

This announcement contains inside information

# 88 Energy Limited

# Selection of Drilling Location in Icewine East following Interpretation of available 3D Seismic data set

# Highlights

- Completion of the interpretation of the recently licensed Franklin Bluffs 3D seismic survey data (**FB3D**), which covers a significant area over the Icewine East leases.
- Amplitude Variation with Offset (**AVO**) analysis has been used to define 'sweet spots' for each play to help identify location for the 1H 2023 exploration well, **Hickory-1**.
- Significantly, the Fluid Factor attribute has identified areas of anomalous AVO behaviour within the FB3D area which could indicate hydrocarbon content and/or superior pore volume (reservoir quality). AVO analysis is often used as a direct hydrocarbon indicator to enhance existing 2D and 3D interpretation and improve the probability of geological success.
- Good correlation has also been observed between AVO signature, RMS amplitude and the geological model at Icewine East.
- The Hickory-1 well will test the SMD, SFS, BFF and Kuparuk reservoir units, which are interpreted to extend from Pantheon Resources' (**Pantheon**) acreage onto Icewine East. The Pantheon wells – Alkaid-1, Talitha-A and Theta West-1 – have flowed 35° to 40° API oil from multiple Brookian reservoirs (see Pantheon releases of 7 February, 21 February and 24 March 2022).
- Planning and permitting for drilling of the Hickory-1 exploration well in 2023 has commenced.
- The Hickory-1 well location is adjacent to the Trans Alaskan Oil Pipeline route and the Dalton Highway, the main north-south all-weather road.

88 Energy Limited (ASX:88E, AIM:88E, OTC:EEENF) (**88 Energy** or the **Company**) is pleased to advise that the interpretation of the recently licensed FB3D, which covers a significant area of the Project Icewine East leases, has been completed.

Results from this analysis and interpretation have been used to define 'sweet spots' for each of the mapped Shelf Margin Delta (**SMD**), Slope Fan System (**SFS**), Basin Floor Fan (**BFF**) and Kuparuk (**KUP**) play fairways. This analysis has played a key role in identifying the drilling location for the planned 2023 exploration well, Hickory-1, which is designed to intersect and test all four key play fairways.

Interpretation of the FB3D data included AVO analysis, where a comprehensive study of the FB3D seismic gathers across all offsets, ultimately produced a series of AVO attributes (such as fluid factor). These attributes can be used to further enhance existing 2D and 3D interpretation and reservoir understanding, as well as improve the probability of geological success and refine selection of target drilling locations.

Significantly, it was observed that the Fluid Factor attribute has identified areas of anomalous AVO behaviour within the FB3D area, which could indicate hydrocarbon content and/or superior pore volume (reservoir quality). It was also observed that good correlation existed between AVO signatures, RMS amplitude and the geological model at Icewine East.

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Figure 1: Regional seismic dip line through Icewine East annotated with Icewine-1 petrophysical data (log pay) as well as preliminary AVO results over the SMD reservoirs. The warmer colours represent potential hydrocarbon accumulations AND/OR higher relative pore space (a proxy for improved reservoir quality). The white circle denotes the position of the proposed Hickory-1 well, while the circle with the black cross indicates the Icewine-1 position.

## **Hickory-1 exploration well**

The Hickory-1 exploration well is currently planned to be drilled during H1 2023 and has been designed as a vertical well to be drilled to approximately 12,500 feet to intersect and test all four key reservoirs noted in the recently announced prospective resource estimates for Icewine East.

Using the results from the initial analysis and interpretation of the FB3D, in combination with Icewine-1 well logs, 88 Energy has identified an optimal drilling location for Hickory-1, located adjacent to the Dalton Highway. This location intersects and will test the substantial potential oil volumes noted across all mapped play fairways, and in particular the SMD and BFF reservoirs. The well location is subject to permitting, as well as Joint Venture (88E 75.2% WI) and Government approvals.

Figure 2: Icewine East lease area, including mapped play fairways and planned Hickory-1 well location (subject to permitting, as well as JV and Government approvals).





