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FORM 6-K

YPF SOCIEDAD ANONIMA - YPF

Filed: February 08, 2012 (period: February 08, 2012)

Report of foreign issuer rules 13a-16 and 15d-16 of the Securities Exchange Act

FORM 6-K
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
Report of Foreign Issuer

**Pursuant to Rule 13a-16 or 15d-16 of
the Securities Exchange Act of 1934**

For the month of February, 2012

Commission File Number: 001-12102

YPF Sociedad Anónima
(Exact name of registrant as specified in its charter)

Macacha Güemes 515
C1106BKK Buenos Aires, Argentina
(Address of principal executive office)

Indicate by check mark whether the registrant files or will file
annual reports under cover of Form 20-F or Form 40-F:
Form 20-F Form 40-F

Indicate by check mark if the registrant is submitting the Form 6-K
in paper as permitted by Regulation S-T Rule 101(b)(1):
Yes No X

Indicate by check mark if the registrant is submitting the Form 6-K
in paper as permitted by Regulation S-T Rule 101(b)(7):
Yes No X

YPF Sociedad Anónima

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-

Autonomous City of Buenos Aires, February 8, 2012

Messrs
Buenos Aires Stock Exchange

Re.: Unconventional resources and reserves at
Vaca Muerta formation

The purpose of this letter is to comply with the requirements of Chapter VII, Article 23 of the Regulations of the Buenos Aires Stock Exchange.

We hereby inform you that, at the request of YPF, Ryder Scott, an International company engaged in the certification of reserves and hydrocarbon resources, conducted an external review of its reserves and unconventional contingent and prospective resources (Shale oil/gas) from the Vaca Muerta formation.

The technical evaluation of proved reserves complies with the formal requirements foreseen by the National Securities Commission of Argentina and the U.S. Securities and Exchange Commission. Likewise, the evaluation of contingent and prospective resources complies with the formal requirements foreseen by the National Securities Commission of Argentina and the guidelines from the Petroleum Resources Management System of the Society of Petroleum Engineers.

We attach to this letter the complete report with the results of the external review.

Yours faithfully,

GUILLERMO REDA

Market relations officer

YPF, S.A

According to the evaluation performed by Ryder Scott Petroleum Consultants, an International consulting firm on reserves and hydrocarbon resources

YPF increases its prospects on resources and reserves from the hydrocarbon finding at Vaca Muerta formation to 22,807 Mboe¹

- Gross prospective resources stand at 21,167 Mboe within an area of 8,071 Km² (where YPF holds a net interest of 5,016 Km²).
- Gross contingent resources reach 1,525 Mboe (over an area of around 1,100Km², where YPF holds a net interest of 834 Km²). Additionally, 116 MBoe have been recorded on YPF 's reserves log (3P), from the same area.

At the request of YPF, Ryder Scott, an International company engaged in the certification of reserves and hydrocarbon resources, conducted an external review of its reserves and unconventional contingent and prospective resources (Shale oil/gas) from Vaca Muerta formation, located at certain concessions in Neuquina basin. The technical evaluation of proved reserves complies with the formal requirements foreseen by the National Securities Commission of Argentina and the U.S. Securities and Exchange Commission. Likewise, the evaluation of contingent and prospective resources complies with the formal requirements foreseen by the National Securities Commission of Argentina and the guidelines from the Petroleum Resources Management System of the Society of Petroleum Engineers.

Vaca muerta formation is estimated to cover a total area of 30,000 Km² (7.4 million acres), in which YPF holds rights over 12,000 Km² (3 million acres). Initial results would reveal that 77% of its area would be oil and the rest would be distributed between wet gas and dry gas.

The study carried out by Ryder Scott covers a total area of 8,071 Km² (1,994,378 acres), where YPF holds a net interest of 5,016 Km² (1,239,407 acres) within the Neuquina basin.

This report breaks down total volumes into prospective resources, contingent resources and proved, probable and possible reserves (definitions are detailed in exhibit IV).

¹ "Resources" are not to be confused with "proved reserves" and may be recognized as such only once the applicable regulations and requirements for recording proved reserves, required by the *Comisión Nacional de Valores* and the Securities and Exchange Commission are met.

Reserves and resources from Vaca Muerta formation

	Gross (100%)				YPF Net			
	Oil (Mbbbl)	Condensate (Mbbbl)	Gas (Mbep)	Total (Mbep)	Oil (Mbbbl)	Condensate (Mbbbl)	Gas (Mbep)	Total (Mbep)
Prospective resources	5,732	396	15,038	21,167	3,966	224	8,161	12,351
Contingent resources	1,115	0	410	1,525	883	0	330	1,213
Reserves P3	81	0	35	116	81	0	35	116
Possible	33	0	15	48	33	0	15	48
Probable	25	0	11	35	25	0	11	35
Proved	23	0	10	33	23	0	10	33

Sources: Ryder Scott

1 bep = 5,615 thousand cubic feet of gas

These studies have determined, within an area of 1,100 Km², an estimate of associated contingent resources of 1,115 Mbbbl of oil and 410 Mbep of gas, i.e. a total of 1,525 Mbep. To YPF's interest, these contingent resources would mean 883 Mbbbl of oil and 330 Mbep of gas, a total of 1,213 Mbep.

