

14 July 2022

## Gas Reserves and Resources Upgrade:

### Blue increases Sapphire Block 2C resources by 98% and 3P gas reserves by 17%

Blue Energy Limited (ASX: BLU, 'Blue Energy', 'Blue' or 'the Company') is pleased to report that the independent reserve and resource certifier, Netherland Sewell and Associates Inc (NSAI) of Dallas, Texas, has significantly upgraded its estimates of gas reserves and resources in Blue's 100% owned and operated Sapphire Block. The Sapphire Block (PL 1034 application area) is part of Authority to Prospect (ATP) 814, located in North Bowen Basin, Queensland. This is the first of the reviews planned for 2022 of the six constituent blocks that comprise ATP 814.

### Summary of reserve and resource upgrades for Sapphire Block (PJ of recoverable gas)

- **Increase in 2P and 3P gas reserves** of 13% and 17%, respectively, to 66.5 PJ and 253.2 PJ
- **Increase in 1C, 2C and 3C Contingent Resource category** of 134%, 98% and 15%, respectively, to 154.3 PJ, 213.9 PJ and 214.4 PJ
- **Increase of 47% in 3P+2C aggregate gas resource available** to 467.1 PJ of recoverable gas

**Table 1: Summary of reserve and resource changes for Sapphire Block (PJ of recoverable gas)**

Permit	1P (PJ)		2P (PJ)		3P (PJ)		1C (PJ)		2C (PJ)		3C (PJ)	
	new	*old	new	*old	new	*old	new	*old	new	*old	new	*old
ATP 814P, Sapphire Block, Qld	–	–	66.5	59	253.2	216	154.3	66	213.9	108	214.4	186
% change	–	–	+12.7%	–	+17.2%	–	+133.7%	–	+98.1%	–	+15.2%	–

Source: NSAI, Blue Energy.

By way of comparison, the State of New South Wales uses approximately 135 PJ of natural gas per annum (Australian Energy Update 2021 – Australian Government).

Blue originally announced the award of 2P reserves and an upgrade of 3P reserves for the Sapphire Block in February 2013 (\*see ASX:BUL 26 February 2013).

NSAI undertook this review as part of the regular block assessment of Blue's assets, in conjunction with technical work completed by Blue on the location of its current pilot well drilling locations and also subsequent to a regional review of data by NSAI in the North Bowen Basin.

NSAI conducted the assessment and classified the resources and reserves using the current Society of Petroleum Engineers – Petroleum Resources Management System (SPE–PRMS) (2018 Update), together

with technical geological data relating to coal seam thickness, coal seam depth, gas content data, seam continuity data and production data from the adjacent activity to the Sapphire Block.

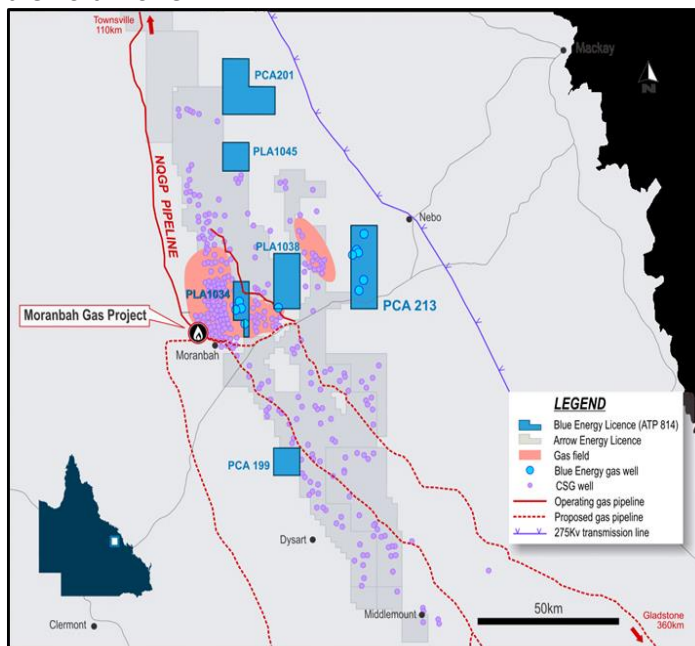
## **North Bowen (Sapphire) drilling program**

This upgrade complements the Sapphire Block (PL 1034 application area) pilot well drilling program currently underway and gives a further impetus for Blue to consider expanding the current drilling program.

The aim of the North Bowen drilling program in ATP 814 is to convert existing Contingent Gas Resources to gas reserves from the existing inventory of resources situated in the Sapphire Block of ATP 814P.

