

have occurred. Others can learn from this case that common routine procedures may protect from unrecognised dangers as well as expected ones. In Case 2 there should have been a recognition that a “free descent” into deep water, particularly in an area known to be dangerous by reason of currents and poor visibility, was a procedure not to be undertaken without prior consideration. Possibly the divers had expected to descend a line but had not liked to expostulate when they were told that the boat would not be anchoring. However, the majority of those diving from this boat had no difficulty in finding the wreck, having followed the instructions to descend immediately. A line-holding descent should be treated as being mandatory whenever the “target” of sea bed or wreck is not plainly visible from the surface.

The difference in dive profiles which led to these fatalities in contrast to the successful dives made by their fellow club members was the unplanned depth, lack of visibility, and arriving at an unplanned destination whose location was uncertain in relation to the expected goal. It may be considered fortunate, in the circumstances, that the buddies survived.

A NEW RULE FOR AN OLD TABLE THE BS-AC CHANGES THE RULES FOR DIVES TO 9 M OR LESS

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The BS-AC has recently (March 1988) altered the procedure to be used when calculating the decompression required following a sequence of more than two dives, where the last dive is to a depth of 9 m or shallower.

Previously for a series of three dives where the third dive was 9 m or shallower, the RNPL/BS-AC “concession” (which allows some credit for surface intervals of two hours or more) could be used for the second dive. No further calculations were required for the third dive as it was 9 m or shallower. For a series of four dives where the third dive was deeper than 9 m and the fourth dive was 9 m or shallower, the “Multiple Dive Rule” (adding together all of the bottom times and decompressing for the deepest depth) was applied to the first three dives, and the fourth dive, being 9 m or shallower, did not require any decompression.

However, while researching the forthcoming new BS-AC tables, it was discovered that these procedures were incorrect. **Third (or subsequent) dives of 9 m or shallower must be taken into account**, which means that the “Multiple Dive Rule” should be used.

This will often make a third dive extremely difficult to plan within a day’s diving, and can also influence the next day’s diving, since the first dive of the next day may still be the third dive undertaken within a 24 hour sequence.

Table A can be used to plan a third dive to a maximum depth of 9 m without the need for decompression stops. It also indicates the surface interval which must follow that third dive in order to re-enter the RNPL/BS-AC table without penalty.

Using the new rule for a third dive to 9m or shallower

1. By referring to the central section of Table A, plan the surface interval preceeding the third dive. The choices are 0-30 minutes, 30-60 minutes, 60-90 minutes, 90 min - 4 hr and more than 4 hours.
2. Read down the column corresponding to the surface interval chosen to determine the maximum no-stop time for the third dive.
3. The final column shows the surface interval required after the third (9 m or shallower) dive so that the RNPL/BS-AC table can be re-entered without a time penalty.

EXAMPLE 1

You are planning the following sequence of dives:

The first is to 20 m for a bottom time of 30 minutes, followed three hours later by an 18 m no-stop dive. If you then wish to dive to 8 m two hours later, and begin a new day’s diving 13 hours after surfacing from the 8 m dive:

- (i) What is the maximum allowable bottom time for the second dive?
- (ii) What is the maximum allowable no-stop time for the third dive?

Since this is a sequence of more than two dives the “Multiple Dive Rule” must be used for the first two dives, but the new additional 9 m table can be consulted for the third dive.

Dive 1 requires no stop and Dive 2 can have a maximum bottom time of $(46-30) = 16$ minutes.

To find the allowable bottom time for Dive 3, enter Table A from the top at the column corresponding to a

TABLE A

	Surface Interval following 2nd dive					Surface Interval after 3rd dive
	minutes				hours	
	0	30	60	90	4	
No-stop time in minutes for a third dive to a maximum depth of 9 m	-	8	28	115	187	15 hours
	-	-	7	78	147	14 hours
	-	-	-	41	86	13 hours
	-	-	-	-	26	12 hours

surface interval of 2 hours following the second dive. This is the 90 min - 4 hr column. Move down this column to find the time allowed for the 8 m dive. If the dive was to be followed by a 15 hour surface interval, a bottom time of 115 minutes could be chosen. However, since the surface interval following the dive will only be 13 hours, a maximum bottom time of 41 minutes is allowed.

EXAMPLE 2

You are planning to do three dives. The first is to 24 m for a bottom time of 25 minutes, the second, after a surface interval of 5 hours, is to be a no-stop dive to 16 m and will begin at 1645. You then wish to do a third dive to 6 m, and then be able to dive again at 0900 the next morning, without a time penalty.

- (i) What surface interval is required after the second dive?
- (ii) What is the maximum allowable no-stop bottom time for the third dive?

Again this is a sequence of more than two dives so the "Multiple Dive Rule" must be used for the first two dives, and Table A can be consulted for the third. No stop is required for the first dive. The maximum no-stop bottom time for the second dive is $(32-25) = 7$ minutes. You should surface from the second dive at about 1653.

If you plan to dive again after a surface interval of say 80 minutes, you would be able to dive for up to 28 minutes but then must wait 15 hours before diving again without penalty. This would mean that you could not dive without penalty until about 0941.

If instead you dived to 6 m for a maximum of 7 minutes, you could dive again 14 hours later, without penalty, which would allow you to dive at 0900 the next morning. Alternatively, if you allow a surface interval of 91 minutes before doing the third dive, you could dive to 6m for 41 minutes and then dive without penalty at 0900, as you would end up having a surface interval of between 13 and 14 hours.

This new rule seems to make an already complicated system even more complicated. However there is some light at the end of the tunnel. The good news is that the new BS-AC tables will definitely be out this year. They will require no calculations at all and promise to be a far simpler and more practical table.

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ARTICLES OF INTEREST FROM OTHER JOURNALS

THE BRITISH SUB-AQUA CLUB INTRODUCES NEW TABLES

CHANGING THE WAY WE DIVE

Mike Busuttilli, Chairman of BS-AC National Diving Committee's Decompression Working Group introduces the BS-AC '88 Tables.

It is now 12 years since the RNPL/BS-AC table was adopted by the BS-AC. In this time there have been many changes in the sports diving scene. Equipment developed has allowed us to stay underwater longer and remain warmer, and we have become more adventurous in our search for diving sites. It has also become increasingly clear that the RNPL/BS-AC table is insufficiently flexible for the patterns of diving required by divers today.