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# SUBSTANTIAL INCREASE IN PHASE I RECOVERABLE RESOURCES TO 324 BCF AND UPDATED CORPORATE PRESENTATION

## Highlights:

- Substantial increase in Phase I technically recoverable gas volumes to 324<sup>1</sup> Bcf representing an increase of 49% over previous estimates
- New Phase I production forecasts derived from dynamic reservoir models combined with proposed well trajectories, frac placements, facilities and export route pipeline
- Production forecasts are based on third party infrastructure tie-in to the Bacton Gas Processing Terminal
- Hartshead are in commercial and technical discussions with a third party on an infrastructure tiein to the Bacton Gas Processing Terminal and currently jointly developing the scope for the next stage of engineering work to define the sub-sea pipeline connection, platform modifications and other work required for the gas export route.
- Updated Corporate Presentation

Hartshead Resources NL (Hartshead, HHR or the Company) is pleased to announce the following operational update with respect to the Company's Phase I gas field development and the release of an updated corporate presentation.

Following the completion of new static and new dynamic reservoir modelling and the generation of new production profiles the technically recoverable gas volumes are as follows:

		CONTINGENT RESOURCES <sup>1,2</sup> (Bcf)			
		1C	2C	3C	GCoS
PHASE I	Anning	95	130	160	100%
	Somerville	160	194	220	100%
	TOTAL	255	324	380	100%

 $\label{thm:coverable} \textbf{Table 1. Phase I field development technically recoverable resources.}$ 

<sup>&</sup>lt;sup>1</sup> Hartshead management estimate

<sup>&</sup>lt;sup>2</sup> First reported on 14 December 2020



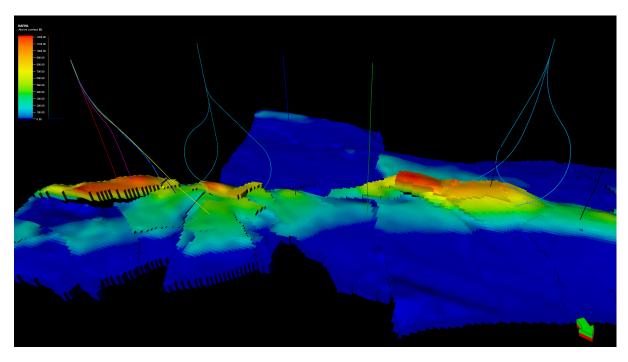


Figure 1. Anning and Somerville field top structures and elevation above the free water level (FWL) with existing and new development well trajectories.

The recoverable gas volumes (Table 2) are from production forecasts (deterministic) that have been generated based on the range in GIIP volumes, new reservoir simulation models, optimised frac placement, well trajectories and a new network model assuming connection via third party infrastructure to Bacton Gas Processing Terminal (Bacton). Hartshead is currently in commercial and technical discussions with a third party, regarding a jointly identified tie-in point, into the third parties infrastructure, for onward transportation to the Bacton. This infrastructure, with associated capacity, availability and pressures formed the basis of the Phase I gas transportation network model. Hartshead and the third party are currently jointly developing a scope of work for the next stage of engineering work to define the sub-sea pipeline connection, platform modification and other works required for the tie-in.

The new Phase I field development production forecasts have resulted in a revision to Hartshead's estimate of the recoverable resources for the Anning and Somerville fields (Table 2), which can be compared against with the existing audited 2C contingent resources of 217<sup>3</sup> Bcf for the Phase I development. These revised resource volumes will be subjected to economic analysis, and the ERCE Peer Review and Competent Persons Report (CPR) previously announced on 28 March 2022. The increase in in-place volumes is due to revised subsurface interpretation. The increase in recoverable

<sup>&</sup>lt;sup>3</sup> Volumetric estimates are from Oilfield Production Consultants (OPC) Ltd, Independent Competent Persons Report (CPR) entitled "Contingent Resources Review and Audit (Anning and Somerville)" dated October 2020. See Qualified Persons Statement for contingent resource reporting notes.



volumes is due to in the increase in in-place volumes and optimised frac placement to increase recovery factor<sup>4</sup>.

Chris Lewis, CEO, commented: "The results from our in-depth subsurface and well planning work have been excellent, with a significant increase in Phase I recoverable gas volumes. This is a hugely material value increase in the project. I am also delighted to have identified a viable and preferred offtake route. We will now continue with technical and commercial workscopes as part of the next stage of development planning, moving towards project execution and first gas."

Ends-

#### **CONTACTS**

The Board of Directors of Hartshead Resources NL authorised this announcement to be given to ASX.

For further information on this announcement, visit www.hartshead-resources.com.au or contact:

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<sup>&</sup>lt;sup>4</sup> The procedures for used for estimating the contingent resources which differ from procedures previously used are as follows:

<sup>•</sup> Geocellular static reservoir models have been built for both fields.

<sup>•</sup> Probabilistic methods have been used within the static models to capture subsurface uncertainty impacts on both in-place and recoverable hydrocarbons.

<sup>•</sup> Dynamic reservoir simulation models have been built for both fields.

<sup>•</sup> Models have been history matched to historic production data.

<sup>•</sup> Models have been used to optimise frac locations and produce revised production forecasts.

