

25 May 2016

Share Price: \$0.0400

## 88 ENERGY LIMITED (88E)

### Icewine...the project is real...and funded

The next phase of 88 Energy's (88E) Project Icewine will involve the drilling and testing of a horizontal, multi frac, well into the HRZ shale. Analysis of the Icewine-#1 suggests the HRZ shale has the potential to be as prolific a producer as some of the major unconventional plays in the Lower 48. Ultimately, flow rates equal to the best parts of the Lower 48 unconventional plays (IP30 2,500 – 3,000b/d liquids) are required to justify the additional operating costs in Alaska. Recent strength in the oil price will provide additional support for 88E and the rest of the oil sector. We have a Speculative Buy recommendation on 88E.

### Phase 1 complete - the project is real

Laboratory testing and data analysis of the Icewine-#1 well is now largely complete. Key unconventional success parameters have all come in either in line or, in some cases, significantly exceeding other major unconventional play types in North America. Especially important was confirmation that the northern part of Project Icewine sits in the volatile oil window. Other important factors such as matrix permeability and porosity exceeded known levels in plays such as the Eagle Ford.

### Will it flow?

This becomes the important questions for investors leading into the drilling of Icewine-#2 early in 2017. Flow simulation is likely to show that a theoretical horizontal well in the HRZ will flow at high rates given the positive viscosity, pressure and permeability analysis of Icewine-#1. We caution that multiple wells may be required to optimise the frac and completion design. Knowledge gained from drilling and fracturing of the vast number of wells in the Lower 48 (producing wells in the Eagle Ford peaked at close to 14,000 in March 2015) should shrink the learning curve for 88E in terms of frac design.

### Updated Resource Estimate

The independent report estimates a Prospective Recoverable Resource Mean Estimate (liquids only) of 985.2MM bbl, 763.1MM net to 88E. The Geological Chance of Success increased from 40% to 60% from the previous resource assessment. Prospective acreage for development was 114,056 compared to gross acres of 272,422. Over time sweet spots will be established within such a large land position. Within the Eagle Ford, for example, there is no doubt that sweet spots exist. In 2015, 52% of production from the Eagle Ford came from just 3 counties (Karnes, Dewitt and LaSalle) with 81% coming from the top 6 counties. The remaining 25 accounted for the balance of only 19%.

### Funding secured

At the end of March 88E had a cash balance of A\$7.49m. In April the Company successfully raised A\$25m at 3.5cps via the issuance of 715m new shares. These proceeds will help fund the cost of seismic acquisition, acreage acquisition and Icewine-#2 preparation. Longer term 88E will need to find a funding partner. As we have flagged previously, 88E's high working interest in the Icewine Project means they can negotiate from a position of strength.

#### Hartleys Brief Investment Conclusion

88E has completed Phase 1 of its exploration program on-shore the North Slope Alaska. Key geological success factors have been established via the drilling and analysis of the Icewine-#1 well. The next phase of the work program will involve drilling and flow testing a horizontal well.

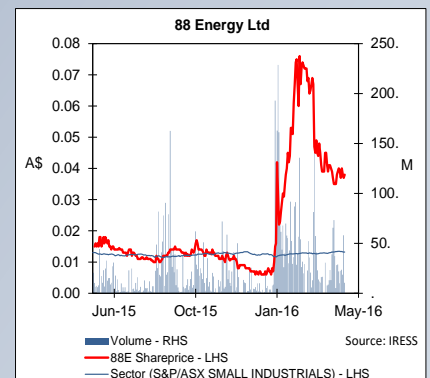
#### Board of Directors:

David Wall	Managing Director
Michael Evans	Non-executive Chairman
Dr Stephen Staley	Non-executive Director
Brent Villemarette	Non-executive Director

#### Company Address:

Level 1, 83 Havelock St, West Perth, WA, 6005

<b>Issued Capital:</b>	3893.2m
- fully diluted	4436.3m
<b>Market Cap:</b>	\$155.7m
- fully diluted	\$177.5m
<b>Cash Estimate</b>	\$25.0m



