

# **BlueCrest Alaska Operating LLC**

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**John M Martineck  
President & Chief Operating Officer**

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**PUBLIC RECORD COPY**

Jim Beckham, Acting Director  
State of Alaska Department of Natural Resources, Division of Oil and Gas  
550 W. 7<sup>th</sup> Avenue, Suite 1100  
Anchorage, AK 99501-3510  
Sent via email with hardcopy to follow

RE: Cosmopolitan Unit – 3rd Plan of Development (Rev #1)  
Leases - ADL018790, ADL384403, ADL391902, ADL391903, and ADL391904

Dear Jim,

BlueCrest Alaska Operating LLC is pleased to provide this 3rd Plan of Development (“3rd POD”) for leases ADL018790, ADL384403, ADL391902, ADL391903, and ADL391904 (the “Cosmopolitan Unit”). This updated plan shall be in effect from January 1, 2017 through December 31, 2017.

To begin, let’s review last year’s 2nd Plan of Development:

BlueCrest obtain the permits required to drill the first well (H-16) in 2016. However, BlueCrest didn’t spud the well as planned due to delays in the construction of the biggest, most powerful rig currently in Alaska.

BlueCrest completed the Engineering Design, HAZOP, Construction and Commissioning of the Processing Facilities and 50 Person Camp.

BlueCrest completed the workover on the Hansen 1AL1 and then started production from this same well on March 31, 2016.

BlueCrest did not drill any offshore wells in 2016 due to the uncertainty in the Governor’s tax credit policies.

## **3rd PLAN OF DEVELOPMENT:**

The Cosmopolitan Unit development consists of five State of Alaska leases (ADL018790, ADL384403, ADL391902, ADL391903, and ADL391904), and one Onshore Surface Use lease (Hansen Production Facility). Figure 1 shows the subject leases and includes wells drilled to date with approximate areas of known productive zones.

The Cosmopolitan Unit 3rd Plan of Development is for the period commencing on January 1, 2017 through December 31, 2017 and consist of the following Processes:

- Permitting:
  - Permits required for the H-16 Well have been obtained. The only exception is the 10-403 Sundry for Hydraulic Fracture Stimulation which is currently under review. H-14, H-14L, H-12 and H-12L Permits to Drill will be filed for in early 2017.
  - Multi-year permits for the potential offshore drilling campaign have been obtained. Annual permits are being requested and are expected in early 2017.
  
- Engineering Design:
  - The Hansen Production Facility (Train A) is complete. (Train B will be designed as production levels warrant).
  - Engineering is schedule to begin on the Water Injection System for reservoir pressure maintenance in the 1<sup>st</sup> Qtr. of 2017.
  
- Construction, Hansen Production Facility:
  - The Hansen Production Facility is complete.
  - First Oil: First Oil was achieved on March 31, 2016 from the Hansen A1L1 well.
  
- Drilling
  - Drill and complete up to five oil production wells or laterals from the Hansen Production Facility in 2017 (H-16 is schedule to spud mid November 2016).

