

12 November 2019

Blue and Queensland Pacific Metals sign gas MOU for proposed Townsville Nickel refining project

Blue Energy Limited (**ASX: BLU**) is pleased to advise that it has signed a non-binding MOU with Queensland Pacific Metals Pty Ltd (QPM) to facilitate supply of a portion of Blue Energy's North Bowen Basin gas resources. QPM is a wholly owned subsidiary of Pure Minerals Limited (**ASX:PM1**), who is focussed on developing a battery chemicals refinery to produce nickel and cobalt sulphate for the emerging EV sector.

Memorandum of Understanding signed to facilitate supply of Gas to proposed QPM Nickel Refining project in Townsville

- **Blue Energy** signs non-binding MOU with Queensland Pacific Metals Pty Ltd to supply gas to the proposed Nickel Refining project.
- Indicative QPM volumes: 7 PJ/annum for 15 years
- Proposed gas supply source- 216 PJ of 3P reserves in Blue's ATP 814P Sapphire Block

This announcement comes in quick succession after the previously announced non-binding MOU between Blue Energy and North Queensland Gas Pipeline Pty Ltd (NQGP) who own the 391km onshore natural gas pipeline infrastructure which currently transports gas from the existing Moranbah Gas Project in the Bowen Basin to power and industrial users in Townsville, Queensland.

Blue Energy Chairman, Mr John Ellice-Flint, said "Blue is delighted to be able to offer our gas to underpin the development of a new domestic mineral processing business in Townsville, undertaken by another Australian owned company. It underscores the vital relationship between access to energy for the mineral processing which underpins the gig economy, for the export industry and revenue for businesses in Townsville and the State, together with jobs for the region both in developing Blue's upstream gas resource and the downstream QPM processing facility."

BACKGROUND

New domestic gas supply for this proposed new Townsville refining project would initially be drawn from Blue Energy's ATP814P Sapphire Block which has been independently assessed to contain nearly 216 PJ of 3P reserves and a further 186 PJ of Contingent Resource, and is located only 12 km from the existing Moranbah Gas Project gas processing facilities and less than 2 km from existing gas field gathering infrastructure.

The broader Northern Bowen Basin Gas Province has a discovered resource of approximately 15,000 PJ of gas which is sufficient to underpin the east coast domestic gas market for the

next 30 years, based on current market conditions. Blue's component of this estimate is currently 3,248PJ. Development of this Basin-wide resource and a single large diameter multi-user gas trunk line connection to the south would provide security of supply for east coast manufacturers and with this additional supply, will put downward pressure on prices. The additional gas availability would also generate the expansion of industry in the greater North Queensland region.

