

# 88 Energy Limited

## **Hickory-1 Flow Test Operations Update**

88 Energy Limited (ASX:88E, AIM:88E, OTC:EEENF) (**88 Energy** or the **Company**) is pleased to report final preparations for the commencement of flow testing operations are advancing at the Hickory-1 well, located within 88 Energy's Project Phoenix acreage directly adjacent to the Trans-Alaska Pipeline System and the Dalton Highway.

### **Highlights**

- Mobilisation operations are complete and pre-flow testing operations have advanced at the fully funded Hickory-1 discovery well, with current operations involving the testing of the blow-out preventers (BOP) installed on the wellhead.
- Two flow tests are scheduled, one each in the Upper SFS and SMD-B reservoirs, with each expected to take approximately ten days.
- Prior to perforating the first zone, wellbore preparations are required which include removing the existing string in the well, drilling out of the plugs and cleaning out of the wellbore.
- Flow testing operations are set to deliver information critical to development planning, such as reservoir deliverability, fluid compositions, pressures and connectivity.

### Flow test operations update

Current operations involve testing of the BOP followed by retrieval of the kill string from within the well, drill out of plugs, clean-up of the wellbore and change-out to completion fluid. This process is expected to span approximately five days.

Testing operations will focus on the two primary targets, the Upper SFS and the SMD reservoirs (refer Figure 1), which together represent a mean, unrisked, multi-hundred-million-barrel oil resource<sup>1,2,3</sup> (refer Table 1). The Upper SFS reservoir will be tested first followed by the SMD-B reservoir. Each zone will be independently isolated, stimulated and flowed to surface using nitrogen lift to assist in an efficient clean-up of the well. Perforation, completion-running and stimulation is expected to take approximately four days, followed by a clean-up and flow period of up to four days and a pressure build-up of up to two days for a total of ten days to complete each of the two flow tests.



Image 1: All American Oilfield Rig-111

- <sup>1</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 movable hydrocarbons.
- <sup>2</sup> Mean unrisked resource Net Entitlement to 88E. Refer announcement 23 August 2022 for pre-Hickory-1 estimates.
- <sup>3</sup> Refer announcement dated 6 November 2023 for post-Hickory-1 for post Hickory-1 drilling resource estimates.

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An extensive suite of data is planned to be captured including, but not limited to, downhole and surface fluid samples, downhole pressure and temperature data, surface pressure and temperature data, as well as flow rates of oil, gas and water. This data is essential in maturing development plans by accurately constraining reservoir models used to progress the next phases of Project Phoenix.

Any future development plan for Project Phoenix would be expected to include horizontal wells to maximise oil rates. As is evidenced in many Lower 48 analogues, horizontal wells typically produce at rates 6-12 times higher than vertical wells, once lessons from field development are captured in the appraisal phase.

Offset exploration vertical well tests, similar to the Hickory-1 discovery well, have all flowed in the 50-100 BOPD range per test. Water to oil ratios, gas to oil ratios and the evolution of rates and pressures over time are critical data sets that assist in development planning and forecasting. It is not uncommon for formation water to be produced sustainably in conjunction with hydrocarbons in these types of reservoirs, as is often observed in producing analogues in the Lower 48. Vertical wells provide cost effective access to test multiple reservoirs in a single wellbore and are therefore the crucial first steps on the path to development of Project Phoenix resources.



Figure 1: Flow testing program to target two of the four pay zones intersected in the Hickory-1 discovery well.



The Company looks forward to providing an update on commencement of the Upper SFS flow test (refer Figure 2).

HIGH LEVEL FLOW TESTING PRO	GRAM TIMELINE (SUBJECT TO CHAN	IGE)	
Days			
Ice pad construction and rig commissioning			
Initial BOP Test			
Kill string retrieval and well bore clean up			
Perforation of Upper SFS zone			
Upper SFS flow testing			
Perforation of SMD-B zone		• • •	
SMD-B flow testing			
Demobilisation			
Schedule			

Figure 2: Flow testing program timeline (scheduled days)

#### 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 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 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.



Table 1: Previously announced Prospective Resource assessment conducted prior to the drilling of Hickory-1

Project Phoenix: Alaska North Slope	Unrisked Gross 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 and C)	70	224	518	231	81%	
Slope Fan System (SFS)	37	134	345	141	50%	
Kuparuk (KUP)	39	88	156	89	72%	
Prospects Total	146	446	1,019	<b>461</b> <sup>2</sup>		

Project Phoenix: Alaska North Slope	Unrisked Net Entitlement to 88E <sup>1</sup> Prospective Oil Resources (MMstb) <sup>4,5</sup>			e Oil	
Prospects (Probabilistic Method)	Low (1U)	Best (2U)	High (3U)	Mean	COS <sup>3</sup>
Shelf Margin Delta (SMD A, B and C)	44	140	326	145	81%
Slope Fan System (SFS)	24	84	217	89	50%
Kuparuk (KUP)	24	56	98	56	72%
Prospects Total	92	280	641	<b>290</b> <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.
COS represents the geological chance of success as assessed by 88 Energy and reviewed and endorsed by LKA.

 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. Prospective Resource Estimates – determined pre-drilling of Hickory-1.

7. Updated Prospective Resource Estimates reflect the removal of the resource estimate for the Basin Floor Fan which as of 1 November 2023 has been redetermined and classified as a Contingent Resource. No other changes have been made to the original estimates, please refer to the ASX announcement of 23 August 2023.



Project Phoenix: Basin Floor Fan		Gross (100%) Contingent Resources <sup>1,3</sup>			
Probabilistic Method		Low (1C)	Best (2C)	High (3C)	
Oil	Million Barrels	17	44	104	
NGL	Million Barrels	35	91	218	
Oil + NGL <sup>2</sup>	Million Barrels	52	136	322	
Gas	Billion Cubic Feet	255	628	1,417	
Total <sup>2</sup>	Million Barrels of Oil Equivalent <sup>4</sup>	98	250	580	

Table 2: Previously announced Contingent Resource assessment for the BFF discovery at Hickory-1

Project Phoenix: Basin Floor Fan		Net Entitlement (~63%) Contingent Resources <sup>1,3</sup>			
Probabilistic Method		Low (1C)	Best (2C)	High (3C)	
Oil	Million Barrels	11	28	65	
NGL	Million Barrels	22	57	137	
Oil + NGL <sup>2</sup>	Million Barrels	33	85	202	
Gas	Billion Cubic Feet	160	394	890	
Total <sup>2</sup>	Million Barrels of Oil Equivalent <sup>4</sup>	62	157	364	

 88 Energy net resources have been calculated using a 75.227% working interest and a 16.5% royalty.
88 Energy cautions that the reported totals for Oil+NGL and Total MMBOE are an arithmetic sum of the individual hydrocarbon types within the BFF reservoir. The arithmetically summed 1C estimate may be a conservative estimate and the arithmetically summed 3C

estimate may be optimistic when compared to a statistical aggregation of probability distributions. 3. The Contingent Resource classification is not required to be adjusted for the chance of development, as per PRMS 2018 guidance, and hence has not been carried out in this assessment.

4. Natural Gas Liquids (NGL's) are converted to oil equivalent volumes via a constant ratio of 1:1. Gas is converted to oil equivalent volumes via a constant ratio of 5.5 BCF per 1 MMBoe.