



# Brazil's Petroleum Market

Alberta International House  
at GPS 2010

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Calgary

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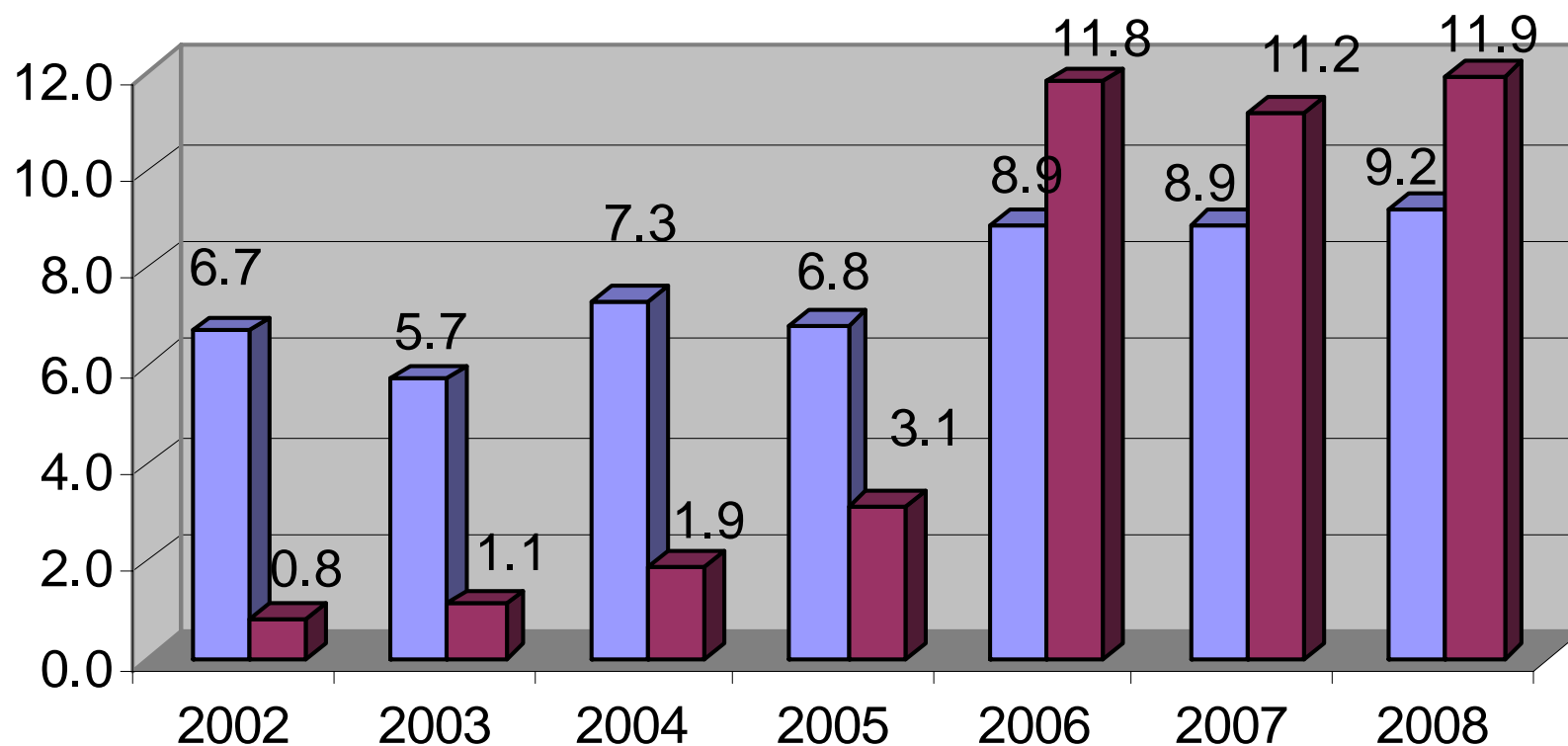
- 1. Some Introduction Figures**
- 2. Upstream facts and latest developments:**
  - i. The onshore independent production market;**
- 3. Downstream facts and latest developments;**
- 4. A Word about RedePetro Brasil;**
- 5. Some trends and forecasts.**