#### Authors:

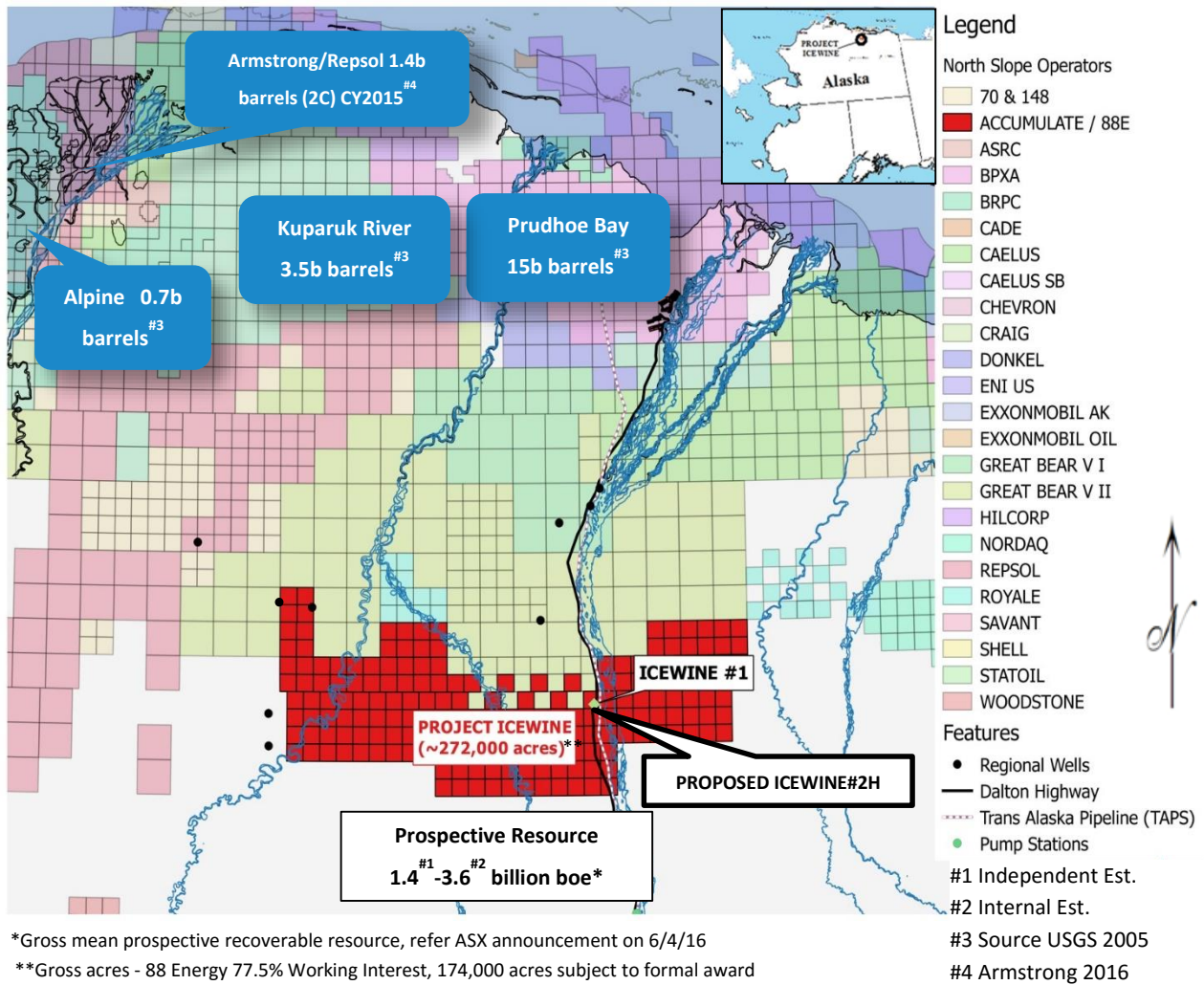
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Hartleys has assisted in the completion of capital raisings in the past 12 months for 88 Energy Limited ("88 Energy") for which it has earned fees. Hartleys has also provided corporate advice within the past 12 months and continues to provide corporate advice to 88 Energy, for which it has earned fees and continues to earn fees.

