



DIVISION OF  
CORPORATION FINANCE

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

September 29, 2010

Mr. Fernando Ramírez Mazarredo  
Chief Financial Officer  
Paseo de la Castellana 278-280  
28046 Madrid, Spain

**Re: Repsol YPF, S.A.  
Form 20-F for Fiscal Year Ended December 31, 2009  
Filed June 29, 2010  
File No. 1-10220**

Dear Mr. Ramírez Mazarredo:

We have reviewed your filing and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days by amending your filing, by providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your filing and the information you provide in response to these comments, we may have additional comments.

Form 20-F for Fiscal Year Ended December 31, 2009

General

1. We note from the disclosure on page 40 that during the last three fiscal years your refineries processed crude oil originated from the Middle East, a region generally understood to include Iran, Syria, and Sudan. Also, you state on page 36 that you held a 25% stake in the Persian LNG Project in Iran as of December 31, 2009. Further, we note on pages 27-29 that you continue to operate in Cuba. In addition, we are aware of publicly available information indicating that on several occasions you have purchased light crude from the Syrian state-owned oil company Sytrol.

As you know, Cuba, Iran, Sudan, and Syria are identified by the U.S. State Department as state sponsors of terrorism, and are subject to U.S. economic sanctions and export controls. please provide us with information regarding your contacts with Cuba and Iran since your letter to us dated September 28, 2007, and describe to us your contacts with Syria and any contacts you have had with Sudan during the last three fiscal years and the

subsequent period. Your response should describe any investments and capital expenditures you have made in any of those countries, and any equipment, technology, or services you have provided into any of those countries, directly or indirectly, as well as any agreements, commercial arrangements, or other contacts you have had with the governments of those countries or entities controlled by those governments. Your response should include the amounts you have paid to each of the referenced countries, as applicable, for the purchase of crude oil and natural gas.

2. Please discuss the materiality of any contacts with Cuba, Iran, Sudan, and Syria that you describe in response to the foregoing comment, and whether those contacts constitute a material investment risk for your security holders. You should address materiality in quantitative terms, including the approximate dollar amounts of revenues, assets, and liabilities associated with each of Cuba, Iran, Sudan, and Syria for the last three fiscal years and the subsequent period. Also, address materiality in terms of qualitative factors that a reasonable investor would deem important in making an investment decision, including the potential impact of corporate activities upon a company's reputation and share value. As you know, various state and municipal governments, universities, and other investors have proposed or adopted divestment or similar initiatives regarding investment in companies that do business with U.S.-designated state sponsors of terrorism. Your materiality analysis should address the potential impact of the investor sentiment evidenced by such actions directed toward companies that have operations associated with Cuba, Iran, Sudan, and Syria.
3. In light of recent events in the Gulf of Mexico, please review your disclosure to ensure that you have disclosed all material information regarding your potential liability in the event that your employees or business partners are involved in an event that leads to property damage, personal injury, death or the discharge of hazardous materials into the environment. For example, and without limitation, please address the following:
  - Disclose your insurance coverage with respect to any liability related to any such event. Such disclosure should address the types of claims covered, and the applicable policy limits and deductibles. For example, and without limitation, such disclosure should address your insurance coverage with respect to any liability related to any resulting negative environmental effects.
  - Disclose your related indemnification obligations and those of your customers, if applicable.
  - Disclose whether your existing insurance would cover any claims made against you by or on behalf of individuals who are not your employees in the event of personal injury or death.
  - Provide further detail on the risks for which you are insured for your offshore operations.

Such disclosure should be set forth in the “Information on Repsol YPF,” “Operating and Financial Review and Prospects” and “Risk Factors” sections of your annual report, as applicable. Please provide a sample of your proposed disclosure for our review. In responding to this comment, please consider all your products and services, not just those involved in offshore operations.

4. In this regard, discuss what remediation plans or procedures you have in place to deal with the environmental impact that would occur in the event that any of an oil spill or leak from one of your offshore operations.
5. We note your disclosure that one of the main strategic priorities of your Upstream and LNG divisions is leveraging successful exploration activity in attractive upstream areas worldwide such as Brazil and the Gulf of Mexico. We further note your statement that, as of the date of this annual report, the drilling of the Buckskin exploratory well had been temporarily suspended at the U.S. Minerals Management Service’s request. Please disclose what effect, if any, the moratorium on Gulf of Mexico activities is expected have on your strategic plans, business and results of operations.

