

21 September 2017

**88 Energy Limited**  
**Project Icewine Operations Update**

88 Energy Limited ("88 Energy", "the Company", "Operator") (ASX, AIM: 88E) is pleased to provide an update on Project Icewine, located onshore North Slope of Alaska.

**Highlights**

- Shut-in on 18<sup>th</sup> September (AK time) ahead of suspension for 2017/2018 winter season
- Continued gas flow of ~2mcf/d with a trend of increasing heavy components since last update
- Forward plan to install narrower tubing and execute artificial lift in April/May 2018 to remove frac fluid

**Icewine#2 Operations Update**

The Icewine#2 well was shut-in on 10<sup>th</sup> July to allow for imbibition and pressure build up to occur within the HRZ shale. Flow testing re-commenced on 31<sup>st</sup> August at 10:26 (AK time), and was suspended on 18<sup>th</sup> September (AK time).

The Joint Venture having assessed the current rate of fluid recovery and, despite several encouraging trends, made the decision to shut-in for the Winter period due to logistical reasons associated with ongoing testing in Arctic conditions. The main issue is that of freezing of the borehole fluid, predominantly fresh water from the frac, over the ~1,300ft permafrost zone due to the low rates of fluid flow observed towards the end of the current test phase. Additionally, winterized equipment deemed suitable for executing efficient artificial lift of the frac fluid is currently unavailable. The forward plan is to optimise and re-initiate the flow testing, utilising artificial lift, in April/May 2018 when weather conditions are more favourable.

Regarding the encouraging trends observed, a summary is included below:

- Decrease in C1 (most recent average <91% vs 93% previously) and increase in C2+ components as a percentage of the gas flow, potentially trending towards the interpreted phase of hydrocarbon in the reservoir
- Increase in the gas / water ratio such that as the water flow rate has decreased over time, the gas rate has remained relatively constant. It is still interpreted that additional fluid is required to be lifted off the formation before effective connectivity to the reservoir can be achieved with representative flowback.

The Icewine#2 well is located on the North Slope of Alaska (ADL 392301). 88 Energy Ltd (via its wholly owned subsidiary, Accumulate Energy Alaska, Inc) has a 77.55% working interest in the well. The well was stimulated in two stages over a gross 128 foot vertical interval in the HRZ shale formation, from 10,957-11,085ft TVD, using a slickwater treatment comprising 27,837 barrels of fluid and 1,034,838 pounds of proppant.

The well was initially flowed back on a 6/64 inch choke and was reduced to a 4/64 inch choke after 26 hours to maintain pressure. Approximately 370 barrels of frac fluid had been recovered as at 1730 on 3<sup>rd</sup> September (AK time) at an average rate of 100 barrels per day. The choke was subsequently stepped up to 8/64 inch at 1800 10<sup>th</sup> September (AK time) as the overall declining



pressure gradient versus time improved, indicating potential pressure support. The choke was gradually increased to 10/64 and then 12/64 in order to lower the bottom hole pressure significantly below the reservoir pressure to increase the draw down on the formation. Consequently, the well head pressure fell below that required to support flow through the separator (~35psi) and the well stopped flowing naturally on 18<sup>th</sup> September 1630 (AK time), as expected, and was shut in. To date, the cumulative amount of stimulation fluid produced from both testing periods is 5,533 barrels, 19.9% of fluids injected.

Since the shut-in, significant pressure build up has already occurred, with current wellhead pressure over 739psi. This is consistent with the interpreted overpressure of the HRZ and is an encouraging sign.

A total of 16.57mcf of gas was measured as production since the 9<sup>th</sup> September, with an average flow rate of 1.79mcf per day. Results to date are consistent with several other early stage unconventional plays that have subsequently been proven successful; however, it is too early to tell the significance of these results for the HRZ play. As previously advised, the Joint Venture is of the view that greater than 30% of the frac fluid needs to be lifted from the formation before gaining connectivity with the reservoir and achieving representative flowback.

A detailed presentation with the conclusions from the testing of the HRZ to date as well as planned operations for 1H2018 will be released to the market shortly.

#### **Bank of America Debt / Alaska Credits Clarification**

The current Bank of America debt balance is US\$17.7m. The State will pay back US\$1.19m of this imminently, based on US\$77m in total payouts, representing \$0.16 in the dollar for each outstanding dollar owed as at the beginning of the year, calculated on issued certificates at that time. The debt balance with Bank of America will consequently be reduced to US\$16.5m. It is anticipated that all outstanding 88E cash certificates will be issued prior to mid-2018. The State will continue to pay back the outstanding credits on a yearly basis, with a minimum floor of paid out monies. Alaska remains one of the wealthiest States in the USA, with close to US\$100 billion in savings and vast natural resources as well as a burgeoning fishing and tourism industry. Risk related to pay back of the credits in full is deemed very low. The Company is also in a strong position in relation to its debt as the estimated amount of cash credits that will be owed is ~US\$23m, significantly in excess of the US\$16.5m debt.