## SUMMARY MODEL

88 Energy Limited 88E		Share Price \$ 0.040		May-16 Speculative Buy		
<b>Key Market Information</b>						
Share Price					\$0.040	
Market Capitalisation	Ordinary				\$156m	
	Fully Diluted				\$177m	
Current Cash est.					\$25.0m	
Issued Capital					3893.2m	
Options					543.1m	
Issued Capital (fully diluted all options)					4436.3m	
Enterprise Value (EV)					\$152.5m	
<b>Projects</b>						
<b>Name</b>	<b>Country</b>	<b>State</b>	<b>Size (Acre)</b>	<b>W.I.*</b>	<b>Net acres</b>	
Icewine	USA	Alaska	272,422	78.00%	212,489	
*Subject to the payment of US\$5m prior to final award						
<b>Prospective Resource Estimate</b>						
Estimated Prospective Oil Resource						
HRZ Shale - liquids only						
Un-risked			Risked Mean			
MM Boe	P90	P50	P10	Mean	Pg	
Wet Gas / Cond	210	623	1524	787	60%	
Volatile Oil	45	150	401	198	60%	
Gross Total Liquids				985		
Net to 88E				763		
Independent Report completed by DeGolyer and MacNaughton						
<b>Internal Resource Estimate</b>						
MM Boe	P90	P50	P10	Mean	Pg	
Volatile Oil	1,594	2,471	3,830	2,602	50%	
Net to 88E	1,234	1,913	2,965	2,014	50%	
<b>Options</b>						
<b>Year Expires</b>	<b>Number</b>	<b>% ord</b>	<b>Avg Price</b>	<b>\$m unpaid</b>		
31-Oct-16	2,500,000	0.1%	\$ 0.450	\$ 1.13		
12-Jun-17	1,000,000	0.0%	\$ 0.420	\$ 0.42		
12-Jun-17	2,000,000	0.1%	\$ 0.280	\$ 0.56		
12-Jun-17	250,000	0.0%	\$ 0.160	\$ 0.04		
2-Mar-18	1,000,000	0.0%	\$ 0.014	\$ 0.01		
18-Feb-18	45,000,000	1.2%	\$ 0.015	\$ 0.68		
31-Aug-18	14,895,785	0.4%	\$ 0.160	\$ 2.38		
1-Nov-18	62,965,301	1.6%	\$ 0.021	\$ 1.32		
2-Mar-18	413,459,650	10.6%	\$ 0.020	\$ 8.27		
<b>TOTAL</b>	<b>543,070,736</b>	<b>13.9%</b>	<b>\$ 0.027</b>	<b>\$ 14.81</b>		
<b>Directors</b>						
David Wall					Managing Director	
Michael Evans					Non-executive Chairman	
Dr Stephen Staley					Non-executive Director	
Brent Villemarette					Non-executive Director	
<b>Company Details</b>						
<b>Investment Summary</b>						
88E has established a large acreage position on the central North Slope of Alaska. Analysis of the Icewine-#1 suggests the HRZ shale has the potential to be as prolific a producer as some of the major unconventional plays in the Lower 48. The next phase of the work program will involve drilling and flow testing a horizontal well in early 2017. Project Icewine attractive fiscal terms, road and pipeline access and well established source rocks mean the rewards could be significant.						
<b>Potential Newsflow</b>						
<b>Potential Newsflow</b>		<b>Event</b>				
2H CY 16		2D seismic acquisition - complete / analysis Farm-out process on-going Flow simulation				
1Q CY17		Drilling Icewine-#2 horizontal well				
<b>Quarterly Cash Flow- Historical</b>						
A\$ m	FY15			FY16		
	Dec	Mar	Jun	Sep	Dec	Mar
Beginning	1.27	0.80	6.24	1.21	9.32	9.33
Operating	-0.88	-1.07	-4.94	-3.04	-16.54	-9.93
Investing	-0.71	0.00	0.00	0.00	-0.77	0.00
Financing	1.12	6.22	0.00	11.16	17.62	7.61
<b>End</b>	<b>0.80</b>	<b>6.24</b>	<b>1.21</b>	<b>9.32</b>	<b>9.33</b>	<b>7.49</b>
Analyst: Simon Andrew						
Phone: +618 9286 3020						
Sources: IRESS, Company Information, Hartleys Research						
Last Updated: 24/05/2016						

