



29 December 2015

### **Icewine #1 Final Drilling Update**

88 Energy Limited ("88 Energy", "the Company", "Operator") (ASX, AIM: 88E) is pleased to provide the following drilling update.

#### **Highlights**

- Icewine#1 reached its planned Total Depth of 11,600' on 24<sup>th</sup> December at 0008 (AK time), having successfully achieved all of the primary **unconventional** objectives of the well:
  - Early analysis suggests that a large portion of the HRZ shale on the Project Icewine acreage is within the thermal maturity sweetspot
  - Oil shows were recorded with cut and fluorescence observed in cuttings returned to surface during the drilling of the HRZ shale
  - A pronounced increase in heavy gas fractions was exhibited in both the gas chromatograph and mass spectrometer whilst drilling through the HRZ shale
  - Two cores were cut in the HRZ primary shale oil objective and the underlying Pebble Shale Unit (bottom seal) with excellent recoveries (97%)
  - The cores have been despatched offsite to the laboratory for Stage 1 of the programmed analysis to confirm the thermal maturity and permeability of the HRZ as well as to determine its geomechanical properties
  - The core acquired in the Pebble Shale will provide valuable information on the bottom sealing potential for the HRZ shale play
- In addition to the unconventional HRZ play, a number of **conventional** reservoir targets were tested by the drilling of the Icewine#1 well with the following key highlights:
  - Excellent reservoir was encountered over the Kuparuk sands interval from 11,262' – 11,320' with elevated gas readings over a 58 foot gross interval – a detailed petrophysical log interpretation is underway
  - Preliminary log interpretation of the Kuparuk sand interval indicates porosities of up to 15% and good permeability
  - The reservoir quality in this Kuparuk sand interval is substantially higher than anticipated, which is extremely positive for deeper conventional prospectivity on the Project Icewine acreage
- As reported previously, the shallow Brookian sequence intersected had excellent reservoir quality and hydrocarbon shows through out the section



## Overview

Since the previous report, an additional 35' of core was cut from 11,165' to 11,200' in the Pebble Shale prior to pulling out of hole for the statutory blow out preventer test. The core acquired in the Pebble Shale marks the completion of another key objective for Icewine#1 as this will provide valuable information associated with the bottom seal for the HRZ shale play.

The well was then drilled to the planned Total Depth of 11,600'. Several gas kicks were experienced whilst drilling an interval of excellent reservoir quality between 11,262'-11,320', with porosities up to 15% and good permeability. This is outstanding for sands at this depth and substantially better than anticipated. The implications for the conventional potential at this horizon across Project Icewine have been significantly high graded as a result.

A checkshot survey was also completed subsequent to reaching Total Depth. Checkshot involves vibrating a seismic source at the surface and this seismic signal is then received by a downhole tool. The checkshot survey will assist with calibration of planned future seismic programs across the Icewine acreage.

The well continues to remain within budget.

## Current Operations

Drilling operations are now complete and the rig will soon be demobilised from site.

## Forward Plan

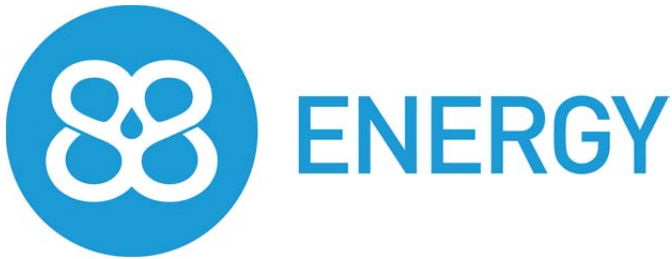
Evaluation of the core, cuttings, logs, isotubes and mud samples is now underway and we expect to be able to release details related to these analyses over the coming weeks as they become available.

Please refer to the presentation released 5<sup>th</sup> November 2015 for more details on the well, look-forward operations and evaluation program.

Managing Director of 88 Energy Limited, Dave Wall commented: *"The high recovery factor in all three cores taken, including in the primary HRZ target and across the bottom seal for the HRZ (Pebble Shale), means that we have excellent data to use in the evaluation of the potentially huge unconventional prize on the Project Icewine acreage. Whilst lab evaluation has only just commenced, early indications for the play at Project Icewine are positive, with a large portion of the acreage interpreted to be within the thermal maturity sweetspot.*

*Additionally, the intersection of high quality reservoir at depth in the Kuparuk sands is a major boost to the conventional potential at Project Icewine. Reservoir quality was always considered a key risk at this horizon and the recent observations from Icewine#1 have substantially mitigated this. These deeper sands complement the already prospective conventional horizons in the shallow Brookian sequence, as previously reported.*

*We look forward to providing more insights into the potential of both the unconventional and conventional prospectivity at Project Icewine over the coming weeks as well as updating investors on the forward program."*



**Fig 1. Kuukpik Rig 5 On Location**



Upon completion of drilling, certain data will be available immediately and will be reported to the market after internal examination; however, the definitive testing of the HRZ shale potential will take several months of data analysis. The pivotal focus will be an extensive evaluation of core material by specialist laboratories, which will cover a number of parameters considered critical for the success of the play.

Conventional potential has been identified in both the shallower (Brookian) and deeper (Kuparuk) horizons; however, early analysis indicates no closure at this location, as expected. Despite this, the excellent reservoir quality and high hydrocarbon saturation has significantly high-graded the conventional potential across the acreage. This potential will be matured up by the potential acquisition of 3D seismic in the near term. The conventional horizons encountered in Icewine #1 were not delineated by 3D seismic.

Yours faithfully

A handwritten signature in blue ink, appearing to read 'Dave Wall', with a long horizontal line extending to the right.

