



ASX Announcement

Business Update

Reference #013/21

Date

30 April 2021

Overview

- A review of 2P reserves across the Western Flank oil and gas fields, including the Bauer oil field, has been undertaken following recent declines in oil production and recent drilling results
- 18.4 MMboe net downgrade to 2P reserves across Western Flank oil and gas assets (pre-production impact), comprising:
 - 17.6 MMbbl downgrade to Western Flank oil 2P reserves
 - 7.2 MMboe downgrade to Western Flank gas and associated liquids 2P reserves
 - Partially offset by acquisition of Senex Energy's Cooper Basin oil and gas assets, with a 2P reserve increase of 4.2 MMbbls and 2.2 MMboe, respectively
 - Net Western Flank 2P oil and gas reserves downgrade represents ~5% of total Company 2P reserves as at 30 June 2020
- Re-focusing Western Flank oil and gas effort towards exploration portfolio following several years of successful development of existing fields, with recent exploration drilling success rate of ~33%
- FY21 pro forma production guidance downgraded to 25.2 – 25.7 MMboe (previously 26.5 – 27.5 MMboe)
- FY22 Western Flank oil production expected to be 4.0 – 5.0 MMbbls below previous estimates
- Five-year outlook is withdrawn and Beach will no longer provide a five-year outlook in its current form¹
- **Beach to hold an investor call at 9:00am AEST today, Friday 30 April 2021 (details on page 5)**

Beach Energy Limited (ASX: BPT, Beach) today announced an update to the Company's business activities, including further details on the Cooper Basin Western Flank oil and gas operations. The update follows details provided at the Company's FY21 Half Year Results on 15 February 2021.

At the FY21 Half Year Results, Beach announced the Company had experienced higher than expected decline rates within the Bauer field, the largest oil field on the Western Flank. The higher declines were a result of interference between the horizontal wells within the McKinlay reservoir, drilled during the FY21 program, and both the existing Namur vertical producers and other McKinlay horizontal development wells.

Since the FY21 Half Year Results, additional production data from Bauer field oil wells drilled throughout the FY21 campaign confirmed the production decline. In addition, recent results from oil wells drilled outside of

¹ Outlook impacted by variability to the business, which includes adjustments in work programs that were experienced during the COVID-19 pandemic, reductions in the Western Flank oil and gas production profile and variations to project interests as a result of asset acquisitions.

For further information contact the following on +61 8 8338 2833

[Investor relations](#) Chris Morbey, Head of Investor Relations

[Media](#) Rob Malinauskas, Head of Corporate Affairs and Community Relations

the Bauer oil field, including the Balgowan, Chiton, Hanson and Kalladeina fields, have come in towards the low end of expectation.

The geological model used to determine reserve volumetrics for the Bauer oil field has been used for nine other oil fields across the Western Flank, in line with Beach's Annual Reserve Audit. The model has also been used to determine well locations for the recent drilling programs. While the results of FY19 and FY20 drilling programs supported the use of the Bauer model on these fields, the FY21 drilling program highlighted the difficulty in prognosing depth in low relief Western Flank oil structures due to natural variability.

Recent drilling results highlighted that some elements of the geological model taken from Bauer, particularly regarding the volumetric estimates, are not entirely applicable to these oil fields, which have shown greater complexity.

Drilling of the FY21 wells was completed in March 2021 and they are being progressively connected and completed on pump, with this activity continuing into FY22. Stabilised production trends typically require at least three months and sometimes up to six months, before predictions of well and field performance can be confirmed.

Beach typically commences the annual reserve audit process during March, with completion in August, however given recent drilling results, the Company has undertaken an urgent review of Western Flank oil and gas reserves for FY21. The Beach assessment has resulted in a 2P reserve downgrade of 17.6 MMbbls across Western Flank oil fields.

Beach expects FY22 Western Flank oil production to be 4.0 – 5.0 MMbbls below previous estimates.

Separately, across the Western Flank gas assets, several wells have shown increased water production, which, combined with recent pressure and production data, has led to a 7.2 MMboe downgrade in 2P gas and associated liquids reserves.

