

23 June 2022

## Substantial Uplift in Project Value Following Independent Technical and Commercial Audit of Anning and Somerville Gas Fields

### Highlights:

- Anning and Somerville gas field development classified as Reserves following an independent Technical and Commercial Audit conducted by ERC Equipoise of Hartshead's Phase I Development Resources.
- Competent Persons Report (CPR) published with Phase I Field Development 2P Gas Reserves of 301.5 Bcf (52 MMboe).
- Anning and Somerville fields classified as Justified for Development and accordingly assigned sales gas volumes based on 1P, 2P and 3P Reserves.
- Upgrade of Anning and Somerville fields to certified Reserves adds value as the company progresses potential industry partnering and project financing.
- Development reserves expected to substantially increase project value with recent UK North Sea transaction multiples exceeding US\$8 per boe of combined 2P reserves and 2C contingent resources.
- The technical and commercial audit of the Phase II and Phase III developments will follow in the coming months as we aim to establish audited resources of up to 0.8 Tcf (138 MMboe) of very high quality gas.

Hartshead Resources NL (**ASX:HHR**) (**Hartshead, HHR** or the **Company**) is pleased to announce an upgrade in the Contingent Resources of the Anning and Somerville gas fields to Reserves following an independent technical audit of the Phase I Development Plan by ERC Equipoise Limited (**ERCE**). The technical and commercial audit has resulted in the compilation of a new Competent Persons Report (**CPR**) for the Phase I Development of the Anning and Somerville gas fields which are now designated as "Justified for Development" and therefore assigned Reserves in accordance with the June 2018 Petroleum Resource Management System (PRMS) framework of the reporting and classification of hydrocarbon reserves and resources.

**CEO of Hartshead, Chris Lewis, commented:** "Delivering reserves in license P2607 affirms Hartshead's core strategy that aggregating high quality, discovered gas volumes, close to infrastructure and delivered to a very strong gas market, demonstrates commercial value and justifies the development

of these fields. Having this confirmed by ERCE adds significant value to Hartshead Southern Gas Basin portfolio. After sixteen months work by the Hartshead team in refining and identifying the best development concept the confirmation that the project has this certainty of being developed is tremendous news.”

### Summary

The evaluation of the Phase I Development Plan for the Anning and Somerville gas fields was prepared with an effective date of 1 June 2022 and follows the submission of the Phase I Development Concept Select Report (**CSR**) to the North Sea Transition Authority (**NSTA**) previously announced on 30 May 2022. The Company intends to commence the Phase I Front-End Engineering & Design (**FEED**) study prior to the submission of a Field Development Plan (**FDP**) with Final Investment Decision (**FID**) planned for Q2 2023.

ERCE have reviewed and evaluated the selected development concept which consists of six production wells from two wireline capable Normally Unmanned Installation (NUI) platforms at Anning and Somerville. These platforms will then connect via a subsea pipeline to third party infrastructure for onward transportation and processing to entry into the UK gas network and provide the basis for determining the economic sales gas volumes or reserves assigned to the Anning and Somerville gas fields. Raw gas production forecasts have been adjusted for backout of third party gas volumes, shrinkage, fuel and flare and an Economic Limit Test (**ELT**) to yield a sales gas volume on which to base the Reserves with any associated liquids production being summarised as condensate reserves.

Based on an assessment by ERCE, using the PRMS sub-classification framework, the Reserves associated with the Anning and Somerville fields are classified as Justified for Development given the project is considered to be sufficiently mature to be developed subject to securing the required project financing and an approved FDP and therefore have been assigned a 100% chance of development.

The Reserves summary for the combined two field development at Anning and Somerville is shown in Table 1 below and is based on the ERCE production forecasts:

License	Working Interest	Area	Phase	Reserves <sup>1</sup>		
				1P	2P	3P
P2607	100%	Anning	Sales Gas (Bscf)	73	<b>145.0</b>	245
			Condensate (MMbbl)	0.081	<b>0.192</b>	0.375
		Somerville	Sales Gas (Bscf)	107.0	<b>156.5</b>	213
			Condensate (MMbbl)	0.119	<b>0.208</b>	0.325

<sup>1</sup> Reserves estimates are from ERC Equipose Limited, Independent Competent Persons Report (CPR) entitled “Hartshead Resources NL Somerville and Anning Competent Persons Report” dated June 2022. See Qualified Persons Statement for reserves reporting notes.

Total (MMboe <sup>2</sup> )	31.2	<b>52.4</b>	79.7
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Table 1. Net Working Interest Gas and Condensate Reserves for the Anning and Somerville Gas Fields.