Managing Director, Dave Wall, commented: *"Whilst it is frustrating to have to wait over the Winter season for the continued flow test of the HRZ, there are several encouraging signs observed from this most recent phase of testing. Given the early stage nature of our appraisal program, we need to have patience and remain open minded as there is no benchmark against which to track the progress of this particular unconventional play."*

Yours faithfully

A blue ink signature of Dave Wall, consisting of a stylized 'D' and 'W' followed by a horizontal line.

Dave Wall  
Managing Director  
88 Energy Ltd



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, Mr Brent Villemarette, who is a Non-Executive Director of the Company. Mr Villemarette has more than 35 years' experience in the petroleum industry, is a member of the Society of Petroleum Engineers, and a qualified Reservoir Engineer 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. Mr Villemarette 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.

Media and Investor Relations:

**88 Energy Ltd**

Dave Wall, Managing Director

Tel: +61 8 9485 0990

Email: [admin@88energy.com](mailto:admin@88energy.com)

**Finlay Thomson**, Investor Relations

Tel: +44 7976 248471

**Hartleys Ltd**

Dale Bryan

Tel: + 61 8 9268 2829

**Cenkos Securities**

Neil McDonald/Derrick Lee

Tel: + 44 131 220 6939

## Project Icewine Overview

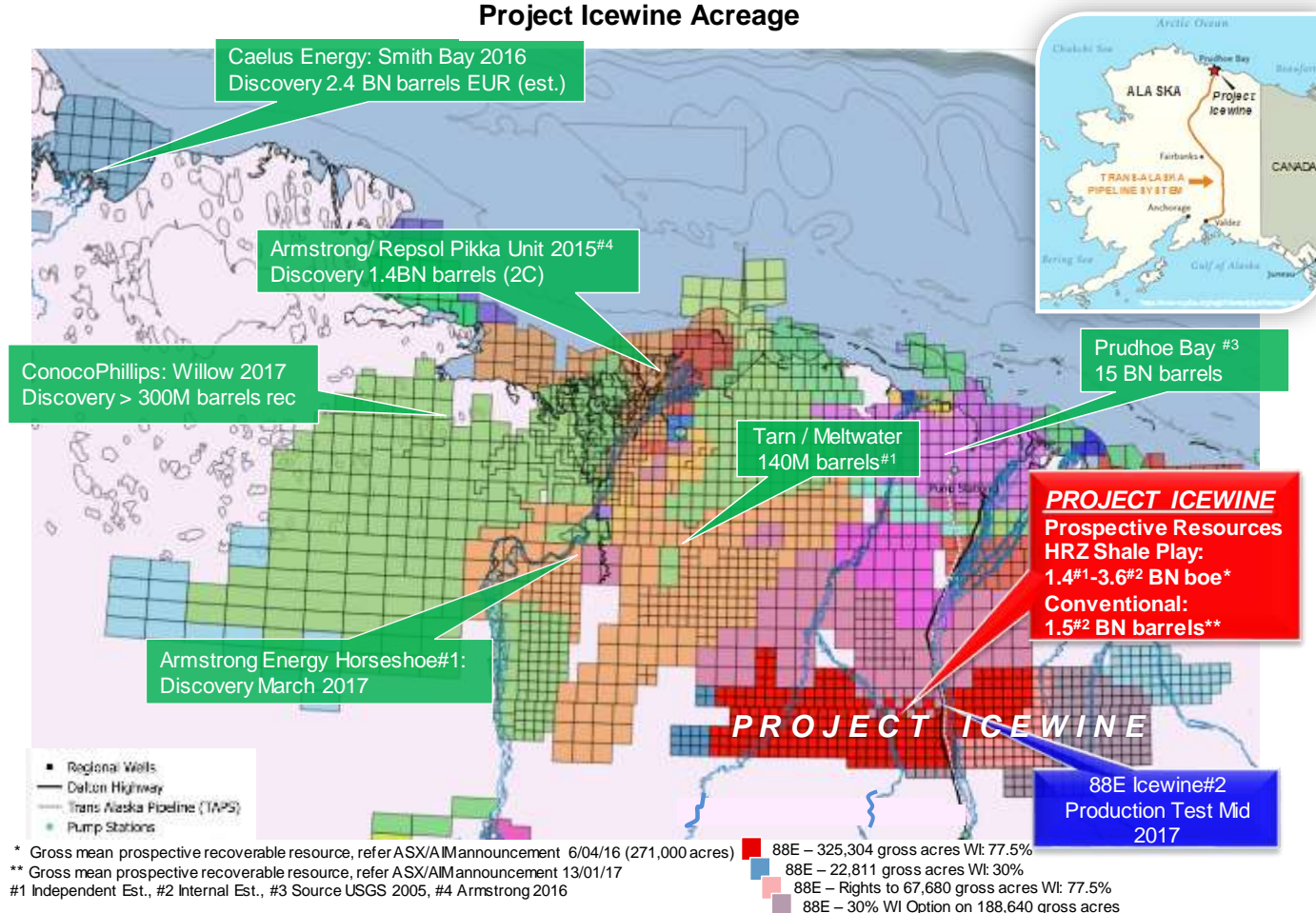
In November 2014, the Company entered into a binding agreement with Burgundy Xploration (**BEX**) to acquire a significant working interest (87.5%, reducing to 77.5% on spud of the first well on the project) in a large acreage position on a multiple objective, liquids rich exploration opportunity onshore Alaska, North America, referred to as Project Icewine. The current gross acreage position is 348,115 contiguous acres (259,114 acres net to the Company). In December 2016, the Company successfully bid on additional acres, some of which were awarded in July 2017. On award of the remaining acres, the Project Icewine gross acreage position may be further expanded to ~604,000 contiguous acres (368,100 acres net to the Company assuming all rights are taken up).

