

## BlueCrest Alaska Operating LLC

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## **Transmittal**

Today's Date:	10/2/15	Transmittal #:	2015-09
To:	Corri Feige, Director	From:	Steve Massey
Company:	State of Alaska, ADNR,	Company:	BlueCrest Alaska Operating LLC
	Div. of Oil and Gas		

Attached is the Second Plan of Development - Cosmopolitan Unit.

Thank you Steve Massey



## BlueCrest Alaska Operating LLC

3301 C Street, Suite 202 Anchorage, AK 99503 (907)754-9550

Steve Massey Vice President Alaska

October 2, 2015

Corri Feige, 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 PUBLIC RECORD COPY
SOME CONTENTS HAVE BEEN
MARKED CONFIDENTIAL BY
REQUEST OF THE OPERATOR
ON 2015-10-16.

RE: Cosmopolitan Unit – Second Plan of Development

Leases - ADL018790, ADL384403, ADL391902, ADL391903, and ADL391904

Dear Corri,

BlueCrest Alaska Operating LLC is pleased to provide this Second Plan of Development ("POD") for leases ADL018790, ADL384403, ADL391902, ADL391903, and ADL391904 (the "Cosmopolitan Unit"). This updated plan shall be in effect from January 1, 2016 through December 31, 2016.

## **SECOND PLAN OF DEVELOPMENT:**

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

The Cosmopolitan Unit Second POD for the period from January 1, 2016 through December 31, 2016 describes BlueCrest's plans for Permitting, Engineering, Construction, Start Up, Development and Drilling activities. Following are the details of the BlueCrest Plan:

- <u>Permitting:</u> Multi-year permits for the 2016 offshore drilling program have been obtained. Annual permits are being requested and are expected in mid-2016. Permits needed for the 2016 onshore construction, drilling and production projects have been obtained except for the last permit which is expected by April 2016.
- Engineering Design:
- Engineering Design for the Processing Facilities is basically complete.
- Construction Isometrics are being developed. This should continue thru the 1<sup>st</sup> Qtr 2016.
- Completed the HAZOP assessment for the Process Facilities "Issued For Construction" Drawings.
- Engineering will begin on the Water Injection System in the 2<sup>nd</sup> Otr 2016.
- <u>Construction, Hansen Pad Process Facility</u>: Civil Construction is ongoing at this time and should be completed early in the 4<sup>th</sup> Qtr 2015. Mechanical. Electrical and Instrumentation Construction started in September 2015 and will be completed

in the 1<sup>st</sup> Qtr 2016. The initial Process Facility installation consists of a 10,000 BOPD Processing Facility, 5250 Barrel Oil Storage Tanks, 2 Tandem Sales Oil Loading Truck Racks, 2 LACT Units, Produced Water Storage, Sales Gas Pipeline (By Enstar), and 50 Man Camp.

• <u>First Oil/Start Up</u>: Commissioning and Facility startup will take place during the 2<sup>nd</sup> Qtr 2016. The Hansen 1AL1 Well will be the primary source of production prior to Hansen 2 being drilled, completed and brought on line. Plans are to work over the Hansen 1AL1 to install a 2 3/8 inch coiled tubing velocity string in order to have more stable flow from the well. The Oil will be delivered to the Tesoro refinery by truck. The associated gas will be utilized as fuel in the facility or sold via the Enstar Gas sales pipeline.

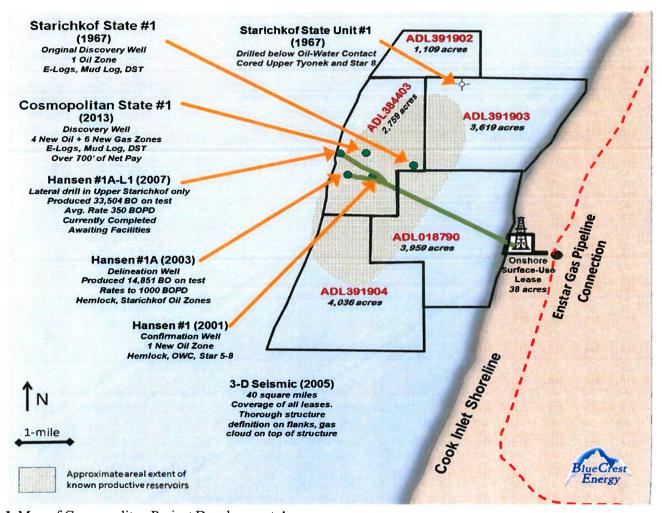


Figure 1. Map of Cosmopolitan Project Development Area

• <u>Development Concept</u>: The Cosmopolitan Field contains both gas and oil reservoirs throughout the stratagraphic 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 allow for a future line drive waterflood maximizing the exploitation of the reservoir. Below is one of the conceptual well patterns with alternating producers (green) and Injectors (blue). At shallower depths, above the oil reservoirs, 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. Subject to budget constraints and rig availibility, a jack-up rig may be utilized to drill up to three delineation wells to further evaluate this resource.