No immediate impact on gas production is expected. Exploration and appraisal drilling is planned for FY22 to extend plateau production through the Middleton gas plant.

Partially offsetting the reserve downgrade, Beach has completed the acquisition of Senex Energy's Cooper Basin Western Flank oil and gas assets, with a 2P reserves increase of 4.2 MMbbls and 2.2 MMboe, respectively.

Whilst we are undertaking our annual Cooper Basin Joint Venture (CBJV) 2P oil and gas reserves audit, there is no correlation between the Western Flank oil and gas reserve downgrade and Beach's CBJV reserves position.

Beach Energy Managing Director and Chief Executive Officer, Matt Kay said the unique nature of these fields had presented some challenges.

"The past five years has seen the Western Flank outperform our expectations, but we are now witnessing material decline from a number of fields," Mr Kay said.

"This has had a negative impact on our recent production results, as well our FY21 production guidance and Western Flank 2P oil and gas reserves.

"Previous reserves assessment across the complex Western Flank oil and gas fields have proven to be optimistic following recent drilling results. The team has developed new reservoir models to optimise field development. We also enlisted the support of three independent reserve consultants, including Beach's external reserves auditor RISC, to confirm our approach."

Reserves impact

Beach has booked a 17.6 MMbbl downgrade to 2P oil reserves and 7.2 MMboe downgrade to 2P gas reserves across Western Flank assets compared to FY20 reserve statement (pre-production impact). This equates to a net downgrade of ~5% of the Company's 2P oil and gas reserves as at 30 June 2020, before the impact of FY21 production and post-acquisition of Senex Energy's Cooper Basin assets, effective 1 July 2020. A breakdown of the 2P oil and gas reserves downgrade can be found in the table below.

Breakdown of net changes to 2P reserves (pre-production impact)

MMboe	2P reserves impact
Bauer oil field	(6.0)
Four other ex-PEL 91 oil fields ¹	(8.2)
Four ex-PEL 92 oil fields ²	(2.2)
Acquired Senex oil acreage ³	(1.2)
Total 2P oil reserve downgrade	(17.6)
Ex-PEL 106 gas fields	(7.2)
Total 2P gas reserve downgrade	(7.2)
Uplift from acquired Senex oil acreage	4.2
Uplift from acquired Senex gas acreage	2.2
Total 2P oil and gas reserve downgrade	(18.4)

²Four ex-Bauer fields include Chiton, Kalladeina, Balgowan and Hanson..

³PEL 92 field includes Callawonga,, Butlers, Parsons and Rincon.

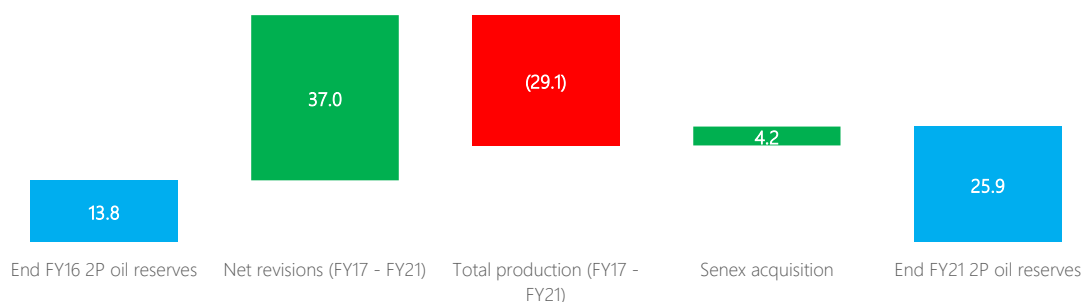
³Lower 2P oil reserves associated with the Senex Energy Cooper Basin asset acquisition were incorporated into the purchase price.