# Introduction Figures

## Brazil – Canada Comparison Figures

	Brazil	Canada
Total area	8,511,965 km <sup>2</sup>	9,976,140 km <sup>2</sup>
Coastline	7,491 km	6,415 km
Population	194,000,000	33,000,000
Unemployment	8.4 %	6.4 %
Life expectancy	71.9 years	80.2 years
Literacy rate (15+)	86.4 %	99.0 %
GDP	US\$ 1.3 trillion	US\$ 1.4 trillion
GDP growth rate	3.7 %	2.7 %
GDP per capita	US\$ 6,844	US\$ 43,400
Inflation	3.1 %	2.0 %
Fixed telephone lines	40 million	21.5 million

## Bilateral Investments



■ Investimentos Canadenses no Brasil ■ Investimentos Brasileiros no Canadá

## Some Key Milestones

- ✓ **1939** -> 1st oil discovery (onshore);
- ✓ **1941** -> 1st commercial oil discovery (Candeias Field in Bahia - NE);
- ✓ **1949** -> 1st refinery (RLAM in Bahia - NE);
- ✓ **1953 - 1997** -> Petrobras monopole;
- ✓ **1997** -> Law 9478 ("Petroleum Law") -> Ends the monopole and creates the National Petroleum Agency (ANP);
- ✓ **1999 - 2009** -> 10 bid rounds of exploratory blocks;
- ✓ **2005 - 2006** -> 2 bid rounds of marginal fields;

## Upstream Facts



Figura 1 – Bacias sedimentares brasileiras

- ✓ Onshore activity in the N and NE;
- ✓ Offshore activity in the SE;
- ✓ 34 seismic surveys in 2009;
- ✓ 307 Exploratory Blocks;
- ✓ 66 Development Fields;
- ✓ 292 Production Fields;
- ✓ 8,539 Production Wells:
  - ✓ 90% onshore
- ✓ 663 million barrels of oil in 2008:
  - ✓ 12% onshore
- ✓ 21.5 thousand million m<sup>3</sup> of gas:
  - ✓ 30% onshore

Complete E&P geographical info at: [www.bdep.gov.br](http://www.bdep.gov.br) (English version)



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# Upstream Latest Developments

✓ **Pre-salt oil giant discoveries** →

✓ **New regulatory framework:**

➤ Concession Vs Partner Agreement

➤ Petrobras will always operate;

➤ Only for pre-salt areas to come;

➤ Current agreements are respected, even in pre-salt areas;

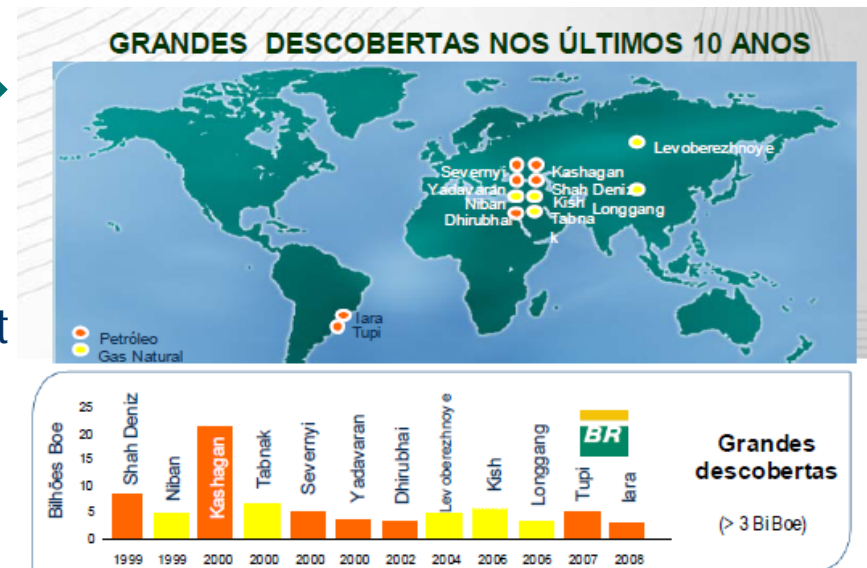
➤ Petrobras would be forced to give up marginal fields;