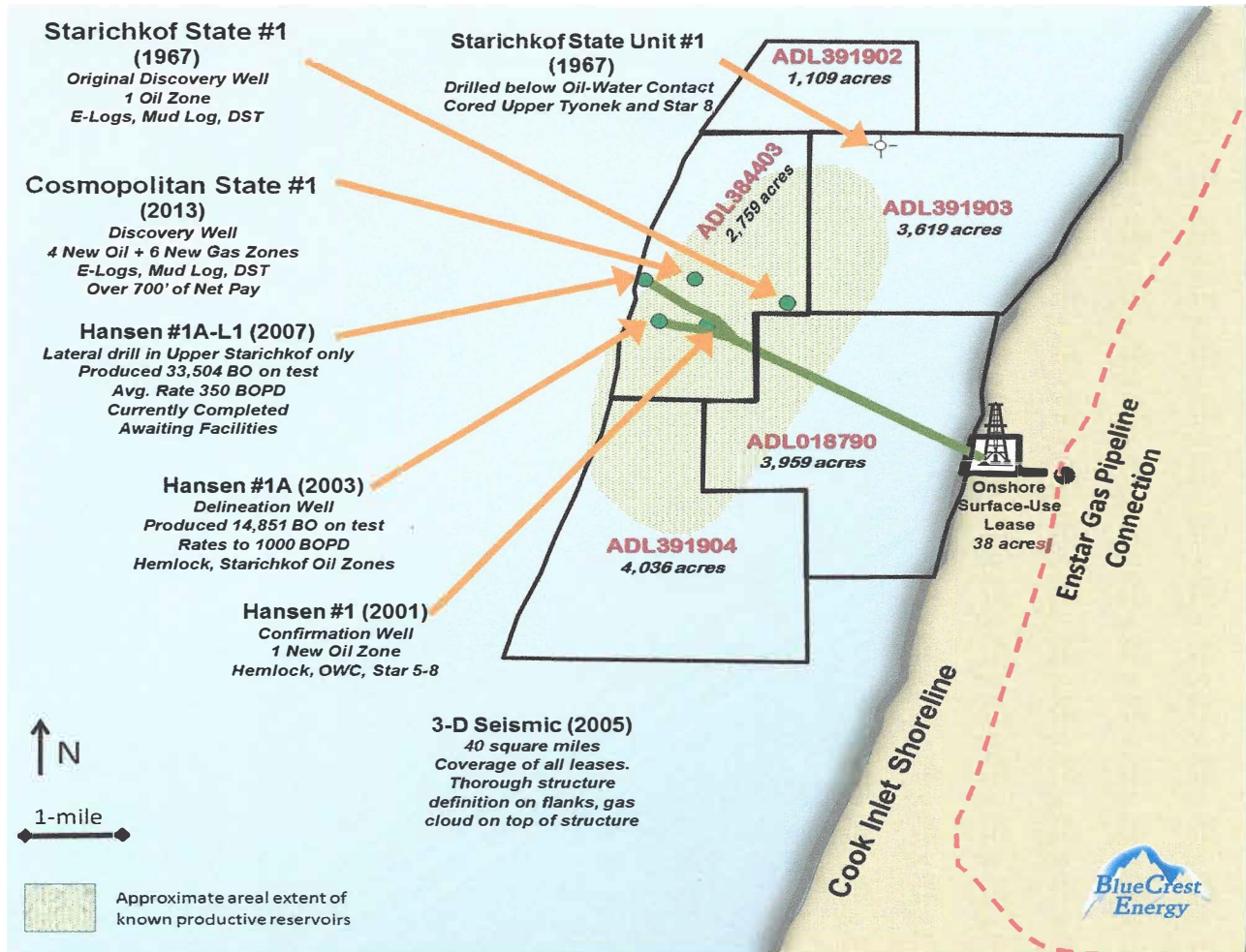
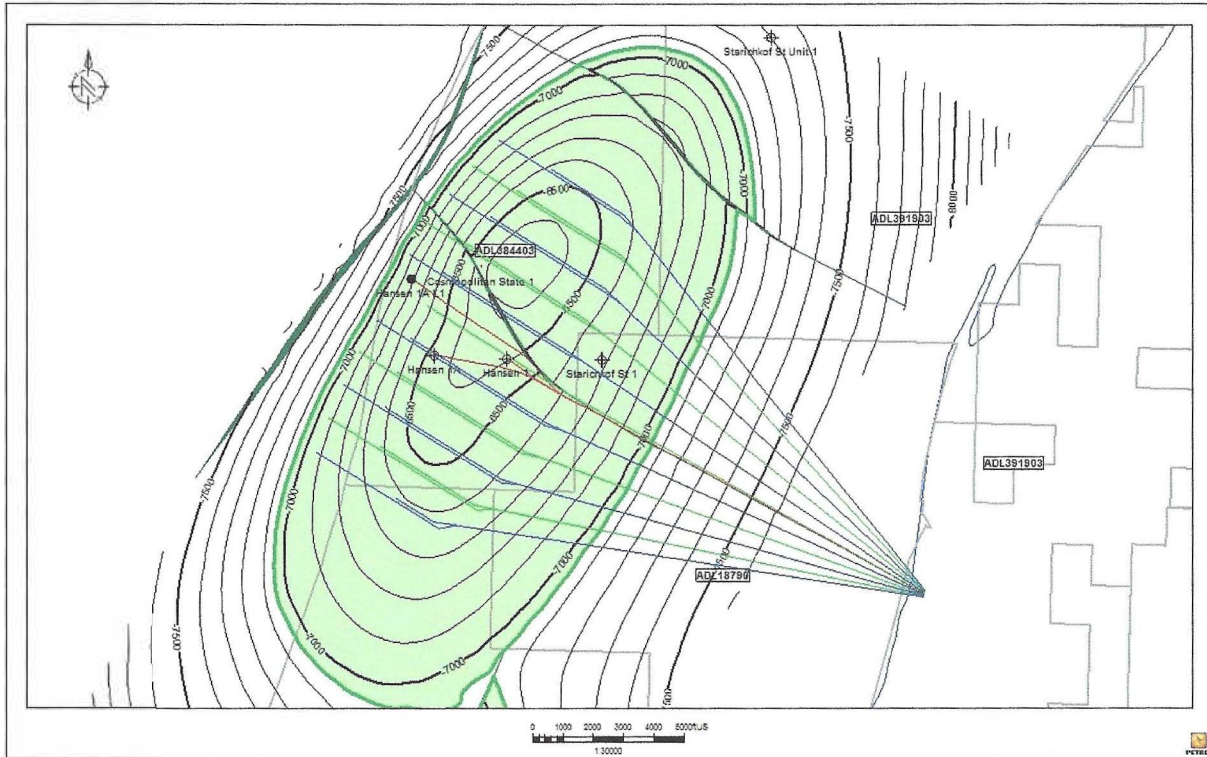


