

This announcement contains inside information

# 88 Energy Limited Project Peregrine Prospective Resources Update

# **Highlights**

- Updated Independent Prospective Resources Assessment at Project Peregrine following post well analysis has confirmed significant potential within the remaining Project Peregrine acreage.
- Further seismic interpretation has identified two new reservoir targets in the Harrier Prospect, which have been assessed as part of the prospect resource update.
- The updated Project Peregrine Prospective Resources now sits beneath a more condensed acreage position, modelled to have improved reservoir quality in the northern areas of the Project Peregrine acreage.

88 Energy Limited (ASX:88E, AIM:88E, OTC:EEENF) (**88 Energy** or the **Company**) is pleased to announce that the Project Peregrine Prospective Resource Assessment has been updated by independent oil and gas reservoir evaluation consultancy, ERCE Australia Pty Ltd (**ERCE**). ERCE incorporated the Merlin-2 Appraisal Well results and assessed 2 new reservoir targets that have been identified by the company following an assessment of the remaining prospectivity of the Project Peregrine acreage. Additionally, the Harrier and Harrier Deep prospects were re-assessed as part of the updated assessment.

Following the reconciliation and integration of the Merlin-2 well results, further 2D seismic interpretation identified two new reservoir intervals, the N13 and N12 sequences in the Nanushuk Formation, along the western edge of the Project Peregrine lease holding. The N13 and N12 sequences underlie the N14 which was the or lowermost reservoir interval targeted by Conoco Phillips's during their 2020 Harpoon 2 well exploration program to the north of the Peregrine acreage. Conveniently, both the N12 and N13 targets may be accessed from the Harrier-1well pad via a sidetrack.

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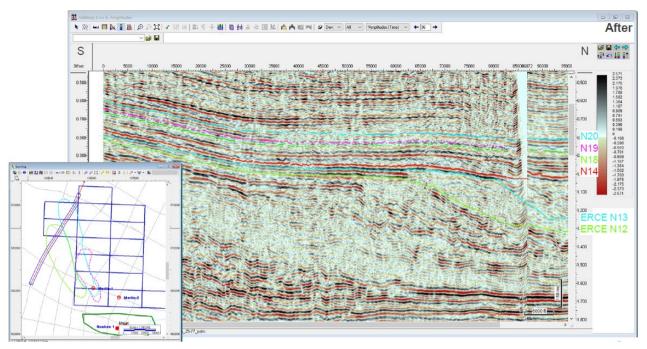


Figure 1: N12 and N13 x-section.

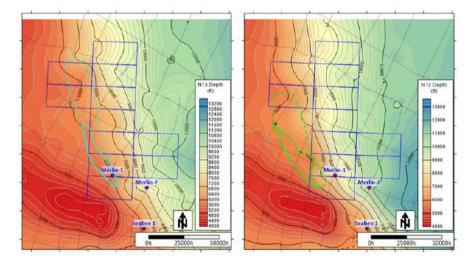


Figure 2 ERCE Low and High Case reservoir polygons of the N13 and N12 reservoirs overlayed on the depth grids.

Integrating the Merlin-2 results into a recent independent basin modelling initiative revealed that maximum depth of burial (Dmax) has a significant impact on reservoir quality. Dmax for Brookian reservoirs on the North Slope is modelled to improve to the north and therefore, reservoir quality for the remaining Project Peregrine portfolio is also expected to materially improve in the norther areas of the Peregrine acreage.



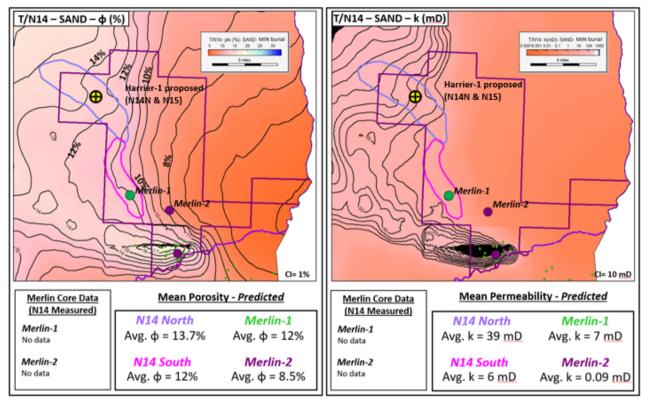


Figure 3: Post Merlin 2 Basin modelling work shows a marked increase in both permeability and porosity in the Northern Project Peregrine lease holding where a majority of the updated prospective resource now resides.

