



# Drift Diving *and*

# DECOMPRESSION

By CURTBOWEN

Currents can be caused by many factors including wind, gravity, tides, the rotation of the Earth, and the orbit of the moon. Some of the most exciting and challenging technical dives are in locations where currents exist. Offshore deep wrecks, channels, bay inlets, and global currents like the gulfstream, offer experienced divers a great dive and the opportunity to explore rare dive sites, however the ascent becomes a critical component of the dive plan. Any one who has ever tried to ascend on an anchor line in a stiff current during a decompression dive is acutely aware of how tiring and muscle-numbing the experience can be. Additionally, if you get blown off the anchor line you may not be able to swim back to it if the current is stronger than two or three knots. Drifting with the current while ascending from a decompression dive is a much more relaxing way to tick off the hours, but it adds complexity to the logistics and planning of the dive.

Special gear is required on drift

decompression dives including float balls, rope or line, lift bags, reels, jon lines, and additional clips to name just a few items. The specific plan for a drift decompression dive depends on the characteristics of the dive site itself. No rules or guidelines can apply to all dive sites. Divers must first analyze the site, develop their specific drift decompression plan, identify everything that might go wrong, and make a contingency plan for it.

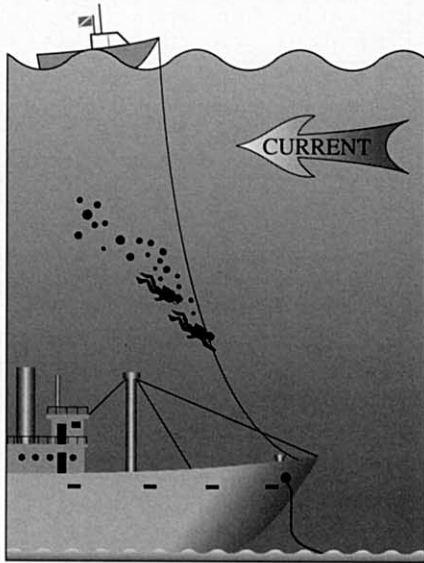
When analyzing the dive site remember to consider such things as the speed of the current, the chance of it changing direction, the seas, the possibility of drifting through shipping channels or into shallow water, hazardous marine life, and the experience level of the divers.

A drift decompression plan should be detailed, and all divers should understand it thoroughly. It should provide for adequate gas supplies plus a reserve for each mixture being used. Every diver should carry their own gear and gas supplies due to the possibility of becoming separated.

An exhaustive "what if" session with the dive team is helpful in identifying everything that can go wrong. For each incident scenario, a contingency plan should be developed and all divers should be capable of reacting appropriately. Remember to consider things like equipment failure, separated divers, boat traffic, entanglements, knotted lines, and mechanical difficulties on the boat that prevent the captain from following the float balls.

On the next few pages some helpful hints and tricks are illustrated that we at DeepTech have learned and used successfully over the years. Ours are not the only methods, indeed for each dive site there exists several possibilities for a drift decompression plan. The point is that drift decompression diving is unique in its planning and execution. There is never just one way to do it. When developing your plan design something that will work well for you and your team under the specific conditions of the day. Ask others in your area for their suggestions.

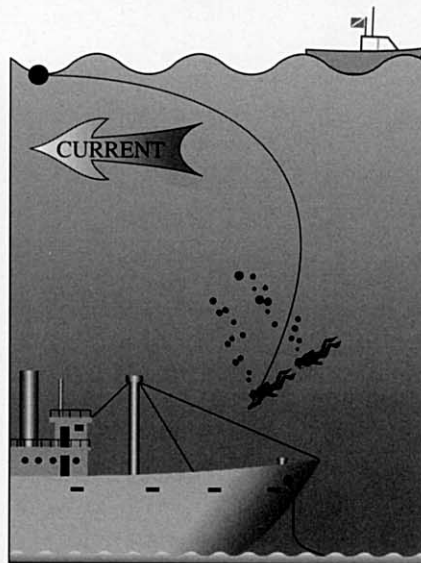
## The Descent – 3 Scenarios



**Standard Descent**

Boat anchors into the wreck.

