatel field, these results enabled reserves to be

incorporated in this region.

Pilot tests were conducted in the Neuquina basin to assess the technical and economic feasibility of developing tight gas fields. The results of these studies are currently pending.

The 10-year extension (2017–2027) of the concessions in the Neuquen province should also be highlighted. Together with the extension achieved in Loma la Lata in 2002, this enabled the concessions of 50% of YPF's reserves in Argentina to be extended.

Another significant event was the awarding of the Gold Prize to the company Mega in the "Medium Private Company" category by the jury of the 2008 Ibero-American Quality awards.



YPF's natural gas sales in 2008 totalled 16.4 billion m<sup>3</sup>, and increased above all in the distribution, industrial and manufacturing segments. YPF's market share in Argentina was 40% and the average price of the natural gas sold by the company increased by 32% in 2008, enabling the gradual alignment of prices on the domestic market. The first liquefied natural gas (LNG) regasification operation commenced in June 2008 at the Bahia Blanca harbour with the Excelsior regasification tanker contracted for this purpose in order to meet the country's demand. This project was developed for the Argentinean Government and was successfully completed in record time, incorporating an average of approximately 4 million cubic

metres/day in the winter season between June and September. This operation, the transfer of LNG from one vessel to another anchored vessel, from the Excelsior to the Excelerate, was the first of its kind in the world. Additionally, within the framework of the programme for supporting the Government of Argentina, in the winter of 2008 YPF constructed the world's largest propane-air plant in Buenos Aires. The plant, with a supply capacity of 1.5 million cubic metres/day, will be used to meet peak winter demand in the capital of Argentina. With regards to the Refining, Logistics and Marketing activity, YPF refineries processed 18.7 million cubic metres of oil, 1% less than in 2007. Over the course of 2008, full use

The extension of the concessions in Neuquen enabled the permits of around 50% of YPF's reserves to be extended



La Plata refinery (Argentina).

of the refineries' installed capacity was maintained thanks to the operational reliability plans being carried out which enable the units' maintenance cycles to be extended, thus increasing effective processing capacity and enabling maximum use of assets to meet Argentina's growing demand for fuel. Petrol production for the domestic market amounted to 3 million cubic metres, 14% higher than in 2007 and a new record in recent years. This was accompanied by enhanced quality of the petrols produced and made it possible to meet the Argentinean market's increasing demand.

#### Record production

YPF completed the remodelling of the catalytic cracker (FCCB) at the La Plata refinery, which enabled an increase in the production of

middle distillates and petrols, with a new record set in the production of diesel and Jet A1 aviation fuel at this facility in October, reaching an average of 13,625 cubic metres/day. Middle distillate production at this refinery thus surpassed, for the second consecutive month and the fourth time in its history, the threshold of 400,000 cubic metres/month.

With regards to heavy products, the production of 2 million cubic metres of fuel oil was noteworthy, similar to the figure for previous year. Internal factory demand was thus met and the requirements of the Total Energy Plan (TEP) were complied with, delivering over 290,000 cubic metres of fuel oil.

The fleet contracted for river and marine transport was renewed with the incorporation of three new vessels: the newly-built

Maria Victoria and Caleta Rosario double-hull vessels, and the Argentina V barge, all of which comply with the Group's latest safety standards. A sixth barge is under construction and is scheduled for launch in 2009. In 2008, YPF's supply of liquid fuels was in line with the growth recorded in Argentina, ensuring a permanent, high-quality supply to all its clients. This supply, particularly in the case of petrol, a key supply for sustaining growth levels, was made from the company's refineries, or was imported to meet exceptional levels of demand.

At the end of 2008, YPF had 1,642 service stations, 1,642 of which were under own management. The company has begun to update the image of its sale outlets, seeking a more modern image and bringing

At the end of 2008, YPF had 1,678 service stations, 1,642 of which were under own management. The company has begun update the image of its sale outlets.

it in line with the slogan “Let’s invent the future”.

Prices in the domestic market gradually adapted to international prices and those of bordering countries.

At the close of 2008, YPF launched a new fuel, YPF D. Eurodiesel, at low sulphur content fuel (less than 50 parts per million), which is recommended for all high-performance EURO IV engines.

#### Increased margins

The Refining, Logistics and Marketing areas obtained a profit of €743 million in 2008. Investments in this area amounted to €167 million.