This updated Prospective Resources assessment, as it pertains to the Merlin prospect, does not consider potential future stimulation of the reservoirs. Future planning of drilling and testing activity within Project Peregrine will incorporate lessons learned from the upcoming Project Phoenix stimulation and flow test.

The updated Post Merlin-2 ERCE Prospective Resources estimates and risking assessments for Project Peregrine are noted in Table 1.

The Company is also currently assessing possible forward work-programs, subject to a potential farmout of Project Peregrine.



Project Peregrine: Alaska North Slope		Unrisked Net Entitlement to 88E <sup>3</sup> Prospective Oil Resources (MMstb)				
Prospects (Probabilistic Calculations)		Low (1U)	Best (2U)	High (3U)	Mean	COS <sup>2</sup>
Merlin Prospective Area	Nanushuk – N20	19.0	76.0	295.5	131.6	10%
	Nanushuk – N14S	25.2	84.4	271.7	127.9	17%
Harrier	Nanushuk – N15	52.5	257.2	1,267.1	554.7	10%
	Nanushuk – N14N	35.3	140.1	531.8	238.2	10%
	Nanushuk – N13	40.4	146.3	555.1	245.5	18%
	Nanushuk – N12	7.6	33.8	140.6	62.5	18%
Harrier Deep	Nanushuk – N06	32.7	204.6	1,107.1	473.7	14%
	Torok - T03	61.0	288.9	1,345.3	588.9	7%
Prospects Total					2,423 <sup>1</sup>	

#### Table 1: Revised Project Peregrine Prospective Resources

1. Unrisked mean total is not representative of the expected total from the three prospects and assumes a success case in all three wells.

2. COS represents the geological chance of success of each of the stacked layers which comprise each prospect. This excludes phase risk which ERCE has estimated to be 70% oil (30% gas). The Prospective Resources have also not been adjusted for the chance of development, which is estimated by 88 Energy to be 60% (including phase risk), ERCE sees this as reasonable based on the data available. Quantifying the chance of development (COD) requires consideration of both economic contingencies and other contingencies, such as legal, regulatory, market access, political, social license, internal and external approvals and commitment to project finance and development timing. As many of these factors are out-with the knowledge of ERCE they must be used with caution.

3. Net working interest Prospective Resources are based on the on-block volumes and 88 Energy's 100% working interest. Net entitlement Prospective Resources are the net working interest Prospective Resources less royalties payable to others. The net entitlement interest to 88 Energy is calculated as 84.7% of net working interest after deduction of state royalty (12.5%) and overriding royalty interests (1.3% and 1.5%).

\*Cautionary Statement: The estimated quantities of petroleum that may be potentially recovered by the application of a future development project relate to undiscovered accumulations. These estimates have both an associated risk of discovery and a risk of development. Further exploration, appraisal and evaluation are required to determine the existence of a significant quantity of potentially movable hydrocarbons.



Project Peregrine: Alaska North Slope		Delta (2021-2023) Unrisked Net Entitlement to 88E Prospective Oil Resources (MMstb)					
Prospects (Probabilistic Calculations)		Low (1U)	Best (2U)	High (3U)	Mean	COS <sup>2</sup>	
Merlin Prospective Area	2023-2021	Nanushuk – N20	-23.3	-177.7	-1185.2	-515.5	-14%
	2023-2021	Nanushuk – N19	-50.7	-222.6	-960.4	-426.0	-19%
	2023-2021	Nanushuk – N18	-62.8	-252.3	-999.0	-449.2	-28%
Post-Drill Merlin-1A	2021	Nanushuk – N14S	0	0	0	0	0%
201 Harrier 202	2019	Nanushuk – N15	0	0	0	0	0%
	2019	Nanushuk – N14N	0	0	0	0	0%
	2023	Nanushuk – N13	40.4	146.3	555.1	245.5	18%
	2023	Nanushuk – N12	7.6	33.8	140.6	62.5	18%
Harrier Deep	2019	Nanushuk – N06	0	0	0	0	0%
	2019	Torok - T03	0	0	0	0	0%
Prospects Total					-1390.8		

