SUMMARY OF THE SEDIMENTARY BASINS

INTRODUCTION

The National Agency of Petroleum, Natural Gas and Biofuels (ANP) hereby discloses the characteristics of sedimentary basins under study for the 13th Bidding Round of blocks for exploration and production of Oil and Natural Gas under concession regime.

The 13th Bidding Round will offer blocks under exploratory risks located in 22 sectors across 10 Brazilian sedimentary basins, as such: Amazonas, Parnaíba, Potiguar (onshore), Recôncavo, Sergipe Alagoas (offshore), Jacuípe, Camamu Almada, Espírito Santo (offshore), Campos and Pelotas.

The basins and sectors focuses on complying with the interest of Federal Government to carry on Bidding Rounds for the concession of blocks in basins of new technological or knowledge frontiers, in mature basins and the ones of high potential, in order to promote insight knowledge of the sedimentary basins, in order to distribute the exploratory investment throughout the country, to become attractive to medium and small companies and to increase national reserves, to establish national and foreign companies in the country, enhancing the continuous demand for local commodities and services, employment generation and income distribution spread.
SEDIMENTARY BASINS

Amazonas Basin (SAM-O Sector)

The Amazonas Basin is composed by an active measured oil bearing system. Several discoveries were made during the history of exploration and the currently underway developments in Azulão and Japiim fields.

The Monte Alegre’s Formation sandstones from carboniferous age are considered the main reservoirs of its basin. Its distribution in terms of extension is sort of uniform throughout the basin, with a layer in the range of 80 to 140 meters in depocenter.

The petroleum exploration in Amazonas Basin began with the Brazilian Geological and Mineralogical Service (SGMB) and had its momentum with Petrobras establishment.

In the first phase between 1953 and 1967, around 63 stratigraphic wells and 58 exploratory wells were drilled. The operation escalated after the first oil discovery, right after the first oil discovery in three drilled wells, in the beginning of this phase in 1953. Such discovery turned out to became commercially unattractive due to the small extension size of the reservoir. Gas and oil were spotted in several wells.

In the second phase between 1971 and 1990 after systematic seismic reports, around 04 stratigraphic wells and 34 exploratory wells were drilled, 02 of which were carried out by risk contracts regime, in addition to 05 extension wells. There were significant findings of hydrocarbon during this stage in 1985, in Tucunará Lake and Igarapé Cuia, gas and oil producers, respectively.

A third phase began in 1996, which a new momentum was triggered by gas findings, held in 1999 in Uatumã River well, located in the block of Petrobras BA-3 once acquired in Round Zero. Such finding, combined with positive oil indicators spotted in Itaúba Lake well, promoting new perspectives in endeavoring a new producing disctrict, into a new frontier basin with large proportions.
Parnaíba Basin (SPN and SPN-N-O Sectors)

The Parnaíba Basin is located in the Northeast and North regions of Brazil, covering part of the States of Piauí, Maranhão, Tocantins, Pará, Ceará and Bahia, and its area covers approximately 668,800 km². It separates from the Basins of Barreirinhas and São Luis in the north borders, from Arc Ferrer–Urbano Santos and Marajó Basin, in the northwest borders, from Arc of Tocantins. To the south, the limit to the São Francisco Basin is defined by the Arc of San Francisco.

The geological research in the basin began in 1909, by means of activities appointed to mining water and coal sourcing under the auspices of the Serviço Geológico e Mineralógico do Brasil (SGMB). At that time the first geological map of the basin was designed.

Incidentally, only in the 50s, via National Petroleum Council – CNP, it had initiated the exploratory campaign of the basin focused on the research of hydrocarbons with terrain surface mapping and with 03 drilled wells in the state of Maranhão, 1- CL-1-MA (Carolina), 1-VG-1-MA and 1-VG-1R-MA (Vereda Grande), in 1951 and 1953 respectively.

