

#### **ASX ANNOUNCEMENT**

25 June 2018

# OTTO TO DRILL 400 MILLION BARREL NANUSHUK OIL PROSPECT ON ALASKA NORTH SLOPE IN EARLY 2019

- Otto's technical team has generated a 400 MMbbl gross best estimate prospective recoverable resource target on the Alaska North Slope
- Drilling target is a direct analogue to the Horseshoe-1/1A oil well drilled in 2017
- Horseshoe-1/1A is part of the billion barrel plus Nanushuk oil play-fairway, one of the largest, most exciting recent conventional oil discoveries on the Alaska North Slope
- Otto has secured well-funded consortium partners to execute the drilling
- Otto has increased its working interest to 22.5% in the prospect leases

Otto Energy Limited (ASX:OEL) ("Otto" or the "Company") is pleased to advise that it has executed a binding term sheet agreement that will see Otto participate in the drilling of a highly prospective Nanushuk oil trend exploration well within its Western Blocks on the Alaska North Slope in early 2019. Final definitive agreements are expected to be executed within 30 days. Otto along with its consortium partners have exclusivity over the opportunity.

Full details of the agreement are set out on the following pages.

Otto's Managing Director, Matthew Allen, commented: "I am personally very pleased with Otto's technical team in putting together the Western Blocks drilling prospect. Our technical team have developed this prospect in-house and demonstrated their continued excellent geological and geophysical skills. This is an exciting prospect in a highly significant emerging new trend in one of the oiliest provinces in North America.

We are also very pleased to be joined by consortium partners 88 Energy and Red Emperor, along with existing partner Great Bear, in the drilling of the well. This is a like-minded joint venture consortium that is funded and highly motivated to get this initial test well drilled in early 2019."

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## Alaska Agreement – Detailed Information

## **Commercial Agreement**

Otto, along with 88 Energy Limited (ASX:88E) and Red Emperor Resources NL (ASX:RMP) (collectively the "Consortium Partners"), have executed a binding term sheet agreement with Great Bear Petroleum Ventures II LLC ("Great Bear") to acquire the majority of Great Bear's working interest in four leases comprising the "Western Blocks" (ADL#s 391718, 391719, 319720 and 391721).

In consideration for acquiring the leases, the consortium partners will undertake the following:

- Provide a performance bond of US\$3.0 million to the State of Alaska by 31 July 2018 (Otto's share is US\$750,000); and
- Drill an exploration well in the Western Blocks by 31 May 2019.

The consortium partners will provide the following consideration to Great Bear:

- Free carry Great Bear for a 10% working interest in the leases for the drilling, completion and production testing of an initial test well, including all associated costs such as permitting, ice road access and test production disposition;
- Pay US\$500,000 upon execution of the definitive agreements;
- Pay US\$500,000 upon receipt of final permits necessary to drill the initial test well, in any case by no later than 31 December 2018; and
- Provide an option for Great Bear to acquire a further 10% working interest prior to the spud of the initial test well by paying its pro-rata share of all costs of the initial test well or if exercised within 6 months of completing the initial test well, by paying 200% of its pro-rata share of all costs of the initial test well.

The relevant interests in the Western Blocks under the commercial agreements are as follows

(subject to regulatory approval by the State of Alaska):

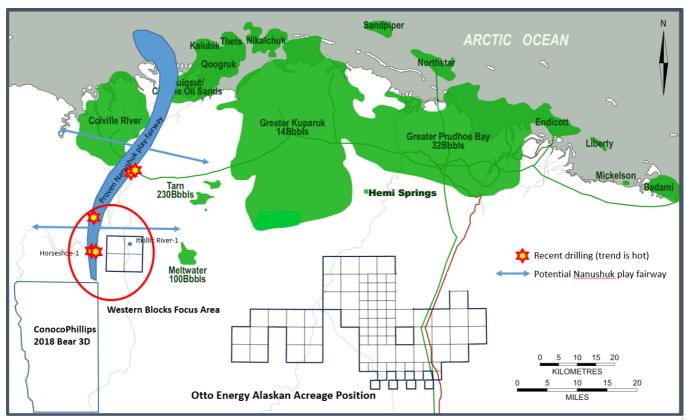
	Current	Post-transaction			
	Working	Working Interest	Paying Interest	Net Revenue	Working Interest
	Interest	(before back-in)	(before back-in)	Interest*	(after back-in)
				(before back-in)	
Otto Energy	10.8%	22.5%	25.0%	18.75%	20.0%
88 Energy (Drilling	-	36.0%	40.0%	30.00%	32.0%
Management)					
Red Emperor	-	31.5%	35.0%	26.25%	28.0%
Great Bear	89.2%	10.0%	-	8.33%	20.0%
Petroleum**					
State of Alaska	_	-	_	16.67%	
	100%	100.0%	100%	100%	100%

