

Laboratory Key #5 - Shoreline Processes

1. waves of oscillation = offshore
waves of translation = near shore

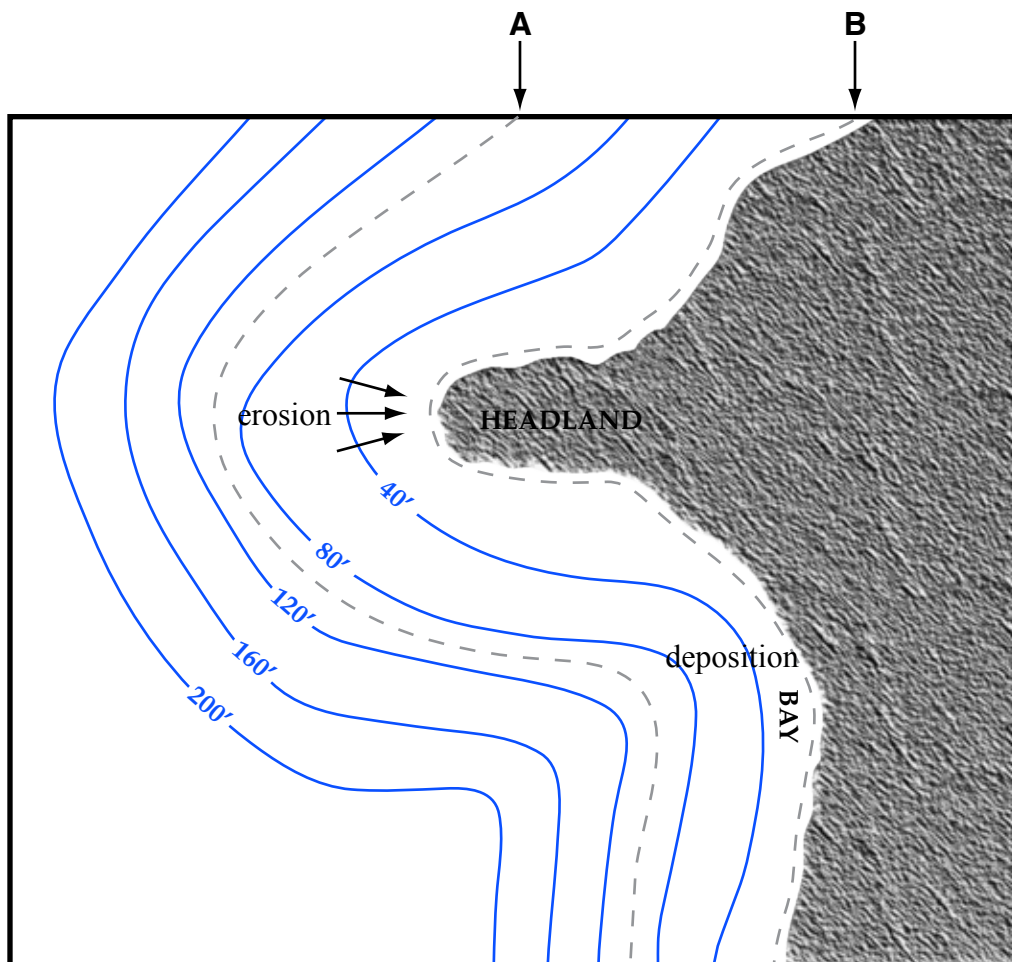
2.

	wave height	wavelength	wave velocity
waves of oscillation	shorter	greater	faster
waves of translation	taller	lower	slower

3. waves of oscillation = elliptical (symmetrical)
waves of translation = oval (asymmetrical)

4. wave base = wavelength / 2 wave break = wavelength / 20

5. 6. & 7. see figure below



A = wavebase for 200 foot wave = 100 feet
 B = wave break for 200 foot wave = 10 feet

8. next to a headland
9. no, beach drift is movement and longshore currents is the energy
10. the features are barrier island, baymouth bar, spit
11. to the West
12. the features are headland, sea stacks
13. Seastacks (erosional)
Doran Beach (depositional)
14. to the West
15. waves speed up and erode at Bodega Head on Fig. 5 because the sea stacks indicate erosion of this headland
16. Groins are built perpendicular to the shoreline and protect the side facing the longshore currents. A breakwater is a wall parallel to the shoreline and is designed to block direct wave action.
17. Depositional (beach)
Erosional (channel entrance)
18. no, only the side facing the longshore currents is protected
19. 2 high tides and 2 low tides a day
20. no because of spring and neap tides
21. $7 \text{ ft} - 3 \text{ ft} = 4 \text{ feet}$
22. $8 \text{ ft} - 1 \text{ ft} = 7 \text{ feet}$
23. Nov 24th saw a full moon (1 week ahead of the 1st quarter)