In order to reach the present estimates on the potential in this area, YPF has made technical efforts in record time becoming a pioneer in the exploration of unconventional resources in Argentina, after analyzing all successful technologies in USA and adapting them to the geologic requirements of the country. For that purpose, YPF counted on the cooperation of leading companies in the development of shale in USA, which, as a consequence of the expectations arising from the shale at Vaca Muerta, made the decision to enter into partnership with YPF for exploration purposes in several areas. YPF's technical team has been able to develop a project since 2009, which exploration, delineation and commencement phases in the development of the Vaca Muerta formation have demanded more than \$300 million. As of December 31, 2011 production had already reached over 700,000 barrels of oil equivalent coming from the Vaca Muerta formation.

The positive results achieved encourage YPF and the rest of operators to continue with the exploration activity to define the extension and productivity of the field as regards oil and gas and wet gas areas from the whole basin. Continuing with the activity, YPF, solely and jointly with several partners, will carry out the drilling and workover of 20 wells in 2012 to further research the potential of prospective resources

With the results to date, Argentina has the chance to replicate the revolution that unconventional hydrocarbons have meant for United States by a development of resources at Vaca Muerta formation.

The development of the area delineated by YPF, in 1,100 Km², with gross contingent resources of 1,525 Mbep, might make it possible to increase current oil production in Argentina by 50%. For that purpose, it would be necessary to undertake an investment plan (100% interest) of about \$28,000 million in coming years in order to drill about 2,000 productive oil wells, which would imply 60 additional drilling equipment units besides the existing ones in the country.

In case these positive results are confirmed on the exploratory wells under way in the gas area, the country's gas production might go up by 50%. In order do so, it would be necessary to

drill more than 1,000 wells as first step, involving an investment of over \$14.000 million in coming years and demanding, 40 additional drilling equipment units besides the existing ones in the country at present.

These 100 new additional drilling equipment units, for oil and gas, would do more than double the present Argentine fleet of 80 units.

If the exploration proved to be successful in the whole Vaca Muerta formation and immediate intensive development began in the area, current oil and gas production capacity of Argentina could double in 10 years time. In order to achieve so, it would be necessary to make a vast investing effort that would reach \$ 25,000 million per year to be able to develop the whole existing prospective resources.

A program of such magnitude demands an important capital contribution from international markets to Argentina, a powerful national industry (equipment, services, etc.) and competitive and highly technically qualified human resources since Argentina, in terms of securing all kind of resources, competes against other similar developments worldwide (United States of America, China, Australia, Eastern Europe, etc.).

EXHIBIT I INTRODUCTION TO UNCONVENTIONAL RESOURCES - SHALE GAS AND OIL

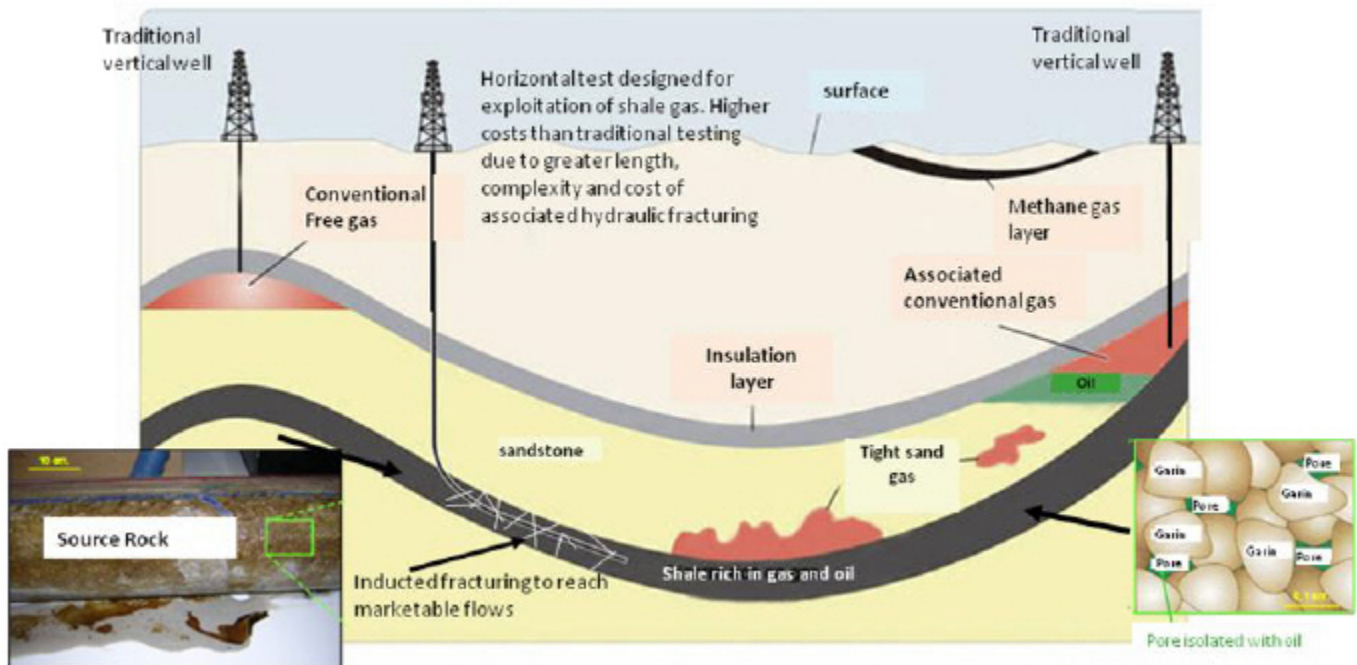
BACKGROUND

During more than 100 years the oil industry explored the subsoil and produced hydrocarbons from storage rocks generated in other rocks called source rock.

