

23 June 2017

# Large Conventional Gas Resource Potential in Tulainyo Gas Discovery Project

- Bombora Natural Energy Pty Ltd, the subject of an acquisition proposal by Pancontinental Oil and Gas, has released prospective recoverable gas estimates for the conventional Tulainyo Gas Discovery Project in California
- If successful, the Tulainyo project is well placed for a commercial development, with good proximity to gas markets and infrastructure, and moderate onshore California development costs
- The Tulainyo Gas Discovery structure is a large anticline with up to 91km<sup>2</sup> of closure. It has a strong surface expression, gas seeps and gas encountered by historic drilling
- Drilling of the structure in late 2014 by the joint venture encountered multiple, stacked, gas bearing conventional reservoirs that were not tested due to mechanical difficulties
- Bombora estimates recoverable Prospective Resources net to its interest to be in the range:

Net	P90	P50	Mean	P10
Prospective				
Resource	68	233	338	691
<b>Pancontinental</b>	Bcf	Bcf	Bcf	Bcf
/Bombora				

#### Cautionary Statement:

The estimated quantities of petroleum that may potentially be recovered by the application of a future development project(s) relate to undiscovered accumulations. These estimates have both an associated risk of discovery and a risk of development. Further exploration appraisal and evaluation is required to determine the existence of a significant quantity of petroleum.

Pancontinental Oil and Gas NL (ASX: PCL) ("Pancontinental"), is pleased to release the results of an internal assessment by Bombora Natural Energy Pty Ltd ("Bombora") of the potential recoverable gas resources for the Tulainyo Gas Discovery Project ("Tulainyo Project") in the Sacramento Gas Basin, California.

Gas Fields LLC ("Gas Fields"), a US registered subsidiary of Bombora, holds rights to acquire an interest in the Tulainyo Project through a farmin agreement.

Pancontinental proposes to acquire Bombora and its subsidiaries in an all-scrip transaction, and is proceeding to seek Pancontinental shareholder approval at a General Meeting on 10 July 2017. A Notice of Meeting was sent to shareholders on 13 June 2017.

The Tulainyo Farmin Agreement ("FIA") was executed by Gas Fields on 21 March, 2017 with parties holding a 152 km² (close to 40,000 acres) net lease position over the large Sites (Tulainyo) Anticline on the west side of the prolific Sacramento Gas Basin, California. See Figures 1 and 2.

The Tulainyo Joint Venture includes project operator California Resources Production Corporation, a subsidiary of California Resources Corporation (NYSE: CRC) and Cirque Resources LP, a private company based in Denver, Colorado. California Resources is the largest oil and gas producer in California on a gross-operated basis.

The Tulainyo-1 discovery well and side track wells were drilled on the Sites Anticline in 2014 to 2015, discovering gas in a series of stacked sandstone reservoirs at relatively shallow depths of less than 1,700 m. High gas shows of 1,000 to 5,000 units were recorded against elevated mud weights. The sands could not be tested due to mechanical difficulties.

Historic drilling, including the most recent well, indicates that the entire anticline could be gas charged.

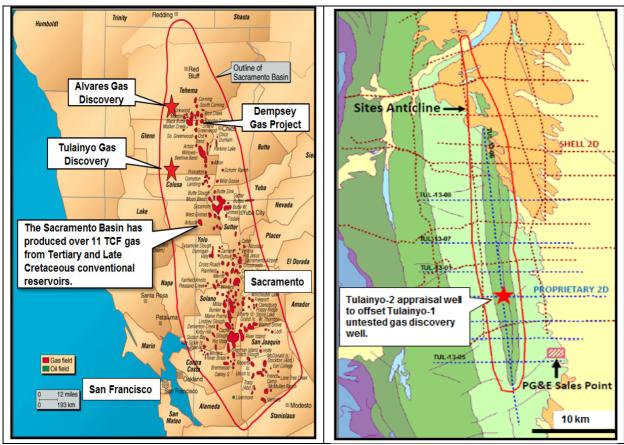


Figure 1 Location of the Tulainyo Gas Discovery

Figure 2 Surface structure of the Sites Anticline

To assess the commercial gas potential, the Tulainyo Joint Venture is planning the Tulainyo-2 appraisal well, funded by Gas Fields, with drilling commencing in September, 2017.

Under the terms of the FIA, Gas Fields will earn a 10% interest in the southern half of the very large, 152 Km² leased land position by funding Tulainyo-2. Gas Fields' interest will increase to 33.33% if Gas Fields drills and funds a second, deeper well in the area.

Gas Fields would also have the option to drill and fund a third well in the northern half of the land position to earn up to 33.33% in the entire leased area.