**Current:** Slow enough to allow the divers to pull themselves down the anchor line.

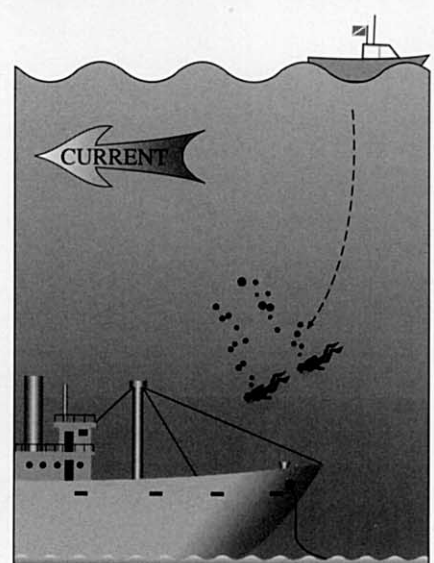


**Buoy Line Descent**

Boat drops divers upstream from the site.

**Current:** Slow to moderate

**Divers:** Descend quickly holding the end of the buoy line. Upon reaching the wreck the divers clip the line to the wreck.



**Free Descent**

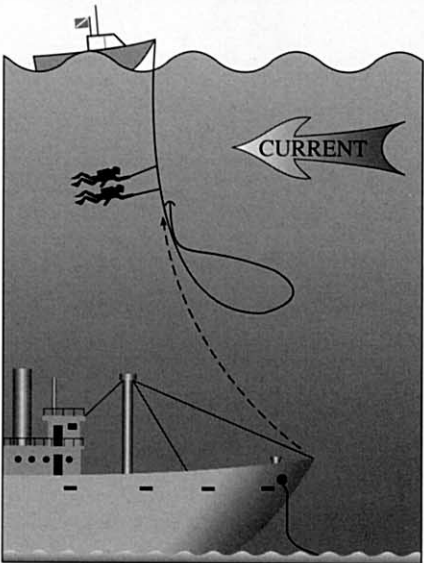
Boat drops divers upstream from the site.

**Current:** Slow to High

**Divers:** Descend quickly. Upon reaching the wreck the divers tuck behind out of the current.

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## The Ascent – 3 Scenarios

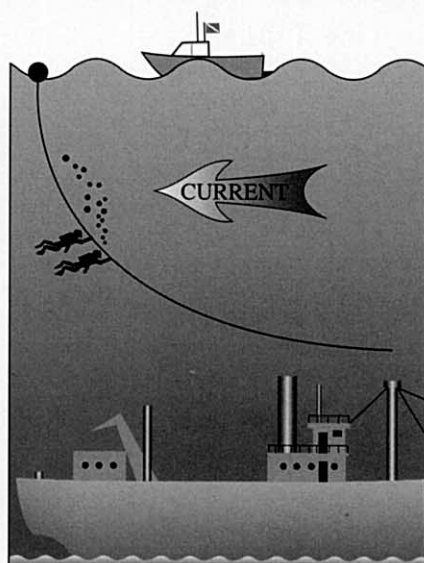


**Standard Drift Ascent**

Anchor is pulled from the wreck and brought partially up the line and clipped in.

**Divers:** Ascend up the line to the first stop, deploy jon lines if needed.

**Caution:** The boat may be affected by winds, high seas, and shipping traffic.

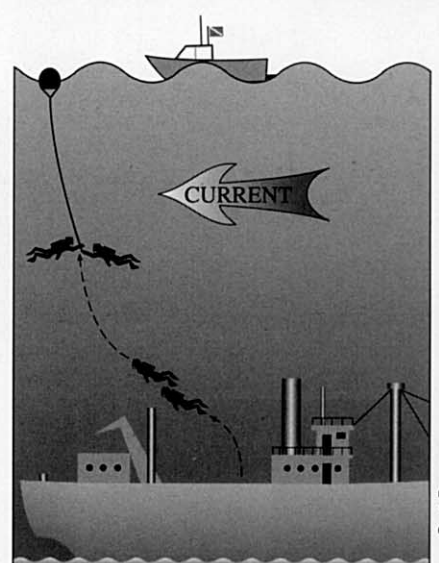


**Float Line Ascent**

Line is pulled from the wreck and brought partially up the line and either clipped in or allowed to drift freely up off the bottom.