Table 2: Reconciliation between Updated and Prior Project Peregrine Prospective Resources

### This announcement has been authorised by the Board.

Media and Investor Relations:

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Pursuant to the requirements of the ASX Listing Rules Chapter 5 and the AIM Rules for Companies, the technical information and resource reporting contained in this announcement was prepared by, or under the supervision of, Dr Stephen Staley, who is a Non-Executive Director of 88 Energy. Dr Staley has more than 35 years' experience in the petroleum industry, is a Fellow of the Geological Society of London, and a



qualified Geologist/Geophysicist who has sufficient experience that is relevant to the style and nature of the oil prospects under consideration and to the activities discussed in this document. Dr Staley has reviewed the information and supporting documentation referred to in this announcement and considers the resource and reserve estimates to be fairly represented and consents to its release in the form and context in which it appears. His academic qualifications and industry memberships appear on the Company's website and both comply with the criteria for "Competence" under clause 3.1 of the Valmin Code 2015. Terminology and standards adopted by the Society of Petroleum Engineers "Petroleum Resources Management System" have been applied in producing this document.

The data used to compile the independent prospective resource report includes reprocessed 2D seismic data, basin modelling, petrophysical analysis of publicly available wells and historical geological records. The data was compiled and interpreted by XCD (a 100% owned subsidiary of 88E) and was reviewed, validated and in some cases modified independently by ERCE.

#### ERCE's methodology for determining Prospective Resources for Project Peregrine

ERCE has determined Prospective Resources by examining the areas of consistent bright amplitude that were mapped by XCD (a 100% owned subsidiary of 88E) using the reprocessed 2D seismic data within the Project Peregrine area. Parameters including potential pool area and thickness, porosity, hydrocarbon saturation, oil expansion and recovery factor were estimated on a probabilistic low, mid and high basis.

The Prospective Resources have not been adjusted for phase risk or chance of development. ERCE has considered the chance of discovering oil over gas to be 70%. Chance of development is estimated by 88E to be 60% (including phase risk), ERCE sees this as reasonable based on the data available.

Please refer to the disclaimers attached as Schedule 1 of this ASX release for more information on the prospective resource report.

#### About ERCE

ERCE is a global independently owned petroleum Reserves and Resources auditor, providing expert consultancy services to the upstream oil and gas industry for over 40 years. With over 50 full-time technical staff, ERCE provides geoscience, reservoir, facilities and cost engineering and economic/commercial expertise in conventional and unconventional projects. Examples of current public clients include Carnarvon, Jadestone Energy, Tag Oil, Interra Resources, ADX Energy and Elixir Energy. ERCE has offices in UK, Canada, Kuala Lumpur and Perth, WA.



# About Project Peregrine

Project Peregrine is located in the NPR-A region of the North Slope of Alaska and encompasses approximately 126,000 contiguous acres. It is situated on trend to recent discoveries in a newly successful play type in topset sands in the Nanushuk formation. 88 Energy has a 100% working interest in the project.

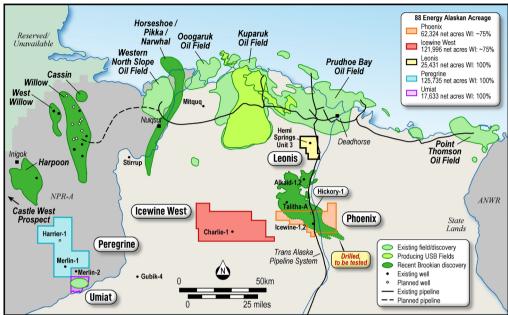


Figure 31 Project Peregrine and Recent Nanushuk Discoveries

The Project Peregrine resources are split across 3 prospects: Merlin (Nanushuk Topset), Harrier (Nanushuk Topsets) and Harrier Deep (Torok Bottomsets). The focus at Project Peregrine moving forward will be on the untested Harrier prospect (N14 and N15 targets, as well as the newly identified N13 and N12 targets) and the N14 south reservoir target. The N14 corresponds with ConocoPhillips' Harpoon prospect 15 miles to the north of the Project Peregrine leases. The N14 south target is the remaining target in the Merlin prospect and may be accessible from the Merlin-1 location. The northern leases are modelled to have better porosity and permeability and are closer to infrastructure.