Under the FIA, the committed cost exposure of Gas Fields to the earning phase of each well in the earning drilling program will be capped, based on joint venture agreed estimates. In order to earn its interest in the Tulainyo Project, Gas Fields is required by 15 July 2017 (or such extended date as the Tulainyo Joint Venture may allow) to provide funding for the Tulainyo-2 well. Bombora plans to achieve such funding through the Magnum Transaction (see below).

Tulainyo-2 will be a "proof of concept well" to evaluate and flow test the gas sands penetrated at depths less than 1,700m (c. 5,500 feet) by the Tulainyo-1 discovery. Bombora has worked closely with the Tulainyo Joint Venture to prepare a robust well plan for Tulainyo-2, incorporating standard industry techniques and expertise from similar over pressured, gassy operating environments.

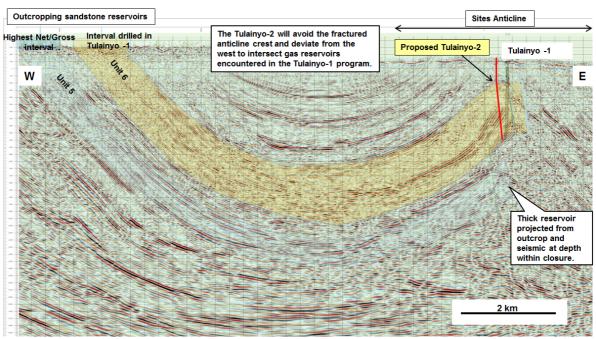


Figure 3 W-E regional Dip Seismic Line from Outcrop across the Tulainyo Gas Discovery structure

## **Magnum Transaction to Fund Tulainyo-2 Drilling**

As announced on 5 June 2017, Magnum Gas and Power Limited (ASX:MPE) has agreed to provide most of the funding for the well, estimated to be approximately A\$4.0 million, in return for taking a 60% shareholding in Gas Fields (the "Magnum Transaction"). This funding must be provided by Magnum consistent with the terms of the FIA. By agreement between Bombora and Magnum, Gas Fields will continue to be managed by Bombora. After the anticipated funding to be provided by Magnum, Gas-Fields will be 40% owned by Bombora.

#### **Recoverable Prospective Gas Resource Estimates**

Prospective recoverable gas resource estimates, effective 19 June 2017, have been calculated on a probabilistic basis for Gas Fields' net interest in the Tulainyo Project, assuming completion of the FIA three well earning program. Bombora's and consequently Pancontinental's, (subject to Pancontinental shareholder approval), net gas resource ownership has been further adjusted (see the table below) to reflect the funding and revised 40% beneficial ownership in Gas Fields expected through the Magnum Transaction. The net interest as required by SPE PRMS standards for prospective resource estimation is also net of lease ownership percentages and royalties.

Net Prospective Resource Gas Fields	P90 169 Bcf	P50 582 Bcf	Mean 845 Bcf	P10 1.73 Tcf
Net Prospective Resource PCL/Bombora	P90 68 Bcf	P50 233 Bcf	Mean 338 Bcf	P10 691Bcf
Related Area of Closure	29.4 km <sup>2</sup> (7,250 acres)	51 km <sup>2</sup> (12,570 acres)	54.5 km <sup>2</sup> (13,470 acres)	91 km² (22,440 acres)

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#### **Background Information to Resource Estimations**

The Tulainyo Gas Discovery contains conventional Early Cretaceous sandstone reservoirs in the Sites Anticline. The reservoirs have been uplifted into a large fold structure associated with the California Coastal Ranges on the northwest flank of the Sacramento Gas Basin. These rocks generally plunge to the east beneath the traditional, younger producing reservoirs of the Sacramento Basin from which over 11 Tcf of gas have been produced.

Only a limited number of wells have ever targeted the older Cretaceous reservoirs, most not on structure. In addition to Tulainyo-2, Bombora's Dempsey farmin will also target these Early Cretaceous reservoirs, guided for the first time by 3D seismic. Dempsey-1 is scheduled to commence drilling in mid-July, 2017.

A number of attempts have been made to drill and test the Sites Anticline, with the 2014-2015 Tulainyo-1 drilling being the first in over 50 years. All wells have been characterised by high gas shows, and over pressured reservoirs.

Data from the Tulainyo-1 drilling program resulted in a better understanding of the petroleum system and pressure regime. Gas samples show that the gas is of sufficient quality for pipeline entry. A major gas trunkline is located just 8km away and there is a ready gas market in California where approximately 90% of its huge daily gas requirement is imported, averaging some 7 Bcf per day and up to 11 Bcf per day in peak periods.