Certification of the Phase I development as reserves substantially increases the project value given recent UK North Sea corporate and asset based transactions have demonstrated average exit multiples exceeding US\$8 per boe based on combined 2P reserves and 2C contingent resources.

### Production Forecasts – Anning and Somerville Fields

The volumetric estimates used to derive the Reserves have been made by combining probabilistically derived estimates of initial in place gas volumes (**GIIP**) with assumptions regarding the gas recovery factors from analogous fields, such as the Clipper South and Babbage gas fields located in the UK Southern Gas Basin, to generate low, best and high case recoverable volumes.

Frac stimulation and well bore deliverability modelling conducted by Fenix Consulting Delft (**Fenix**) and Hartshead have been applied to dynamic reservoir models to generate raw gas production profiles which are then adjusted for backout, shrinkage, fuel and flare reductions and an economic limit test (ELT) applied to yield an estimate of Reserves or Sales Gas.

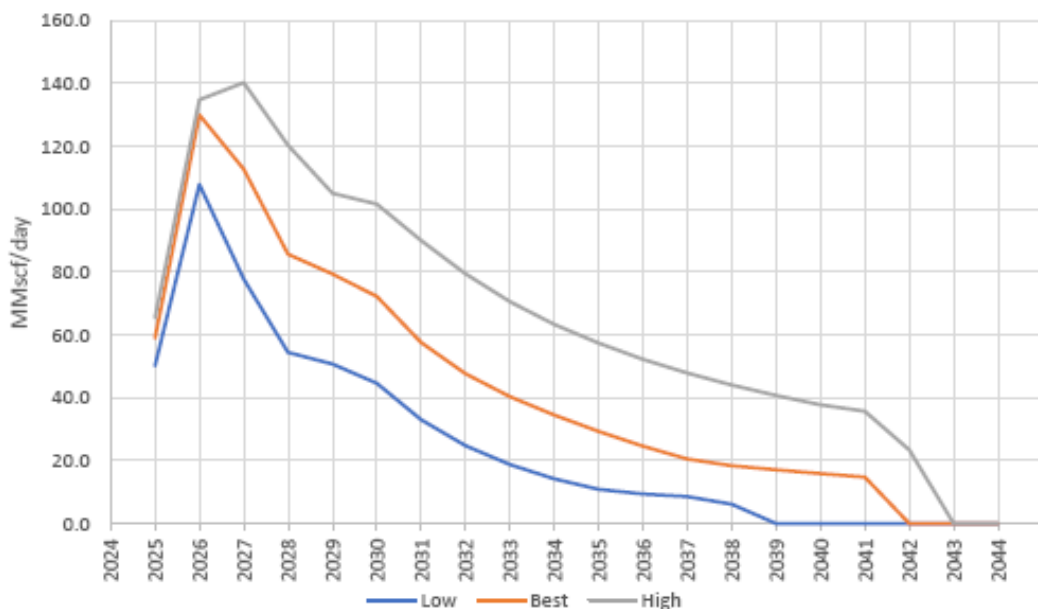


Figure 1. Anning and Somerville Combined Production Forecasts (with Economic Limit Test).

<sup>2</sup> 5.8 Mscf equals 1 boe

### ERC Equipoise

ERC Equipoise Ltd. (ERCE) is a leading, employee owned, global energy consultancy headquartered in London with offices in Singapore, Kuala Lumpur and Perth. Its fully integrated team of Geoscientists, Engineers and Economists are specialists in Competent Persons reporting, reserves and resources auditing, technical services, commercial analysis and Expert advisory services. ERCE supports companies in traditional energy sectors as well as providing energy transition and sustainability services.

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### 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](http://www.hartshead-resources.com.au) or contact:

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## Notes to Editors:

### Hartshead Resources NL

ASX-listed Hartshead Resources NL 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 – Reserves, Contingent and Prospective Resources

Please refer to the qualified person's statement relating to the reporting of reserves on Hartshead Resources Southern North Sea License P2607 in Hartshead's ASX announcements dated 23 June 2022.

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 or 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.