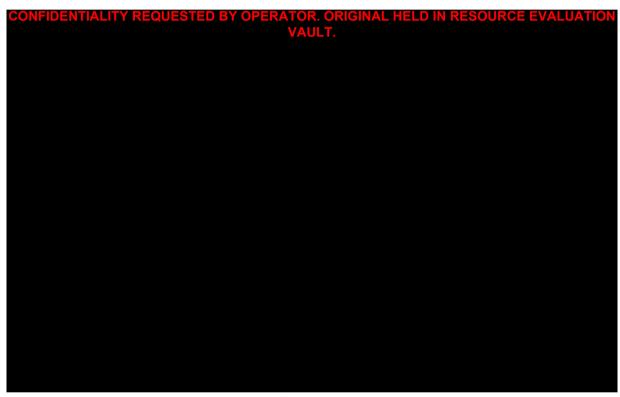
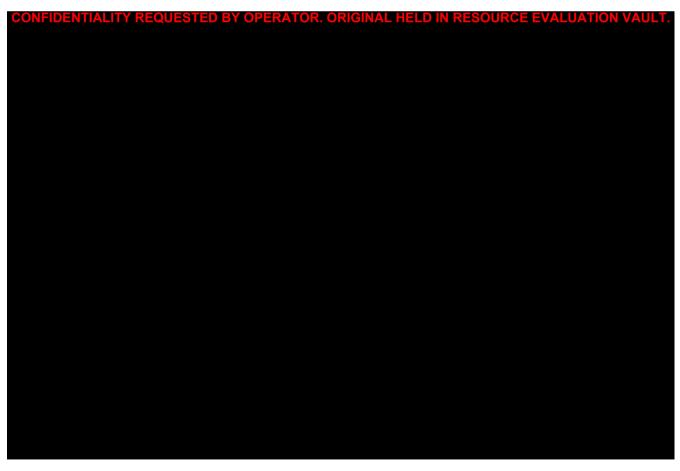


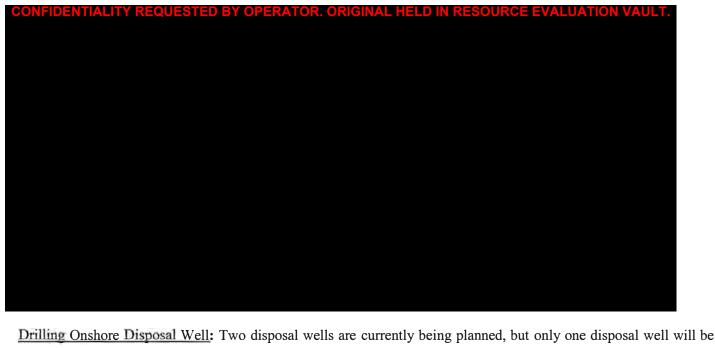
Figure 2. Map of Cosmopolitan Project Line Drive Waterflood Concept

• <u>Drilling Onshore Production Wells</u>: A land rig is currently being constructed to drill from the Hansen Production Facility north of Anchor Point. The rig, being built in Texas for BlueCrest, is designed to operate in Alaska conditions and drill extended reach wells within the Cosmopolitan Unit. Upon arrival and commissioning of the rig, one single lateral oil production well and two dual lateral oil production wells are planned in 2016 from the Hansen Production Facility. Pending construction, commissioning and logistics, it is expected that the drilling operations will commence in the first quarter of 2016. All American Oilfield, located in Kenai AK, will operate the rig for BlueCrest. 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 analysed and modeled to optimize the well patern and maximize the exploitation of the reservoirs prior to any future drilling.

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VAULT.
Map of Cosmopolitan Project Development Area with First Three Wells

Figure 3. N





• <u>Drilling Onshore Disposal Well:</u> 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 three production wells discussed above are drilled. Surface and bottom hole coordinates for the first proposed disposal well are indicated below:

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• <u>Drilling Offshore Delineation Wells</u>: Subject to economic evaluation, rig availability, and confirmation of future State Tax regime and Credit Programs, plans are to drill up to three offshore wells from a jack-up drilling rig during 2016. The Spartan Rig 151 or other similar rig would be used to drill the wells. Surface and bottom hole coordinates for the three wells are indicated below:

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The offshore delineation wells may be deepened to delineate both the natural gas and oil formations. The wells will be plugged and abandoned below the lowest gas reservoir once logging and evaluation of the oil formations has been completed. The natural gas portion of all three wells will be suspended until a platform is installed. The wells will be reentered and developed for future production operations. See Figure 4 below for approximate location of the two offshore platforms A and B.



Figure 4. Hemlock structure map showing potential surface locations for A and B offshore platforms

• 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 2016. 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.

Please let me know if you have any questions regarding our Second Plan of Development.

Respectfully submitted,

Steve Massey

Vice President Alaska

BlueCrest Alaska Operating LLC