Part of the hydrocarbon generated in the source rock is expelled and due to pressure variation, it migrates to other rocks with storage capacity. The latter are known as Conventional Reservoirs. The rest of the hydrocarbon generated remains in the source rock.

Until the end of the twentieth century the oil and gas industry focused on exploiting Conventional Reservoirs. Decline in production from conventional reservoirs, technological development, and suitable economic conditions paved the way for the start in the exploitation of the hydrocarbon contained in source rocks (Shale reservoirs). The exploitation of unconventional resources opens new opportunities; it demands technological challenges and it bears higher costs.

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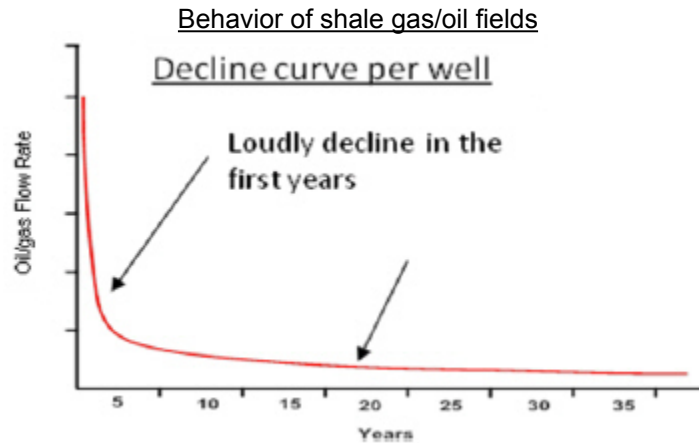
Features an behavior of shale oil and gas fields

Any basin having a production of conventional hydrocarbons in the past stands as a candidate to be explored in search of shale gas and oil.

One of the particular features of this type of fields is well behavior. They present modest initial productions that decline extraordinarily soon. In the first year production falls by 50-80% over average production on the first 30 days.

Its fast depletion forces permanent test drilling to avoid the decline of the field, at a rhythm and intensity so far unknown. This fact, together to the vast extension covered by this type of accumulations, leads to an intensive and continuous activity.

Fracturing tasks are crucial to obtain commercial flows. Massive use and utilization rates of said techniques needed in those fields were achieved just by half way through the last decade. New fracturing technologies applied to horizontal test drilling have also been developed. The cost of massive hydraulic fracturing accounts for up to 60% of test drilling total cost.



Production of shale gas, shale oil and other liquids in USA

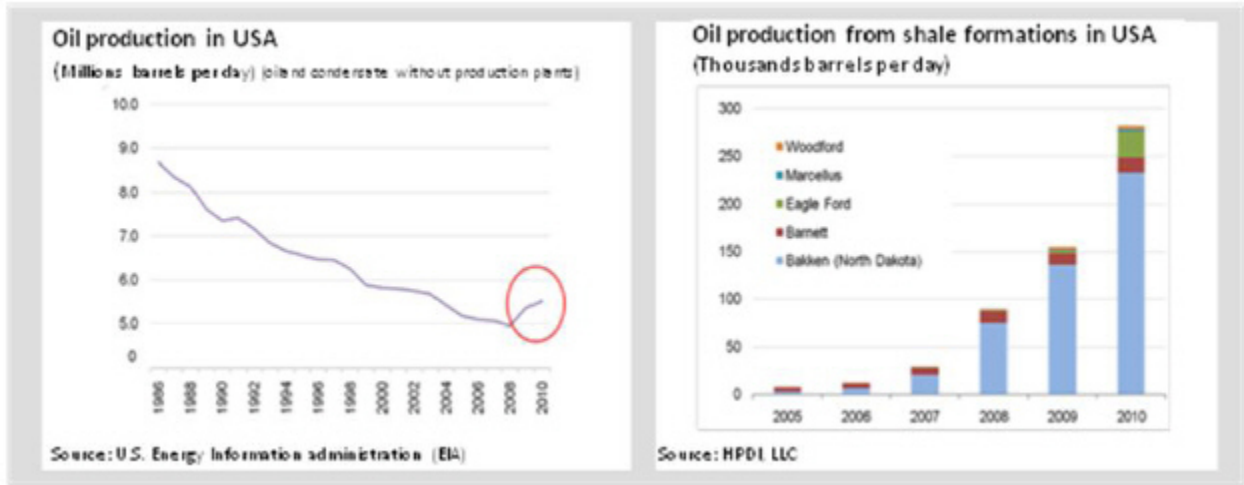
In USA and Canada several traditional producing basins have been revisited and there has been a boom of new and numerous opportunities for shale exploitation.