RESERVES <sup>1</sup>						
PHASE I	49/17b	Anning	1P		2P	3P
			Sales Gas (Bcf)	73	145.0	245
			Condensate (MMbbl)	0.081	0.192	0.375
	49/17b	Somerville	Sales Gas (Bcf)	107.0	156.5	213
			Condensate (MMbbl)	0.119	0.208	0.325
			Total (MMboe)	31.2	52.4	79.7

CONTINGENT RESOURCES <sup>3</sup> (BCF)			1C	2C	3C	GCoS
PHASE II	49/6c, 49/11c	Lovelace	14	39	70	100%
	48/15c	Hodgkin	35	100	387	100%
PROSPECTIVE RESOURCES <sup>4</sup>			1U	2U	3U	GCoS
PHASE III EXPLORATION	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%
	49/17b	Lonsdale	5	16	31	50%
	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%

#### Additional Information in respect to Reserves required by the ASX Listing Rules (LR)

The reported Reserves on the Anning and Somerville gas fields are within Hartshead's UK Production Seaward License P2607 have been estimated by ERCE as at date 1 June 2022.

All Reserves and Resources figures in this document are net to Hartshead unless otherwise stated. Hartshead holds a 100% operated interest in UK Production Seaward License P2607 to which the Reserve and Resource estimates relate.

The Reserves have been prepared in accordance with definitions and guidelines in the SPE/WPC/AAPG/SPEE/SEG/SPWLA/EAGE June 2018 Petroleum Resources Management System

<sup>3</sup> Hartshead management estimates

<sup>4</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.

(PRMS) of reporting and classification and have been categorised and reported in the most specific category that reflects the degree of uncertainty in the estimated quantities, that is 1P, 2P and 3P.

The definition of the key PRMS Reserves and Resources classifications and sub-classifications used in this announcement are shown below.

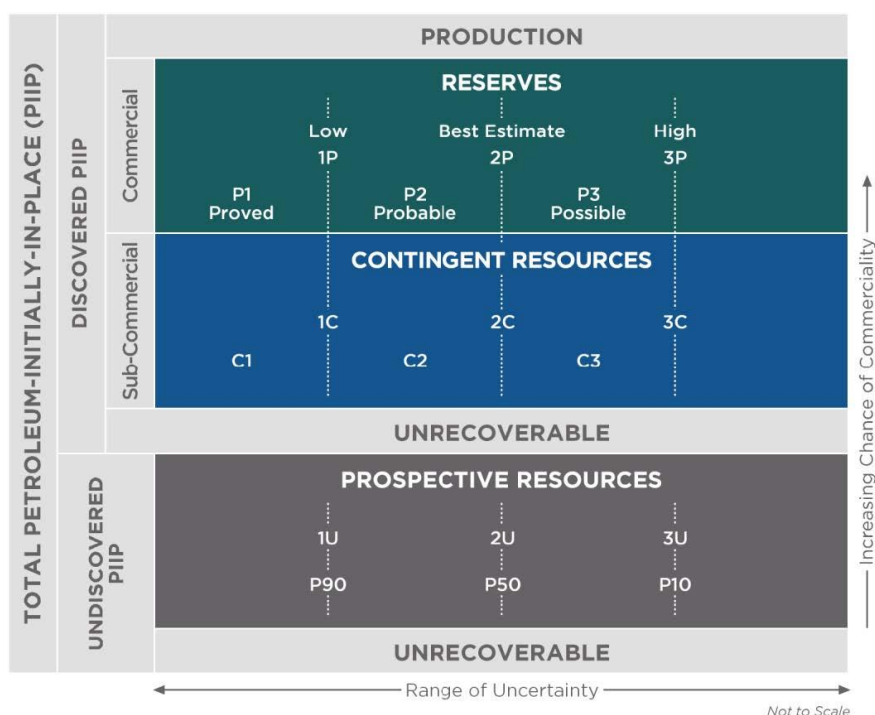


Figure 2. PRMS Reserves and Resources Classification Framework

Oil and gas reserves and resource estimates are expressions of judgment based on knowledge, experience and industry practice. Estimates that were valid when originally calculated may alter significantly when new information or techniques become available. Additionally, by their very nature, reserve and resource estimates are imprecise and depend to some extent on interpretations, which may prove to be inaccurate. As further information becomes available through additional drilling and analysis, the estimates are likely to change. This may result in alterations to development and production plans which may, in turn, adversely impact the Company's operations. Reserves estimates and estimates of future net revenues are, by nature, forward looking statements and subject to the same risks as other forward looking statements.