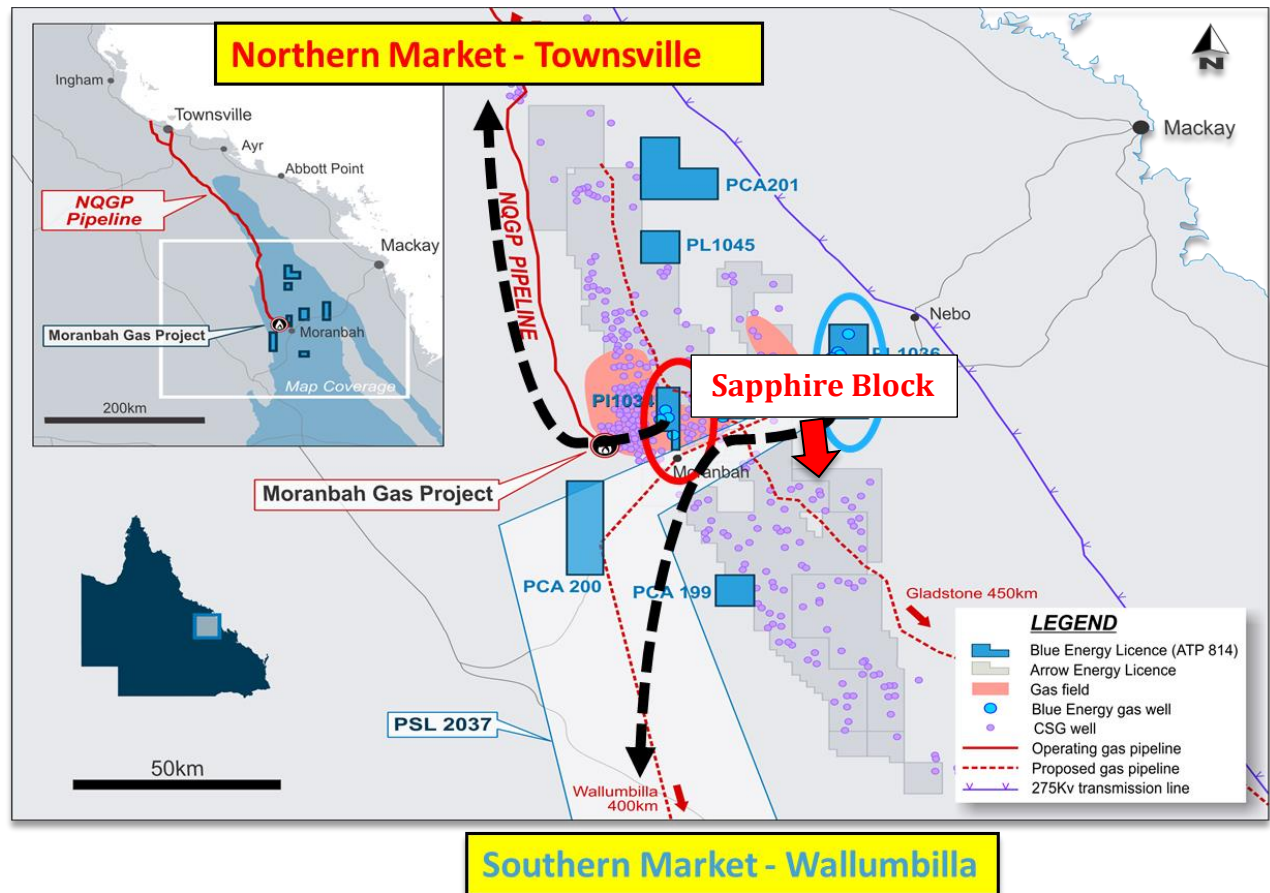


Figure 1: Blue Energy's ATP814P acreage and the North Queensland Gas Pipeline to Townsville plus the southern pipeline option route - PSL 2037 from Moranbah to Rolleston

Townsville Energy Chemical Hub (TECH) Project, 100% QPM

The TECH project envisages the development of a new refinery in the northern Queensland town, processing 600,000 tonnes/year of laterite ore to produce 25,000 tonnes of nickel sulphate and 3,000 tonnes of cobalt sulphate plus other valuable co-products such as hematite and alumina.

Ore will be imported under long-term supply agreements already negotiated with two New Caledonian mining companies and is expected to grade 1.6% nickel and 0.17% cobalt, which compares favourably to similar projects (operating and slated for development) in Australia.

QPM is a wholly owned subsidiary of Pure Minerals Ltd (**ASX:PM1**).