<sup>\*</sup>Government royalty of 16.67%. \*\*Currently Operator of record on leases.

The initial test well will satisfy Otto's first participation obligation under Otto's Purchase and Development Agreement with Great Bear dated 29 May 2015.



## Nanushuk Topset Oil Trend



Otto holds a working interest in four leases totalling over 22,710 acres located in the heart of the prolific Nanushuk oil fairway. The Horseshoe-1 well, which discovered oil in 2017, is located less than one mile to the west of Otto's Western Blocks. Horseshoe-1 extended the Nanushuk play fairway, which has been extensively drilled since 2013 with no dry holes, by well over 20 miles to the south of previous drilling.

Industry sources have indicated contingent recoverable resources discovered to date in the trend could contain over 1.2 billion barrels of oil. This places the trend as one of the most significant emerging plays on the Alaska North Slope. With ongoing drilling in 2018 it is expected that additional discoveries will be made in this emerging play trend.

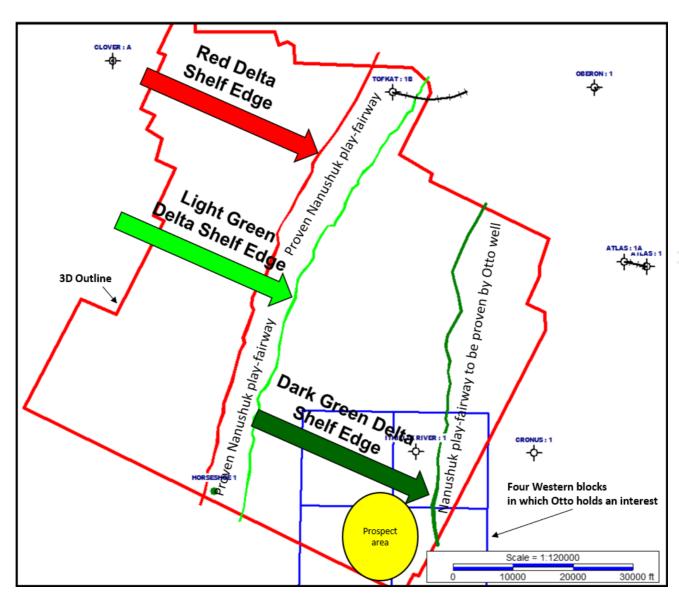
The Horseshoe-1 discovery well was drilled by the Repsol-led joint venture in 2017 to a total depth of 6,000 ft. (1,828 meters) and encountered more than 150 ft. of net oil pay in several reservoir zones in the Nanushuk section. The deviated Horseshoe-1A sidetrack was drilled to a total depth of 8,215 ft. and encountered more than 100 ft. of net oil pay in the Nanushuk interval as well. Given the relative shallow depth and quality of the reservoir being intersected, this trend is expected to commence producing over 120,000 barrels of oil per day in 2021.



## Western Blocks Prospect

Recent in-house technical work conducted by Otto on its Alaska acreage in the Western Blocks has resulted in the identification of an oil prospect with a gross best estimate prospective recoverable resource volume of 400 MMbbls and a geological chance of success in the range of 25-30%. The prospective recoverable resource calculation was based on a consideration of offset well information and seismic expression. Otto's 18.75% net revenue interest (before Great Bear 10% back in – refer table on page 2) in the prospect would be 75 MMbbls.