#### 2.2 Oil and Gas Reserves, page 14

6. We note your summary table of oil and gas reserves on page 15 and your table of changes in proved reserves on page 16 do not separately present reserves associated with your equity method investments. Please tell us how you considered separately presenting such reserves in these tables to enhance investor understanding of your operations.

#### Note (2) Regulatory Framework, page F-13

#### Minimum Safety Stock, page F-15

7. You explain that Royal Decree 1766/2007 regulates the obligation to maintain a minimum stock in the oil and natural gas sectors, and that the Royal Decree “increases the number of minimum safety stock days from 90 to 92 compulsory days as of January 1, 2010.” Please modify your disclosure to clarify what the 90 to 92 days represent (i.e. production, sales, etc.), and, tell us where such assets are reported within your consolidated balance sheet. If such items are reported as inventory, please demonstrate to us using the guidance in IAS 2 why you believe such presentation is appropriate given that such assets appear to be required by law to be maintained.

#### Note (10) Impairment of Assets, page F-46

8. On the top of page F-47 we note your disclosure regarding the reversal of an impairment primarily as a result of “the reassessment in 2009 of the configuration of cash generating units (CGUs) into which the Argentine upstream assets are grouped.” Paragraph 72 of

IAS 36 explains that cash-generating units shall be identified consistently from period to period, unless a change is justified. Please describe for us the underlying facts and circumstances in the Argentina upstream operations that led to a change in the configuration of your CGUs.

Note (25) Tax Matters, page F-90

Income tax expense for accounting purposes, page F-92

9. Within the tables beginning on page F-92, you disclose tax credits related to your Spanish companies totaling 618 million Euros, 996 million Euros, and 299 million Euros for the years ended December 31, 2009, 2008 and 2007 respectively. We also note your disclosure indicating the tax credits are primarily due to the mechanics to avoid double taxation and from investments made. Please tell us in more detail, with a view towards disclosure, to what the tax credits relate, the periods for which you expect to continue to record such credits, and how the amount of such credits are determined. Please also tell us what consideration you have given to including a discussion of such tax credits within the discussion of your results of operations in Section 3.2 of your Form 20-F.

Supplementary Information on Oil and Gas Exploration and Production Activities (Unaudited Information), page F-189

Estimated proved net developed and undeveloped oil and gas reserves, page F-192

10. Please tell us why you have not separately disclosed the quantities of proved undeveloped oil and gas reserves, as required by ASC 932-235-50-4.
11. Please also tell us why you have not separately disclosed the net oil and gas reserve quantities related to investments accounted for using the equity method, as required by ASC 932-235-50-8.

Exhibit 99.1, 99.2 and 99.3

12. The closing paragraph of each reserve statement states in part:

GCA reserves the right to approve, in advance, the use and context of the use of any results, statements or opinions expressed in this report. Such approval shall include, but not be confined to, statements or references in documents of a public or semi-public nature such as loan agreements, prospectuses, reserve statements, press releases etc. This report has been prepared for RY and should not be used for purposes other than those for which it is intended.

Please obtain and file revised reserve statements which retain no language that could suggest either a limited audience or a limit on potential investor reliance.

Exhibit 99.4

13. While we understand that there are fundamentals of physics, mathematics and economics that are applied in the estimation of reserves, we are not aware of an official industry compilation of such “generally accepted petroleum engineering and evaluation principles.” With a view toward possible disclosure, please explain to us the basis for concluding that such principles have been sufficiently established so as to judge that the reserve information has been prepared in conformity with such principles.
14. We note the following language in Netherland Sewell’s report:

In evaluating the information at our disposal concerning this report, we have excluded from our consideration all matters as to which the controlling interpretation may be legal or accounting, rather than engineering and geoscience.

