# **PL417 Relinquishment Report**

# Summary

PL417 consisting of blocks 31/3, 32/1 and 36/10 was awarded in the 2006 APA Round for a 2-year period to Revus (40% and operator), Premier Oil (40%) and Noreco (20%). The license area is located north east of the Troll Field along the Øygarden Fault Complex, shown in Fig.1. The main prospect defined in the license, Kopi Luwak, showed a clear amplitude anomaly conform with structure, but it was recognized that the prospect risk could be significantly decreased by 3D seismic. A proposal to acquire 3D seismic data was presented in the license, but the partners did not support this and it was decided to drop the license.



Fig.1. Location of PL417

## Introduction

PL417, consisting of blocks 31/3, 32/1 and 36/10 was awarded on February 16<sup>th</sup>, 2007 for a 2-year initial period to Revus (40% and operator), Premier Oil (40%) and Noreco (20%). The work program for the first exploration term was reprocessing of existing 2D seismic data and acquisition of additional 2000 line km of 2D seismic data. Due to delays in the seismic acquisition the license applied for a one year extension of the first exploration period ending on Feb 16<sup>th</sup>, 2010. The evaluation of the largest prospect, Kopi Luwak, concluded that the prospect risk would be considerably reduced by 3D seismic data. Three prospects were identified in the license shown on Fig.2. No wells have been drilled in the license.



## Prospects

The two prospects Cucuta and Java are hanging wall traps which are fault bound to the east and with a dip closure to the north, west and south, shown on Fig.3. The reservoir in the Java and Cucuta prospects is the Sognefjord sands that show excellent reservoir quality in the nearby drilled wells. The reservoir is capped by the Draupne and Heather shales which are not mature at these depths, but are effective top seals. The lateral fault seal is critical for the integrity of the traps, the Cucuta terminates against basement in an active rifting system and the Java prospect is faulted against the interbedded Upper Jurassic rocks.



## Fig.3

Top Sognefjord depth structure map with the prospects Cucuta and Java





The Kopi Luwak prospect is a large structural/stratigraphic trap of Upper Cretaceous sands of the Jorsalfare Fm., which seems to have a local distribution along fault terraces along the Øygarden Fault Complex, but with presence of thin sand layers in the distal offset wells. The well 35/12-1 due 15km NW of the prospect encountered the Jorsalfare Fm. with good reservoir quality and the more distal wells in the Gjøa Field also have thin sands in this interval. The 2D seismic data indicate amplitude

anomalies that appear to be conformable to the interpreted structure but there are no analogs in the vicinity of the prospect where this type of information could be calibrated. However, if the conformance of structure and amplitude anomaly is confirmed on the 3D seismic, the risk may be significantly decreased. For both the Jurassic and Cretaceous prospects migration is an additional risk. The source rock is not mature in the area, but basin modeling has indicated possible migration pathways both from local kitchens and possibly from a northern source area.





Fig.7. Minimum far-stack amplitude (max trough amplitude) in 70ms window below top Cretaceous on structure map showing conformance with structure

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## Volumes for oil initially in place:

Prospect	Vol P90 (mmbbl	Vol MSV (mmbbl)	Vol P10 (mmbbl	GPOS (%)
Cucuta	6,89	97,4	241	15
Java	11,9	72,7	152	11
Kopi Luwak	55,3	308	658	14

# Conclusions

The evaluation of the PL417 was based on 2D seismic data and the mapped prospects carry a considerable risk. However, the Kopi Luwak prospect has a potential large volume and an interesting amplitude response that could give a better confidence with 3D data. Because the PL417 license partners did not agree to the operator's proposal to acquire new 3D data over the structure it was decided to relinquish the license.