Fig. 1: Project Icewine – Location Map



Source: 88E

Fig. 2: Icewine-#1 – Key Metrics

Metric (Unit)	Result	Comment / Comparison
Thermal Maturity	Volatile Oil	High rate, recovery, & performance
GRI Matrix Permeability	>10X Eagle Ford	Very good for volatile oil resource plays
Gross / Net Pay	197' / 186'	Tier 1 net to gross ratio of 94%
Effective Porosity	12.6%+	30%+ higher than Eagle Ford
TOC	3.7%+ (wt basis)	In line with highly commercial resource plays
Clay Content	38%	Analogous to Marcellus / Haynesville
Hydrocarbon Saturation	75%	Consistent with world class resource plays
Bottom Seal	Effective	Allows for overpressure and volatile oil phase
Pore Pressure	40% above normal	Essential for commercial production

Source: 88E

## RISKS

The key risks for 88E (like most oil & gas exploration and development companies) is making an economic discovery and obtaining the funding for ongoing exploration. Other risks include delays, key person risk, country/sovereign risk, weather, JV partner obligations, cost inflation. Investing in explorers is very risky given the exploration value of the company in essence assumes that the market will recognise a portion of potential value before the results of an exploration program are known, conscious that the ultimate chance of success is low (typically 1%-20%) and that failure is much more likely, in most cases. Other risks are earnings disappointments given the industry is volatile and earnings can disappoint due to cost overruns, project delays, cost inflation, environmental regulations, resource estimate errors and management performance and contract negotiation skills. High financial leverage (if it exists at that time) would add to the problem.

**Moroccan withdrawal.** 88E has now formally withdrawn from the Tarfaya Offshore Block. It should be remembered however, that 88E has an outstanding contingent liability to Galo Energia (Galp). Now that 88E's market cap has exceeded US\$50m, the US\$3.4m contingent liability has been triggered. The payment can be made in either cash or shares.

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## SIMPLE S.W.O.T. TABLE

Strengths	Early mover advantage with a large acreage position. Very attractive fiscal terms to encourage exploration. Phase 1 of the exploration program complete – major unconventional success factors confirmed.
Weaknesses	Yet to confirm flow rates – laboratory testing is all well and good but ultimately it will be flow rates the drive value. Will need further funding.
Opportunities	To be one of the first operators to prove up the unconventional potential of the North Slope of Alaska. A large equity position from which 88E could attract a farm-in partner.
Threats	A lower oil price. A tightening of environmental standards in Alaska.

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Source: Hartleys Research

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*manner:firstname\_lastname@hartleys.com.au*

## Hartleys Recommendation Categories

Buy	Share price appreciation anticipated.
Accumulate	Share price appreciation anticipated but the risk/reward is not as attractive as a "Buy". Alternatively, for the share price to rise it may be contingent on the outcome of an uncertain or distant event. Analyst will often indicate a price level at which it may become a "Buy".
Neutral	Take no action. Upside & downside risk/reward is evenly balanced.
Reduce / Take profits	It is anticipated to be unlikely that there will be gains over the investment time horizon but there is a possibility of some price weakness over that period.
Sell	Significant price depreciation anticipated.
No Rating	No recommendation.
Speculative	Share price could be volatile. While it is anticipated that, on a risk/reward basis, an investment is attractive, there is at least one identifiable risk that has a meaningful possibility of occurring, which, if it did occur, could lead to significant share price reduction. Consequently, the investment is considered high risk.
Buy	

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