With regards to YPF’s chemicals business, profits increased by 20%, reaching an all-time high of €158 million thanks to an

increase in margins in all lines and the integration of the refining, exploration and production activities. This was achieved despite the fall in international prices in the fourth quarter of 2008 and declining demand for fertilizers due to the farmers’ strike in Argentina. These enhanced financial results were shored up by high international prices in the first three quarters of the year, the application of a cost savings and expense curtailment plan, and a policy aligned to prices in the local market which boosted the Argentinean industry’s growth. Investments in the year amounted to €25 million.

In 2008, the company Profertil, in which YPF holds a stake, won the National Quality Prize in the large company category,



and also renewed its exemption on customs duty for methanol exported to the United States. YPF’s workforce at the end of 2008 comprised 11,038 employees, a year-on-year decrease of 1.3%. 271 new employees joined the Exploration and Production area, an increase of 16% over 2007. The workforce of the company Astra Evangelista (AESA) was reduced by 540 workers.

The Repsol YPF Group commenced implementation of a teleworking pilot project. In Argentina, the project was launched with the collaboration of the Ministry of Labour. YPF is the first company in the country to implement this new work arrangement, which was adopted by several of its employees, and which was recognised with the

awarding of the Meta 4 Prize for Innovation in Human Resources. Three labour agreements govern the employment conditions of YPF’s refinery, field, service station and LNG employees. In 2008, several salary agreements were reached with trade union representatives.

With regards to Research and Development (R+D), within the framework of the Asset Development Plan (PLADA), YPF began to evaluate and develop technologies for the exploitation of heavy oil fields, enhancing the recovery factor of mature fields, and recycling the water used in production processes for irrigation and other purposes. The Chemicals area launched a new fertilizer made with liquid sulphur generated by

the hydrocarbons processed at the refinery. With regards to environmental protection, the company continued to develop soil recovery technologies.

# Additional YPF information

## Exploration and production

At 31 December 2008, YPF held mineral rights in Argentina on 113 blocks covering a net area of 76,722 km<sup>2</sup>: 21 exploration blocks (50,221 km<sup>2</sup>) and 92 exploitation blocks (26,501 km<sup>2</sup>), located in the Neuquina, Cañadon Asfalto, Bolsones Intermontanos, Gulf of San Jorge, Austral, Colorado Marina, Cuyana, Noroeste and Malvinas basins.

Average net daily productions by areas were the following: Neuquina (420.03 kboepd), Gulf of San Jorge and Austral (108.57 kboepd), Cuyana (25.31 kboepd), Noroeste (45.11 kboepd) and the offshore basins (17.49 kboepd).

Net proved reserves of liquids and natural gas in Argentina at the close of 2008 were estimated at 1,141 Mboe.

## Logistics

In Argentina there is no company operating primarily in the distribution of oil products, and each operator therefore carries out their own distribution. YPF has a network of 1,801 km of oil pipelines for distribution of its refined products which link up its two main refineries with the 16 storage and supply installations, which can house up to 983,620 m<sup>3</sup> of products. It also has 53 airport installations, 40 of which

are owned by the company (24,000 m<sup>3</sup> of storage capacity), and 27 company-owned tanker trucks. The YPF refineries receive crude oil through pipelines: the Lujan de Cuyo refinery from Puesto Hernandez through a 528 km oil pipeline, and the La Plata refinery from Puerto Rosales through a 585 km oil pipeline.

YPF also holds a 37% stake in Oldelval, the company which manages the oil pipeline linking the Neuquina basin with Puerto Rosales, and a shareholding of 33.15% in Termap, an operator with two storage and port installations: Caleta Cordova, located in the southern province



## YPF

	2007					2008				
	1 Q	2 Q	3 Q	4 Q	TOTAL	1 Q	2 Q	3 Q	4 Q	TOTAL
<b>Operating income</b>	1,989	2,065	2,199	2,383	<b>8,636</b>	2,282	2,330	2,914	2,556	<b>10,082</b>
Upstream	1,055	1,117	1,154	1,250	4,576	1,026	939	1,097	1,207	4,269
Downstream	1,639	1,719	1,815	2,100	7,273	1,882	1,789	2,448	2,034	8,153
Corporation	34	26	99	101	260	55	68	78	79	280
Adjustments	(739)	(797)	(869)	(1,068)	(3,473)	(681)	(466)	(709)	(764)	(2,620)
<b>EBITDA</b>	715	730	668	851	<b>2,964</b>	756	618	855	573	<b>2,802</b>
Upstream	502	575	601	772	2,450	507	380	457	453	1,797
Downstream	241	159	69	77	546	259	258	419	138	1,074
Corporation	(28)	(4)	(2)	2	(32)	(10)	(20)	(21)	(18)	(69)
<b>Operating profit</b>	328	296	228	376	<b>1,228</b>	365	279	402	113	<b>1,159</b>
Upstream	139	211	235	394	979	167	130	68	76	441
Downstream	210	116	16	44	386	225	218	375	83	901
Corporation	(21)	(31)	(23)	(62)	(137)	(27)	(69)	(41)	(46)	(183)
<b>Investments</b>	303	287	349	435	<b>1,374</b>	250	316	346	596	<b>1,508</b>
Upstream	234	247	297	309	1,087	223	247	259	486	1,215
Downstream	56	39	26	92	213	17	45	54	76	192
Corporation	13	1	26	34	74	10	24	33	34	101