Once Petrobras was established, a new exploration campaign was implemented between 1954 and 1966, therefore a new surface mapping were performed, together with photogeology, gravity and seismic surveys, as local content aspect, and the drilling of 31 exploratory wells, most of which with poor seismic support. A ground gravity coverage mainly executed by Petrobras accrued about 116,300 km².

In the 70s the basin was the key study for Project Radam (CPRM) and also by CPRM’s activities in the area.

A new exploratory phase, called the risk contracts regime, phased in 1975 being extended to 1988 with new seismic surveys, aeromagnetic metric surveys and the drilling of 07 exploratory wells. Thus, Esso and Anschutz performed 888 km of seismic and aeromagnetic metric surveys, remote sensorial surveys and a well was drilled in the Arc Ferrer – Urbano Santos region.

Seismic surveys were performed on a discontinuously basis between 1954 and 1996, on the total of 13,194 km in linear 2D seismic. The current seismic lines are wide-distributed and
severe low density, with minuscule 0.02 km/km². This data records are low in absolute terms and negligible in connection to the size of the basin.

An updated exploratory effort in the basin occurred with the assistance of ANP, by offering blocks in the Bidding Round 9 (2008). The result of this round, OGX concessionaire drilled in 2010/2011 three wells in the PN-T-68 block, having requested and declared commercial feasibility for gas for the first time in the basin, in two separate areas covering coal and Devonian sections of the sedimentary package, Poti Formation and Cabeças.

To the date, the basin has 89 exploratory wells, 38 of which are pioneers, 04 adjacent pioneers, 12 stratigraphic, 01 shallow reservoir, 19 as developments, 06 as extension and 09 as special. The Parnaíba Basin to the date gathers three gas fields, as such: Gavião Real, Gavião Azul and Gavião Branco.

The seismic surveys previously mentioned covers the total of 25,500 kilometers (2D) and 294 km² (3D). As non-seismic surveys, the basin covers: magnetometer with approximately 243,900 km², 116,300 km² of gravimetry, grav/mag of 748,600 km², range/mag of 544,400 kilometers and geochemical surface with approximate 5,000 samples in a polygon around 249,300 km².

In the last decade, by an agreement entered with the University Of São Paulo (USP), ANP held an aero gravity metric survey, aeromagnetic metric and aero range spectrum metric in the Parnaíba Basin.

In 2009, under the auspices of ANP, around 1,500 km of 2D seismic lines were surveyed in the State of Piauí, in Trans Brazilian Lineament Region. In 2012, ANP raised data in the Parnaíba Basin, on the total of 2,600 km of seismic data, combined with gravimetry and magnetic data.

For the purpose of increasing the geological knowledge of Parnaíba Basin in view of enhancing its exploration attractiveness, ANP under the Multi-Year Plan of Geology and Geophysics (PPA), has taken two-dimensional seismic surveys with gravimetric data and associated magnetic metric. The first was located in the State of Piauí, in Trans Brazilian Lineament region, about 1,600 km. The second survey was located in the central portion of the basin, about 2,625 kilometers.
To the date, Parnaíba Basin is the fifth largest producer of natural gas in Brazil, undergoing daily output of around 4.7 million m³, approximately 5% of natural gas production.

**Potiguar Basin (SPOT-T2, SPOT-T3, SPOT- T4 and SPOT-T5 sectors)**

The Potiguar Basin is located in the northeast of Brazilian Continental borders, including an emerged and a submerged part. It is distributed mostly in the state of Rio Grande do Norte and partially in the State of Ceará. Geologically, confined to east Pernambuco – Paraiba Basin, by Alto de Touros, to northwest with Ceará Basin, by Alto de Fortaleza and to south, with Precambrian rocks of the crystalline abasement.

The first geological studies in the Potiguar Basin were performed in 1945 via surface mapping, gravimetric and magnetic metric. From this study two wells were drilled in the emerged part of the basin in 1956, which evidenced weak trace of hydrocarbons. Taken into account, these results upon the emerged part of the basin were temporarily phased out in view of new exploration efforts. Exploratory activities were resumed in the 70s, initially with maritime seismic acquisition in 1971 and with land and seismic acquisition in 1974 afterwards. This effort resulted in the discovery of Ubarana (1973) and Agulha (1975) fields, both on the continental platform.