The prospect, identified on modern 3D seismic data obtained through the Alaska Department of Natural Resources, Division of Oil and Gas is illustrated below in the context of the four graticular leases that comprise the Western Blocks in which Otto holds an interest.

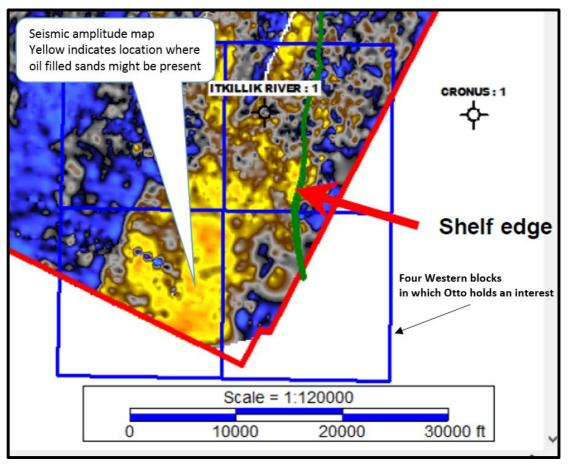


On seismic data the prospect shares many of the positive attributes seen at the Horseshoe-1 discovery which found light oil reservoired in more than 150ft of net oil sand of the Nanushuk delta sequence at just over 5000ft below the surface.



The discovery at Horseshoe-1 has extended the known accumulation of Nanushuk oil some 20 miles south of earlier discoveries such as those at Qugruk 8 and Qugruk 301 which flowed 30 degree gravity crude at rates as much as 2,160 and 4,600 bbls/d respectively.

The Horseshoe-1 discovery has signalled the presence of an extensive previously overlooked hydrocarbon province which is in now attracting major development capital including the recent acquisition by Oil Search Limited (ASX: OSH) of operatorship of the Pikka Unit and a number of oil exploration assets on the Alaska North Slope.



Exploration success in the Nanushuk play-fairway is now being driven by the understanding that when reservoir quality top set sands are present anomalously high amplitudes are seen on seismic data.

This type of positive amplitude response has also been seen on seismic over the Western Blocks as illustrated above. Otto presently calculates a best estimate gross prospective resource of 400 MMbbls in the prospect area mainly on the basis of this amplitude work.

As can be seen some of the block area to the south is not covered by 3D data and as yet uncalculated upside potential is likely to exist in this area as well.

Further encouragement that the prospect will be found oil bearing is provided by the presence of oil shows seen in the adjacent Itkillik River-1 well drilled in 1978. Here oil was observed during drilling at multiple levels within fine grained sediments.

If 3D data had been available at the time Itkillik River-1 had been drilled, the well would likely have been moved further south to intersect a better reservoir quality and more continuous sand interval. This higher quality sand interval is the key target for the proposed Otto well.



#### Offtake Options

With the Oil Search operated Pikka unit development activities occurring to the west and the Conoco-Phillips Meltwater unit facility some 10 miles to the east, any oil found within the Western Blocks will find a cost effective, commercially attractive route to market. Project economics will be further enhanced by the shallow nature of the oil pool.

## **Drilling Planning**

88 Energy Ltd will manage the drilling of the initial test well in the Western Blocks on behalf of the joint venture and consortium partners. 88 Energy has already commenced a rig market survey and is identifying a suitable rig with which to commence the drilling operations. Given that the location is only accessible through an ice road, drilling will be undertaken during the winter operational months once the Alaska North Slope is opened for operations.

The joint venture has met with the Alaska Department of Natural Resources to expedite required approvals and permits to undertake the initial test well.

#### **Lease Terms**

The four North Slope leases comprising the Western Blocks have recently been extended by three years with the term now expiring on 30 April 2021. During this period the joint venture is required to post a US\$3.0 million performance bond and undertake the drilling and testing of an initial test well by no later than 31 May 2019. The leases have an annual rental of US\$10.00 per acre or fraction thereof.

