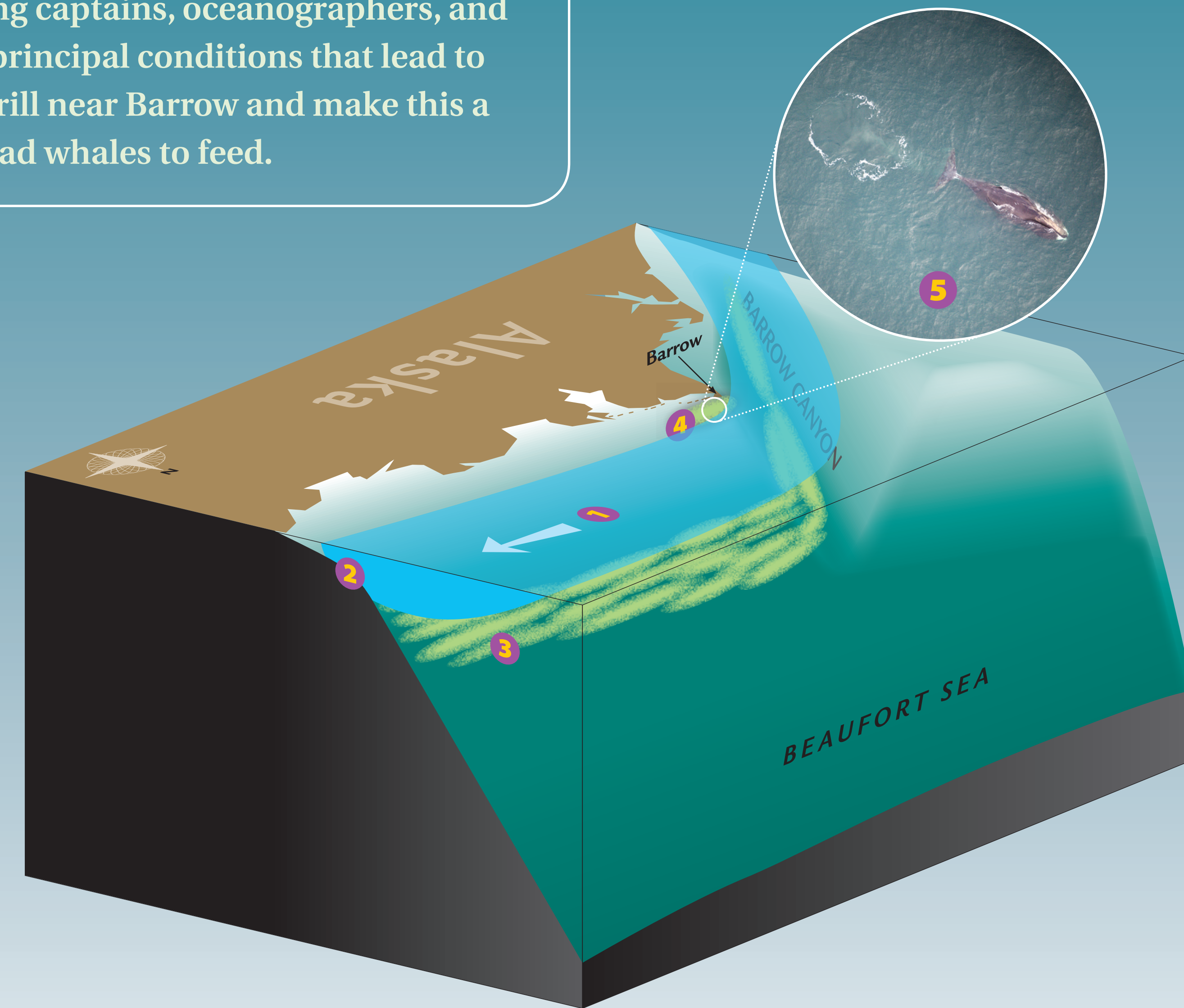
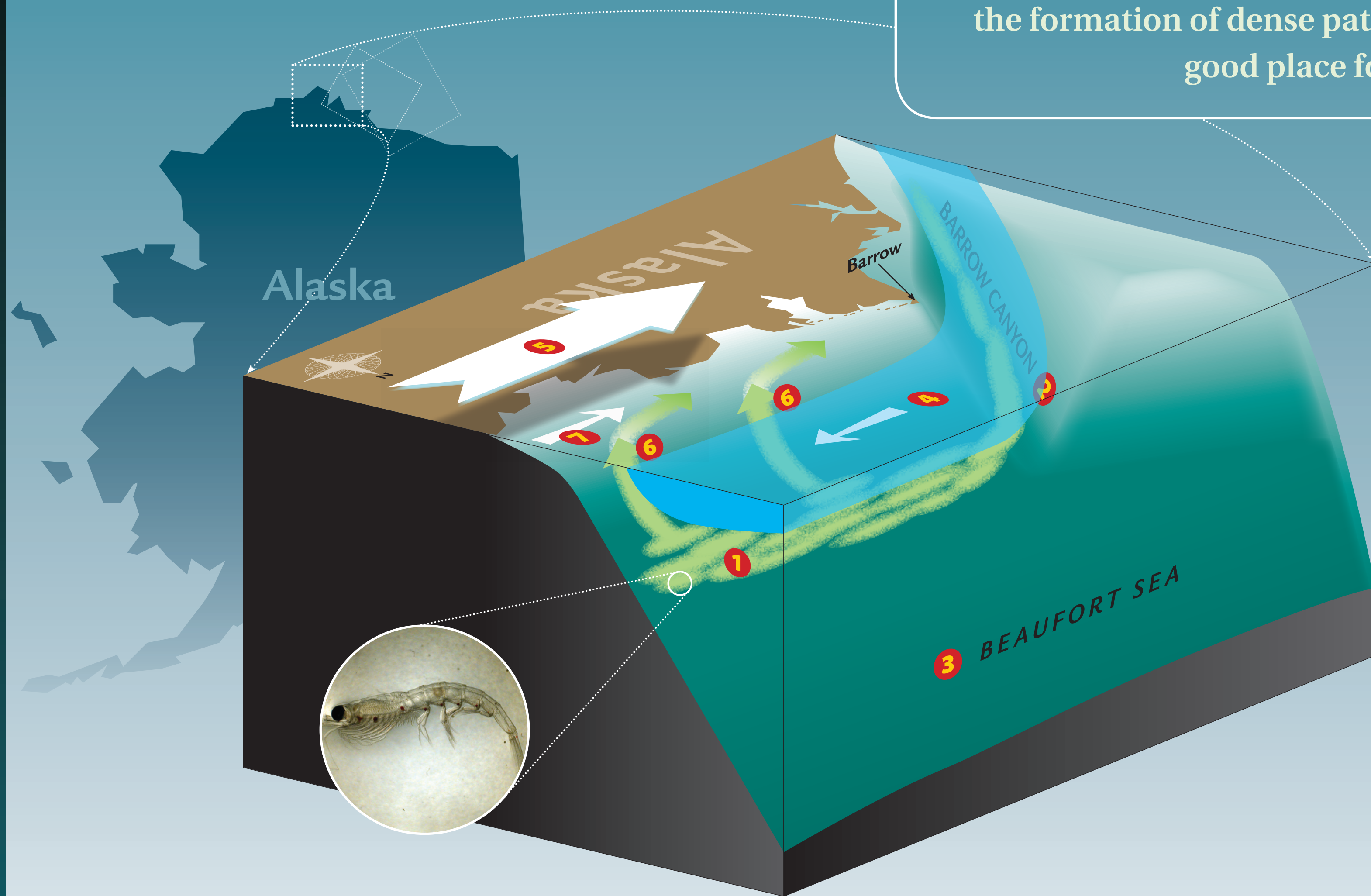