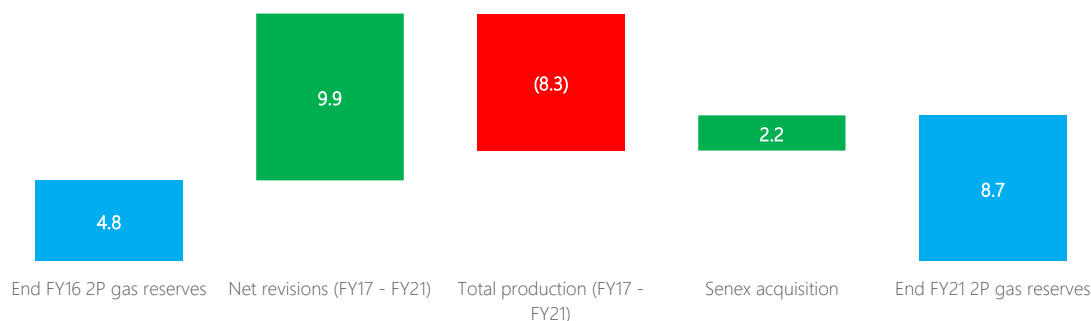
Once forecast production of 8.6 MMboe is included, the 2P reserves across Western Flank oil and gas assets at 30 June 2021 are 34.6 MMboe, comprising:

- 25.9 MMbbls of Western Flank oil
- 8.7 MMboe of Western Flank gas and associated liquids

Western Flank 2P oil reserves at 30 June 2021 are 12.1 MMbbls higher than those booked at 30 June 2016, despite the fields having produced 29.1 MMbbls over the five-year period.

Western Flank 2P oil reserves since end-FY16 (MMbbls)



Western Flank 2P gas reserves since end-FY16 (MMboe)**Future Western Flank potential**

Following several successful years of developing our existing Western Flank fields, Beach plans to focus attention towards its exploration portfolio across the Western Flank oil and gas assets.

Beach continues to value the exploration potential within the Company's Western Flank oil and gas acreage and plans to further evaluate the seriatim of more than 100 prospects and leads, based on new Western Flank interpretations and lessons learnt. The Company has had a ~33% exploration drilling success rate in recent years.

The FY22 drilling program will focus on:

- Infill drilling within existing oil fields
- Appraisal and development of Birkhead reservoir (focus on Senex acreage)
- Oil exploration focused on Namur targets (~33% historic success rate)
- Gas exploration targeting near-field Patchawarra prospects

Guidance update**FY21 guidance**

	Pre-acquisition guidance	Pro-forma guidance ¹	Updated guidance
Production (MMboe)	25.5 – 26.5	26.5 – 27.5	25.2 – 25.7
Capital expenditure ² (\$ million)		\$720 – 760	\$700 – 740
Underlying EBITDA ^{3,4} (\$ million)		\$900 – 950	\$850 – 900
Unit operating cost (\$ per boe)		\$9.00 – 9.40	\$10.00 – 10.50
Unit DD&A (\$ per boe)		\$16.50 – 17.50	\$16.25 – 16.75

¹Pro forma includes production from Senex Energy's Cooper Basin and Mitsui's Bass Basin assets, with an effective date 1 July 2020. Other pro forma financial guidance based on Senex Energy Cooper Basin asset acquisition at completion of 1 March 2021 and assumes a Mitsui Bass Basin asset acquisition date of 1 January 2021 for accounting purposes.

²Excludes abandonment activities.

³Economic assumption Q4 FY21: Brent price – US\$65.00 per bbl, AUD/USD – 0.770, NZD/AUD – 1.07.

⁴Includes the preliminary outcome of the Otway gas price arbitration.

Beach's FY21 production guidance has been impacted by:

- Larger than expected decline across the Western Flank oil assets
- Lower nominations from the Otway Gas Project

Outlook

Beach has withdrawn and will no longer provide a five-year outlook in its current form. The Company is currently reviewing plans regarding its outlook, which will be completed in conjunction with the FY21 Full Year Audited Results.

This is due to an acknowledgement of continuing variability to the business, which includes adjustments in work programs that were experienced during the COVID-19 pandemic, reductions in the Western Flank oil and gas production profile and variations to project interests as a result of asset acquisitions.

Planned production growth from the Otway Basin and Perth Basin developments remain on track.