## **Funding**

The well is estimated to cost approximately US\$15 million (100% dry hole cost) of which Otto's share will be US\$3.75 million. There is also a performance bond of US\$3 million (\$0.75 million Otto's share) to be posted to the Alaska DNR by 31 July 2018. The bond will be refunded if the well is drilled before 31 May 2019.

Otto expects to fund the bond and drilling of this well from the strong cash flows currently being generated by the production at its flagship Gulf of Mexico field at SM 71. During the month of May 2018 SM 71 generated approximately US\$4.2 million in revenue (Otto's share before royalties) based on May average field production of 4,542 boe/d (2,271 boe/d Otto 50% WI share).

Otto holds its working interest in Alaska through a wholly owned subsidiary Borealis Alaska LLC.



#### **Competent Persons Statement**

The information in this report that relates to oil and gas resources in relation to Alaska was compiled by Mr Paul Senycia BSc (Hons) (Mining Engineering), MAppSc (Exploration Geophysics), who has consented to the inclusion of such information in this report in the form and context in which it appears.

Mr Senycia is an employee of the Company, with more than 30 years relevant experience in the petroleum industry and is a member of The Society of Petroleum Engineers (SPE). The resources included in this report have been prepared using definitions and guidelines consistent with the 2007 Society of Petroleum Engineers (SPE)/World Petroleum Council (WPC)/ American Association of Petroleum Geologists (AAPG)/ Society of Petroleum Evaluation Engineers (SPEE) Petroleum Resources Management System (PRMS). The resources information included in this report are based on, and fairly represents, information and supporting documentation reviewed by Mr Senycia. Mr Senycia is qualified in accordance with the requirements of ASX Listing Rule 5.41 and consents to the inclusion of the information in this report of the matters based on this information in the form and context in which it appears.

#### **Prospective Resources Cautionary Statement**

The estimated quantities of petroleum that may potentially be recovered by the application of future development projects relate to undiscovered accumulations. These estimates have both an associated risk of discovery and a risk of development. Further appraisal and evaluation is required to determine the existence of a significant quantity of potentially moveable hydrocarbons.

#### Prospective Resources Reporting Notes (Western Blocks prospect reported for the first time)

(i) The prospective resources information in this document is effective as at 30 April 2018 (Listing Rule (LR) 5.25.1). (ii) The prospective resources information in this document has been estimated and is classified in accordance with SPE PRMS (Society of Petroleum Engineers Petroleum Resources Management System) (LR 5.25.2). (iii) The prospective resources information in this document is reported according to the Company's economic interest in each of the resources and net of royalties (LR 5.25.5). (iv) The prospective resources information in this document has been estimated and prepared using the deterministic method (LR 5.25.6). (v) The prospective resources information in this document has been estimated using a 6:1 BOE conversion ratio for gas to oil; 6:1 conversion ratio is based on an energy equivalency conversion method and does not represent value equivalency (LR 5.25.7). (vi) The prospective resources information in this document has been estimated on the basis that products are sold on the spot market with delivery at the sales point on the production facilities (LR 5.26.5.) (vii) Prospective resources are reported on a best estimate basis (LR 5.28.1). (viii) For prospective resources, 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 moveable hydrocarbons (LR 5.28.2). (ix) In respect to the prospective resources referred to in this statement, Otto currently has a 10.8% working interest in four leases (ADL#s 391718, 391719, 319720 and 391721), totalling 22,711 acres all of which are located on the North Slope, Alaska, USA (LR 5.35.1). Otto's working interest in the four leases will increase to 22.5% (as set out in the table on page 2) upon completion of the transaction detailed in this ASX release. (x) The prospective resources have been estimated on the following basis (LR 5.35.2): the best estimate prospective recoverable resource calculation was based on a consideration of offset well information and seismic expression; a combination of volumetric assessment and field analogues have been used to estimate the prospective resources; exploration drilling will be required to assess these resources. (xi) The chance of discovery is considered moderate as the prospective resources are near developed and undeveloped reserves and in a proven oil and gas producing province. There is a risk that exploration will not result in sufficient volumes of oil and/or gas for a commercial development (LR 5.35.3). (xii) Prospective resources are un-risked and have not been adjusted for an associated chance of discovery and a chance of development (LR 5.35.4).