Over the last decade shale gas production in United States rocketed and currently, it accounts for 25% of total domestic production, offsetting the decline of conventional fields and reducing the quantity of LNG imports.

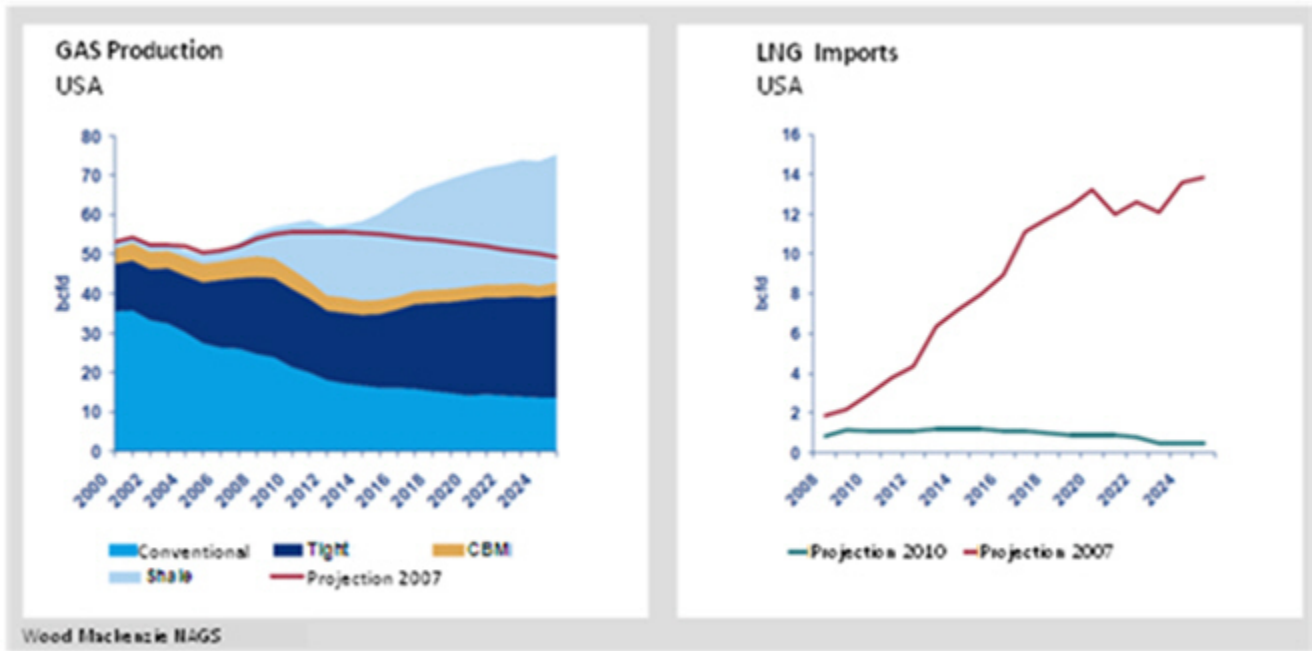
The production of shale oil has increased considerably since 2007 thanks to, mainly, the boom of the activity taking place in the play of Bakken in North Dakota and Eagle Ford in Texas, to which other shales have added in the last 2 years across the country, this allowing to reverse the down trend throughout more than 4 decades.

As a result of this new concept, the crude oil domestic production in USA is expected to reach 6.7 million barrels per day (Mbpd) in 2020 from the 5.5 Mbpd recorded in 2010 due to the growth of shale oil and despite the decline of the conventional production onshore.

