

# 88 Energy Limited

# **Project Leonis: Maiden Prospective Resource Estimate Complete**

## **Highlights**

- Maiden internal Prospective Resource estimate completed at Project Leonis.
- Total estimated net mean Prospective Resource of 381 million barrels (**MMbbls**) of oil<sup>1,2</sup> recoverable from the Upper Schrader Bluff Formation (**USB**).
- Unrisked net 3U (high) of 671 MMbbls, 2U (best) of 338 MMbbls and 1U (low) of 167 MMbbls<sup>1,2</sup>.
- Permitting and planning has commenced for the newly named Tiri-1 exploration well designed to test the Tiri prospect in the USB Formation.
- The Tiri prospect has exceptional estimated porosity, averaging almost 30% over the 175 feet of interpreted pay.
- Concurrent farm-out process ongoing to secure a funding partner ahead of drilling.
- <sup>*†*</sup> **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 recoverable hydrocarbons.
- <sup>2</sup> Net Unrisked Prospective Oil Resources (MMbbls). Refer to page 5 for further details.

88 Energy Limited (ASX:88E, AIM:88E, OTC:EEENF) (**88 Energy** or the **Company**) is pleased to report a maiden internal Prospective Resource estimate of 381 MMbbls<sup>1,2</sup> of oil (net mean, unrisked) for Project Leonis (100% working interest and a 16.6667% royalty).

Material Prospective Resources have been estimated in the USB reservoir interval within the Project Leonis acreage. The initial total Prospective Resource estimate follows a period of review

of an extensive data suite that included 3D and 2D seismic data, well logs from Hemi Springs Unit-3 and Hailstorm-1, as well as nearby wells adjacent to the Project Leonis acreage, along with extensive petrophysical analysis and mapping.

Importantly, the USB formation is the same proven producing zone as nearby Polaris, Orion and West Sak oil fields to the north-west. These proven USB producers served as important calibration points for the Leonis petrophysical model. The Leonis USB prospect has been fully delineated and mapped following a review of reprocessed 3D seismic data and a 3rd party dedicated fault mapping study to assist in prospect definition.



Figure 1: Project Leonis acreage position adjacent to TAPS and multiple producing USB reservoirs.

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#### Managing Director, Ashley Gilbert, commented:

"Following the recent success at Project Phoenix we are pleased to announce the completion of a maiden Prospective Resource estimate at Project Leonis. Being strategically located on the North Slope of Alaska, with TAPS running through the acreage and Deadhorse just six miles to the North, Project Leonis represents a significant resource and development opportunity. We have commenced permitting and planning processes for the Tiri-1 exploration well ahead of a future potential drilling event, to target the USB zone.

Timing for the drilling of the Tiri-1 exploration well is dependent on securing a successful farm-out partner, and with our 100% working interest in Project Leonis, we believe there is significant potential to secure a large proportionate carry on any future well. However, despite there being multiple parties assessing the farm-out opportunity, there is much work to be done and no guarantees a partner will be secured on our desired terms.

In terms of our Alaskan acreage position, we are now fully focused on Project Leonis and Project Phoenix, where we expect meaningful advancement with key milestones set to be achieved in the coming 6 to 12 month period."

#### Project Leonis: Summary of the opportunity

The Project Leonis leases were awarded in April 2023 with a 10-year lease (refer to Schedule 3 for further information). The project provides an attractive appraisal drilling opportunity targeting 381 MMbbls of estimated net mean unrisked Prospective Resources, with upside (net 3U unrisked prospective resource estimate) of 671 MMbbls (refer to page 5 for further details of Low, Best and High estimates, and page 1 for the Cautionary Statement). Project Leonis is advantageously positioned nearby to existing infrastructure, including export pipeline and major service hubs.

The Tiri prospect within the Leonis acreage is defined by utilising a high-quality dataset comprising well data and recently reprocessed 3D seismic data, which underpins the compelling technical and commercial case for further assessment.

The unlocking of low-resistivity pay by other operators across Alaska's North Slope has led to the establishment of a multi-billion barrel oil reserve. The enormous success observed by operators targeting the Cretaceous Nanushuk Formation (such as the Willow and Pikka fields) as well as the successful development and production of reservoirs within the Cretaceous Upper Schrader Bluff Formation (such as the Polaris, Orion and West Sak fields) drove 88 Energy's focussed strategy to identify and target overlooked oil pay from legacy wells. This is evidenced by the Willow field which was originally drilled in 2002 but went unrecognised at the time. This same strategy led 88E to re-evaluate the petrophysics of the Icewine-1 well which was drilled in 2015 targeting the deeper unconventional HRZ reservoirs but also drilled through the shallower SFS and SMD reservoirs. This re-evaluation identified the conventional oil pay in these reservoirs and led to the successful drilling and testing of the Hickory-1 well in 2023-24 which produced oil to surface from both the USFS and SMD reservoirs.





