Environmental Management of Potential Impacts

Impact	Potential Consequence	Environmental Management and Control Measures
Seabed Disturbance	Seabed disturbance can occur from seabed surveys, drilling rig and vessel anchoring, cementing operations, and well drilling.	Emperor Energy has implemented controls to reduce the impact of seabed disturbance and uses survey data helps us to identify and avoid sensitive benthic features and potential underwater cultural heritage.
Underwater Sound	Underwater sound will be generated through a 2D seabed seismic survey, vertical seismic profiling, drilling rig, support vessels, ROV, and drilling operations.	Research regarding the impact of seismic noise on marine fauna has found that effects range from no effect to temporary and permanent hearing shifts, physiological changes, and behavioural avoidance. Typically, where effects have been identified, fauna have been at close range to the seismic source. To manage seismic noise impacts to fauna the following will be undertaken • Compliance with EPBC Act Policy Statement 2.1 include pre-start observations, low power and shut down zones, and low-visibility procedures. • At least one member of vessel crew trained in marine fauna observation and low power and shut down zone procedures. • Reporting of marine fauna observations.
Interaction with Marine Fauna	The well will be drilled with a jack-up drill rig with up to three support vessels. Pre-drilling seabed surveys will be undertaken using a purpose-built vessel. Interaction with marine fauna such as whales and turtles, may occur.	To avoid marine fauna vessel strikes or potential entrapment in the streamer buoy the following will be implemented: • At least one member of vessel crew trained in marine fauna observation. • Vessels will not actively approach within the caution zone of a whale or dolphin in accordance with EPBC Regulations 2000 - Part 8 Division 8.1. • Streamer tail buoy designed to avoid entrapment risk to turtles.

Vessel Interaction with Other Marine Users	The well will be drilled with a jack-up drill rig with up to three support vessels. Pre-drilling seabed surveys will be undertaken using a purpose-built vessel. Interaction with commercial and recreational vessels may occur.	To avoid displacement of other marine users, Emperor Energy will be implementing the following controls:
		• Pre-start notifications and marine notices will be issued.
		• Ongoing stakeholder consultation and notifications.
		• A 500 m Petroleum Safety Zone around the drill rig with a 2 km cautionary zone.
		• A 500 m exclusion zone around the survey vessel when undertaking seabed surveys.
		• The drill rig and vessels will have:
		  ○ Automatic Identification System (AIS) and visual and radar watch will always be maintained
		  ○ Appropriate lighting, signals, navigation, and communication in compliance with the *Navigation Act 2012* and associated Marine Orders.
		• While undertaking seabed surveys, the streamer tail buoy will be fitted with lights and radar reflectors.

Climate Change	Greenhouse gases will be emitted during project activities.	The emissions from the Judith-2 project will be minimised through ongoing monitoring and management of fuel use. The Emperor Energy reports GHG emissions annually in compliance with the National Greenhouse and Energy Reporting (NGER) Scheme to comply with GHG emissions obligations.

Accidental Hydrocarbon Release	An accidental hydrocarbon release could occur during drilling, from fuel transfers between vessels and the rig, and collision between vessels offshore	Emperor Energy works with regulators to develop management plans and safety cases to ensure the risk of an accidental hydrocarbon release is reduced to As Low As Reasonably Practicable and to be prepared for a response in the unlikely event of an accidental release by:
		• Drill and vessels (appropriate to class) will comply with MARPOL 73/78, the *Navigation Act 2012*, the Protection of the Sea (*Prevention of Pollution from Ships Act 1983*) and subsequent Marine Orders including the following:
		  ○ Waste management requirements
		  ○ Emergency drills
		  ○ Shipboard Oil Pollution Emergency Plan or Shipboard Marine Pollution Emergency Plan.
		• The Judith-2 Oil Pollution Emergency Plan will be accepted by NOPSEMA and in place, appropriate to the credible hydrocarbon spill scenario associated with activities.
		• The Judith-2 Well Operations Management Plan will be accepted by NOPSEMA in accordance with the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* requirements, which include:
		  ○ Blowout Preventer (BOP) installed during drilling operations and regularly tested.
		• Relevant persons will be notified of activities prior to commencement of activities if requested