➤ New regulation still to be approved by the Senate;

✓ **“Local Content” supply policy:**

➤ Minimum % of goods and services bought in Brazil (65%);

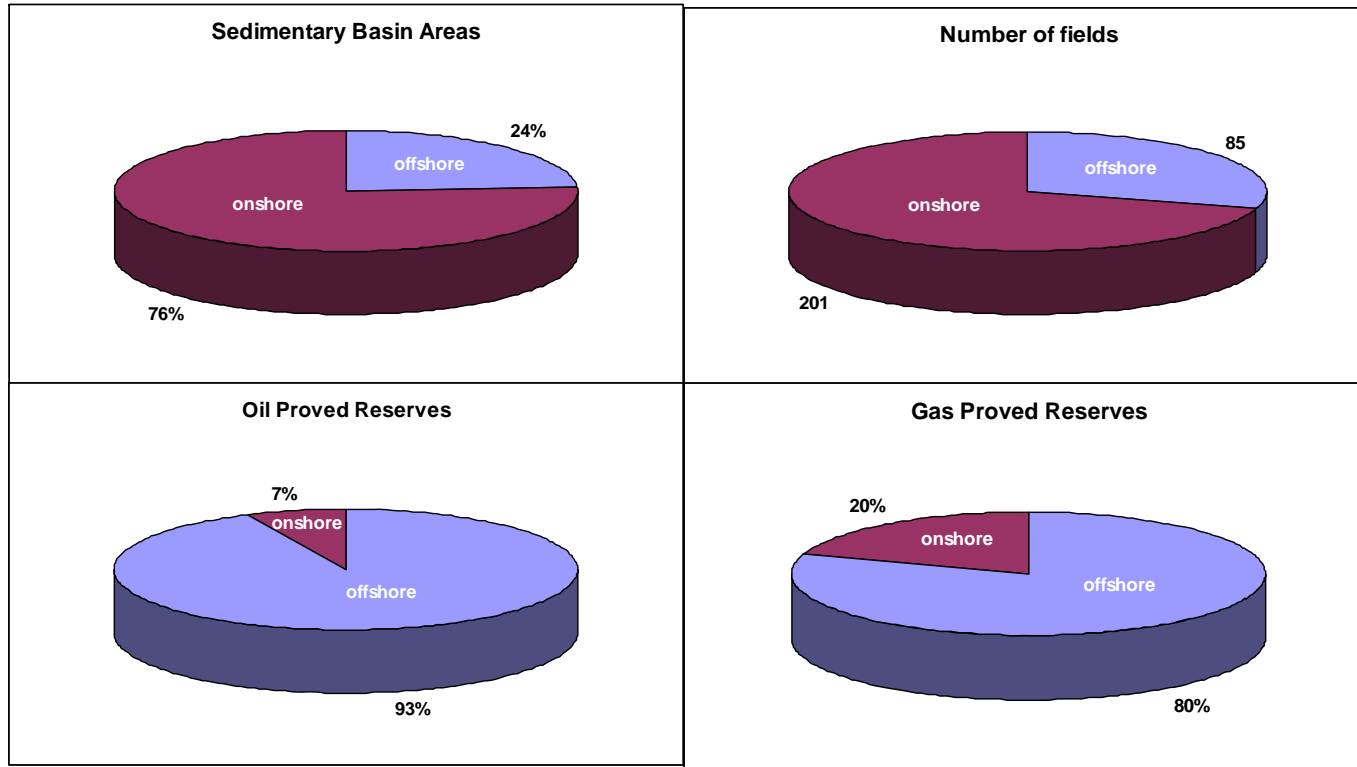
➤ ANP is monitoring local content through certification companies





