

# Baúna Oil Reserves Upgrade and Contingent Resource Competent Persons Report Summary

Karoon Energy Ltd ('Karoon') is pleased to provide a summary of the Competent Persons Report ('CPR') prepared by AGR Petroleum Services Reservoir Management Division ('AGR') for the Reserves and Contingent Resources relating to Santos Basin concession BM-S-40 containing the Baúna oilfield and Patola oil discovery.

This assessment is effective as of 1 January 2020 and represents an update to previous CPR prepared by AGR which was announced on 29<sup>th</sup> August 2019 and was effective as of 1 January 2019. Production for calendar year 2019 was 6.94MMbbls oil or 19kbpd.

After accounting for field production through 2019 the CPR results represent reserve increases of 4.0MMbbl, 1.2MMbbl and 0.8MMbbl at 1P, 2P & 3P levels respectively. AGR's revised Contingent Resource assessment represents increases of 0.7MMbbls, 1.0MMbbls and 1.2MMbbls respectively at 1C, 2C & 3C levels.

# AGR Assessed Reserves and Contingent Resources Estimates\*\*

Table 1. AGR Reserves Estimates

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Project	Reserves 1/1/2020**			
	1P (MMbbl)	2P (MMbbl)	3P (MMbbl)	
Bauna current wells incl.	35.6	46.8	55.2	
intervention program				

<sup>\*\*</sup>These reserves are a result of stochastic summation of individual well reserves; and not arithmetic sum of the individual well reserves

Table 2. AGR Contingent Resource Estimates

Project	Contingent Resources 1/1/2020		
	1C (MMbbl)	2C (MMbbl)	3C (MMbbl)
Patola	10.6	15.6	19.6
SPS-57	1.9	4.2	8.3

In order to complete their updated assessment, AGR were provided with all relevant field performance data, subsurface data/interpretation, operational planning and cost information.

As announced on 25 July 2019, Karoon entered into a binding sale and purchase agreement to acquire a 100% operated interest in Santos Basin Block BM-S-40 offshore Brazil containing the producing Baúna oil field and the Patola oil discovery. Karoon will provide a full resources statement to the ASX after the acquisition completes.

#### **Reserves Estimates**

The Baúna reserves estimates are based on the current production development which consists of six production wells, three water injectors and one gas injector across the Baúna and Piracaba oil producing accumulations. The wells are tied back to a leased floating production, storage and off-loading facility (FPSO), the Cidade de Itajai. Bauna has a long production history which began in 2011 and has continued to perform strongly with 127MMbbl produced up to 31 December 2019.

AGR's updated independent assessment of the remaining reserves for the Baúna oil field is now estimated for the period from 1 January 2020 through to an economic cut-off year of 2031, based on a 2P case in a US\$ 65/bbl scenario.

AGR has estimated Oil Initially-In-Place and generated production forecasts, reserves and contingent resources. The CPR work process involved the following main parts:

- 1. Establish data base, review data, models and reports.
- 2. Analyse data, models, uncertainty studies and methodologies. Perform independent assessments.
- 3. Generate independent production forecasts and profiles for the existing wells and generate estimate of ultimate recovery for the future well portfolio.
- 4. Review Karoon operation planning & assumptions.
- 5. Economic evaluation using generated production forecasts and capex and opex cost estimates.

## **Contingent Resource Estimates**

AGR has determined the oil-in-place for the Patola field discovery and estimated oil recovery from a development comprised of two production wells tied back to the existing FPSO.

Also shown, are estimates of contingent resources for the SPS-57 well, which was produced from the Piracaba accumulation during an Extended Well Testing phase in 2012 before the Baúna oil field was fully developed.

## **SPE-PRMS Standards**

The review of historical resource estimates and historical reserves has been prepared using the guidelines of the Petroleum Resources Management System (SPE-PRMS) jointly published by the Society of Petroleum Engineers, the World Petroleum Congresses, the American Association of Petroleum Geologists, and the Society of Petroleum Evaluation Engineers (SPE/WPC/AAPG/SPEE) in 2011 and then in 2018 as the basis for its classification and categorization of hydrocarbon volumes. Reserves and Contingent Resource definitions are as follows:

Reserves: Those quantities of petroleum anticipated to be commercially recoverable by application of development projects to known accumulations from a given date forward under defined conditions. Reserves must satisfy four criteria: they must be discovered, recoverable, commercial, and remaining (as of a given date) based on the development project(s) applied.