Shale Oil in U.S.A



Shale Gas in U.S.A



Production of Shale Gas in U.S.A

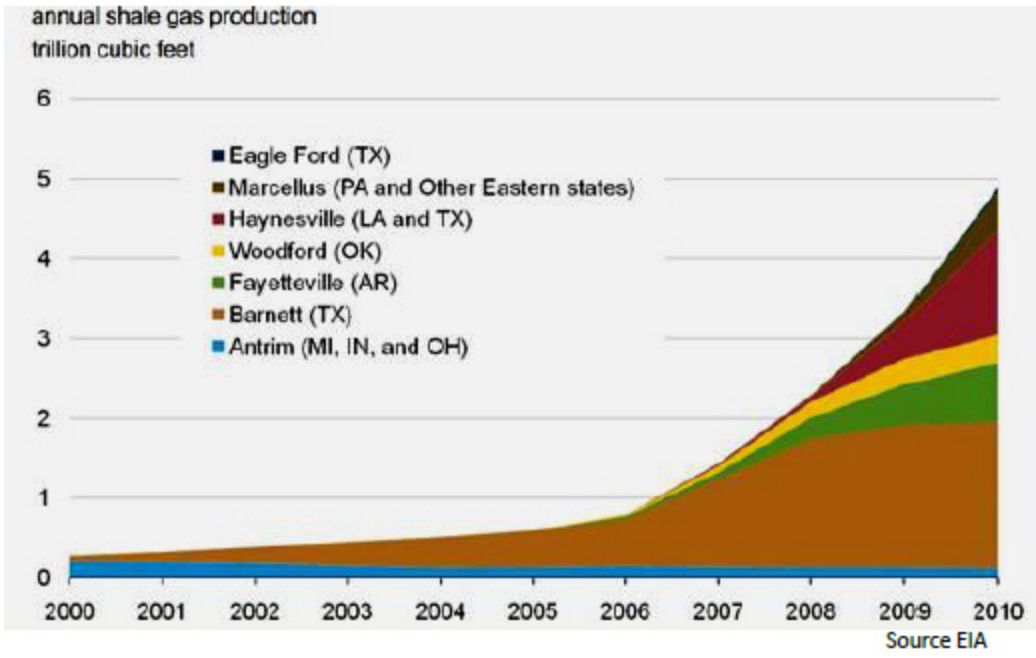


EXHIBIT II

IMMEDIATE POTENTIAL OF THE SHALE DEVELOPMENT AT VACA MUERTA BY YPF

Discovery background

Since the development of "shale" began in USA, YPF started applying the same techniques in Argentina. Initially YPF revised all the existing opportunities in the country and it selected the Vaca Muerta formation in the Neuquina basin to adapt what was going on in USA to the Argentine geology which proved to be successful. In the second half of the year 2010, it drilled 2 wells to which novel technologies were applied, not experienced before in Argentina and it discovered the capacity of Vaca Muerta to produce gas and oil of commercial grades.

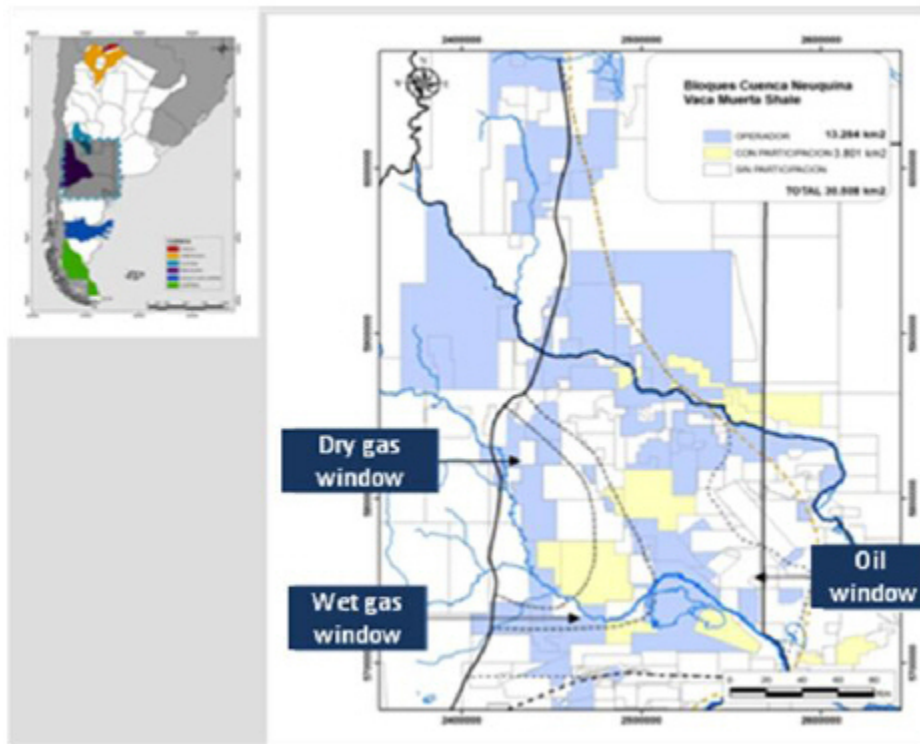
By the end of January 2012, YPF SA has drilled 28 new wells and re-completed 1 existing well in the blocks of Loma La Lata and Loma Campana, advancing in its delineation and development plan of unconventional resources in the Vaca Muerta formation.

Out of the total drilling abovementioned, 24 are vertical wells completed with stimulation treatments of between 2 and 4 stages of hydraulic fracturing. Currently, 20 of them produce crude oil of excellent quality out of upwelling, with initial flows, restricted by hole of 4 mm, between 180 and 600 boed. It is worth mentioning that 6 of them are productive without stimulation needs. The remaining 4 wells are awaiting termination.

Additionally, 4 horizontal wells have been drilled during the last months of 2011; evaluation is still pending.

Vaca muerta Shale

The Vaca Muerta formation expands over an area of about 30,000 Km² (7.4 million acres), from which YPF holds an interest over 12,000 Km² (3.0 million acres - 40% of the total). Initial results would reveal that 77% of its area would be in the oil area and the rest would be distributed between wet gas and dry gas.