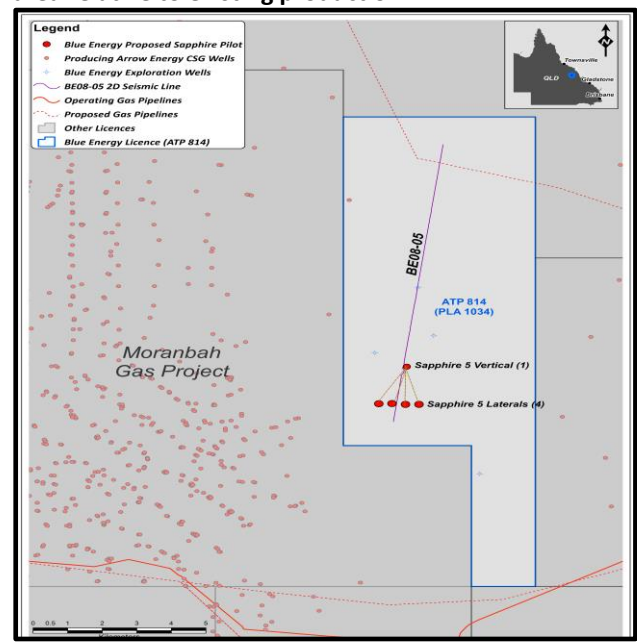
The area covered by the application for PL 1034 area is immediately adjacent to the Moranbah Gas Project which is currently a producing field operated by Arrow Energy (see Figures 1–2). The application for PL 1034 is currently with the Queensland Government for the issue of the Production Licence (PL). Blue Energy is 100% owner and operator of ATP 814P and the PL 1034 application area.

**Figure 1: Blue Energy acreage position in the North Bowen**



Source: Blue Energy.

**Figure 2: The location of the Sapphire Block (PL 1034) area relative to existing production**



Source: Blue Energy.

**APPENDIX 1 – ADDITIONAL INFORMATION REQUIRED UNDER CHAPTER 5 OF THE LISTING RULES****Listing Rule 5.31.1**

A large range of technical geological and production data has been obtained over a wide area, particularly within the proximity of the Sapphire Block, in order to understand the technical and commercial nature of this resource. NSAI utilises proximal data from the adjacent producing gas field to assess and estimate the gas reserve and resource quantities in Blue Energy's ATP 814.

The proximity to existing infrastructure consists of a large producing well field, gas gathering, gas conditioning and compression facilities and connection to the Moranbah–Townsville pipeline, which has supplied gas to the Townsville market since 2006. This information has also been utilised by NSAI in the estimation of the economic thresholds for Blue Energy's gas reserves and resources.

Since the initial reserves and Contingent Resources were reported for the Sapphire Block on 26 February 2013, a better understanding of the data has been developed, which has led to the current interpretation and reserve and resource estimate.

The upgrade of reserves and Contingent Resources have been prepared by NSAI utilising a deterministic estimation method.

The new technical data and refined interpretation incorporated since February 2013 has resulted in an increase in the 2P and 3P reserves as well as the Contingent Resources. The area is subject to a Production Licence Application with the Queensland Government and, as such, a Field Development Plan has been lodged as part of the Application. The large amount of technical data, the production performance of Moranbah Gas Field over 18 years and the proximity of the Sapphire Block to this existing gas field and gas market at both Moranbah and Townsville resulted in NSAI re-affirming its previous opinion that both 2P and 3P reserves volumes are justified and warranted.

While Blue has commenced a drilling programme which will see an initial 5 wells, there are currently no existing production wells, processing or compression facilities located in the Sapphire Block and recovery of gas from the permit will be conducted through future investment in development infrastructure of the currently undeveloped reserves.

Given appropriate approvals and grant of a Production Licence by the Queensland Government, it is expected that development of the field will take between 3 and 5 years with first gas expected in 2024, subject to access to existing gas infrastructure. The Company is confident that the project has a positive economic outlook as the Company has already executed a number of memorandums of understanding for the supply of gas, the potential buyers of which include Queensland Pacific Metals, Origin Energy and EnergyAustralia. As stated, the Company is presently waiting for the Queensland Government to issue the Petroleum Lease for PL 1034, which will require grant of a suitable Environmental Authority by the State and Federal EPBC clearance.

The Company is not aware of any key social or economic concerns that need to be resolved for development to proceed.

LR 5.31.7: The estimates reported include unconventional petroleum reserves. The details of the project area, the method of extraction and number of wells that may be required are not yet finalised.

*LR5.31.8:* Due to the large amount of technical data, combined with the close proximity of the Sapphire Block to the Moranbah Gas Field and the adherence to a deterministic well spacing assessment criteria (using SPE/PRMS criteria), NSAI is of the opinion that 2P and 3P reserves volumes are justified and warranted.