It does not appear that NSAI has “excluded from its consideration all matters as to which the controlling interpretation may be legal or accounting, rather than engineering and geosciences.” In this regard, we note that the definition of “reserves” in Rule 4-10 (a)(26) of Regulation S-X indicates that “there must exist, or there must be a reasonable expectation that there will exist, the *legal* right to produce or revenue interest in the production.” We also note that the definition of proved reserves is contained in Regulation S-X which is an *accounting* regulation. Therefore, we believe NSAI should address this limiting language in one of the following ways, as deemed appropriate:

- Remove the sentence referenced above;
- Replace the referenced sentence with a new statement that is precisely tailored to the expertise of NSAI and the circumstances under which the report was prepared.

Also, ensure that the report discloses the assumptions, data, methods and procedures used pursuant to Item 1202(a)(8)(iv) of Regulation S-K.

Exhibit 99.5

15. Obtain a revised report from the third party engineer that contains a statement as to whether the reviewed properties included all subject properties.
16. The closing paragraph states in part that the report “was prepared for the exclusive use and sole benefit of Repsol YPF Company and may not be put to other use without our prior written consent for such use.” Please obtain and file a revised version which retains no language that could suggest either a limited audience or a limit on potential investor reliance.

17. While we understand that there are fundamentals of physics, mathematics and economics that are applied in the estimation of reserves, we are not aware of an official industry compilation of such “generally accepted petroleum engineering and evaluation principles.” With a view toward possible disclosure, please explain to us the basis for concluding that such principles have been sufficiently established so as to judge that the reserve information has been prepared in conformity with such principles.

#### Engineering Comments

##### Risk Factors, page 3

The oil and gas industry is subject to particular operational risks, and Repsol YPF depends on the cost-effective acquisition or discovery of, and, thereafter, development of new oil and gas reserves, page 6

18. We note your statement, “The operations of Repsol YPF may be curtailed, delayed or cancelled as a result of weather conditions, mechanical difficulties, hydrocarbons spills or leaks, shortages or delays in the delivery of equipment and compliance with governmental requirements.” Please amend your document to discuss the consequences of loss of hydrocarbon containment during drilling, transportation and processing. Address offshore operations, such as in the Gulf of Mexico, separately.

##### Repsol YPF’s oil and natural gas reserves are estimates, page 7

19. We note your statement, “Many of these factors, assumptions and variables involved in estimating proved reserves are beyond Repsol YPF’s control and may prove to be incorrect over time.” Please amend your document to discuss those reserve estimation items over which you have control, e.g. initial hydrocarbons in place, recovery efficiencies, initial production rates.

##### Information on Repsol YPF, page 9

##### Oil and Gas Reserves, page 14

20. We note your statement, “In determining net reserves, we exclude from our reported reserves royalties due to others, whether payable in cash or in kind, where the royalty owner has a direct interest in the underlying production and is able to make lifting and sales arrangements independently.” Please tell us the countries in which royalty owners satisfy these conditions.

Changes in Repsol YPF's proved undeveloped reserves during 2009, page 18

21. We note your statement, "As at December 31, 2009, some of the proved undeveloped reserves have remained undeveloped for five years or longer, associated mainly with projects in Trinidad and Tobago that we expect will be executed as needed to meet the delivery commitments under existing gas contracts and to ongoing development projects in Africa and South America, which are associated with the installation of compression facilities and construction of gas pipelines, respectively." Please tell us the figures for these PUD volumes that have remained undeveloped for more than five years and discuss those factors that prevent the development of these undeveloped volumes. Address the factors over which you have control and those over which you have no control. Please tell us if you have made a final investment decision for all these claimed PUD reserves. You may refer to our "Compliance and Disclosure Interpretations" at <http://www.sec.gov/divisions/corpfin/guidance/oilandgas-interp.htm>.

Internal Controls on Reserves and Reserves Audits, page 20

22. We note your statement, "These [third party reserves] audits covered 866 mmboe, representing approximately 41.5% of Repsol YPF's aggregate estimated proved reserves as of December 31, 2009 (2,084 mmboe)." Please amend your document to disclose the portion of your proved undeveloped reserves that were audited by your third party engineers and describe the qualifications of the person(s) overseeing the reserve audits.
23. Please expand your statement, "For the areas externally audited at September 30, 2009, the estimated proved reserves at year-end were internally adjusted as a result of movements during the fourth quarter of 2009." to disclose your figures for the proved reserves at September 30, 2009 assigned to the properties audited by your third party engineer and reported in Exhibits 99.1, 99.2 and 99.3

Operations, page 21

Peru, page 32

24. We note your statement, "The important discovery made through the Kinteroni exploratory well in 2008 was one of the greatest discoveries in the world that year according to IHS." With a view to possible disclosure, please furnish to us technical support for this statement.