Blue Energy Gas Reserves and Resources

Permit	Block	Assessment Date	Announcement Date	Methodology	Certifier	1P (PJ)	1C (PJ)	2P (PJ)	2C (PJ)	3P (PJ)	3C (PJ)
ATP854P		30/06/2012	19/03/2013	SPE/PRMS	NSAI	0	22	0	47	0	101
ATP813P		29/10/2014	30/10/2014	SPE/PRMS	NSAI	0	0	0	61	0	830
ATP814P	Sapphire	5/12/2015	8/12/2015	SPE/PRMS	NSAI	0	66	59	108	216	186
ATP814P	Central	5/12/2015	8/12/2015	SPE/PRMS	NSAI	0	50	12	99	75	306
ATP814P	Monslatt	5/12/2015	8/12/2015	SPE/PRMS	NSAI	0	0	0	619	0	2,054
ATP814P	Lancewood	5/12/2015	8/12/2015	SPE/PRMS	NSAI	0	5	0	23	1	435
ATP814P	Hillalong	6/02/2019	7/02/2019	SPE/PRMS	NSAI	0	0	0	182	0	237
ATP814P	South	30/06/2013	29/07/2013	SPE/PRMS	NSAI	0	15	0	27	6	30
Total (PJ)						0	158	71	1,166	298	4,179
Total						0	27	12	199	51	714

Table 1: Blue Energy net Reserves and Resources

*Listing Rule 5.42 Disclosure for Reserves and Resources

The estimates of Reserves and Contingent Resources noted throughout this 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:

- 21 July 2011 (Maiden Reserves for ATP 814P)
- 13 December 2011 (Monslatt Resource Upgrade);
- 25 January 2012 (Reserves Upgrade for ATP 814P);
- 26 February 2013 (CSG Reserves Boost for Blue Energy's key Bowen Basin Project – ATP 814P),
- 19 March 2013 (Major Queensland Gas Resources for Blue Energy – ATP 814 & ATP 854);
- 8 December 2015 (Significant increase in Gas Reserve for key Bowen Basin permit); and
- 28 February 2019 (New gas resource upgrade – ATP 814 – Hillalong Block).

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 Reserves and Contingent Resources information for the Company's interests in ATP 854, ATP 813 and ATP 814 referred to in this Presentation has been issued with the prior consent of Mr John Hattner of Netherland, Sewell and Associates Inc in the form and context in which they appear.

Mr Hattner's qualifications and experience meet the requirements to act as a Competent Person as defined under the ASX Listing Rule 5.42, to report petroleum reserves in accordance with the Society of Petroleum Engineers ("SPE") 2007 Petroleum Resource Management System ("PRMS") Guidelines as well as the 2011 and 2018 Guidelines for Application of the PRMS approved by the SPE utilizing the deterministic methodology and have not been adjusted for commercial risk.

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

Petroleum Tenements Held

Table 2

Permit	Location	Interest Held Previous Quarter	Interest Held Current Quarter
ATP656P	Cooper Basin (Qld)	100%	100%
ATP657P	Cooper Basin (Qld)	100%	100%
ATP658P	Cooper Basin (Qld)	100%	100%
ATP660P	Cooper Basin (Qld)	100%	100%
ATP813P	Galilee Basin (Qld)	100%	100%
ATP814P	Bowen Basin (Qld)	100%	100%
ATP854P	Surat Basin (Qld)	100%	100%
ATP1112A	Carpentaria Basin (Qld)	100%	100%
ATP1114A	Georgina Basin (Qld)	100%	100%
ATP1117A	Georgina Basin (Qld)	100%	100%
ATP1123A	Georgina Basin (Qld)	100%	100%

*Permit	Location	Interest Held Previous Quarter	Interest Held Current Quarter	Comment
EP199A*	Wiso Basin (NT)	10%	10%	See Note 1
EP200*	Wiso Basin (NT)	10%	10%	See Note 1
EP205*	Wiso Basin (NT)	10%	10%	See Note 1
EP206A*	Wiso Basin (NT)	10%	10%	See Note 1
EP207*	Wiso Basin (NT)	10%	10%	See Note 1
EP208A*	Wiso Basin (NT)	10%	10%	See Note 1
EP209A*	Wiso Basin (NT)	10%	10%	See Note 1
EP210A*	Wiso Basin (NT)	10%	10%	See Note 1
EP211A*	Wiso Basin (NT)	10%	10%	See Note 1

Table 3

*Exploration blocks Blue is farming into

Note 1: Subject to Farm in Agreement which upon completion of the seismic work program will result in Blue Interest becoming a 50% equity participant

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