The Project is located on an all year operational access road with both conventional and unconventional oil potential. The primary term for the State leases is 10 years with no mandatory relinquishment and a low 16.5% royalty.

The HRZ liquids-rich resource play has been successfully evaluated based on core obtained in the recently completed (December 2015) Icewine #1 exploration well, marking the completion of Phase I of Project Icewine. Phase II has now commenced, with drilling at the follow-up appraisal well, Icewine#2, commencing early 2Q2017. Production testing is ongoing.

Significant conventional prospectivity has also been identified on recently acquired 2D seismic across the project acreage.

## Project Icewine Acreage



**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.





Exploration incentives provided by the State of Alaska with up to 35% of net operating loss refundable in cash were concluded for all expenditure post 30 June 2017.

The primary objective is an untested, unconventional liquids-rich shale play in a prolific source rock, the HRZ shale (Brookian Sequence), that co-sourced the largest oil field in North America; the giant Prudhoe Bay Oil Field Complex. Internal modelling and analysis indicates that Project Icelwine is located in a high liquids vapour phase sweetspot analogous to those encountered in other Tier 1 shale plays e.g. the Eagle Ford, Texas.

Recently acquired 2D seismic has identified large conventional leads at Project Icelwine within the same Brookian petroleum system and shallow to the HRZ shale, including potential high porosity channel and turbiditic sands associated with slope apron and deepwater fan plays. The Brookian conventional play is proven on the North Slope; the USGS (2013) estimated the remaining oil potential to be 2.1 billion barrels within the Brookian sequence. Two recent discoveries in the Brookian have already exceeded these estimates, with Armstrong/Repsol discovering 1.4 billion barrels in 2015 and Caelus announcing a 2.5 billion barrel discovery in 2016. Additional conventional potential exists in the Brookian delta topset play, deeper Kuparuk sands and the Ivishak Formation.

A Prospective Resources Report by DeGolyer and MacNaughton, was commissioned by 88 Energy to evaluate the unconventional resource potential of Project Icelwine in February 2016 and was released to the market on 6<sup>th</sup> April 2016.

**About 88 Energy:** 88 Energy has a 77.5% working interest and operatorship in ~325,000 acres onshore the prolific North Slope of Alaska ("Project Icelwine"). Gross contiguous acreage position will expand on award of additional leases successfully bid on in the December 2016 State of Alaska North Slope Licensing Round. The North Slope is the host to the 15 billion barrel Prudhoe Bay oilfield complex, the largest conventional oil pool in North America. The Company, with its Joint Venture partner Burgundy Xploration, has identified highly prospective play types that are likely to exist on the Project Icelwine acreage – two conventional and one unconventional. The large unconventional resource potential of Project Icelwine was independently verified by leading international petroleum resource consultant DeGolyer and MacNaughton. In addition to the interpreted high prospectivity, the project is strategically located on a year-round operational access road and only 35 miles south of Pump Station 1 where Prudhoe Bay feeds into the Trans Alaska Pipeline System. The Company acquired 2D seismic in early 2016 to take advantage of the globally unique fiscal system in Alaska, which allowed for up to 75% of 1H2016 exploration expenditure to be rebated in cash. Results from the seismic mapping and prospectivity review are encouraging, and form the basis of a conventional prospectivity portfolio for Project Icelwine. In late 2015, the Company completed its maiden well at the project, Icelwine#1, to evaluate an unconventional source rock reservoir play which yielded excellent results from analysis of core obtained from the HRZ shale. The follow-up well with a multi-stage stimulation and test of the HRZ shale, Icelwine#2, spud in early 2Q2017.