**Divers:** Ascend up the line to the first stop, deploy jon lines if needed.

**Boat:** The captain follows the buoy.



**Free Ascent**

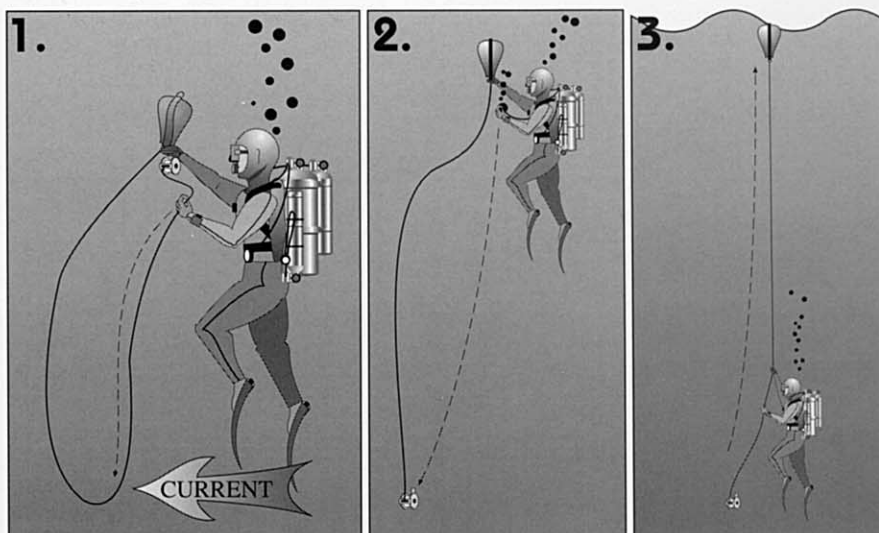
No lines are used

**Divers:** Ascend in open water to the first required decompression stop and deploy lift bags.

**Boat:** The captain is required to monitor his position over the wreck keeping a constant watch for deployed lift bags.

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## Deploying the Lift Bag



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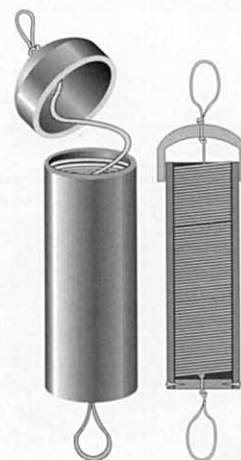
1. Upon ascending to the first decompression stop the diver prepares the lift bag and reel. Stopping 10 feet below the first required stop the diver holds the empty lift bag and reel in one hand. The diver ties the reel line to the lift bag and slowly belays off enough line for the bag to reach the surface.

2. As the line is belayed off, it is allowed to sink slowly preventing entanglement. Once enough line has been belayed the diver tightens down the lock bolt on the reel and drops the reel, maintaining a hold on the lift bag.

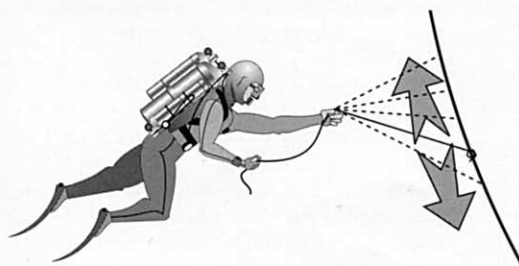
3. Once the reel has tightened the line with it's weight the diver inspects the line to make sure he is not entangled, he then pumps air into the bag and lets it shoot to the surface. The line is OKed through his/her other hand and the reel is retrieved after the bag has reached the surface.

## Line Tubes

An easy alternative to a reel, a lift bag tub can be made from a piece of 3" or smaller diameter PVC tube and two end caps. A hole is drilled through the bottoms of the caps. The line is fed through each end and a knot is tied on the out side. Several feet of line can be neatly coiled into the tub prior to the days diving. This type of deployment is very fast, reliable, and easy to carry. A rope bag can also be used in the same manner.