In the emerged part of the basin two subsequent events to these maritime findings had changed significantly the exploratory panorama. Thus, the findings of Mossoro fields (1979) and Fazenda Belém (1980) triggered an intense exploration campaign, mainly between 1981 and 1988. As a result of these tasks, dozens of oil bearings were found, many of which, aligned in Carnaubais System, as Alto do Rodrigues, Estreito, Fazenda Pocinho and Guamaré fields, in addition to Serraria, Lorena, Upanema, Canto do Amaro (the largest of all), in other parts of the basin.

In the submersed part Pescada and Arabaiana fields (gas) and Aratum (oil) were discovered, as well as smaller ones. All the mentioned efforts are on behalf of Petrobras, not to
mention, in the 70s, four oil fields had been discovered by companies under risk contract regime.

Currently, the Potiguar Basin is the fourth largest producer of oil and natural gas in Brazil, underway of a daily output around 66,900, from 86 producing fields.

**Recôncavo Basin (SREC-T1, SREC-T2, SREC-T3 and SREC-T4 Sectors)**

The Recôncavo Basin is located in the Northeast Region, emerged part from the state of Bahia, in the north of the city of Salvador, having an area of approximately 10,300 km², of which 9,600 km² onshore and 702 km² offshore (Bahia de Todos os Santos). It is surrounded by Tucano Basin, to the north, by the Alto de Aporá and Camamu Basin, to the south, by an E-W transfer zone (Barra Fault).

It is limited to the east and west by Precambrian outcrops, through the Salvador and Maragogipe systems respectively.

Taking into the account of tectonic-sedimentary evolution knowledge of the basin due to the exploratory efforts over the last 70 years, once consolidated by more than 6,000 wells drilled (with approximately 1,200 to be exploratory). The exploration activities started in 1937 under the leadership of former National Petroleum Council (CNP). The first significant oil discovery was in 1939 in a well drilled in Lobato district, near the city of Salvador and considered to be the birth of the national oil industry.

The first exploratory phase, under the peak of CNP, it was extended until 1954 and consolidated important findings as the Candeias Fields (1941), Aratu and Itaparica (1942), Don Juan (1947) and Agua Grande (1952). From this standpoint to 1997 the maneuver of all exploration and production in the basin became a monopoly transferred to Petrobras, when hundreds of new accrual were incorporated into the afore mentioned findings. Valuable to note, specially the consolidation of Buracica, Miranga, Araçás, Taquipe, Fazenda Imbé fields and in the last phase of Petrobras, Fazenda Alvorada, Rio do Bu, Fazenda do Bálsamo and Riacho da Barra, among others.
With the breach of monopoly and implementation of the ANP, some discoveries were made in addition to the incorporation of small accumulations established by Petrobras.

The exploratory efforts from the past to the date had resulted in regional surveys of gravimetric and magnetic data, acquisition of approximately 13,500 km of 2D seismic and 3,500 km² of 3D seismic and the drilling of approximately 6,531 wells, of which 1,216 were exploratory.

Up until today around 71 oil fields and 21 gas fields were discovered. It had been produced about 1.6 billion oil barrels and 69.5 billion m³ gas. The measured reserves are currently in the amount of 221.8 million barrels of oil and 5.4 billion m³ of gas.

The Recôncavo Basin is the sixth largest producer of oil and natural gas in Brazil, underway of a daily output around 58,200, from 78 producing fields.

**Sergipe-Alagoas Basin (SSEAL-AP1 and SSEAL-AP2 Sectors)**

Sergipe-Alagoas Basin is located in the continental border of northeastern Brazil, covering part of the States of Sergipe and Alagoas. In the map, it leans towards the direction NE with 350 km long and 35 km wide of average offshore. It is composed by an area around 44,300 km², with 31,700 km² onshore up until the average of the bathymetric quota of 3,000 m and 12,600 km² emerged part. The borders are aligned to the north by the Pernambuco-Paraiba Basin by the Alto de Maragogi and to south by the Jacuípe Basin, the Estância Platform, in the emerged part, by the Vaza-Barris system, in the submerged part. The western border with the Precambrian crystalline abasement is settled by extensional fault systems and associated structures.