The Tulainyo drilling, for the first time, has provided high quality wireline logs and subsurface data to support an estimation of prospective gas resources. In particular, the wireline and seismic data (Figure 3) can be correlated to the Early Cretaceous sandstone reservoirs of the Lodoga Formation seen in outcrop to the west.

The seismic and well data show a very thick section of repeated sequences of moderate quality sandstone reservoirs that are potentially gas charged.

Outcrop sampling indicates relatively low permeabilities (at <= 3Md from limited samples), but these permeabilities should be sufficient to support natural gas flow, particularly in the over pressured reservoir within the anticlinal closure. Notably, Bombora interprets that the wireline log data indicate superior reservoir quality compared to the weathered outcrop samples.

Tulainyo Project royalties are favourable, averaging less than 20%.

Bombora's subsurface interpretation of the Sites / Tulainyo Anticline, is based on a grid of 2D seismic data and high quality surface mapping. This mapping shows a structural closure from near surface to below 3,000m (c. 10,000 feet), with the closure ranging from some 29 km² at the P90 map level to over 90km² at the P10 level (See Figure 2).

High gas shows and petrophysical analysis of wireline log data and mud log data strongly support the presence of multiple gas-saturated sands. Bombora expects that deeper additional gas saturated sands will also be present within closure.

Bombora considers the principal risks to the Tulainyo Project are associated with mechanical execution and to a lesser extent reservoir quality.

Based on the advanced planning for the Tulainyo-2 appraisal well, Bombora believes the chance of achieving a successful flow of gas to surface at potentially commercial rates is better than 50%. If this is achieved, Bombora believes that the proximity to

gas markets and related infrastructure, and the moderate onshore California development costs, mean that a commercial development is virtually certain.

Barry Rushworth, CEO of Pancontinental said:

"Bombora has given details of exciting potential recoverable gas volumes for the imminent appraisal drilling of the Tulainyo Gas Discovery onshore California.

Tulainyo is just one of a number of gas projects that provide strong validation for Pancontinental's acquisition of Bombora. Pancontinental is creating an asset portfolio with near term drilling and gas production potential through Bombora, plus the large oil prone upside of our existing African projects.

We will be announcing further news relating to the Bombora assets as drilling approaches.

The transaction by Bombora with Magnum, as recently announced by Magnum, is expected to provide close-to-full funding of the Tulainyo-2 well. This means that Bombora's, and hence Pancontinental's, cost exposure to that well will be modest, particularly compared to the potential size of the gas resources."

### Pancontinental Acquisition of Bombora

As announced on 7 June, 2017, Pancontinental has executed a Binding Heads of Agreement to acquire Bombora, a gas and oil explorer focused mainly on the appraisal of discovered gas fields in the onshore Sacramento Gas Basin and the Perth Basin.

The completion of the acquisition is subject to the approval of Pancontinental shareholders in a General Meeting on 10 July 2017, as well as the fulfilment of certain conditions precedent including the requirement that Pancontinental must have received by 10 July 2017 binding commitments for the raising of at least \$550,000 as part of the capital raising referred to in the Notice of Meeting sent to shareholders on 13 June 2017 which gives details of the transaction.

Bombora has the right to interests in near-term projects close to strong gas markets and infrastructure, with the potential for rapid development and early production.

Bombora provides Pancontinental with near-term activity to complement existing larger, but longer term African projects.

Further asset expansion is planned in the USA, Africa and Australia.

#### **QRRE Person (Qualified Petroleum Resources Evaluator)**

The information relating to the Tulainyo Gas Discovery Project is based on information compiled up to 19 June 2017 by Mr Brian Diamond who holds a BSc Geology and an MSc in Geophysics and is a member of the American Association of Petroleum Geologists.

Mr Diamond has over 20 years of experience in petroleum exploration, development and production and is satisfied that the estimated resources mentioned in this release have been classified in accordance with SPE-PRMS.

Mr Diamond is not aware of any new information or data that would materially affect the information relating to the Tulainyo Gas Discovery that is included in this announcement. All material assumptions and technical parameters underpinning the estimates in this announcement continue to apply and have not materially changed.

Mr Diamond has consented in writing to the inclusion of the information stated in this release in the form and context in which it appears.

For and on behalf of

**Pancontinental Oil & Gas NL** 

**Barry Rushworth** 

**CEO and Executive Director** 

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PANCONTINENTAL OIL & GAS NL
Head Office - Level 1, 10 Ord Street, Perth,
Western Australia 6005
Postal Address - PO Box 1154, Perth Business
Centre, Western Australia 6872
Telephone +61 8 6363 7090
Facsimile +61 8 6363 7099