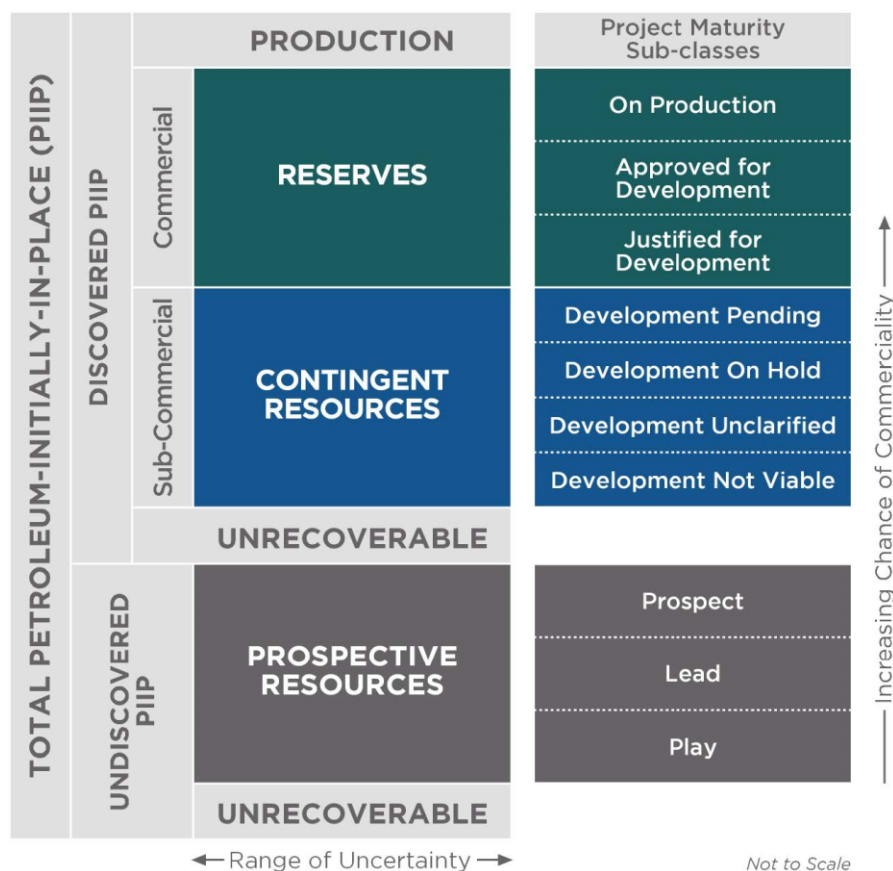


Figure 3. PRMS Reserves and Resources Sub-classification Framework

In respect to the Reserve estimates:

- LR 5.26.1 - Hartshead has a high degree of confidence in the commerciality of the Anning and Somerville gas fields and evidence of the economic producibility of their respective reservoirs;
- LR 5.26.4 (Lease Fuel) - The Reserves estimates include adjustments for fuel and flare gas consumption and shrinkage. The sales gas forecast include reductions for shrinkage (2%) and fuel and flare gas. 1% of raw gas is assumed until the first compression comes onstream on 1 July 2029 when it increases to 2.5% of raw gas;
- LR 5.26.5 (Reference Point) - The reference point at which these reserves have been estimated is the UK Bacton Gas Terminal which receives and processes gas to the National Transmission Network (NTS) from gas fields in the UK Southern Gas Basin;
- LR 5.26.7 and 5.26.8 (Aggregation) - The Reserves have been aggregated by statistical aggregation by category, that is 1P, 2P and 3P. As recommended by the PRMS, the 1P, 2P and 3P Reserves have been aggregated beyond the project level by statistical



aggregation of uncertainty distributions up to the field level, hence the aggregate 1P may be a very conservative estimate and the aggregate 3P may be a very optimistic estimate due to the portfolio effects of probabilistic summation;

- LR 5.31.1 (Material economic assumptions) - All economic assumptions that form the basis of the economic evaluation were provided as actual or planned expenditures and forecast production by Hartshead to ERCE. Any assumptions on capital or operating costs were based on the Petrofac Greenfield Concept Select Report (announced August 2021) and confidential information provided by third party infrastructure owners. ERCE have fully reviewed this information and made their own estimates where differences occurred.

The main economic assumptions are based on a preferred development concept consisting of the following:

- (i) Two normally unmanned platform installations (NUIs)
- (ii) A six well development programme consisting of multi-fraced extended reach horizontal wells
- (iii) A sub-sea tie-in to third party host infrastructure and facilities for onward gas transportation to the Bacton Gas Terminal

Gross Phase I Capex: £351 million

Gross Phase I Direct Opex: £7.6 million per year

Gross Phase I In-Direct (Third Party) Opex: Commercially sensitive due to third party information & ongoing discussions. Estimates have been made based on historically achieved Gas Transportation, Processing and Operational Services Agreements (TPOSA) and an understanding of the third party infrastructure operating costs and projected throughput.

