



August 1, 2016

Canada-Newfoundland and Labrador Offshore Petroleum Board
5th Floor, TD Place
140 Water Street
St John's, NL
A1C 6H6

Attention: Elizabeth Young, Environmental Assessment Officer

Dear Elizabeth,

Re: Revised Amendment of Multi Klient Invest AS Northeast Newfoundland Slope 2-D Seismic Survey Programme 2012–2017 Environmental Assessment

Multi Klient Invest AS and its affiliates ("MKI") are requesting an Amendment of the Environmental Assessment (EA) of MKI's Northeast Newfoundland Slope 2-D Seismic Survey Programme 2012–2017 (YOLO/RPS 2012), specifically regarding text in the Executive Summary and Subsection 2.2. The text in these subsections refers to the total linear length (km) of survey lines proposed for the multi-year programme. The blocks of text and the table in these two subsections are as follows:

Executive Summary (p. i of the EA):

"Multi Klient Invest (MKI) AS proposes to undertake a multi-year 2-D seismic survey programme within a large regional area that encompasses the Northeast Newfoundland Slope and North Grand Banks totaling 40,000 km in the Labrador Basin, Orphan Basin, Flemish Basin, and Jeanne d'Arc Basin over the next six years (2012–2017)."

Section 2.2 (p. 5 of the EA):

"MKI proposes to conduct an offshore regional 2-D seismic reflection survey programme, totaling 40,000 km in the Labrador Basin, Orphan Basin, Flemish Basin and Jeanne d'Arc Basin over the next six years (2012–2017) in the jurisdiction the C-NLOPB."

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Section 2.2, Table 2.1 (p. 6 of the EA):

Table 2.1: Known Seismic Survey Parameters

<i>Total Linear Length of Lines (km)</i>	<i>40,000 km multi-year programme</i>
<i>Number and Length of Streamers</i>	<i>1 x Geostreamer™ 8-10 km</i>
<i>Group Interval</i>	<i>12 groups per section; 12.5 m</i>
<i>Shot Interval</i>	<i>25 m</i>
<i>Airgun Arrays</i>	<i>4135 cu in</i>
<i>Airgun Operating Pressure</i>	<i>138 to 172bar (2000 psi)</i>
<i>Hydrophones</i>	<i>Dual sensor</i>
<i>Recording Time</i>	<i>10 seconds</i>
<i>Source Array Tow Depth</i>	<i>9 m</i>
<i>Vessel Speed</i>	<i>4.5 knots while shooting, 10 knots in transit</i>
<i>Turning Radius</i>	<i>10 to 12 km</i>

MKI is proposing to amend the EA to increase the total linear length (km) of survey lines from 40,000 km to 70,000 km for the multi-year programme, i.e., the cumulative number of survey lines acquired during 2-D seismic surveys from 2012–2017 would not exceed 70,000 km. The rationale for this proposed change is as follows:

- Originally, MKI had planned a broader regional 2-D seismic survey approach for the Northeast Newfoundland Slope Project Area. However, following the introduction of the Land Tenure System in 2013 and given the focus of the recent land sales, particularly in the Flemish Pass and the North East Orphan Basin, more surveying effort than initially planned in these portions of the Project Area has become necessary;
- In 2016, MKI plans to acquire approximately 16,500 km of 2-D seismic data as infill to the existing course regional grid of seismic lines; and
- There are no current plans to acquire additional 2-D seismic data in 2017 under the existing EA.

The proposed rewording of the two blocks of text and table noted above are as follows:

Executive Summary (p. i of the EA):

“Multi Klient Invest (MKI) AS proposes to undertake a multi-year 2-D seismic survey programme within a large regional area that encompasses the Northeast Newfoundland Slope and North Grand Banks totaling 70,000 km in the Labrador Basin, Orphan Basin, Flemish Basin, and Jeanne d’Arc Basin over the next six years (2012–2017).”



Section 2.2 (p. 5 of the EA):

“MKI proposes to conduct an offshore regional 2-D seismic reflection survey programme, totaling 70,000 km in the Labrador Basin, Orphan Basin, Flemish Basin and Jeanne d’Arc Basin over the next six years (2012–2017) in the jurisdiction of the C-NLOPB.”