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# The onshore independent production market



- Alvorada Petróleo
- Arclima
- Aurizonia Petróleo
- Brazalta
- Cheim
- Egesa
- El Paso Brasil
- Koch Brasil
- Nord Oil & Gas
- Norse Energy Brasil
- Orteng
- Panergy
- Partex Brasil
- Petrogal Brasil
- Petrosynergy
- Ral Oil & Gas
- Reconcavo E&P
- Severo Villares
- Starfish Oil & Gas
- UTC Engenharia
- Vitoria Ambiental
- W Petróleo

**Marginal fields:** oil production up to 500 bpd or production of non associated gas up to 70,000 m<sup>3</sup>/d (Ordinance ANP 279 - 31/Oct/2003)



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# The onshore independent production market

## **Resolution #10-2008 from the Energy Policy National Committee - CNPE**

“The Federal Government has the interest of organizing round bids in areas other than pre-salt, in exploratory new frontier basins, and in mature basins aiming at promoting the knowledge of sedimentary basins, developing the small oil industry and fixing national and foreign companies in Brazil, and so growing demand for local goods and services as well as creating jobs and income.”

**But...**

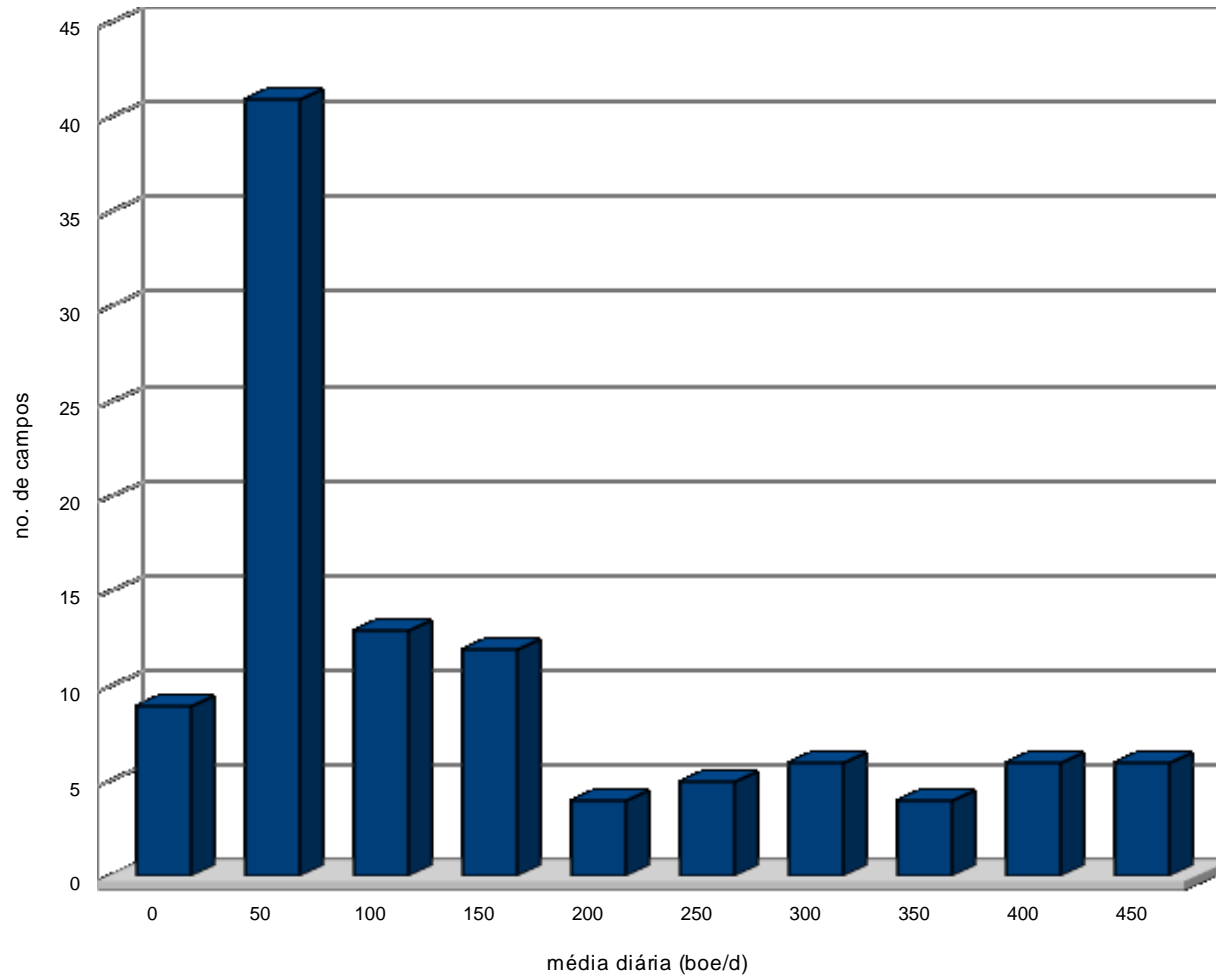


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# The onshore independent production market

## Produção de óleo e gás

último 12 meses



### ... The fact today is that:

- Petrobras operates around 150 onshore fields in NE, producing around 190,000 bpd;
- 2/3 of these fields produce less than 500 bpd with a total volume up to 12,000 bpd;
- 50 fields produce less than 50 bpd.

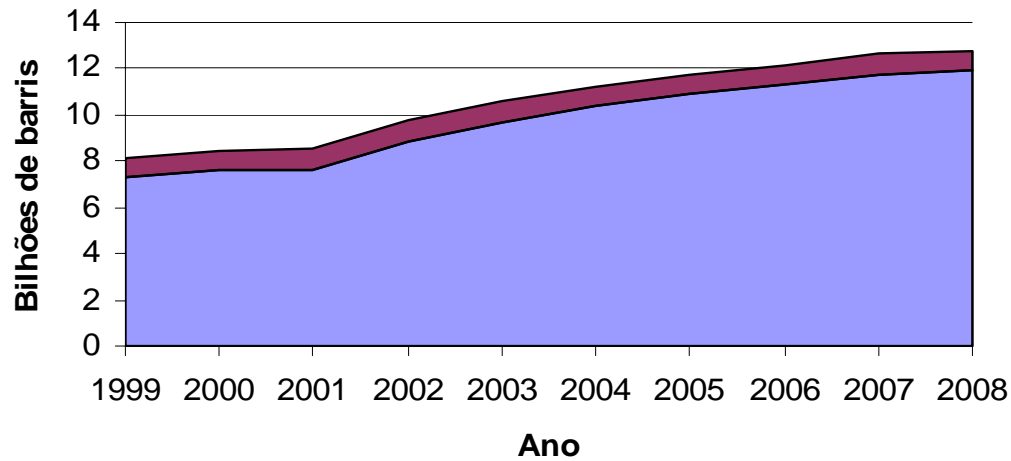
**And so...**



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# The onshore independent production market

### Evolução das Reservas Provadas - Óleo



- The significant growing of offshore reserves are not followed onshore;
- The graphic does not show the pre-salt discoveries.