Abandonment expense: £38 million

UK Gas Price: ERCE UK NBP Price as described in the ERCE Energy Review

ERCE (Base Case) NBP Gas Price Assumptions (p/therm)	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032+
Real (Constant, 2022)	255	163	92	81	81	81	81	81	81	81	81
Nominal (\$ of the day)	255	166	96	86	88	90	91	93	95	97	+2.0% pa
ERCE (Base Case) NBP Gas Price Assumptions (£/mcf)	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032+
Real (Constant, 2022)	27.3	17.4	9.8	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
Nominal (\$ of the day)	27.3	17.8	10.3	9.2	9.4	9.6	9.7	10.0	10.2	10.4	+2.0% pa

- LR 5.31.2 (Operated interest) – Hartshead has a 100% operated interest in UK

Production Seaward License P2607 and the Anning and Somerville gas fields.

- LR 5.31.3 (License) – Hartshead holds UK Production Seaward License P2607 in respect of the reported Reserves with a 100% equity interest.
- LR 5.31.4 (Description of the analysis of Reserves) - The economic evaluation used industry standard discounted cash flow forecasts and the economic assumptions above.

A discount origin date of 1 April 2022 was used together with NPVs calculated at discount rates of 0%, 5%, 10%, 15% and 20%. The NPVs were calculated based on current UK fiscal terms and net of capital allowances, UK Ring-Fenced Corporation Tax (RFCT) and the Upstream Supplementary Charge Tax (SCT).

Anning and Somerville	NPV10 (£ millions)
1P (Low case)	264
2P (Best Case)	514
3P (High Case)	810

- LR 5.31.5 (Estimated Quantities to be recovered) – All reserves listed under the ERCE report are deemed ‘justified for development’ and the resulting recoverable quantities of gas reflect the ultimate recoveries of the proposed six production well inventory in the Anning and Somerville gas fields.
- LR 5.31.6:
  - Status of the project – The Phase I development of the Anning and Somerville gas fields are in the pre-development stage and remains contingent on finalising a project financing facility, securing an approved field development plan (FDP) from the NSTA and the taking of a final investment decision (FID). Hartshead believes there is now sufficient technical data available and sufficient reserves certified to proceed to take the development forward and progress each of these development pre-conditions.
  - Development timeline – The Front-End Engineering & Design (FEED) stage of the Phase I development is expected to be completed by Q2 2023 with entry into the project execution phase shortly afterwards. Construction of the two normally unmanned platform installations (NUIs) at Anning and Somerville, together with the drilling of the initial producer wells and brownfield modifications for the pipeline tie-in to third party

transportation infrastructure is expected to commence in 2H 2023 following FDP approval and FID with first gas expected in late 2024.

- Marketing arrangements – A Gas Sales Agreement (GSA) will be entered into at the point of FID with well established offtakers of natural gas in the UK market, such as BP, Shell and Engie. The nature of such GSA's are likely to be highly commercially sensitive and may involve elements of prepayment, spot delivery and/or forward take or pay contractual arrangements.
- Access to transportation infrastructure – The Anning and Somerville gas fields are located in the UK Southern Gas Basin adjacent to several options for access to third party gas transportation infrastructure and onward processing at the onshore Bacton Gas Terminal. The Petrofac Greenfield Concept Select Report (dated August 2021) appraised each of the available gas transportation options and Hartshead is in active negotiations with several infrastructure owners with a view to securing commercial terms for accessing transportation and processing infrastructure.
- Environmental approvals required – A key element of the FDP approval is the approval of an Environmental statement which is expected to be submitted to the NSTA in Q3 2022 prior to the submission of the FDP.

### 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**

The Reserves estimated in this announcement have been made by Dr Adam Law, Director, ERC Equipoise (ERCE), a post-graduate in Geology, a Fellow of the Geological Society and a member of the Society of Petroleum Evaluation Engineers. Dr Adam Law is qualified in accordance with ASX listing rule 5.41 and has consented to the use of Reserves estimates, and to the form and context in which these statements appear.

ERC Equipoise Ltd. (ERCE) is a leading, employee owned, global energy consultancy headquartered in London with offices in Singapore, Kuala Lumpur and Perth. It's fully integrated team of Geoscientists, Engineers and Economists are specialists in Competent Persons reporting, reserves and resources auditing, technical services, commercial analysis and Expert advisory services. ERCE supports companies in traditional energy sectors as well as providing energy transition and sustainability services.

The Reserves estimates presented in this report were originally disclosed to the market in announcement released on 23 June 2022.

The information in this announcement that relates to Reserves estimates is based on information compiled or reviewed by Mr Christopher Lewis. Mr Lewis has consented to the form and context in which the estimated Reserves and the supporting material are presented.

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 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 compiled 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 holds 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.