# Winds, Currents, and Krill

## The Story of the Barrow Area Bowhead Whale Feeding Hotspot

A collaborative effort between whaling captains, oceanographers, and whale biologists has identified the principal conditions that lead to the formation of dense patches of krill near Barrow and make this a good place for bowhead whales to feed.



### When East Winds Blow...

Currents carry krill **1** through Barrow Canyon **2** into the Beaufort Sea **3** beneath the relatively warm Alaskan Coastal Water **4**.

When winds blow from the east **5**, they move the Alaskan Coastal Water farther away from the coast. At the same time, upwelling currents **6** near the bottom carry the krill into shallower shelf waters.

Once krill are in shallow shelf waters, shelf currents **7** carry the krill to the west toward Barrow.

### When Winds Are Calm...

When winds become very weak or stop blowing, upwelling currents stop and the warm Alaskan Coastal Water **1** moves closer to the shore.

In this situation, the Alaskan Coastal Water extends down to the sea floor **2** and acts as a barrier to the movement of krill **3**. Krill that were carried westward by shelf currents when winds were from the east are prevented from escaping into deeper water by the Alaskan Coastal Water, so they collect in large numbers near Point Barrow **4**.

Bowhead whales feed upon these dense patches of krill during late summer and during their annual westward fall-feeding migration **5**.