### However...

### Onshore exploratory wells drilled from 2000 to 2008:

<b>Exploratory wells</b>	<b>479</b>	<b>100%</b>
Petrobras	317	66%
Independents	162	34%
<b>Pioneer wells</b>	<b>316</b>	<b>100%</b>
Petrobras	173	55%
Independents	143	45%



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# The onshore independent production market

## Exploratory Success from 2000 to 2008

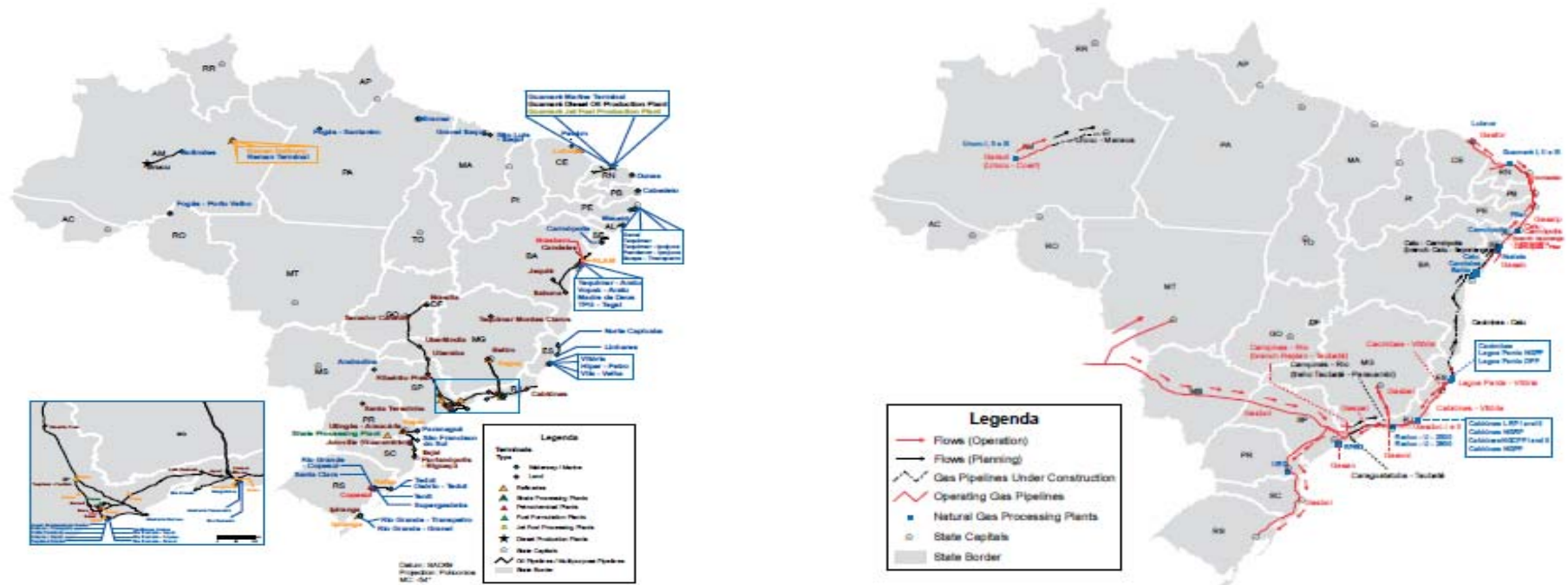
	Petrobras			Other operators		
	Blocks	Comm.	Success	Blocks	Comm.	Success
Espirito Santo	31	15	48%	5	2	40%
Potiguar	51	8	16%	68	15	22%
Recôncavo	13	3	23%	52	6	12%
Sergipe- Alagoas	17	2	12%	27	1	4%
Total	112	28	25%	152	24	16%



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# Downstream Facts

- ✓ 14 Low-complexity Refineries, at 92% capacity, all being upgraded or renewed;
- ✓ ~ 7,100 km of pipelines;
- ✓ 7 Petrochemical sites;
- ✓ 14 Regional State-owned Pipeline Operators;
- ✓ 25 Sea Ports and 9 River Ports;



Complete Downstream info at: [www.anp.gov.br](http://www.anp.gov.br) (English version)