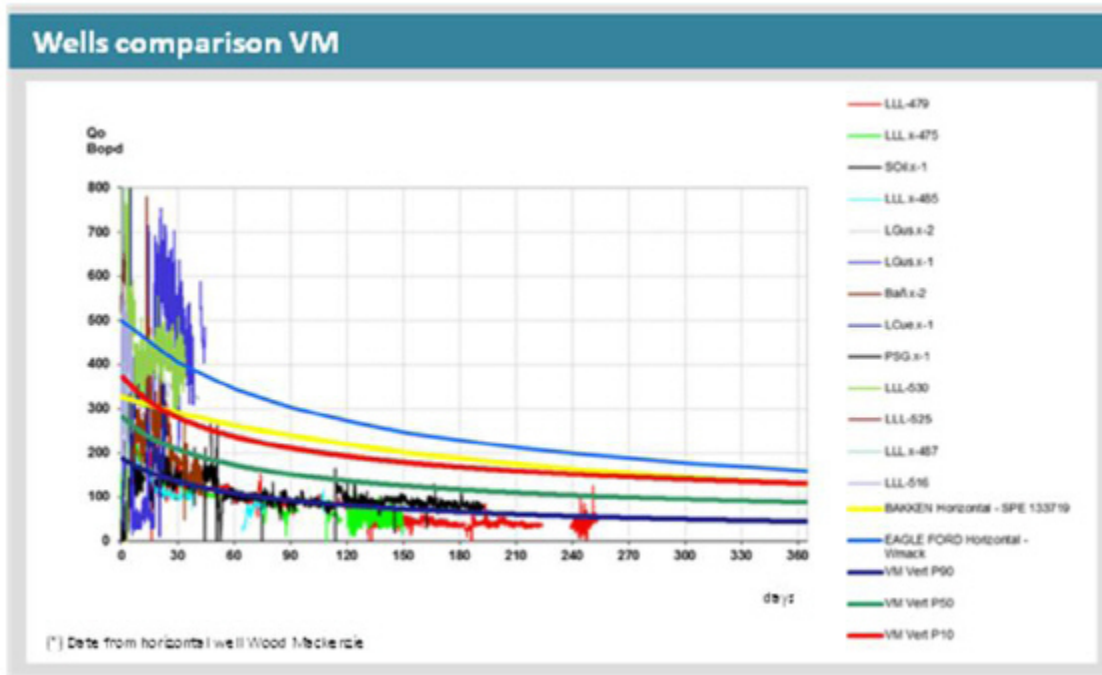


The analogy to shales from U.S. A shows Vaca Muerta has better features:

	Vaca Muerta	Barnett	Haynesville	Marcellus	Eagle Ford (*)	Balden
TOC (%)	6	5	2	12	4	12
Thickness (mts)	200	91	76	61	61	30
Depth(mts)	3,000	2,286	3,658	2,057	2,287	1,829
Area (Km ²)	30,000	16,726	23,310	245,773	5,180	51,800
Reservoir pressure (psi)	9,000	3,525	10,800	3,375	4,502	4,200
Pressure gradient (psi/ft)	0.65 – 1.0	0.47	0.90	0.50	0.60	0.70
STOOIP/Km2 (Mbbl/km ²)	33-58	-	-	-	22.0	3.9
OGIP/Km2 (Bcf/km ²)	-	25.3	30.8	6.1	-	-

Source: SPE, EIA, WM, UG Harts and YPF
 (*) oil windows

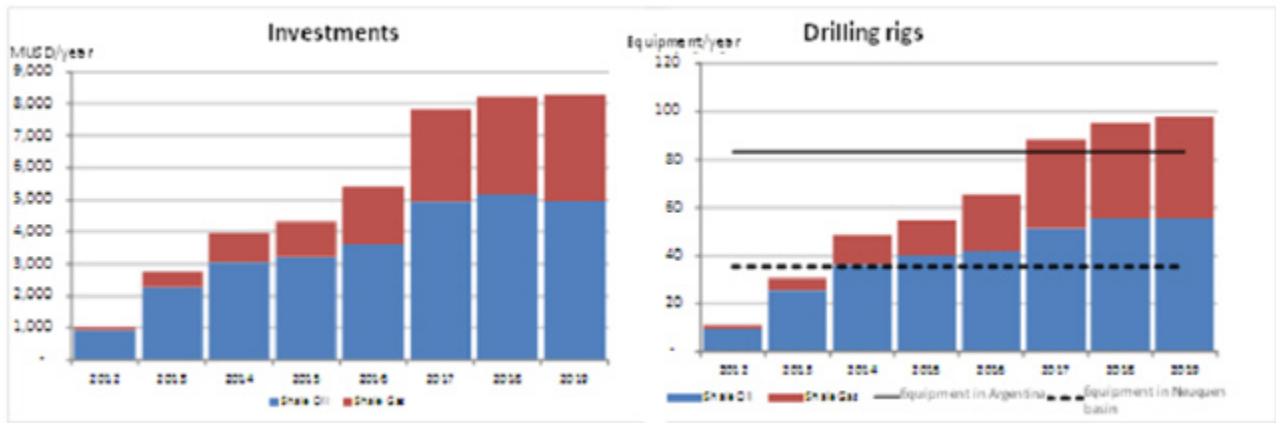
And the wells results to date in terms of production verify these predictions, showing that vertical wells with 4 fractures produce similarly to horizontal wells with more than 25 fractures in comparable fields in U.S.A.



In light of the results achieved by YPF to date, Argentina has the opportunity to replicate the successful case taking place in USA, by means of massive development of unconventional oil and gas resources from Vaca Muerta.