Figure 1. Map of Cosmopolitan Project Development Area

Development Concept: The Cosmopolitan Field contains both gas and oil reservoirs throughout the stratigraphic column. The reservoir is a double plunging anticlinal structural trap. The oil reservoirs are contained in the lower Tyonek and Hemlock Formations. Both formations are comprised of fluvial conglomerate, sandstone, siltstone, shale and coal. The oil reservoirs within these formations are going to be developed utilizing extended reach wells drilled from the onshore Hansen Production Facility. The well pattern is designed to create a line drive waterflood to maximize the exploitation of the reservoir. Below is one of the conceptual well patterns with alternating producers (green) and injectors (blue). Above the oil reservoirs there are stacked gas sands within the Upper and Lower Tyonek Formation. Currently a gas development is outside the scope of the sanctioned project and requires additional delineation to determine if it will be an economic project.



**Figure 2.** Map of Cosmopolitan Project Line Drive Waterflood Concept

Drilling Onshore Production Wells: The “BlueCrest Rig #1” is currently being constructed onsite to drill the Starichkof and Hemlock oil reservoirs from the Hansen Production Facility north of Anchor Point and is currently near completion and final commissioning. The rig is designed and is being constructed to operate in Alaska conditions and drill extended reach wells within the Cosmopolitan Unit. Upon final commissioning of the rig, one single lateral oil production well and up to two dual lateral oil production wells will be drilled from the Hansen Production Facility. Pending construction, commissioning and logistics, it is expected that the drilling operations will commence in the fourth quarter of 2016. The proposed surface, top of production and bottom hole coordinates for the first three wells are indicated below. These plans are still tentative and are subject to change due to reservoir modeling, anti-collision, drilling optimization or other issues. The petrophysical and production data from these first three wells will be analyzed and modeled to optimize the well pattern and maximize the exploitation of the reservoirs prior to any future drilling.