Exploration activities in the Sergipe-Alagoas basin began in 1935 with geophysical surveys and the drilling of the well 2-AL-1, on behalf of the National Petroleum Council. The first ones took place in the northern region of the State of Alagoas, with the first commercial oil discovery occurred in 1957, via TM-1-AL. In 1963 Carmópolis field was discovered in the Sergipe sub-basin emerged part.
The majority of the findings took place in the 60s, in Sergipe sub-basin. In the late 60’s in the mentioned sub-basin exploration on the continental platform, the first commercial discoveries of oil in Brazilian continental border was performed, once held by the pioneer 1-SES-1A drilling, together with the subsequent consolidation of Guaricema field.

To the date in the average of 5,000 wells were drilled with a range of 1,000 of exploratory wells, and 4,000 development wells. The basin is covered by seismic reflection surveys, composed by 38,700 km of 2D land lines and 55,100 km of 2D maritime lines, and 1,000 km² of 3D seismic land lines and 8,200 km² of 3D seismic sea.

Total hydrocarbon reserves in Sergipe-Alagoas Basin are in the order of 410 million BBL of oil and 10 billion cubic meters of gas.

The inclusion of the Sergipe-Alagoas Basin (sea), which is not included in any ANP Bidding Rounds since 2004, appears to be appropriate by means of the recent discoveries announced by Petrobras in blocks from the 6th Bidding Round.

The Sergipe-Alagoas Basin has brought important results to the market. Since 2010, several discoveries have been announced in the concessions of the blocks BM SEAL-4, BM-SEAL-10 and BM-SEAL-11, with a high success rate.

Seven plans submitted by Petrobras, including, Moita Bonita, Barra and Farfan are underway. It is six turbid sandstones of the Early Cretaceous reservoirs and Aptian reservoir in Muribeca Formation.

Currently, this basin assists on a daily production of about 67,500 BOE, 32 coming from production fields.

**Jacuípe Basin (SJA-AP Sector)**

The Jacuípe Basin is located in the Brazilian continental east border, in the northern coast of Bahia State. It is surrounded to the north by the Sergipe-Alagoas basin, to the south by Camamu-Almada and to the west by the Reconcavo Basin. The basin is solely offshore and features a triangular geometry with an area of approximately 23,000 km² to bathymetric quota of
4,000 m. The basin is considered to be a new exploratory frontier due to the low geological knowledge and the lack of a measured petroleum system.

The first exploratory efforts in Jacuípe Basin began in the 1970s with 2D seismic acquisitions spotted in regions with water depths around 1,000 m.

During the 80s the interest in acquiring data in the basin increased considerably. In 1980 the single well was drilled in the basin in southern Jacuípe platform without evidence of hydrocarbons records. In that decade, 2D seismic surveys intensified and reached locations to water depths close to 3000 m. Also during this time, it began the gravimetric and magnetic surveys in the basin.

During the 1990s, in contrast, data acquisition was reduced to a 2D seismic survey acquired in the north of the basin, near the boundary with the Sergipe-Alagoas Basin.

In the current decade some gravimetric and magnetic metric were performed in association to maritime seismic acquisition. Additionally, there were two speculative seismic reviews. The first one performed in 2000 in the northwestern part of the basin. The second one was in 2009 and evidenced regional coverage of the basin and reached water depths close to 4,000 m. Also in 2009 ANP, via Multi-Year Plan of Geology and Geophysics, performed a geochemical surface surveys. 2,000 soil samples were collected and gas from the seabed sediments of the basin, water depths between 100m and 3,000m. By this review it was discovered the presence of micro exudations on a parallel stream to the coast, with thermogenic indications of hydrocarbon.