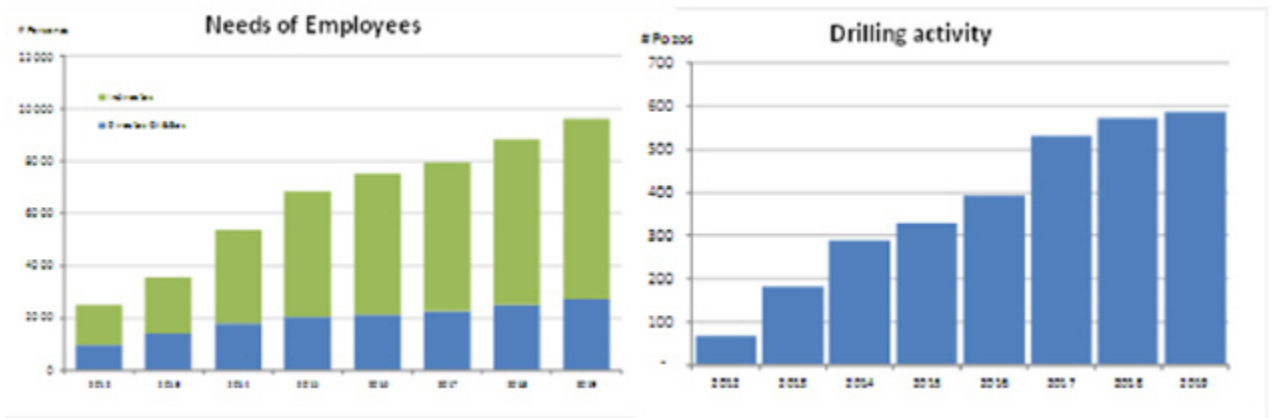
The development of the area delineated by YPF, 1,100 Km², with gross contingent resources of 1,525 Mboe, would make it possible to increase current oil production in Argentina by 50%. For such purpose, it would be necessary to address an investment plan (100% interest) of about \$28 billion in coming years for the drilling of almost 2,000 productive oil wells, which would imply 60 additional drilling equipment units besides the existing ones in the country.

In case positive results are confirmed on the exploratory wells under way in the gas area, the country's gas production might go up by 50%. In order do so, it would be necessary to drill more than 1,000 wells involving an initial investment of over \$14 billion in coming years and demanding, 40 additional drilling equipment units besides the existing ones in the country at present.



Source: YPF

That would have a material impact on the creation of more than 7,000 new jobs in coming years and it would demand 100 drilling equipment units per year and more than 2,000 Km of pipes.



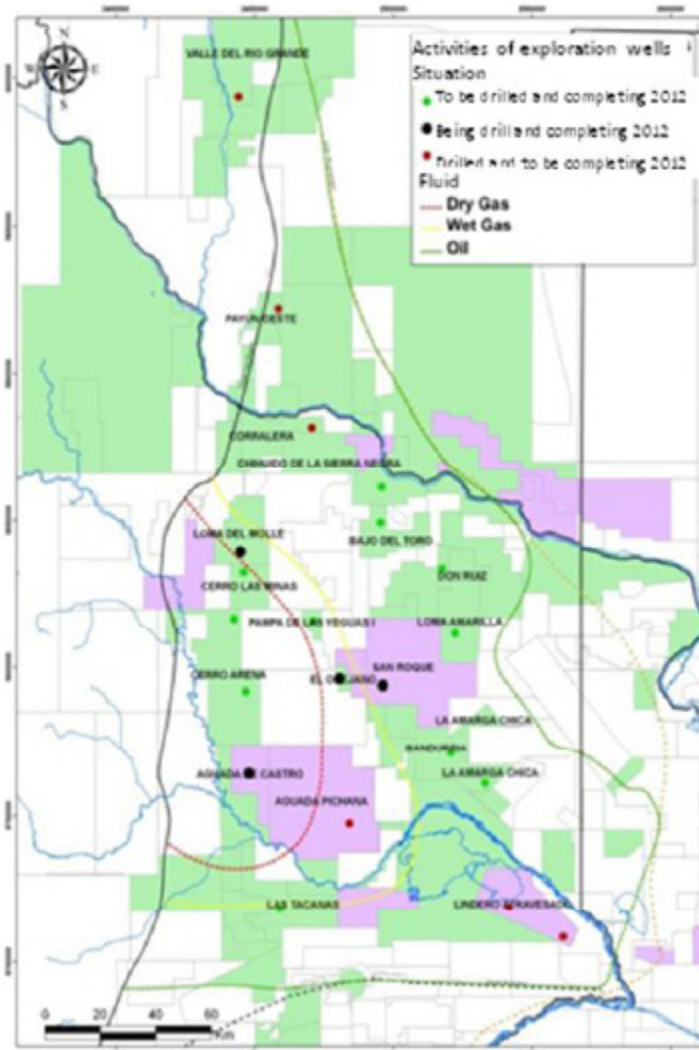
Source: YPF

EXHIBIT III

EXPECTATIONS ON SHALE POTENTIAL OF VACA MUERTA IN THE NEUQUINA BASIN.