Dave Wall  
Managing Director  
88 Energy Ltd

## Project Icewine Highlights

In November 2014, the Company entered into a binding agreement with Burgundy Xploration (**BEX**) to acquire a significant working interest (87.5%, reducing to 78% 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. In November 2015, the gross acreage position was expanded by 174,240 acres (to be awarded in due process by the State of Alaska)..

88 Energy has a 272,422 gross contiguous acre position with 212,489 acres net to the Company, 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 unconventional oil play will be evaluated based on core obtained in the recently completed (December 2015) Icewine #1 exploration well.

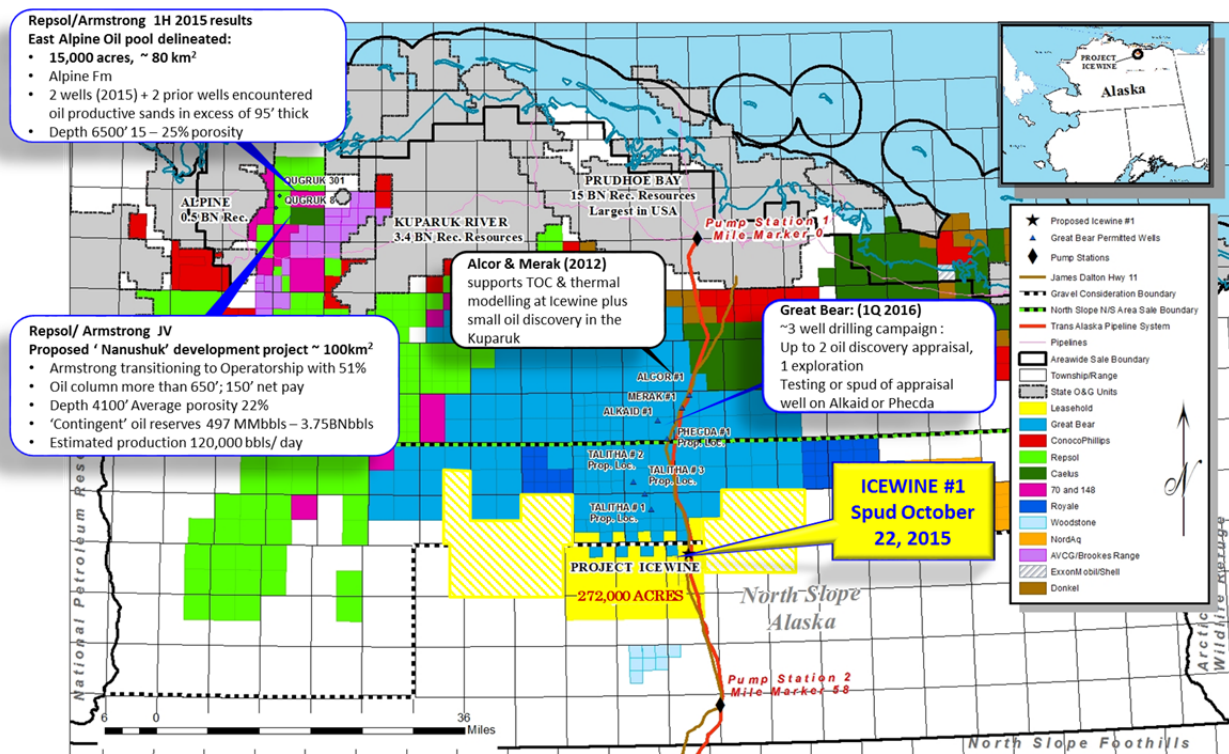
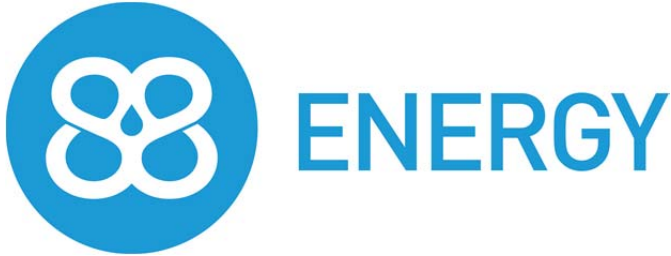


Figure 1: Project Icewine Location

Generous exploration incentives are provided by the State of Alaska with up to 85% of exploration expenditure in 2015 cash refundable, dropping to 75% mid 2016 and thereafter 35%.

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 Icewine 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.



Conventional play potential can be found at Project Icewine within the same Brookian petroleum system and shallow to the HRZ shale and includes high porosity channel and deep water turbiditic sands. The Brookian conventional play is proven on the North Slope; the USGS (2013) estimate the remaining oil potential to be 2.1 billion barrels just within the Brookian sequence. Additional conventional potential exists in the deeper Kuparuk sands and the Ivashuk Formation.

Drilling, (2012), in the adjacent acreage to the north confirmed that the HRZ shales, along with the underlying Kingak & Shublik shales, were all within the oil window which is extremely encouraging for the unconventional potential at Project Icewine. In addition, a conventional oil discovery was reported in the Kuparuk sandstones.

A Prospective Resources Report by DeGolyer and MacNaughton, was commissioned by 88 Energy to evaluate the unconventional resource potential of Project Icewine in early December 2014 and was released to the market on 19 January 2015.

**About 88 Energy:** 88 Energy has a 78% working interest and operatorship in ~272,000 acres (~174,000 acres subject to formal award) onshore the prolific North Slope of Alaska (“Project Icewine”). The North Slope is the host for 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 three highly prospective play types that are likely to exist on the Project Icewine acreage – two conventional and one unconventional. The large resource potential of Project Icewine 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 TransAlaska Pipeline System. The Company plans to progress drilling and seismic acquisition in the near term to take advantage of the globally unique fiscal system in Alaska, which allows for up to 85% of CY2015 exploration expenditure to be rebated in cash.

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