### Merlin-1 Well Results

The Merlin-1 well was spudded in March 2021 with drilling operations completed in April 2021. Interpretation of results was completed in August 2021 with post well evaluation successfully demonstrating the presence of oil in N20, N19 and N18 targets, with 41 feet of net log pay across the three reservoir intervals noted and geochemical analysis determining the oil to have an estimated API gravity between mid-30 to low-40 API (light oil).

Post well analysis has also determined that the N14 horizon, one of the targets of the Merlin-1 well, was not intersected, as it is believed to lie below the total depth of the well. The N14 prospect remains a target of interest and the Merlin-1 well may be re-entered in order to test this prospective target as part of the Company's future drilling activities at Project Peregrine.

### Merlin-2 Well Results

The results of Merlin-2 were consistent with the initial Merlin-1 exploration well drilled in Project Peregrine in 2021, with strong fluorescence, oil sheen, petroliferous odour and cut noted in the drilling cuttings, elevated C2-C5 mud gas readings over the target zones with total gas significantly above background gas readings and also evidence from the reservoir sampling tool of movable hydrocarbons. The primary objective of the Merlin-2 well was to collect hydrocarbon samples from the target zones. Unfortunately, this was unable to be achieved using Schlumberger's MDT (Modular-Formation Dynamics Testing) tool due to the tightness of the formation at this location.



# SCHEDULE 1

#### Disclaimers:

**Cautionary Statement for Prospective Resources Estimates** - With respect to the Prospective Resources estimates contained within this report, it should be noted that the estimated quantities of gas that may potentially be recovered by the future application of a development project relate to undiscovered accumulations. These estimates have an associated risk of discovery and risk of development. Further exploration and appraisal is required to determine the existence of a significant quantity of potentially moveable hydrocarbons.

**Hydrocarbon Resources Estimates** – The Prospective Resource estimates for Project Peregrine presented in this report are prepared as at 28 July 2023. The Prospective Resource estimates are quoted on an unrisked basis together with the geological chance of success for each prospect. The unrisked mean total presented in the table is not representative of the expected total from the three prospects and assumes a success case in all three wells. ERCE has considered the chance of discovering oil over gas to be 70%. Chance of development is estimated by XCD (a 100% owned subsidiary of 88E) to be 60% (including phase risk), ERCE sees this as reasonable based on the data available. Quantifying the chance of development (COD) requires consideration of both economic contingencies and other contingencies, such as legal, regulatory, market access, political, social license, internal and external approvals and commitment to project finance and development timing. As many of these factors are outside the knowledge of ERCE they must be used with caution.

**Government Royalty and Overriding Royalty Interests** – The Project Peregrine leases ("Leases") are situated in the National Petroleum Reserve – Alaska (NPR-A) and are administered by the US Department of the Interior - Bureau of Land Management (BLM). All leases issued by BLM are subject to a royalty and 88E's Leases are subject to a 12.5% government royalty. In addition, the Leases are subject to an overriding royalty of 1.5% payable to non-related parties of the Company. The net economic interest to 88E has therefore been calculated as 86% and the Net Entitlement Prospective Resources have been adjusted to reflect this.