YPF, solely and jointly with several partners, plans to carry out the drilling and workover of 20 wells in 2012 to further research the potential of prospective resources

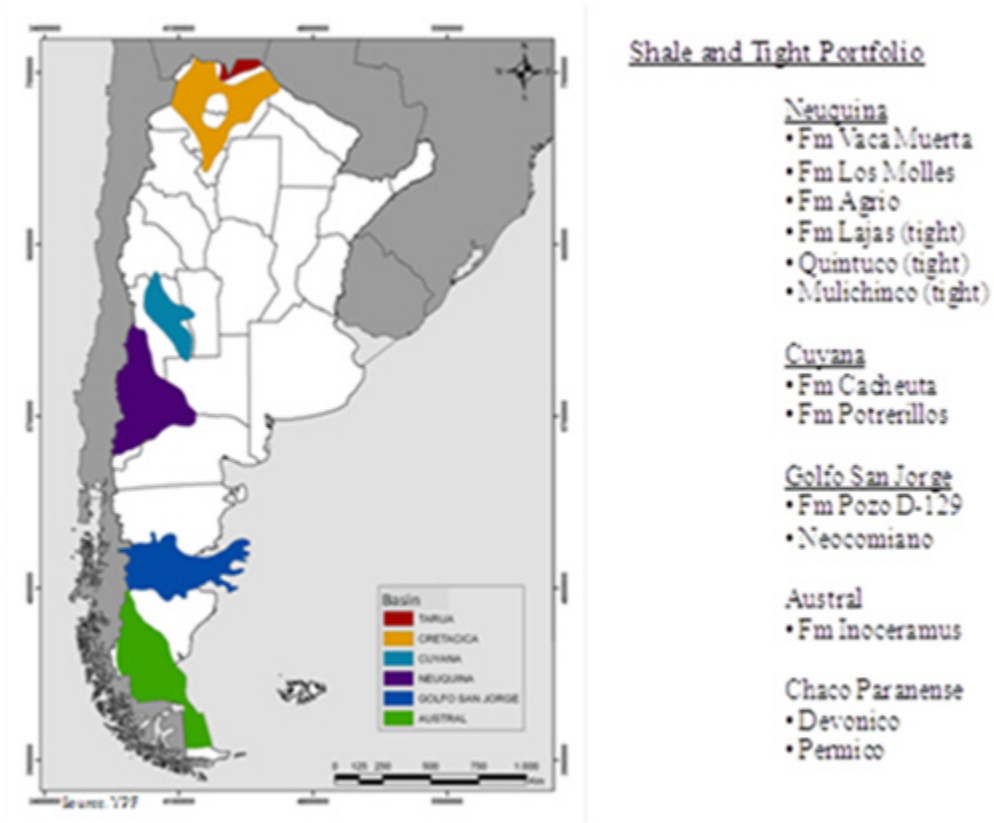
It is worth mentioning that certified prospective volumes represent about 30 years of oil supply and 50 years of gas supply at the current consumption rates in the country.



If the exploration proved to be successful in the whole Vaca Muerta formation and immediate intensive development began in the area, current oil and gas production capacity of Argentina could double in 10 years time. In order to achieve so, it would be necessary to make a vast investing effort that would reach \$ 25,000 million per year to be able to develop the whole existing prospective resources.

Evidently the facts revealed by the exploration results under way that the sector is carrying out will show the true production potential.

In any case, it is important to highlight that this opportunity is the first of an array of existing niches for unconventional resources in Argentina that are being explored by YPF and other companies, which might in future years expand the growth scenario for the production of reserves and hydrocarbon resources in Argentina.



Vaca Muerta opportunity and environment conditions

The development of the Vaca Muerta formation is a paramount opportunity for Argentina.

As in Brazil with the offshore discoveries, Argentina faces the opportunity of creating a new industry of shale and what this bears; manufacturing of drilling and workover equipment in the country, creation of companies that engage in the construction of wells, valves, tubes, equipment, etc., at the new scale this undertaking demands to create a competitive cost scenario.

Also, the professional development of human resources able to meet the employment demand that will take place in coming years, highly qualified professionals trained in the country, is a challenge we should deal with.

As in U.S.A, the opportunity of energy self sufficiency emerges enabling a reduction of the level of energy imports with a gas and crude oil price that make these developments viable at a cost lower than the cost of importing such products.

Additionally, the attraction of international capitals to Argentina as a source of financing the enormous economic resources that this project will require in coming years is a mandatory condition for a project of such magnitude.

The development of unconventional resources opens a new paradigm for the hydrocarbon industry in Argentina; an orderly development will be a key piece to sustain the economic growth of the country in the next decades. In order to make this come true, consent capacity among the sector, workers included, and the national and provincial governments is crucial.

EXHIBIT IV

Reserves: Estimate of the quantity of oil, gas and other products that can be produced in a profitable manner by means of development projects. Also, there should be, or have, a reasonable expectation as to obtaining rights of exploitation, necessary facilities to market the oil and gas, as well as, all the necessary permits and financing to implement the projects.

Contingent resources: Refer to potentially recoverable quantities of hydrocarbon on the basis of a previous exploratory activity that includes discoveries. These resources cannot be considered commercial at the moment of evaluation (i.e. they can be economically viable, but pending exploitation permit, application of certain technologies, etc.).

Prospective resources: Refer to potentially recoverable quantities of hydrocarbon on the basis of an accumulation from which preliminary data is available but where no discovery wells have been drilled.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

YPF Sociedad Anónima

Date: February 8, 2012

By: /s/ Guillermo Reda
Name: Guillermo Reda
Title: Chief Financial Officer

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