## YPF Milestones

- In February Repsol concluded the sale of 14.9% of YPF to the Petersen Group for 2.235 billion dollars. This operation forms part of the company's strategy to enhance geographical distribution of its assets and apply global management with a local focus. The agreement allows for the Petersen Group, which has already exercised an option for 0.1%, to extend its stake in YPF to 25%.
- The concessions in the province of Neuquen were extended for a ten-year period (2017-2027), which represents the extension of the concessions of almost half of YPF's reserves in Argentina.
- In June 2008 the first liquefied natural gas (LNG) regasification operation in South America commenced in the port of Bahia Blanca.
- YPF completed the remodelling of the catalytic cracker (FCCB) at the La Plata refinery, enabling production of middle distillates and petrols to increase.

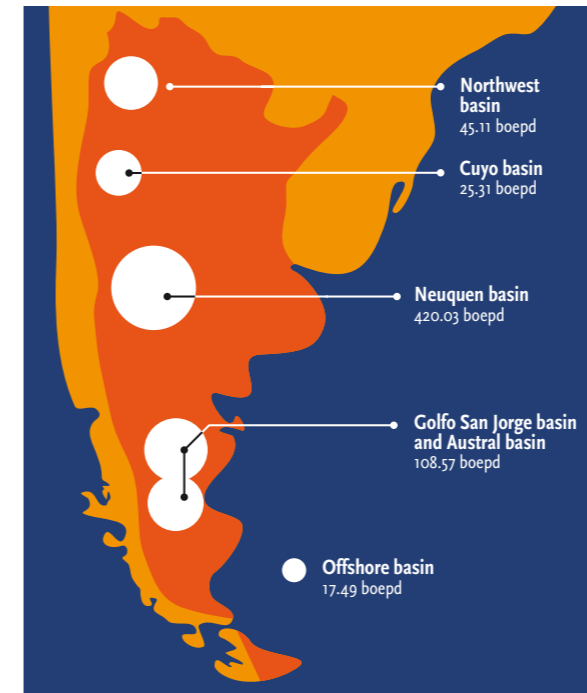


of Chubut and with a capacity of 314,000 m<sup>3</sup>; and Caleta Olivia, located in the province of Santa Cruz and with a storage capacity of 246,000 m<sup>3</sup>.

YPF also holds a 30% share in Oiltanking Ebytem, the operator of the Puerto Rosales maritime terminal, with a capacity of 480,000 m<sup>3</sup>, and of the extension of the Puerto Rosales-La Plata oil pipeline from Brandsen to the ESSO refinery in Campana. The installations also include a crude oil storage and distribution plant situated in Formosa, with an operational capacity of 19,000 m<sup>3</sup>.

In 2008, YPF completed the first liquefied natural gas regasification operation in South America

YPF HYDROCARBON BASINS



YPF REFINERIES



### Marketing

In Argentina, YPF has a network of 1,678 service stations, 1,642 of which are company managed and the remainder form part of Repsol YPF's 50% stake in Refinor, a company with a refinery located in Campo Duran and a Refinor brand service station network located mainly in the country's north-eastern provinces. This represents almost a third of the total number of sales points in Argentina, making the Group the leader in this market, as is the case in Spain.

In Argentina, YPF's chemical business focuses mainly on the manufacture of industrial

products, including a wide range of raw materials for chemical, industrial and agricultural activities. Production is located at the Ensenada, Plaza Huincul and Bahia Blanca complexes. Production of urea and ammonia in Argentina is carried out through Profertil, a joint venture with Agrium.