Balance sheet

With Beach's net gearing of ~1% (following the completion of the acquisition of Senex Energy's Cooper Basin assets) and liquidity of \$430 million, Beach maintains its strong balance sheet to support the delivery of our two key growth projects, the Waitsia Gas Project Stage 2 and the Victorian Otway development campaign, as well as the potential development of Trefoil in the Bass Basin.

Our key gas growth projects remain on track to deliver material production growth, providing a stable, long-life earnings base and expected platform to deliver value to Beach shareholders.

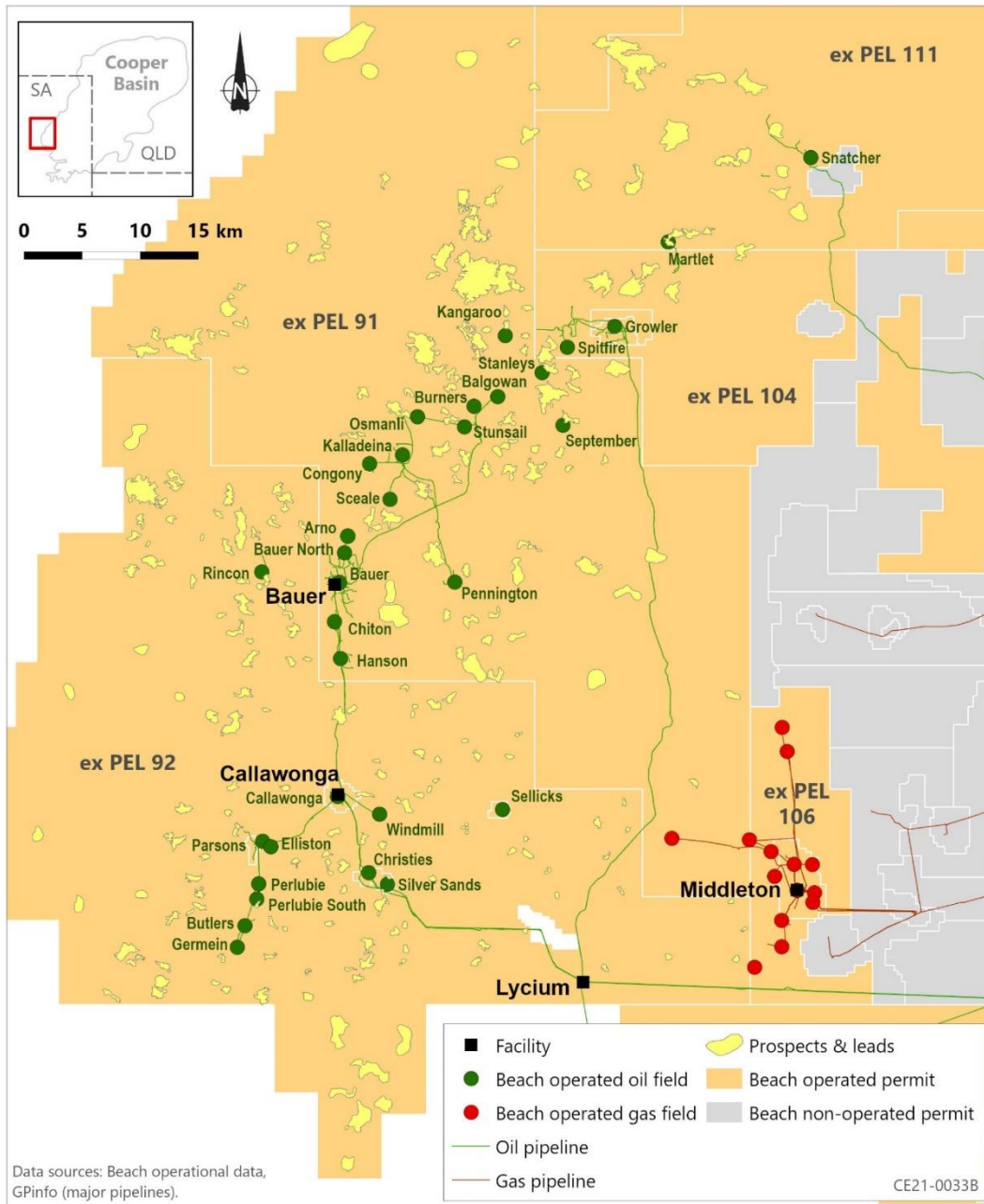
Assessing carrying values

The downgrade to 2P reserves across Western Flank oil and gas assets could lead to carrying value adjustments. Beach will assess the carrying values of all its assets as part of its FY21 Full Year Audited Results reporting process, to be released on 16 August 2021.