Figure 2: Zone of interest (Upper Schrader Bluff Fm.) at the Hemi Springs Unit-3 well (green) and the Hailstorms-1 (blue) wells. Reprocessed 2005 Storms 3D.

The Company has now interpreted material oil pay from the legacy Hemi Springs Unit-3 well drilled on the Leonis acreage in 1985 where re-evaluation of the petrophysical data shows net oil pay of 175 ft within the Upper Schrader Bluff Formation with the well's mud logs noting oil over the shakers at multiple depths. The interpreted oil pay can be mapped over an extensive area, providing large untapped potential oil resources for appraisal and development. While modern technologies support the development of such a reservoir, at the time of drilling the Tiri prospect was overlooked with low-resistivity pay being poorly understood. Importantly, the Hemi Springs Unit-3 well targeted deeper reservoirs when drilled in 1985 and pre-drill interpretation lacked the benefit of the Storms 3D which was shot some 20 years later in 2005; another reason for why this interpreted oil-bearing reservoir was previously overlooked.



### Project Leonis: Forward Program

88 Energy has engaged Fairweather to assist in commencing the planning and permitting for the Tiri-1 exploration well. The well will be designed to drill, log and test the USB zone in a single season, and will utilise the existing gravel pad at the location of the Hemi Springs Unit-3 well to reduce costs.



Figure 3: Hemi Springs Unit-3 well gravel pad and well head – March, 2024.

Timing for the drilling of the Tiri-1 exploration well is dependent on securing a successful farm-out partner. The Company has engaged Stellar Energy Advisors Limited (**Stellar**) in London to manage the farm-out process, who have been engaged with multiple parties in advancing the assessment of the farm-out opportunity and will continue to seek further interest from parties globally.

### Focused Alaskan Strategy

88 Energy has a strategic focus on infrastructure led opportunities which benefit from proximity to Deadhorse, TAPS and other key infrastructure and in Alaska, the Company is focusing on advancing both Project Phoenix and Project Leonis. Following Hickory-1 successfully flowing light oil to surface, the Company is aiming to drill horizontal production wells and generate cash flow within the next 24 months from Pheonix as well as unlocking Project Leonis' potential through an appraisal well program.

The Company intends to divest its interest in the Umiat oil field, and also rationalise the Project Icewine West acreage which is nearing the end of the initial 8-10 year lease term. Both Umiat and Icewine West will be marketed for divestment of working interest and/or relinquished over the remainder of 2024. Project Peregrine remains in suspension until late 2024.

The Company will benefit from a reduction in leases costs as well as from a focused strategy that unlocks value from key acreage positions that benefit from their strategic locations.



## Prospective Resources Estimate – Project Leonis

The assessed maiden Prospective Resource estimate associated with 88 Energy's Project Leonis acreage (100% working interest) is summarised below.

Project Leonis: Alaska North Slope	Unrisked Gross Prospective Oil Resources (MMbbls) <sup>3,4</sup>				
Prospect (Probabilistic Method)	Low (1U)	Best (2U)	High (3U)	Mean	COS <sup>2</sup>
Tiri Prospect (Upper Schrader Bluff)	200	406	806	458	32%

Project Leonis: Alaska North Slope	Unrisked Net Entitlement to 88E <sup>1</sup> Prospective Oil Resources (MMbbls) <sup>3,4</sup>				
Prospect (Probabilistic Method)	Low (1U)	Best (2U)	High (3U)	Mean	COS <sup>2</sup>
Tiri Prospect (Upper Schrader Bluff)	167	338	671	381	32%

1. 88 Energy net resources have been calculated using a 100% working interest and a 16.6667% royalty.

2. COS represents the geological chance of success as assessed by 88 Energy, taking into account and risking of such factors as source, timing/migration, estimated reservoir and quality, mapped closures and seal effectiveness.

3. Prospects are subject to a phase risk (oil vs gas). Chance of oil has been assessed as 100%. Phase risk has not been applied to the unrisked numbers.

4. The Prospective Resources have not been adjusted for the chance of development. Quantifying the chance of development (COD) requires consideration of both economic 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 not yet known, 88 Energy has qualitatively assessed the chance of development as "probable" upon geological success given the strategic location of the acreage position adjacent to TAPS and key infrastructure.

The data used to compile the prospective resource report includes reprocessed 3D seismic data as well as thorough petrophysical analysis of publicly available wells and historical geological records. The data was compiled and interpreted by 88 Energy.

<u>Cautionary Statement</u>: 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 recoverable hydrocarbons.