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

"We continue to advance our Icewine East acreage towards the planned drilling of an exploration well next year. Importantly, the Hickory-1 well, and more generally the Icewine East acreage, has been significantly de-risked by the recent drilling and flow tests carried out on the adjacent acreage by Pantheon Resources, as well as data from the Icewine-1 well logs and the richly detailed FB3D data set. These existing data sets, and the multi-disciplinary evaluation undertaken on them, substantially increases our confidence in unlocking the potential of the Icewine East acreage."

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

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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 the Company. 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.



## About Icewine East

Project Icewine East (88E 75.2% WI) is located on the central North Slope of Alaska and encompasses approximately 82,846 gross acres. It is situated on-trend to recent discoveries by Pantheon Resources PIc (LSE:PANR) in multiple, newly successful play types across top- and bottom-set sands of the Schrader Bluff and Seabee formations. Independent mapping has demonstrated that these plays extend into the Icewine East acreage.

Icewine East holds an estimated unrisked conventional total of 647 MMbbl of prospective oil resources (mean unrisked, net to 88E), independently assessed by Lee Keeling and Associates in Q3 2022 (see 88E ASX release dated 23 August 2022). The acreage has been significantly de-risked by the recent Pantheon drilling and flow tests on their adjacent acreage, as well as data from Icewine-1 well logs (encountered 380 ft of net oil pay within SMD sands) and a detailed 3D seismic data set (FB3D).

Figure 3: Icewine East lease area, including mapped play fairways, Franklin Bluffs #d area and planned Hickory-1 well location (subject to permitting, as well as JV and Government approvals).



| Icewine East: Alaska North Slope  | Unrisked Net Entitlement to 88E <sup>1,6</sup> Prospective Oil Resources (MMstb) <sup>4,5</sup> |           |           |                  |                  |
|-----------------------------------|-------------------------------------------------------------------------------------------------|-----------|-----------|------------------|------------------|
| Prospects (Probabilistic Method)  | Low (1U)                                                                                        | Best (2U) | High (3U) | Mean             | COS <sup>3</sup> |
| Shelf Margin Delta (SMD A, B & C) | 44                                                                                              | 140       | 326       | 145              | 81%              |
| Slope Fan Set (SFS)               | 24                                                                                              | 84        | 217       | 89               | 50%              |
| Basin Floor Fan (BFF)             | 75                                                                                              | 341       | 930       | 358              | 50%              |
| Kuparuk (KUP)                     | 24                                                                                              | 56        | 98        | 56               | 72%              |
| Prospects Total                   | 167                                                                                             | 621       | 1,570     | 647 <sup>2</sup> |                  |

1. 88 Energy net resources have been calculated using a 75.227% working interest and a 16.5% royalty.

 The unrisked means, which have been arithmetically summed, are not representative of expected total from the prospects and implies a success case in all reservoir intervals. 88 Energy cautions that the arithmetically summed 1U estimate may be a conservative estimate and the arithmetically summed 3U estimate may be optimistic when compared to a statistical aggregation of probability distributions.

3. COS represents the geological chance of success as assessed by 88 Energy and reviewed and endorsed by LKA.

4. Prospects are subject to a phase risk (oil vs gas). Chance of oil has been assessed as 100% for all targets except for the Kuparuk Formation which has been assessed as 70%. Phase risk has not been applied to the unrisked numbers.

5. 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 outside the knowledge of LKA they must be used with caution.

6. Please refer to ASX announcement dated 23 August 2022 for further details in relation to the prospective resources estimate and associated risking with Icewine East.

Cautionary Statement: The estimated quantities of petroleum that may potentially be recovered by the application of a future development project(s) relate to undiscovered accumulations. These 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 recoverable hydrocarbons.



88 Energy is pursuing an infrastructure-led exploration strategy at Icewine East. The Icewine East acreage is strategically located near to the Dalton Highway and with the Trans-Alaska Pipeline System (TAPS) transecting it. This delivers an immediate potential export route, expediting future development activities and, crucially, minimising costs and potential environmental impacts.

The Hickory-1 exploration well is currently planned to be drilled at Icewine East during H1 2023. The selected location is adjacent to the Dalton Highway. It is a vertical well designed to intersect and test all four key target reservoirs at Icewine East.