It is expected upon the developments in the region to indicate opportunities in exploration of turbid sandstones, like the recent discoveries in Sergipe sub-basin.

**Camamu-Almada Basin (SCAL-AP1 and SCAL-AP2 Sectors)**

The Camamu-Almada Basin is located in south-central part of the coast of Bahia state, between the cities of Salvador and Ilhéus, covering a small part of land, into the coastal plain as it advances through the platform, slope and continental feet.

Limited to the south by the Jequitinhonha Basin through the Alto de Olivença and to the north is surrounded with Jacuípe and Recôncavo Basins, through the faults of Barra and
Salvador, respectively. The total basin area referred to bathymetric quota of 3,000 m, is around 21,300 km², of which 2,500 km² onshore.

In the early days of exploration this basin was split into two, Camamu and Almada, ceased due to lack of geological support for this alleged division. The information from that time to the present day remains only as geographical references in a common practice as former Camamu and Almada area.

The basin had non-continuous exploratory streams. The exploration activities initiated in Camamu area and date back to the era before Petrobras was established, carved out in the drilling of the shallow onshore stratigraphic wells, concentrated in Itaparica Island and around the Camamu Bay. In Almada area oil bearings were drilled in the 60s.

In the 60s Petrobras undertook an exploratory effort into the Camamu area which resulted in findings at Jiribatuba fields (oil) and Morro do Barro (gas), both of them onshore. As offshore basis, the activities began in the 70s, and in the late 80s and 90s two discoveries were ratified, 1-BAS-64 (Pinaúna field with oil) and 1-BAS-97 (Sardinha field gas / oil).

On the other hand, the most important discovery recently occurred in the BCAM-40 block, via 1-BRSA-14-BAS (1-BAS-128), drilled by the consortium Queiroz Galvão, Petrobras and Petroserv, who discovered a major gas accumulation in the sandstones Fm. Sergi (Manati field, Camarão and Camarão Norte), of which became commercially attractive in 2002.

The measured oil potential in the Camamu sub-basin is also evidenced in Almada soon to be a promising sub-basin due to the geological similarity of these reservoirs.

Valuable to note, the threshold between these regions is solely geographic, without any proved geological limits and differences.

Currently, the Camamu Basin is the fourth largest producer of natural gas in Brazil, underway of a daily output of around 5.8 million m³, representing about 6.1% of natural gas production from three fields production.

Espírito Santo Basin (SES-AP1 and AP2-SES Sectors)

The Espírito Santo Basin, along with Mucuri, is located in the Brazilian continental border, with its extension from the south of Bahia to the south-central State of Espírito Santo. It
has an area around 193,900 km², of which 176,900 km² are offshore to bathymetric quota of 3,000m and 17,000 km² onshore. To the south, the Alto da Vitória defines the borders with Campos Basin. The northern border to the Cumuruxatiba Basin, colliding with the northern border of the Volcanic Complex of Abrolhos.

The basins of Espírito Santo and Mucuri had an exploratory history dated back to the 50s, with the first seismic surveys in the onshore part. The first well in the Espírito Santo basin was drilled in 1959 by Petrobras, near the town of Conceição da Barra (02 stratigraphic wells - CBST-1-ES). On the continental platform, the exploration activities have also initiated in the 50s, through seismic and gravity surveys. In 1969 the first commercial discovery of the basin was brought (São Mateus field), with the drilling of 1-SM-1-ES well.

In shallow waters, the exploration also began in the 50s, with seismic and gravity surveys, moving forward with the drilling of the first pioneer well in the Brazilian continental platform (1-ESS-1-ES, 1968).

Driven by this fact, the first systematic campaign of exploration in the basin took place, of which extended through the 1970s. This venture was settled by a regular pace, with an approximate average of 11 drilled wells per year between 1971 and 1979. This effort resulted in the discovery of Farm Cedro field in 1972 (Biasussi et. al., 1990). During this period it was also discovered the first field located on the continental platform of the basin (Cação, in 1977). In 1978, the discovery of Lagoa Parda field initiated a new stage for exploratory endeavors, with a driven concern to the evaluation and development studies of the field findings so far.