- 1P- Denotes low estimate of Reserves (i.e. Proved Reserves).
- 2P- Denotes best estimate of Reserves (i.e. the sum of Proved plus Probable Reserves).
- 3P- Denotes high estimate of Reserves (i.e. the sum of Proved, Probable and Possible Reserves).

Contingent Resources: Those quantities of hydrocarbons estimated, as of a given date, to be potentially recoverable from known accumulations by application of development projects, but which are not currently considered to be commercially recoverable owing to one or more contingencies.

- 1C- Denotes low estimate scenario of contingent resources.
- 2C- Denotes best estimate scenario of contingent resources.
- 3C- Denotes high estimate scenario of contingent resources.

## **Competent Persons Statement**

AGR is an independent consultancy specializing in amongst others petroleum reservoir evaluation, reserves auditing and economic analysis. Except for the provision of professional services on a fee basis, AGR does not have a commercial arrangement with any other person or company involved in the interests that are the subject of this report. The evaluation was managed by André Sæthern (MSc in Petroleum Engineering), AGR VP Reservoir Management. Mr. Sæthern, a Reservoir Engineer, has 12+ years of international and Norway experience. The report was reviewed by Gudmund Olsen (MSc in Petroleum Engineering), Reservoir Engineering Manager. Mr. Olsen, a Reservoir Engineer, has 30+ years of international and Norway experience, and is an expert on reserves and resource reporting. AGR has conducted valuations for many energy companies and financial institutions.

### About AGR

AGR is globally recognised expert consultancy group who provides Certified Reserves Audits and CPR. Clients include national and international oil companies, government organisations, investment groups and banks. AGR performs studies to standards which are accepted among others by the ASX, London Stock Exchange, SEC, international commercial and institutional banks.

#### Important Note

Should investors have any questions or queries regarding the company, please contact James Wootton on 03 9616 7500 or <a href="mailto:jwootton@karoonenergy.com.au">jwootton@karoonenergy.com.au</a> All <a href="mailto:holding">holding</a> enquiries should be directed to our share register, Computershare on 1300 850 505.

This announcement was authorised for lodgement by Scott Hosking, Company Secretary.

# About Karoon Energy Ltd

Karoon Energy Ltd. is an international oil and gas exploration company with projects in Australia, Brazil and Peru and is an ASX listed company.

Karoon has a core exploration growth strategy, focused on large targets in proven Petroleum Systems. The Company is looking to complete the acquisition of a foundation production asset that will underpin long-term sustainable growth and shareholder value.

Karoon's strategic vision is to transform into a global E&P company with material production to underpin growth through a highly prospective exploration portfolio and entrepreneurial spirit.

## Forward-looking Statements

This announcement may contain certain "forward-looking statements" with respect to the financial condition, results of operations and business of Karoon and certain plans and objectives of the management of Karoon. Forward-looking statements can generally be identified by words such as 'may', 'could', 'believes', 'plan', 'will', 'likely', 'estimates', 'targets', 'expects', or 'intends' and other similar words that involve risks and uncertainties, which may include, but are not limited to, the outcome and effects of the subject matter of this announcement. Indications of, and guidance on, future earnings and financial position and performance are also forward-looking statements.

You are cautioned not to place undue reliance on forward-looking statements as actual outcomes may differ materially from forward-looking statements. Any forward-looking statements, opinions and estimates provided in this announcement necessarily involve uncertainties, assumptions, contingencies and other factors, and unknown risks may arise, many of which are outside the control of Karoon. Such statements may cause the actual results or performance of Karoon to be materially different from any future results or performance expressed or implied by such forward-looking statements. Forward-looking statements including, without limitation, guidance on future plans, are provided as a general guide only and should not be relied upon as an indication or guarantee of future performance. Such forward-looking statements speak only as of the date of this announcement.

Karoon disclaims any intent or obligation to update publicly any forward-looking statements, whether as a result of new information, future events or results or otherwise.