YPF is the largest LPG producer in Argentina. On the retail market it sells bottled and bulk LPG on the domestic, commercial and industrial markets, with a 34.8% market share. Until May 2005, the market was liberalized, although since 2002 agents reached agreements with the

Administration on stability of prices for butane. After 2005 the new LPG Law stipulates that the Energy Department will establish quarterly wholesale prices for butane and propane and will recommend maximum retail prices for bottled gas for domestic use. Distribution of bottled LPG is carried out entirely through distributors who in turn resell the product to the sales points.

# Gas Natural SDG

Gas Natural SDG's operating revenue increased by 7.6% to €555 million. This growth is largely due to the positive performance of the electricity business in Spain as a result of improved prices in the electricity pool, the incorporation of the Mexican power business in 2008 and growth in distribution activities in Latin America.

Investments in 2008 amounted to €894 million, an increase of 37%, mainly attributable to the financial investment carried out for the acquisition of a percentage stake in the electricity company Union Fenosa. Excluding this operation, material investments were slightly lower than the previous year and were applied above all to gas and electricity distribution activities.

Through its 30.9% stake in Gas Natural SDG, Repsol participates in the entire gas value

chain, from supply to distribution and marketing.

Through the Repsol-Gas Natural LNG (Stream) joint venture, the company consolidated its position in 2008 as the world's third-ranking company in terms of volume of liquefied natural gas (LNG) transported. Founded in 2005, the objective of this joint venture company is to maximize the value of its partners' contracts through efficient management and marketing, as well as facilitating access to LNG supply sources and strategic markets.

## Sales volume

Gas distribution in Spain contributed 34.6% of Gas Natural's results, with sales for regulated activity amounting to 270,073 GWh. The distribution network increased by 6.9% to 48,578 kilometres. Sales in Latin

America increased 16.2% to 208,408 GWh and the distribution network increased 2.8% to 61,196 kilometres.

In 2008, Gas Natural SDG strengthened its presence on the Italian market with the acquisition of the Pitta Costruzioni Group, which operates in the Puglia region in southern Italy, for the sum of €30 million. This acquisition, together with the incorporation of Italmeco at the end of 2007, has enabled Gas Natural SDG to increase its distribution area in Italy, which now comprises 187 municipalities in eight regions: Molise, Abruzzo, Puglia, Calabria, Basilicata, Campania and Lazio. In 2008, gas sales in Italy amounted to 2,933 GWh, there were 397,000 supply points and the distribution network totalled 5,521 kilometres.



Gas pipes for use at the Repsol Technology Centre located in Mostoles (Spain).

GAS NATURAL SDG

Millions of euros	2007					2008				
	1 q	2 q	3 q	4 q	TOTAL	1 q	2 q	3 q	4 q	TOTAL
Operating income	849	723	729	853	3.154	1.031	963	1.017	1.199	4.210
EBITDA	183	158	184	192	717	230	203	209	206	848
Operating profit	149	119	123	125	516	157	130	136	132	555
Investments	48	74	99	430	651	54	72	598	170	894

SALES

BCM	2004	2005	2006	2007	2008
Spain	20.99	23.36	23.11	22.2	21.2
Latin America	7.92	8.59	9.19	9.92	12.4
Rest of the world	3.94	4.16	3.9	4.34	4.9
<b>TOTAL SALES</b>	<b>32.85</b>	<b>36.11</b>	<b>36.2</b>	<b>36.4</b>	<b>38.5</b>

NUMBER OF CLIENTS

Millions	2004	2005	2006	2007	2008
Spain	4.8	5.1	5.4	5.7	5.8
Latin America	4.5	4.8	4.9	5.1	5.3
Rest of the world	0.3	0.3	0.3	0.4	0.4
<b>TOTAL NUMBER OF CLIENTS</b>	<b>9.6</b>	<b>10.2</b>	<b>10.6</b>	<b>11.2</b>	<b>11.5</b>

In the electricity industry, the company operates a total of 6,495 MW installed power for electricity generation divided between Spain, Puerto Rico and Mexico.

In Spain, Gas Natural SDG has operational combined cycle electricity generation installations of 3,600 MW. A group of 400 MW is currently under construction in Malaga and a further two, totalling 800 MW, in the port of Barcelona. In addition, an application is currently being processed for two 400 MW groups in Lantaron (Alava). In generation, the total of combined cycle plants together with installed capacity for cogeneration and wind generation produced 18,130 GWh at year-end 2008, that is, 6.8% more than in the previous year.