The 80s was characterized by a boom in exploration ventures, which reached its peak in the years of 1981 and 1982, with the drilling of 70 exploratory wells. As a result, seven fields were discovered in the onshore part, with an exploration success rate of 18.5%. In 1988, three fields were discovered, highlighting Cangoá (gas and condensed) in the maritime part 1-ESS-67-ESwell.

In 1989, the basin exploration entered into a stagnation process, as evidenced by the number of exploratory wells drilled (five to seven wells per year). This phase lasted until 1997, the year of flexibility and oil market opening by Law No. 9.478/97, feasibility of which it would only be measured from 1999 and on. Even though, a ratio on the average of one open field per year was performed in such time frame, among the Peroá (gas and condensed) in 1996, on the
continental platform, via 1-ESS-77 ES well. In 1999, it was discovered the first field in the deepwaters region (Canapu), near to the southern most point of the basin.

Nevertheless, the major exploratory milestone of this period occurred in 2003, with the discovery of five fields, two onshore and three in the deepwater offshore region. In this year, the success rate reached 41%, a record in the basin history. The deep water fields, recently discovered, to the date, gather one of the most measured oil bearing reserves of the basin. Additionally, the Camarupim fields (condensed) and Carapó (non-related gas), located on the outskirts of Golfinho, had significantly contributed to new reserves aggregation out of light oil and gas, placing conclusively the basin in the restricted group of the largest oil producers in Brazil and confirming the potential offshore exploratory expectations.

The deep waters region is heavily influenced by the occurrence of slide movement in the salt layers. The expected exploratory potential is directly related to the occurrence of these saline structures, such as prolific field findings in the Gulf of Mexico.

To the date, the Espírito Santo Basin is the fifth largest producer of oil and natural gas in Brazil, underway of a daily output around 61,300 boe, from 40 producing fields.

**Campos Basin (SC-AR3 Sector)**

The Campos Basin, located on the coast of the States of Rio de Janeiro and Espírito Santo, is surrounded to the south by Alto de Cabo Frio, of which separates it from the Santos Basin and to the north by Alto de Vitória, the perimeter to the Espírito Santo Basin. It covers a total area of around 102 km², with 6,500 km² onshore and 95,500 km² offshore to bathymetric quota of 3.000m.

The small land stream of the basin, where the stratigraphic 2-CST-1-RJ well was drilled is devoid of any interest to oil due to continental clastic sequence sheltering without evidencing commercial interest.

The offshore exploration began in 1968 by the acquisition and seismic processing followed by the first well drilling in 1971. The first discovery took place three years later, in 1974, via 1-RJS-9A well creating the Garoupa Field out of Albian calcareous. The activities in the area resulted in a great exploration success consolidating the basin in outstanding high potential
profile, despite of currently coexistence, areas of New technology Frontier associated with depths of potential targets.

The previous 1968 exploration activities in the basin were poorly significant, consisting of gravity surveys in 1958 and the drilling of an onshore 2-CST-1-RJ well (Cabo de São Tomé), once concluded in August, 20th 1958. From 1968, seismic surveys on a detailed basis were sponsored by Petrobras in shallow waters areas, up to a depth of 400m.

The construed data turned into a consolidated drilling program to evaluate the potential of the basin, once started in 1971 as it was awarded with the first commercial oil finding in 1974 by 1-RJS-9A (Campo de Garoupa).

The current basin status has a significant seismic network enriched with speculative seismic lines, Spec Surveys, conducted by geophysical service companies from the oil sector overture and then became available to the interested oil companies.

The estimated total reserves overview is 13.4 billion barrels of oil and 160 billion m³ of gas.

As renowned to be the current largest producing basin in the country, the Campos Basin has a daily production of 1.914 million boe, of which approximately 1.7 million barrels of oil and 29.9 million cubic meters per day. This production comes from 47 fields and is responsible for 71% of domestic oil production and 31.4% of domestic production of gas.

