

May 2014

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# Atlanta Statement of Reserves

Dated March 31<sup>st</sup>, 2014

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## **QGEP**

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## QGEP releases Reserves Certification of Atlanta Field

**Rio de Janeiro, May 7<sup>th</sup>, 2014** – QGEP Participações S.A. (BMF&Bovespa: QGEP3, “Company”, “QGEP”) discloses today certified reserves for the Atlanta Field, based on a reserve certification, dated March 31<sup>st</sup>, 2014, prepared by independent consultants Gaffney, Cline & Associates (GCA) and issued on April 30<sup>th</sup>, 2014.

Please find below an extract, which is part of the GCA report:

“This reserve statement has been prepared by Gaffney, Cline & Associates (GCA) and issued on April 30, 2014 at the request of Queiroz Galvão Exploração e Produção S.A. (QGEP) operator of the Consortium participating in the Atlanta Field in the Santos offshore Basin, Brazil. The Consortium consists of QGEP, with a 30% participating interest and operator, Barra Energia do Brasil Petróleo e Gás Ltda. (Barra), with a 30% participating interest and OGX Petróleo e Gás S.A. (OGX), with a 40% participating interest.

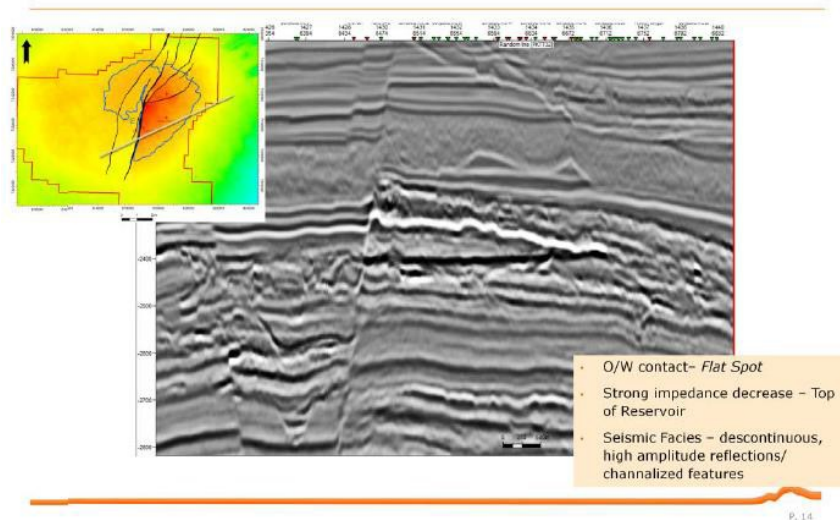
GCA has conducted an independent audit examination as of March 31, 2014, of the hydrocarbon liquids and natural gas volumes expected to be produced in the mentioned field. On the basis of pertinent technical and other information made available to us concerning this property unit, we hereby provide the reserve statement given in the table below.

**Hydrocarbon Reserves Statement as of March 31,  
2014 Atlanta Field, Santos Basin, Brazil  
Gross and Net to the Consortium’s 100% Interest**

	Gross (100%) Field Volumes		Reserves Net to Consortium's Interest	
	Crude Oil	Natural Gas	Crude Oil	Natural Gas
	(MMBbl)	(MMm <sup>3</sup> )	(MMBbl)	(MMm <sup>3</sup> )
1	147	56	44	17
2	191	90	57	27
3	269	311	81	93

The Atlanta Field is located in the North area of Santos Basin, 185 km offshore southeast from the city of Rio de Janeiro. It was part of the BS-4 Block that was acquired in Round Zero by Petrobras. In 1998 a consortium was formed between Petrobras (40%), Shell (40% as operator) and Chevron (20%).

The field discovery was made by well 1-SHEL-4-RJS drilled by Shell in April, 2001. The well found heavy oil of 14° API in Eocene turbiditic sandstones at -2,326 m subsea depth under 1,550 m of water. The oil-water contact was identified by well logs at -2,404 m subsea. The structure defined by 3D seismic is a faulted anticline with a main fault running SW to NE. The well is located in the footwall which has the main prospective interest. Pay zone in the footwall is around 130 m while in the hanging wall is around 30 m. The oil-water contact also is clearly seen in the seismic image as a flat spot.



Shell followed the discovery with an appraisal program in 2001 consisting of a side track to #4, the #4A, the #5 (dry) and the #8, a successful oil well. In 2006 Shell drilled extension wells #10 (dry), #19D, #20HP (abandoned) and #20HPA (side track). In 2012, Shell and Chevron sold their participation to QGEP (30% as operator) and Barra Energia (30%). OGX acquired its 40% from Petrobras in 2013.