### 88 Energy's methodology for determining Prospective Resources for Project Leonis

88 Energy has determined Prospective Resources by interpreting the top and base pay (calculated In the Hemi Springs Unit 3 petrophysical model), using the reprocessed 3D seismic data within the Project Leonis 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 relate to the Upper Schrader Bluff mapped prospect which one (1) well could effectively test. The unrisked prospective resources estimates (and associated geological chance of success) were modelled using Monte-Carlo analysis on the assumption there was no economic minimum and that volumes and risks of each of the prospective intervals within each prospect were independent.



The Prospective Resources have not been adjusted for phase risk or chance of development. 88 Energy have considered the chance of discovering oil over gas to be 100% and 88 Energy has qualitatively assessed the chance of development as "probable" upon geological success given the strategic location of the acreage position adjacent to TAPS and key infrastructure.

The estimates of Prospective Resources included in the announcement have been prepared in accordance with the definitions and guidelines set forth in the Petroleum Resources Management System ("PRMS") as revised in June 2018 by the Society of Petroleum Engineers. The PRMS defines prospective resources as those quantities of petroleum which are estimated, as of a given date, to be potentially recoverable from undiscovered accumulations.

The evaluation date for the Prospective Resources stated within this document is 3 June 2024.

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

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

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## SCHEDULE 1

#### **Disclaimers:**

**Cautionary Statement for Prospective Resource Estimates** - With respect to the Prospective Resource 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 recoverable hydrocarbons.

**Hydrocarbon Resource Estimates** – The Prospective Resource estimates for Project Leonis presented in this report are prepared as at 3 June 2024. The Prospective Resource estimates are quoted on an unrisked basis together with the geological chance of success for the Upper Schrader Bluff prospect. 88 Energy have considered the chance of discovering oil over gas to be 100%. Chance of development has not been estimated. 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 88 Energy they must be used with caution.

**Government Royalty and Overriding Royalty Interests** – The Project Leonis leases ("Leases") are situated in the State Lands of the North Slope of Alaska and are administered by the Alaskan Department of Natural Resources – Oil and Gas Division (DNR). All leases issued by DNR are subject to a royalty and 88 Energy's Leases are subject to a 16.67% government royalty. The net economic interest to 88 Energy has therefore been calculated as 83.3% 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 prepared by Allister Caird, Exploration Manager at 88 Energy Limited, and reviewed by Dr Stephen Staley, who is a Non-Executive Director of the Company. This information is based on, and fairly represents, information and supporting documentation compiled by Allister Caird, 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. Dr Stephen Staley, who is a Non-Executive Director of the Company, has more than 40 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 88 Energy'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 88 Energy 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 Resource

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.

1U	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	The estimated probability that a known accumulation, once discovered,
Development	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	Those quantities of petroleum that are estimated, as of a given date, to
Resources	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 resource's 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.

## **Glossary of Key Terms**



## SCHEDULE 3

#### Project Leonis - lease information:

Project Leonis acreage comprises ten leases covering approximately 25,430 contiguous acres;

Project Leonis					
Sub-Project	Entity	ADL	Gross Acres	WI	Net Acres
Leonis	Captivate Energy Alaska, Inc	394125	2,560	100.0%	2,560
Leonis	Captivate Energy Alaska, Inc	394126	2,439	100.0%	2,439
Leonis	Captivate Energy Alaska, Inc	394134	2,560	100.0%	2,560
Leonis	Captivate Energy Alaska, Inc	394135	2,560	100.0%	2,560
Leonis	Captivate Energy Alaska, Inc	394136	2,560	100.0%	2,560
Leonis	Captivate Energy Alaska, Inc	394137	2,560	100.0%	2,560
Leonis	Captivate Energy Alaska, Inc	394138	2,560	100.0%	2,560
Leonis	Captivate Energy Alaska, Inc	394139	2,533	100.0%	2,533
Leonis	Captivate Energy Alaska, Inc	394140	2,544	100.0%	2,544
Leonis	Captivate Energy Alaska, Inc	394142	2,555	100.0%	2,555
Total Project Leonis			25,431	100.0%	25,431

In late 2022, the Company announced Captivate Energy Alaska, Inc. (a wholly-owned subsidiary of the Company) had been declared the highest bidder for select acreage offered as part of the North Slope Areawide 2022 Oil and Gas lease sale (refer 88 Energy's ASX announcement dated 10 November 2022). On 20 April 2023 the Company announced that the Alaskan Department of Natural Resources (DNR), Oil and Gas Division, had completed its adjudication process and formally issued award notices to Captivate Energy Alaska, Inc..

The leases have an annual rental of \$10/acre on or around 1 May each year, and a royalty of 16.6667% payable to the State of Alaska. Project Leonis leases have a ten-year term and expire on 30 April 2033.