# Downstream Latest Developments

✓ **03 new Premium refineries:**

- Up to 600,000 bpd processing capacity;
- To be built in NE region starting 2012;

✓ **National Program for Ship and Vessel Renewal:**

- 04 new shipyards to be constructed;
- New vessels and platforms:



	Already signed	To bid	Total
Vessels	26	44	70
Small support ships	24	122	146
FPSO/SS Platforms	6	8	14
Other: jack-up, TLWP	3	1	4
<b>Total</b>	<b>59</b>	<b>175</b>	<b>234</b>



## A word about RedePetro Brasil

A virtual Brazilian-wide environment including regional-level non-profit societies of supply and service companies for the oil & gas exploration, production, refining, transport, distribution and petrochemical sectors

- ✓ ~650 partner companies;
- ✓ ~ 75,000 employees;
- ✓ 13 states.



## How can RedePetro help non-Brazilian companies?

- Suggesting suitable partner companies in Brazil;
- Giving basic information on oil & gas investment opportunities in Brazil;
- General advising on Brazilian Local Content regulation;

Free Services!



## Some oil figures of Amazonas



- ✓ Main basins: Amazonas, Solimões (onshore)
- ~66,000 sqkm of exploratory blocks (24% Petrobras);
  - ✓ 6 companies with exploratory blocks;
  - ✓ 60 drilled wells in 2008 (100% onshore);
- ✓ 60 oil & gas producing wells (100% Petrobras);
  - ✓ ~36,000 bpd;
- ✓ ~10,1 Mm<sup>3</sup> of gas per day;
- ✓ ~570 km of pipeline length;
- ✓ 01 refinery @ ~45,000 bpd.

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# Some oil figures of Rio Grande do Norte



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- ✓ Main basins: Potiguar (onshore & offshore)
- ✓ ~3,700 sqkm of exploratory blocks (85% Petrobras);
  - ✓ 16 companies with exploratory blocks;
  - ✓ ~290 drilled wells in 2009 (100% onshore);
- ✓ 3,670 oil & gas producing wells (97% Petrobras);
  - ✓ 1,200 injection wells;
  - ✓ 5 producing companies;
  - ✓ ~57,000 bpd;
- ✓ ~2,06 Mm<sup>3</sup> of gas per day;



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## Some oil figures of Bahia

- ✓ Main basins: Recôncavo, Tucano (onshore) & Camamu-Almada (offshore)
- 21,592.11 sqkm of exploratory blocks (54% Petrobras);
  - ✓ 132 companies with exploratory blocks;
  - ✓ 106 drilled wells in 2008 (96% onshore);
  - ✓ 1,695 oil producing wells (98% Petrobras);
  - ✓ 285 gas producing wells (97% Petrobras);
    - ✓ 533 injection wells;
    - ✓ 12 producing companies;
    - ✓ 47,500 bpd;
    - ✓ 9,22 Mm3 of gas per day;
    - ✓ 1,575 km of pipeline length;
    - ✓ 02 refineries @ 261,000 bpd.

# Some oil figures of Rio Grande do Sul



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- ✓ Main basins: Pelotas (offshore)
- ✓ 3,900 sqkm of exploratory blocks (100% Petrobras);
  - ✓ Not oil or gas production;
  - ✓ ~565 km of pipeline length;
  - ✓ 02 refineries @ 206,000 bpd.
- ✓ Brazilian most densely industrialized state.