Petrophysical parameters for these sandstones comprise high porosities (around 36%), permeabilities of several Darcies, high rock compressibility (estimated about 60 E-6 psi-1) and low water saturations, below 10%. Oil properties include high oil viscosities (228 cp at reservoir conditions), formation volume factor of 1.1 and Rsi 261 scf/bbl.

GCA performed an independent evaluation of the hydrocarbon in place volumes of the footwall side of the structure, (areas C2, E2 and E1 above), using QGEP's isopach map and GCA's independent petrophysical interpretation. The hanging wall side, areas C1 and W, was not included due to its low net pay and the lack of any proposed development. The following table presents the categorized result of the in place volumes obtained.

**Original Hydrocarbon in Place Atlanta  
Footwall Areas, as of March 31, 2014**

Category	Crude Oil MMBbl	Solution Gas Bm <sup>3</sup>
1	1,192	8.8
2	1,337	9.9
3	1,494	11.0

In 2013, QGEP started the field development by drilling the horizontal well 7-ATL-2HP- RJS, which tested 5,000 bopd with a down-hole Electrical Submersible Pump (ESP) and without choke restrictions. QGEP expects to increase this rate with a higher power pump. These two wells are planned to produce starting in 2016, sending the fluids to a gathering submarine manifold and from there to an FPSO processing unit. Oil will be exported via ships and gas through an 85 km pipeline to the neighboring Uruguá facilities. Water will be treated and disposed into the sea. During 2018/2020 QGEP will complete the field development with ten new horizontal wells. The concession period expires at the end of 2033.

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## **BASIS OF OPINION**

In line with those accepted standards, this document does not in any way constitute or make a guarantee or prediction of results, and no warranty is implied or expressed that actual outcome will conform to the outcomes presented herein. GCA has not independently verified any information provided by or at the direction of the Client, and has accepted the accuracy and completeness of these data. GCA has no reason to believe that any material facts have been withheld from it, but does not warrant that its inquiries have revealed all of the matters that a more extensive examination might otherwise disclose.

The opinions expressed herein are subject to, and fully qualified by, the generally accepted uncertainties associated with the interpretation of geoscience and engineering data and do not reflect the totality of circumstances, scenarios and information that could potentially affect decisions made by the report's recipients and/or actual results. The opinions and statements contained in this report are made in good faith and in the belief that such opinions and statements are representative of prevailing physical and economic circumstances.

This assessment has been conducted within the context of GCA's understanding of the effects of petroleum legislation and other regulations that currently apply to these properties. However, GCA is not in a position to attest to property title or rights, conditions of these rights including environmental and abandonment obligations, and any necessary licenses and consents including planning permission, financial interest relationships or encumbrances thereon for any part of the appraised properties.

In carrying out this study, GCA is not aware that any conflict of interest has existed. As an independent consultancy, GCA is providing impartial technical, commercial and strategic advice within the energy sector. GCA's remuneration was not in any way contingent on the contents of this report. In the preparation of this document, GCA has maintained, and continues to maintain, a strict independent consultant-client relationship with the Client. Furthermore, the management and employees of GCA have no interest in any of the assets evaluated or related with the analysis carried out as part of this report.

Staff members who prepared this report are professionally-qualified with appropriate educational qualifications and levels of experience and expertise to perform the scope of work set out in the Proposal for Services.

GCA has not undertaken a site visit and inspection because it was considered not relevant for the purpose of this report. As such, GCA is not in a position to comment on the operations or facilities in place, their appropriateness and condition, and whether they are in compliance with the regulations pertaining to such operations. Further, GCA is not in a position to comment on any aspect of health, safety or environment of such operation.

Oil and condensate volumes appearing in this report have been quoted at stock tank conditions. Typically these volumes have been referred to in million barrel increments (MMBbl). Natural gas volumes have been reported in millions of cubic meters at standard conditions. Gas reserve volumes correspond to sales gas, after an allocation has been made for fuel and process shrinkage losses. Standard conditions are defined as 1 Bar and 20o Celsius.

GCA prepared an independent assessment of the reserves based on data and interpretations provided by the Client.

It is GCA's opinion that the estimates of total remaining recoverable hydrocarbon liquid and gas volumes at March 31, 2014, are, in the aggregate, reasonable and the reserves classification and categorization is appropriate and consistent with the definitions and guidelines for reserves.

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This evaluation was based on information provided by QGEP to GCA through April 22, 2014, and included such tests, procedures and adjustments as were considered necessary. All questions that arose during the course of the evaluation process were resolved to our satisfaction."