Section 2.2, Table 2.1 (p. 6 of the EA):

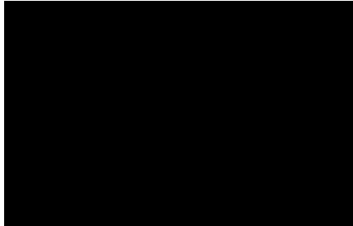
Table 2.1: Known Seismic Survey Parameters

<i>Total Linear Length of Lines (km)</i>	<i>70,000 km multi-year programme</i>
<i>Number and Length of Streamers</i>	<i>1 x Geostreamer™ 8-10 km</i>
<i>Group Interval</i>	<i>12 groups per section; 12.5 m</i>
<i>Shot Interval</i>	<i>25 m</i>
<i>Airgun Arrays</i>	<i>4135 cu in</i>
<i>Airgun Operating Pressure</i>	<i>138 to 172bar (2000 psi)</i>
<i>Hydrophones</i>	<i>Dual sensor</i>
<i>Recording Time</i>	<i>10 seconds</i>
<i>Source Array Tow Depth</i>	<i>9 m</i>
<i>Vessel Speed</i>	<i>4.5 knots while shooting, 10 knots in transit</i>
<i>Turning Radius</i>	<i>10 to 12 km</i>

The majority of the proposed 30,000 km maximum increase in total linear length of 2-D survey lines will be located in portions of the Project Area which have either not been previously surveyed by MKI during the 2012-2017 program or where there is requirement for broad infill to existing sparse coverage. As per the effects assessment tables for each Valued Environmental Component (VEC) in the EA (see Tables 6.1 and 6.7-6.12 in YOLO/RPS 2012), the residual effects of additional total linear length of 2-D survey lines on the seven VECs are predicted to be *not significant*. Therefore, the determinations of significance of the residual effects of seismic survey activities on VECs presented in the EA (YOLO/RPS 2012) and previous EA Amendments (Keel/RPS 2015a,b; PGS 2015; LGL 2016) remain valid after consideration of the increase in total linear length of 2-D survey lines for the multi-year program. MKI reaffirms its commitment to implement the mitigation measures proposed in these assessment documents and in the Screening Decisions made by the C-NLOPB (see Table 2 of LGL 2016 for a complete listing of mitigation measures).



Yours respectfully,



Vice-President MultiClient
North America

EA Documents Cited:

Keel/RPS. 2015a. Amendment Report: Environmental Assessment Northeast Newfoundland Slope 2-D Seismic Survey. Rep. by Keel HSE Management Inc., Dartmouth, NS and RPS Energy Canada, Halifax, NS for Multi Klient Invest AS, Oslo, Norway. 17 p. + appendix.

Keel/RPS. 2015b. Amendment Report: Environmental Assessment Northeast Newfoundland Slope 2-D Seismic Survey. Rep. by Keel HSE Management Inc., Dartmouth, NS and RPS Energy Canada, Halifax, NS for Multi Klient Invest AS, Oslo, Norway. 16 p.

LGL. 2016. Amendment of MKI's Environmental Assessment of the Northeast Newfoundland Slope 2-D Seismic Programme, 2012-2017. Rep. (Reference No. FA0064) by LGL Limited, St. John's, NL for Multi Klient Invest AS, Oslo, Norway. 11 p.

PGS. 2015. Amendment to EA for Waste Management on NE Newfoundland Slope Program. Letter by PGS for the Canada-Newfoundland and Labrador Offshore Petroleum Board, St. John's, NL. 2 p.

YOLO/RPS (YOLO Environmental Inc./RPS Energy Canada). 2012. Environmental Assessment: Northeast Newfoundland Slope 2-D Seismic Survey Programme 2012-2017. Rep. by YOLO Environmental Inc., Dartmouth, NS and RPS Energy Canada, Halifax, NS for Multi Klient Invest AS, Oslo, Norway. 279 p. + appendices.