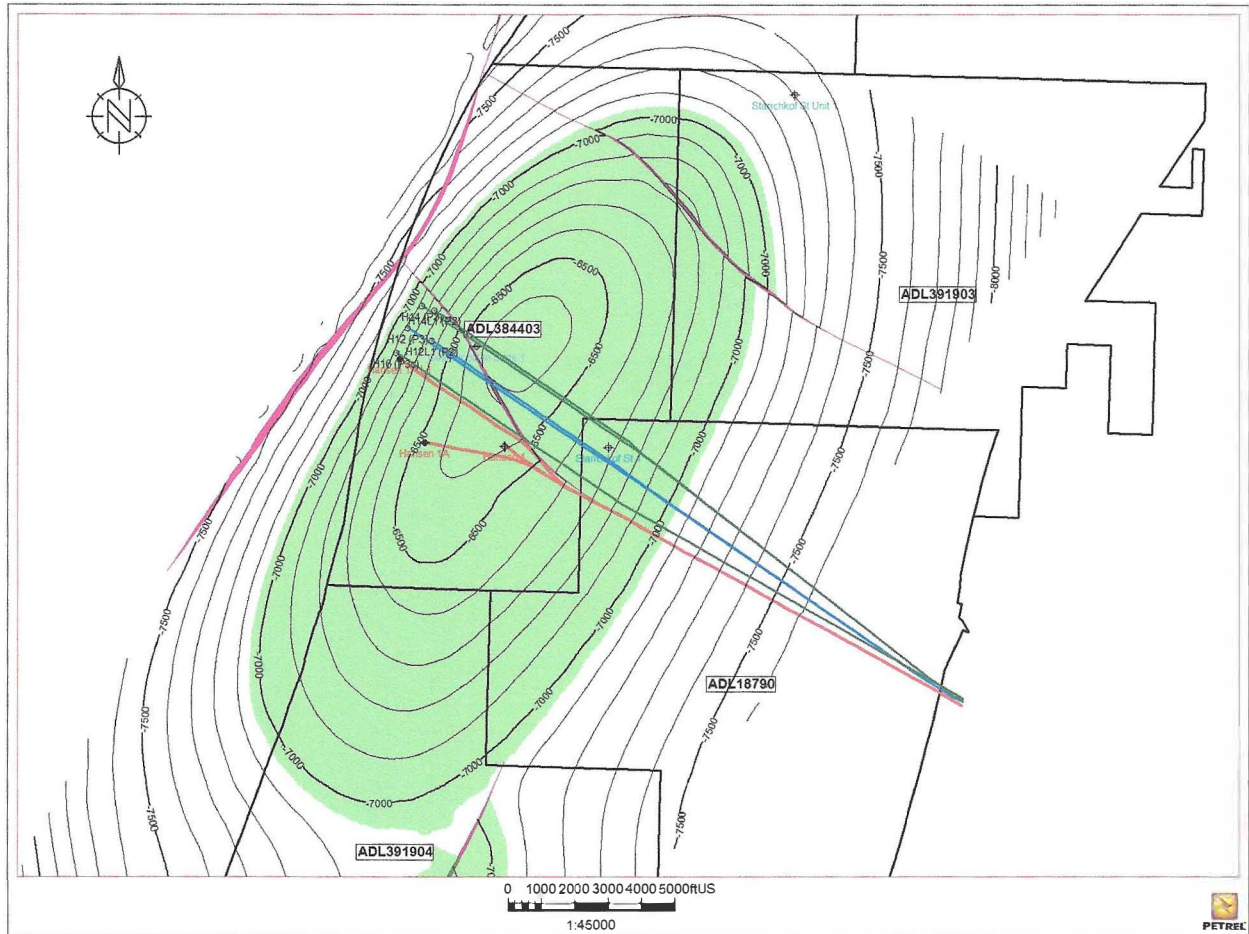


Figure 3. Map of Cosmopolitan Project Development Area With First Three Wells

Well Name	Surface Location					
	MD	TVDSS	X Coordinate	Y-Coordinate	Latitude	Longitude
H16	0'	0'	168 861.86'	2 144 856.07'	54° 12' 59.36530"	142° 18' 24.52350"
	Top Production					
	14 740'	6,900'	158 494.48'	2 150 776.62'	54° 11' 11.73094"	142° 17' 04.82169"
	TD					
22 846'	6,900'	151 772.00'	2 155 304.00'	54° 10' 01.19200"	142° 16' 01.73954"	