Petroleum Oil & Gas España (100% owned by Gas Natural)

is participating, jointly with Repsol, in the offshore well to be drilled in 2009 at the Montanazo concession off the coast of Tarragona. The preparatory work for this project was carried out in the fourth quarter of 2008.

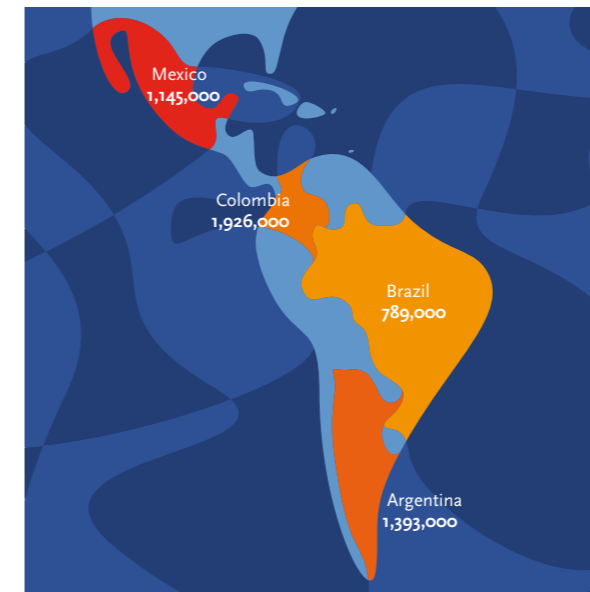
Repsol and Gas Natural, in consortium with other companies, have signed a shareholders' agreement to develop an integrated gas project in Angola. The company Gas Natural West Africa (60% Repsol-40% Gas Natural), which will manage this project, has been incorporated. In the initial phase, an appraisal will be made of the gas reserves before making the necessary investments for development and subsequent export of LNG. Progress has been made defining the seismic exploration and drilling work to be carried out in 2009.

With regards to the Gassi Touil project and following Sonatrach's decision in August 2007 to unilaterally terminate the agreement, the international arbitration process is still underway in which Repsol and Gas Natural will defend their rights and which will decide on the validity of the termination and on the damages caused. The arbitration court's decision is expected to be announced in 2009.

**Supplies**

Most natural gas consumed in Spain comes from imports. Algeria is the main source of supplies, although recent years have seen a significant effort to diversify. The supplies of the company Gas Natural SDG come from a number of sources. The group purchases LNG from

GAS NATURAL SDG CLIENTS IN LATIN AMERICA



Gas Natural SDG Milestones

- On 30 July 2008, Gas Natural SDG reached an agreement with the construction company ACS to purchase its entire 43.3% stake in the electricity company Union Fenosa.
- Gas Natural SDG consolidated its presence on the Italian market with the acquisition of the Pitta Costruzioni group.



producers in Algeria, Libya, Trinidad and Tobago, Nigeria and the Middle East and natural gas from producers in Algeria, Norway and Spain.

An important element of the Gas Natural SDG group's supply strategy is the Maghreb-Europe gas pipeline, which has a diameter of 48 inches and is 540 km long. It was completed in 1996 and connects the production fields in Hassi R'Mel, in Algeria, with the consumer centres in Spain and Europe through Morocco and the Strait of Gibraltar. From January 2005 its capacity was extended from 9 bcma to 11.7 bcma. Gas Natural SDG holds a 72.6% stake in the company Europe-Maghreb Pipeline Ltd. (EMPL), which holds the exclusive right to operate the section of the Maghreb-Europe gas pipeline located in Morocco

and the Strait of Gibraltar. The remaining 27.4% is owned by Transgas, a company which distributes natural gas in Portugal.

**Distribution and marketing**

Gas Natural SDG is the largest distributor of natural gas in Spain. Most sales are concentrated in the industrial sector and power stations.

In line with the planned schedule, on 1 July 2008 the gas sector in Spain was totally liberalized with the abolition of the regulated supply market, in accordance with Law 12/2007, published on 3 July 2007, and with Order ITC/2309/2007, published on 31 July 2007. Distribution companies have ceased tariffed supply activity and have created last resort supply. Royal Decree 1968/2007, published on 28 July 2007, regulates the

introduction of last resort supply in the natural gas sector, which is available to consumers connected to gas pipelines with pressures less than or equal to 4 bar and with an annual consumption of less than 3 GWh may take part in. Gas Natural SDG is one of the companies which have undertaken a commitment to last resort supply.