Venezuela, page 33

25. We note your statement, "In September 2009, Repsol YPF made a very significant gas discovery with the Perla 1X drill in the marine block Cardon IV. This is one of the most important discoveries in Venezuela and the largest gas discovery in the history of Repsol YPF. As of December 31, 2009, the field had an estimated gas volume of 8 trillions of

cubic feet (TCF) and an estimated condensate volume of approximately 100 mmbbl, located in an estimated area of 33 km<sup>2</sup> with a thickness of 240 meters.... The preliminary evaluation of the positive results obtained by the Perla 2X well as of April 2010, indicate that resources available in the field could be 30% higher than estimated as of December 31, 2009.” With a view to possible disclosure, please furnish to us technical support for the statement that this is “the largest gas discovery in the history of Repsol YPF.”

26. Note that Instruction to Item 1202 of Regulation S-K states “Estimates of oil or gas resources other than reserves, and any estimated values of such resources, shall not be disclosed in any document publicly filed with the Commission...”. Since the 8 TCF of gas and 100 million barrels of condensate are not reserves figures, they should not be disclosed. Please revise to remove those figures.

Supplementary Information on Oil and Gas Exploration and Production Activities (Unaudited Information), Page F-189

Standardized measure of discounted future net cash flows and changes therein relating to proved oil and gas reserves, page F-197

27. Please explain to us your procedures in determining the benchmark oil and gas prices and the average adjusted prices you used to estimate your 2009 proved reserves and to determine the future cash inflows of your 2009 standardized measure. Include the 2009 oil and gas prices used for the six geographic areas.
28. We note the line item “Future production and abandonment costs” in your presentation of the Standardized Measure for the three prior years. Subparagraph 932-235-50-31(b) of ASC 932 (formerly FAS 69) states that significant estimated development expenditures shall be presented separately from estimated production costs. Since abandonment costs are correctly included with development costs, please amend your document to present line items that consist only of production costs and only of development costs in compliance with ASC 932.

Exhibits 99.1, 99.2 99.3, 99.4 and 99.5

29. We note the omission in these third party audit reports of either benchmark oil and gas prices or the average adjusted product prices used to estimate proved reserves as contemplated in Item 1202(8)(a)(v) of Regulation S-K. Please obtain a revised report from the third party engineer that contains both the 12 month average benchmark prices and the average adjusted product prices used to estimate proved reserves.

Exhibit 99.4

30. We note that your third party engineer reported an estimate for 3.3% of your proved reserves. Please revise the report to disclose the portion of your proved undeveloped reserves that were estimated.

Exhibit 99.5

31. We note the statement, “The conclusions of our third party studies, completed on February 16, 2009, are discussed herein.” Affirm to us the date on which these studies, effective December 31, 2009, were concluded.
32. We note that your third party engineer reported an estimate for 26% of your proved reserves. Please procure a report that also discloses the portion of your proved undeveloped reserves that were estimated.
33. We note that the report discloses the estimated reserves as “located in the Caribbean and South America”. Please procure a report that presents at least the specific countries in which these reserves are located.

Closing Comments

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. Since the company and its management are in possession of all facts relating to a company’s disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In responding to our comments, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Mr. Fernando Ramírez Mazarredo  
Repsol YPF, S.A.  
September 29, 2010  
Page 10

You may contact Mark Wojciechowski at (202) 551-3759 or, in his absence, Mark Shannon, Branch Chief, at (202) 551-3299 if you have questions regarding comments on the financial statements and related matters. You may contact Ronald Winfrey, Petroleum Engineer, at (202) 551-3704 with any questions about engineering comments. Please contact Parker Morrill at (202) 551-3696 or, in his absence, Anne Nguyen Parker, Branch Chief, at (202) 551-3611 with any other questions.

Sincerely,

H. Roger Schwall  
Assistant Director