The increase in resource volumes is due to revised subsurface interpretation identifying additional gas-initially-in-place within the Somerville Fields as well as a revised dynamic modelling to optimise frac location to improve recovery factor and production.



### **Notes to Editors:**

# **Hartshead Resources NL**

ASX-listed Hartshead Resources NL and is focussed on building a financially, technically and environmentally responsible European Energy business.

Hartshead's goal is to secure and invest in projects where resources can be extracted and delivered to meet Europe's growing energy demand while supporting the transition to a low carbon future.

In progressing this strategy Hartshead is focused on its 100% owned Production Seaward License P2607 comprising of five blocks which contain four existing gas fields in the UK Southern Gas Basin.

Hartshead brings together a highly experienced oil and gas team with specialised knowledge covering subsurface, engineering, commercial, QHSE and capital markets with the required skillsets needed to successfully and safely deliver oil and gas upstream projects.

# UK Southern North Sea Production Seaward License P2607 - Contingent and Prospective Resources

Please refer to the qualified person's statement relating to the reporting of contingent and prospective resources on Hartshead Resources Southern North Sea License P2607 in Hartshead's ASX announcements dated 6 April 2022 and 8 March 2022. The Company is not aware of any new information or data that materially affects the information about the contingent resource and prospective resource estimates included in this announcement and all the material assumptions and technical parameters underpinning those estimates in this announcement continue to apply and have not materially changed.

		CONTINGENT RESOURCES (Bcf)			
		1C	2C	3C	GCoS
PHASE I	Anning	95	130	160	100%
	Somerville	160	194	220	100%
	TOTAL	255	324	380	100%

CONTINGENT RESOURCES (BCF)		1C	2C	3C	GCoS	
	49/6c, 49/11c	Lovelace	14	39	70	100%
PHASE II	48/15c	Hodgkin	35	100	387	100%
PROSPECTIVE RESOURCES <sup>5</sup>		1U	<b>2</b> U	3U	GCoS	

<sup>&</sup>lt;sup>5</sup> Prospective resources are estimated quantities of petroleum that may potentially be recovered by the application of a future development project(s) and relate to undiscovered accumulations. These prospective resources 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.



	49/17b	Garrod	16	52	125	50%
	49/17b	Ayrton	25	74	146	41%
	49/17b	McLaren	18	27	39	54%
	49/17b	Stephenson	36	47	60	43%
	49/17b	Widdowson East	6	29	79	32%
	49/17b	Widdowson Central	11	21	40	50%
PHASE III	49/17b	Lonsdale	5	16	31	50%
EXPLORATION	49/17b	Anderson	5	12	29	45%
	49/12d	Wenlock Prospect 1	4	19	55	36%
	49/12d	Wenlock Prospect 2	1	5	19	36%
	49/11c	Wenlock Prospect 3	1	5	17	36%
	49/11c	FFs Prospect 1	3	11	26	41%
	49/11c	FFs Prospect 2	8	19	37	35%
	49/11c	FFs Prospect 3	4	9	17	34%

# **Forward Looking Statements**

This document has been prepared by Hartshead Resources NL (HHR). This document contains certain statements which may constitute "forward-looking statements". 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 and resource 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.

HHR's operations and activities are subject to regulatory and other approvals and their timing and order may also be affected by weather, availability of equipment and materials and land access arrangements. Although HHR believes that the expectations raised in this document are reasonable there can be no certainty that the events or operations described in this document will occur in the timeframe or order presented or at all.

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## **Qualified Person's Statement**

Hartshead has prepared the Contingent Resource and Prospective Resource information in this announcement in accordance with the ASX Listing Rules and the 2007 Petroleum Resources Management System published by the Society of Petroleum Engineers (SPE-PRMS). The Contingent Resource estimates and Prospective Resource estimates presented in this report were originally disclosed to the market in announcement released on 14 December 2020 and updated 8 March 2022 and 6 April 2022. Hartshead confirms that it is not aware of any new information or data that materially affects the information included in the aforesaid market announcements and that all the material assumptions and technical parameters underpinning the estimates in the aforesaid market announcement continue to apply and have not materially changed. The information in this announcement that relates to Contingent Resource information in relation to the Phase I Anning and Somerville fields is based on information compiled by Mr Christopher Lewis and information complied by technical consultants contracted to Hartshead which has been subsequently reviewed by Mr Christopher Lewis. The information in this announcement that relates to Contingent Resource information in relation to the Phase II Hodgkin and Lovelace fields and the Prospective Resource information in relation to the Phase III exploration portfolio is based on information compiled by Mr Christopher Lewis and information complied by technical consultants contracted to Hartshead which has been subsequently reviewed by Mr Christopher Lewis. Mr Lewis has consented to the inclusion of such information in this announcement in the form and context in which it appears and the resources information in this report is based on, and fairly represents, information and supporting documentation reviewed by, or prepared under the supervision of, Mr Christopher Lewis. Mr Lewis is a Director of Hartshead and has a BSc from the Imperial College, University of London and is a member of The American Association of Petroleum Geologists (AAPG) and the European Association of Geoscientists and Engineers (EAGE). Mr Lewis is qualified in accordance with the requirements in ASX Listing Rule 5.41.