**Competent Person Statement Information** – In this report information relating to hydrocarbon resource estimates have been supplied by ERCE, and the company has stated in the Report that it has been prepared in accordance with the definitions and guidelines set forth in the Petroleum Resources Management System, 2018, approved by the Society of Petroleum Engineers and have been prepared using probabilistic methods. ERC Equipoise Pty Ltd, the independent resource reviewer named in this document, has consented to the inclusion of information relevant to their review in the form and context in which it appears. Dr Stephen Staley, who is a Non-Executive Director of 88 Energy Limited. Dr Staley has more than 35 years' experience in the petroleum industry, is a Fellow of the Geological Society of London, and a qualified Geologist/Geophysicist who has sufficient experience that is relevant to the style and nature of the oil prospects under consideration and to the activities discussed in this document. Dr Staley has reviewed the information and supporting documentation referred to in this announcement and considers the prospective resource estimates to be fairly represented and consents to its release in the form and context in which it appears. His academic qualifications and industry memberships appear on the Company's website and both comply with the criteria for "Competence" under clause 3.1 of the Valmin Code 2015. Terminology and standards adopted by the Society of Petroleum Engineers "Petroleum Resources Management System" have been applied in producing this document.

**Forward looking statements** – This document may include forward looking statements. Forward looking statements include, are not necessarily limited to, statements concerning 88E's planned operation program and other statements that are not historic facts. When used in this document, the words such as "could", "plan", "estimate", "expect", "intend", "may", "potential", "should" and similar expressions are forward looking statements. Although 88E believes the expectations reflected in these are reasonable, such statements involve risks and uncertainties, and no assurance can be given that actual results will be consistent with these forward-looking statements. The entity confirms that it is not aware of any new information or data that materially affects the information included in this announcement and that all material assumptions and technical parameters underpinning this announcement continue to apply and have not materially changed.



# SCHEDULE 2

## **Definitions and Glossary of Key Terms:**

### SPE definition: Prospective Resources

Prospective Resources are estimated volumes associated with undiscovered accumulations. These represent quantities of petroleum which are estimated, as of a given date, to be potentially recoverable from oil and gas deposits identified on the basis of indirect evidence but which have not yet been drilled. This class represents a higher risk than contingent resources since the risk of discovery is also added. For prospective resources to become classified as contingent resources, hydrocarbons must be discovered, the accumulations must be further evaluated and an estimate of quantities that would be recoverable under appropriate development project(s) prepared.

### **Glossary of Key Terms**

10	Denotes the unrisked low estimate qualifying as Prospective	
	Resources.	
2U	Denotes the unrisked best estimate qualifying as Prospective	
	Resources	
3U	Denotes the unrisked high estimate qualifying as Prospective	
	Resources	
BOE	Barrels of oil equivalent	
Bnbbl	Billion barrels of oil	
Chance	Chance equals 1-risk. Generally synonymous with likelihood.	
Chance of Development	The estimated probability that a known accumulation, once	
	discovered, will be commercially developed.	
Entitlement	That portion of future production (and thus resources) legally	
	accruing to an entity under the terms of the development and	
	production contract or license.	
Mean	The sum of a set of numerical values divided by the number of	
	values in the set.	
MMbbl	Million barrels of oil	
Prospect	A project associated with a potential accumulation that is	
	sufficiently well defined to represent a viable drilling target.	
Prospective Resources	Those quantities of petroleum that are estimated, as of a given	
	date, to be potentially recoverable from undiscovered	
	accumulations.	
Reservoir	A subsurface rock formation that contains an individual and	
	separate natural accumulation of petroleum that is confined by	
	impermeable barriers, pressure systems, or fluid regimes	
	(conventional reservoirs), or is confined by hydraulic fracture	
	barriers or fluid regimes (unconventional reservoirs).	
Royalty	A type of entitlement interest in a resource that is free and clear	
	of the costs and expenses of development and production to	
	the royalty interest owner. A royalty is commonly retained by a	
	resources owner (lessor/host) when granting rights to a	
	producer (lessee/contractor) to develop and produce that	
	resource. Depending on the specific terms defining the royalty,	
	the payment obligation may be expressed in monetary terms as	
	a portion of the proceeds of production or as a right to take a	
	portion of production in-kind. The royalty terms may also provide the option to switch between forms of payment at	
	discretion of the royalty owner	
Working Interest	An entity's equity interest in a project before reduction for	
	royalties or production share owed to others under the	
	applicable fiscal terms.	
	applicable libear territo.	