**Listing Rule 5.32**

Since the reserves for the Sapphire Block were last reported to the market on 26 February 2013, the following data or information has been secured, enabling an upgrade of the reserves and resources. The changes include the following:

- Coal Overburden and Net Thickness have been revised across the block
- regional geologic features have been incorporated with more clarity
- Gas Content and Recovery Factor calculations have been adjusted for regional historical trends.

**Listing Rule 5.33.2**

The Reserves and Contingent Resources which are reported herein have been estimated using the deterministic method, with classification and categorisation based on incremental well spacing concepts. The estimates have not been adjusted for development risk.

**Listing Rules 5.33.3 and 5.33.5**

The Reserves and Contingent Resources which have been certified by NSAI for ATP 814 are based upon the incorporation of additional technical data by the independent certifier NSAI, from regional geologic and production interpretations, to establish the commercial viability of project development and commitment to develop the Sapphire Block resources.

If the contingencies are successfully addressed, some part of the Contingent Gas Resources may be reclassified as reserves. The estimates of Contingent Resources have not been risked to account for the possibility that the contingencies are not successfully addressed.

The estimates reported relate to unconventional petroleum reserves. The details of the project area, the method of extraction and number of wells that may be required are not yet finalised. The Contingent Resources estimated have been prepared in accordance with the definitions and guidelines set forth in the SPE–PRMS 2018.

**Listing Rule 5.33.4**

The report does not identify that the Contingent Resources are contingent on technology that remains under development. A pilot well drilling programme has been announced and is currently under way with the drilling rig having been mobilised to the field.

**Listing Rule 5.34**

The Company confirms that it is not aware of any other information or data, other than that disclosed in this announcement and which has been provided to NSAI for the purposes of preparing the estimate of the Contingent Resources, that materially affects the information included in the original announcement relating to the Sapphire Block (PL 1034 application pending) ATP 814 (ASX:BUL 26 February 2013) and this announcement and that all of the material assumptions and technical parameters underpinning the estimates in the original announcement continue to apply.

**Table 2: Blue Energy Updated Reserves and Resources Table at 14 July 2022**

Permit	Block	Assessment Date	Announcement Date	1P (PJ)	1C (PJ)	2P (PJ)	2C (PJ)	3P (PJ)	3C (PJ)
ATP854P		22/01/2022	25/01/2022	-	90	-	194	-	398
ATP813P		29/10/2014	30/10/2014	-	-	-	61	-	830
ATP814P	Sapphire	11/07/2022	11/07/2022	-	154.3	66.5	213.9	253.2	214.4
ATP814P	Central	5/12/2015	8/12/2015	-	50	12	99	75	306
ATP814P	Monslatt	5/12/2015	8/12/2015	-	-	-	619	-	2,054
ATP814P	Lancewood	5/12/2015	8/12/2015	-	5	-	23	1	435
ATP814P	Hillalong	27/02/2020	27/02/2020	-	-	-	182	-	237
ATP814P	South	30/06/2013	29/07/2013	-	15	-	27	6	30
<b>Total (PJ)</b>				-	<b>314</b>	<b>78</b>	<b>1,418</b>	<b>335</b>	<b>4,504</b>
All numbers are net to Blue Energy									

Source: NSAI, Blue Energy.

#### \*Listing Rule 5.42 Disclosure

The estimates of Reserves and Contingent Resources noted throughout this ASX Announcement have been provided by Mr John Hattner of Netherland, Sewell and Associates Inc (NSAI) and were originally reported in the Company's market announcements of 25 January 2012, 26 February 2013, 19 March 2013, 8 December 2015, 28 February 2019 and 22 January 2022. NSAI independently regularly reviews the Company's Reserves and Contingent Resources. Mr Hattner is a full-time employee of NSAI, has over 30 years of industry experience and 20 years of experience in reserve estimation, is a licensed geologist and a member of the Society of Petroleum Engineers (SPE), and has consented to the use of the information presented herein. The estimates in the reports by Mr Hattner have been prepared in accordance with the definitions and guidelines set forth in the 2018 Petroleum and Resource Management System (PRMS) approved by the SPE, utilising a deterministic methodology.

Blue Energy confirms that it is not aware of any new information or data that materially affects the information included in any of the announcements relating to ATP 813, 814 or 854 referred to in this report and that all of the material assumptions and technical parameters underpinning the estimates in the announcements continue to apply and have not materially changed.

<sup>++</sup> Listing Rule 5.28.2: 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 potentially moveable hydrocarbons.

#### By Authority of the Board per:

**John Phillips**  
Managing Director  
Blue Energy Limited