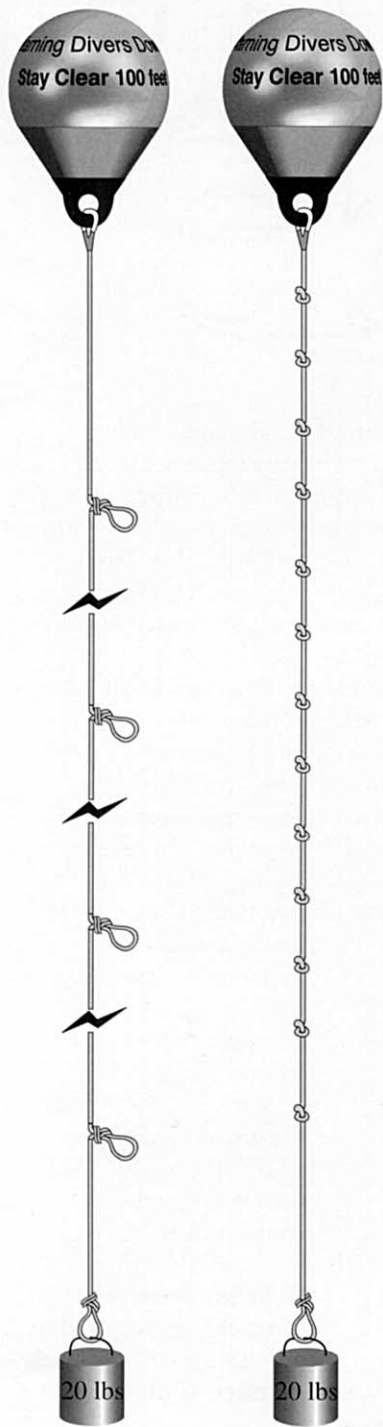
## The Jon Line



A jon line can be an essential piece of equipment for decompression in rough sea's. Normally made from a 6 to 10 foot piece of 3/8 inch rope it helps the diver stay at one depth while the line fluctuates up and down with the boat or float. It is also used to separate divers decompressing on the same line and same depth preventing over-crowding.



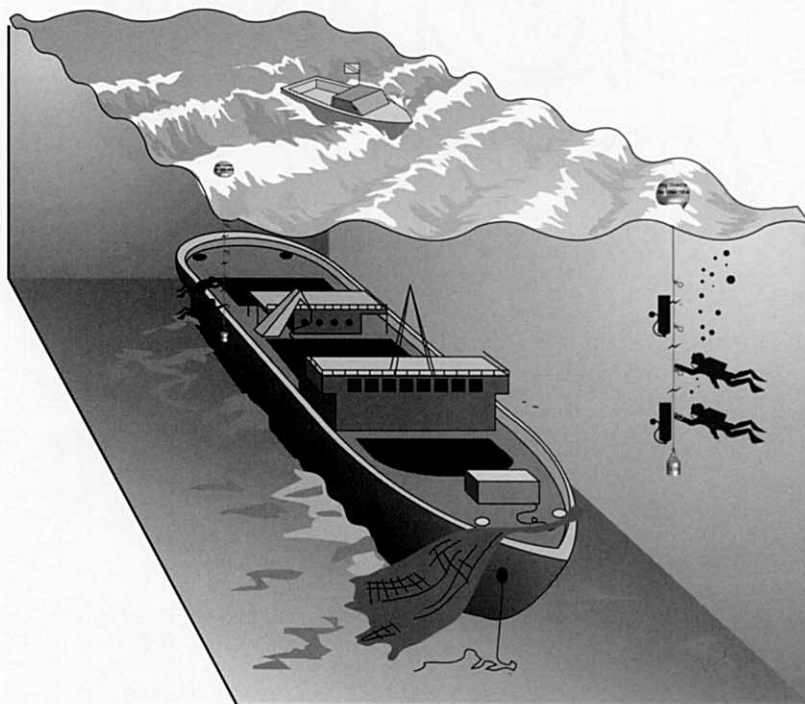
## Float Lines



The above illustrates two types of float down lines. The left drop line has a loop tied at 5 to 10 foot intervals. The float down line on the right, a 3/8 inch line has knots tied every 2 feet. These loops or knots are used to hang stage tanks, clip surface support regs, etc... The down line should be weighted with 20 pounds to prevent the diver from pulling the line upwards if he or the cylinders become buoyant.

## Down Lines

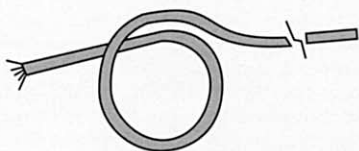
With the increased chance of divers becoming separated during the dive, the boat can carry preset down lines and added tanks for decompression.



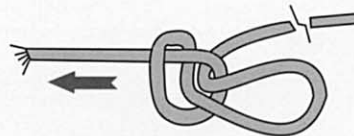
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## Rope Tricks

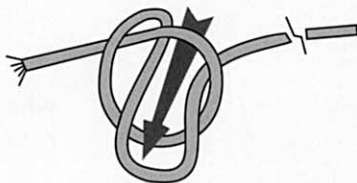
A little rope trick can be used to help prevent a line from becoming a big ball of knots. This trick can shorten the line by two-thirds and allow simple deployment when needed. After pre-tying, the line can be balled up and placed into a pocket. When needed it can be removed and unraveled with ease by just pulling on one end.



1. Make a loop on one end of the rope



4. Tighten the short end of the line



2. Pull the running end of the rope through the loop.



5. Pull the running end of the line through the new loop creating another loop, tighten old loop and repeat until all the line has been tied. When completed, the line can be untied by simply pulling on the end of the line you finished with.



3. Pull the loop snug