Although densely explored, the Campos Basin also stands to promising future with good exploratory perspectives and could result in new oil and/or natural gas findings. Valuable to note, exploratory opportunities in the post-salt sector may follow the current exploration standards (turbid sandstones accrual from the Cretaceous and Tertiary) or in new standards not yet been tested, the result of increased knowledge and technological development.

The focus on the analysis of ANPs 13thBidding Round will be aimed to shallow waters perimeter of the Campos Basin, therefore, other side areas that may evidence potential performance can be evaluated, as soon as these areas are located outside the pre-salt of the polygon.
Pelotas Basin (SP-AR4, SP-AP4 and SP-AUP4 Sectors)

The sedimentary basin of Pelotas is located to the southern end of the Brazilian continental border, and its submerged part to the territorial limit of 200 nautical miles area, around 346,800 km². In Brazil, the basin extension surrounds the Alto de Florianópolis, geologic border to the Santos Basin, to the borders of Uruguay. In the neighboring country, the basin runs to the Alto de Polônio, which separates it from the Punta del Este basin.

The exploratory activities in the Pelotas Basin can be divided into four cycles. The first exploratory pulse in Pelotas Basin occurred in the 50s and 60s. During this period, Petrobras drilled eight wells in the onshore part, based on gravimetric surveys without evidence of hydrocarbons.

In the 70s another pulse occurred with the execution of the first seismic surveys on the continental platform area. The data analysis from these surveys guided the arrangement of 07 wells in shallow waters portion, one stratigraphic and the others pioneers. In none of the drilled areas hydrocarbons were identified.

A new exploratory pulse occurred in the 1990s, with new seismic acquisitions and 5 drilled wells between 1995 and 2001 without finding significant indications of hydrocarbons.

Despite the absence of commercial findings in the basin, the exploratory efforts resulted in considerable volume of geological and geophysical data.

The Punta del Este Basin was offered in 2009 in the Bidding Round called “Uruguay Round 2009”, on the purpose of exploration and production of oil and natural gas in the continental platform blocks of such country. In this opportunity, all offered blocks were sold, turning quite attractive to large companies (Petrobras, Tullow Oil, Total, British Petroleum, British Gas, Repsol, Murphy Oil, CEPSA, ExxonMobil, Shell, among others).

The Pelotas Basin, adjacent to Punta del Este Basin, have not been inserted in any ANP bids since 2006, when some offers were under exploratory blocks in the Rio Grande Cone region.

Geochemical standardization studies leans forward to the Rio Grande Cone region to render low feasibility due to the shale thickness, combined with the advanced stage of maturity as end of the gas gap window. On the other hand, these same studies suggest the region to be
positioned next to the Cone and would present feasibility for light oil accrual. This region has a greater geological similarity to the Punta del Este Basin, where oil companies were searching for accumulations in turbid reservoirs of Cretaceous and Paleocene.

**ADDITIONAL INFORMATION**

i) The sectors under study for the 13th Bidding Round, the blocks and fields of concession, as well as other features on the available data, such as wells, 2D and 3D’s seismic analysis among others, in “shape file” format, can be gathered by clicking the BDEP WEP MAPS via http://www.bdep.gov.br link.

ii) The monthly Bulletin with disaggregated data of oil and natural gas in Brazil, containing information of productivity states, basins, fields and production wells, can be accessed via link: http://www.anp.gov.br/?pg=74894&m=&t1=&t2=&t3=&t4=&ar=&ps=&1429902603884

iii) Data from national reserves, discovered resources of oil and natural gas commercially recoverable from the date on, can be accessed through the link: http://www.anp.gov.br/?pg=74777&m=&t1=&t2=&t3=&t4=&ar=&ps=&1430426275995

iv) ANP Multi-Year Plan of Geology and Geophysics containing the conclusive and ongoing projects as well as investment planning can be accessed via link: http://www.anp.gov.br/?pg=75140&m=&t1=&t2=&t3=&t4=&ar=&ps=&142990280906.