Well Name	Surface Location					
	MD	TVD	X Coordinate	Y-Coordinate	Latitude	Longitude
H14	0'	0'	168 853.3'	2 144 816.9'	54° 12' 59.32361"	142° 18' 25.19211"
	Top Production					
	15 023'	6,900'	159 183.44'	2 152 238.33'	54° 11' 16.89212"	142° 16' 39.21211"
	TD					
23 032'	6,900'	152 542.00'	2 156 714.00'	54° 10' 07.19711"	142° 15' 36.85279"	

Well Name	Surface Location					
	MD	TVD	X Coordinate	Y-Coordinate	Latitude	Longitude
H14L1	0'	0'	168 842'	2 144 757'	54° 12' 59.27734"	142° 18' 26.21128"
	Top Production					
	14 735'	6 880'	159 412.16'	2 152 065.52'	54° 11' 19.31223"	142° 16' 41.67176"
	TD					
22 713'	6,900'	152 917.00'	2 156 583.00'	54° 10' 11.00152"	142° 15' 38.34587"	

Well Name	Surface Location					
	MD	TVD	X Coordinate	Y-Coordinate	Latitude	Longitude
H12	0'	0'	168,845.19'	2,144,777.73'	54° 12' 59.28631"	142° 18' 25.85989"
	Top Production					
	15,036'	6,900'	158,915.81'	2,151,461.58'	54° 11' 15.11180"	142° 16' 52.64089"
	TD					
	23,238'	6,900'	152,111.00'	2,156,040.00'	54° 10' 03.71201"	142° 15' 48.86464"

Well Name	Surface Location					
	MD	TVD	X Coordinate	Y-Coordinate	Latitude	Longitude
H12L1	0'	0'	168,834'	2,144,718'	54° 12' 59.24093"	142° 18' 26.87603"
	Top Production					
	14,749'	6,680'	159,158.13'	2,151,308.78'	54° 11' 17.64322"	142° 16' 54.74252"
	TD					
	22,479'	6,900'	152,841.00'	2,155,669.00'	54° 10' 11.24265"	142° 15' 53.70293"


Disposal Wells planned: Two disposal wells are currently being planned, but only one disposal well will be permitted and drilled initially. An aquifer exemption has been issued by the EPA for the well location in the table below. Current plans are to drill the disposal wells from the onshore pad after the five production wells or laterals discussed above are drilled. BlueCrest and EPA are currently evaluating a slightly different bottom hole location that is closer and at a shallower depth. Surface and bottom hole coordinates for the first proposed disposal well is indicated below:

Well	Depth (Feet MSL)	X-Coordinate (NAD27)	Y-Coordinate (NAD27)	Latitude (NAD27)	Longitude (NAD27)	Well
DW1 Surface	175'	168,717'	2,144,407'	59° 51' 27.58" N	151° 48' 7.62" W	DW1 Surface
DW1 Bottom	-9,050'	162,912'	2,141,542'	59° 50' 57.81" N	151° 49' 59.67" W	DW1 Bottom

Drilling Offshore Delineation Wells: BlueCrest is not currently planning on any offshore drilling activity in 2017.

Plan for Exploratory Blocks: BlueCrest currently does not anticipate drilling in the exploratory blocks, specifically Alaska state oil and gas leases ADL 391899, ADL 391900, and ADL 391902, in year 2017. Interpretation of the 3D seismic acquired over 40 square miles in 2005, covering Alaska state leases ADL391902, ADL384403, ADL391903, ADL018790 and ADL391904, suggests that the southern exploratory blocks potentially have producible hydrocarbon deposits at a deeper depth. The economic potential of these leases suggest that additional evaluation is necessary.

God bless,



John M Martineck