Repsol YPF participates, through Gas Natural SDG, in the distribution of natural gas in Argentina, Colombia, Brazil and Mexico to 5.25 million clients.

The group participates in the distribution of natural gas in six of the largest Latin American cities: Mexico City, Monterrey, Santafe de Bogota, Buenos Aires, Rio de Janeiro and Sao Paulo. In general, prices to end consumers are regulated. In Argentina and Mexico there is a market of industrial



## The acquisition of Union Fenosa represents a significant step forward in the development of Gas Natural SDG and its strategy of integration of gas and electricity, and will accelerate compliance with the 2008–2012 Strategic Plan

clients authorized to freely choose their supplier based on a minimum level of consumption.

In July 2004, Gas Natural SDG closed the acquisition of Enron's stake in the Compañía Distribuidora de Gas de Rio de Janeiro (CEG) and CEG RIO, and the group subsequently increased its holdings in these companies to 54.16% and 72% respectively. In Brazil, Gas Natural SDG distributes natural gas in the metropolitan area and state of Rio de Janeiro and, since the year 2000, in the southern region of the state of Sao Paulo, with a total of 789,000 clients.

In Colombia, the group distributes in Bogota, the Cundi-Boyacense area and the eastern region of the country, with a total of 1.9 million clients. In Mexico, Gas Natural SDG is present in the

cities of Nuevo Laredo, Saltillo, Toluca, Monterrey and the Bajío and Mexico City areas, and has 1.1 million clients. Finally, in Argentina, the group participates, through Gas Natural BAN, in distribution of gas in the north of Buenos Aires, where it has 1.4 million clients.

### Infrastructure

Enagas is the company which owns most of the gas transport infrastructures in Spain. After the initial public offering (IPO) in June 2002 by Gas Natural SDG, the company has reduced its stake in Enagas (at 31 December 2008 it held 5%).

### Electricity

The Repsol Group participates in electricity generation and marketing projects which enable it to make a profit from its natural

gas reserves and consolidate its profile as a diversified company in Spain and Latin America.

### Acquisition of Union Fenosa

On 30 July 2008, Gas Natural SDG reached an agreement with ACS to purchase its entire 45.3% stake in Union Fenosa at an effective price of €18.33 per share, which values the electricity company's share capital at €16.757 billion. In accordance with the terms of the agreement signed, in early August 2008 Gas Natural acquired a 9.9% stake in Union Fenosa from ACS for the sum of €1.675 billion.

In accordance with the agreement signed with ACS, the purchase price was adjusted, deducting the €0.28 per share dividend paid by Union Fenosa on 2 January 2008. The resulting adjusted price is €18.05 per share.

On 12 December 2008, Gas Natural SDG purchased a 4.7% stake in Union Fenosa from Caixanova. Therefore, at 31 December 2008 Gas Natural's stake in Union Fenosa amounted to 14.7%. Once the threshold of 30% of voting rights in Union Fenosa had been exceeded, Gas Natural SDG was under the obligation to submit a takeover bid, within one month, for the remaining shares in the electricity company. Therefore, in September 2008 the company initiated the process for securing the corresponding permits from the appropriate authorities.

The acquisition of Union Fenosa represents a significant step forward in the development of Gas Natural SDG and its strategy of becoming a leading integrated gas and electricity company,

and will enable it to accelerate compliance with the 2008-2012 Strategic Plan. This will take it to a new level as an integrated gas and electricity operator due to the complementary nature of both companies' within the whole value chain of the energy sector.

In July 2008, Gas Natural SDG signed an agreement with 10 banking institutions to finance the acquisition of 100% of Union Fenosa, including the stakes held by ACS and Caixanova as well as the subsequent takeover bid. Nineteen institutions are currently participating in the banking syndicate and the process of general syndication has commenced.

In order to ensure a sound, flexible financial structure, Criteria and Repsol have undertaken to make contributions to Gas Natural SDG's equity, for the amount

and in the manner necessary for the company to obtain a consolidated rating immediately after settlement of the takeover bid of at least BBB (stable) and Baa2 (stable) from S&P and Moody's respectively, and for a maximum amount of €1.903 billion and 1.6 billion respectively.

Gas Natural SDG has commenced the process for carrying out the planned capital increase for the sum of €3.5 billion within the context of the Union Fenosa acquisition transaction. On 30 January 2009, its Board of Directors agreed to convene an Extraordinary General Meeting for the purpose of authorizing the issue of new shares with preferential subscription rights.