# Some Trends and Forecasts

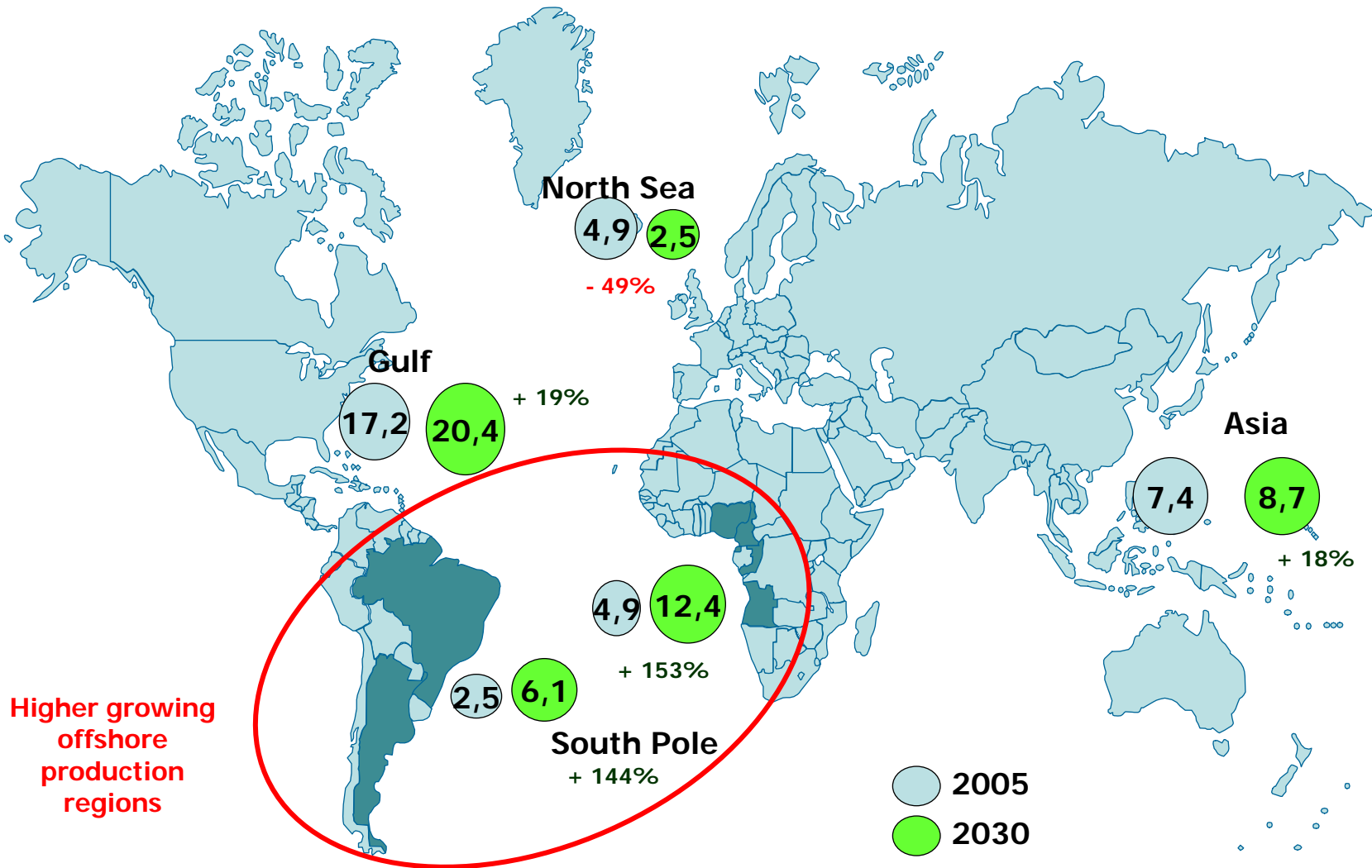
- ✓ A government change may occur in October, but no dramatically changes are likely to follow;
- ✓ Exploratory blocks bids are likely to continue to be launched by ANP on an annual basis;
- ✓ Priority for gas projects;
- ✓ Regular application of the Local Content certification process;
- ✓ Growing public concern on the development of onshore marginal fields;
- ✓ Marginal field bids are likely to happen again in 2011;

**... but in Brazil only the weather can be accurately forecasted!!**



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# Some Trends and Forecasts



Source: PROMINP (IE-UFRJ)



Thank you!

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