Webcast details

Beach will hold a webcast at 9:00am AEST today, Friday 30 April 2021. Access to the webcast will be available on our website www.beachenergy.com.au.

Beach Energy's Cooper Basin Western Flank oil and gas operations



Authorisation

This release has been authorised for release by the Beach Energy Board.

Disclaimer

This ASX Release contains forward looking statements that are subject to risk factors associated with oil, gas and related businesses. It is believed that the expectations reflected in these statements are reasonable but they may be affected by a variety of variables and changes in underlying assumptions which could cause actual results or trends to differ materially, including, but not limited to: price fluctuations, actual demand, currency fluctuations, drilling and production results, reserve estimates, loss of market, industry competition, environmental risks, physical risks, legislative, fiscal and regulatory developments, economic and financial market conditions in various countries and regions, political risks, project delays or advancements, approvals and cost estimates.

All references to dollars, cents or \$ in this announcement are to Australian currency, unless otherwise stated. References to "Beach" may be references to Beach Energy Limited or its applicable subsidiaries.

Certain FY21 planned activities are subject to joint venture approvals. References to planned activities beyond FY21 are subject to finalisation of work programs, government approvals, JV approvals and board approvals

Reserves disclosure

Beach prepares its petroleum reserves and contingent resources estimates in accordance with the 2018 update to the Petroleum Resources Management System (PRMS) published by the Society of Petroleum Engineers. The reserves and resources information in this report is based on, and fairly represents, information and supporting documentation prepared by, or under the supervision of, Mr David Capon (General Manager Development - Victoria, New Zealand). Mr Capon is a full-time employee of Beach Energy Limited and has a BSc (Hons) degree from the University of Adelaide and is a member of the Society of Petroleum Engineers. He has in excess of 25 years of relevant experience. The reserves and resources information in this announcement has been issued with the prior written consent of Mr Capon as to the form and context in which it appears.

Beach most recently released full Company reserves information in its 2020 Annual Report. Information about the updated reserves position relating to Beach's Western Flank oil and gas acreage is contained in this release. Information regarding acquisition of Senex interests in the Cooper Basin is contained in ASX announcement #037/20 from 3 November 2020: "Beach expands Cooper Basin Portfolio" and the contracted acquisition of Mitsui's interests in the Bass Basin are contained in ASX announcement #002/21 from 27 January 2021: "FY21 Second Quarter Activities Results". Information about the Enterprise 1 discovery reserve booking are included in the ASX announcement #004/21 from 15 February 2021: "Enterprise Exploration Success Delivers Material 2P Reserves Booking". Beach confirms that it is not aware of any other new information or data that materially affects the information included in this announcement and that all the material assumptions and technical parameters underpinning the estimates in the aforesaid market announcements continue to apply and have not materially changed.

FY21 2P reserves estimates for Western Flank oil and gas assets take into account forecast full year FY21 production as required. Reserve estimates may change if production is different to forecast. Conversion factors used to evaluate oil equivalent quantities are sales gas and ethane: 5.816 TJ per kboe, LPG: 8.458 ktonnes per boe, condensate: 1.069 bbl per boe and oil: 1 bbl per boe. The reference point for reserves determination is the custody transfer point for the products. Reserves are stated net of fuel, flare & vent volumes.

The reserves described herein are conventional, developed and undeveloped reserves. Undeveloped reserves are classified as Justified for Development under PRMS guidelines. The reserves have been estimated using a combination of probabilistic and deterministic procedures for volumetrics, and analogue methods.