

**BOARD OF INQUIRY – TAMARIND DEVELOPMENT DRILLING APPLICATIONS:
SUMMARY OF EVIDENCE OF JUSTIN ROGERS REGARDING OIL SPILL
MODELLING**

7 November 2018

1. This is a summary of my reports and expert conferencing regarding Tamarind's oil spill modelling and the status of two issues remaining after expert conferencing.
2. The first Coffey review ("Technical Review of Oil Spill Modelling," 14 June 2018) of the Applicant's oil spill modelling reports for the Application identified nine issues of concern that I judged to be of either moderate or high severity. Subsequent evidence was provided by Dr Brian King (20 July 2018). A second Coffey review ("Review of Oil Spill Modelling Expert Evidence," 31 August 2018) confirmed that the new evidence addressed seven of those issues and reiterated two remaining issues.
3. The two remaining issues were discussed with Dr Brian King at Expert Conferencing on 18 September 2018 and summarised in a Joint Statement dated 20 September 2018, being:
 - (a) The choice of a subsurface concentration threshold for dissolved hydrocarbons (and therefore the extent of the water column is deemed affected by an oil spill) given different lower threshold levels (1 v 6ppb). During conferencing, Dr King explained the modelling conservatism and his reasoning such that I consider that the results, as presented, are robust and useful for understanding the likely extent of subsurface impacts.
 - (b) The type of model validation conducted in Tamarind's reporting. Additional information on the performance of the models was provided during Expert Conferencing. I am satisfied that the models are fit for

purpose and have been validated either worldwide, in the case of HYCOM, or through extensive albeit confidential use, with Maritime NZ.

- (c) Therefore, all the issues I raised have been, in my opinion, appropriately addressed by Dr Brian King on behalf of Tamarind.
- 4. I consider that the information provided is robust, sound and well-reasoned. For the reasons I have set out, I consider that the potential effects of an accidental oil spill have been well-described by the modelling.
- 5. No issues have arisen since conferencing that require me to respond further.