

# OIL TRAJECTORY

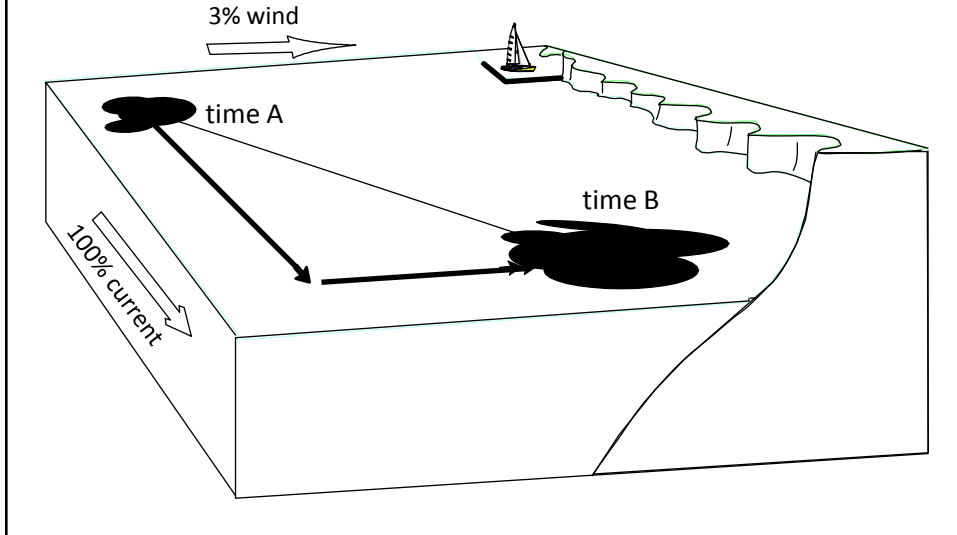
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## OIL TRAJECTORY

### Guidelines:

- For prediction of tracking, note that oil travels on the sea surface at approximately 100% of the current and 3% of the wind velocities.
- **Wind** is described in terms of the direction from which it blows. Thus a north wind blows from the north.
- **Currents** are described in terms of the direction they flow to. Thus a northerly current flows to the north.
- On a marine chart 1 minute of latitude (i.e. the north-south position) is a distance of 1 nautical mile (1 knot = 1 nautical mile[nm] per hour)

# OIL MOVEMENT ON SEA SURFACE



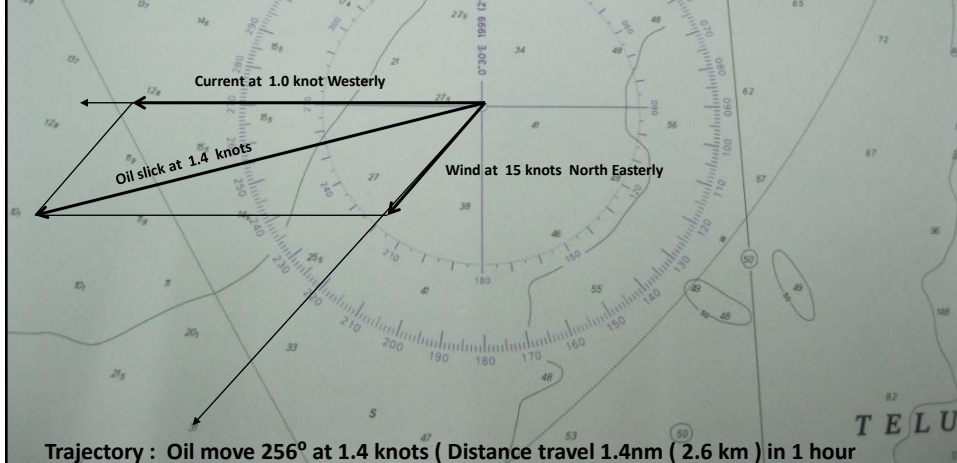
## Oil Trajectory

1. Find the coordinate ( slick location )

2. Wind and current data

eg: *The wind north east ( 45° ) @ 15 knots and forecast to continue.  
There is westerly ( 270° ) residual current of 1.0 knot in this area.*

3. Predict the movement of the spilled oil



## OIL SLICK TRAJECTORY - EXAMPLE

1. The position of the oil slick at 1500 hrs 19 June 2012 is  
Lat 05 32' min N Long 100 12' min E
2. Wind & Current data  
*The wind is north-easterly @ 20 knot & steady*  
*Current is setting at 140 deg 1.0 knot in this area*
3. Predict the movement of the spilled oil and what time will it hit the shore and where ( longitude & latitude )?

