SubseaPartner

SURFACE-ORIENTED NITROX DIVING: ASSESSMENT OF OXYGEN TOXICITY, DAYS OFF DIVING AND NON-STANDARDIZED NITROX MIXES

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1 EXECUTIVE SUMMARY

SubseaPartner (SPAS) executes surface-oriented Nitrox diving operations normally scheduled with Nitrox 36 or Nitrox 40 with maximum pO_2=1.4 bar. Past projects have revealed challenges for such diving which have been resolved through risk assessments and procedural changes. The objective of this document is to summarize the topics and present recommendation for future diving.

Nitrox diving is conventionally planned with standardized mixes of 32, 36 or 40% Oxygen (FO_2) in balance Nitrogen. Tables are published online allowing calculation of Equivalent Air Depth (EAD), pO_2 and secondary measures such as recommended air table depth and maximum operational depth (MOD). This review concludes that the use of Nitrox tables for non-standardized mixtures is equally safe as diving with standardized mixtures. The dive should be planned according to the FO_2 presented on the downstream oxygen monitor. Decompression planning should round FO_2 to nearest integer percentage based on conventional rules. This integer FO_2 percentage should be used to decide EAD and MOD. The report details how allowable no-decompression bottom time and MOD should be adjusted to accommodate FO_2 measurement inaccuracies or FO_2 changes during the dive. The downstream oxygen monitor should voice high and low alarm if FO_2 deviates more than 1.5% from pre-dive value and EAD as well as MOD should be re-calculated in such cases.

This review concludes that probability for acute oxygen toxicity ("oxygen hit") is minimal if $pO_2 \leq 1.5$ bar.

The latest edition of the Norwegian Diving and Treatment Tables recommends two days off following five or seven days of Nitrox diving dependent on the hyperoxic burden. NORSOK U-100:2023 advice for one day off diving following three consecutive days of diving. This document holds a risk assessment evaluating the consequence of running 3/1, 5/2 or 7/2 (days of diving/days off diving) shift rotations for no-decompression diving with pO_2=1.5 bar. From a medical perspective it is fully acceptable to run either rota when diving no-decompression nitrox dives with $FO_2 \leq 40\%$. A 5/2 or 7/2 rota should be adhered to if planning maximum allowed bottom times for no-decompression nitrox dives with $FO_2 > 40\%$ and table depth 9 or 12 msw.

2 INTRODUCTION

2.1 BACKGROUND

SubseaPartner (SPAS) has for many years used oxygen-enriched nitrogen-oxygen breathing gas mixtures (EAN or nitrox) in surface-oriented diving. Such diving is usually planned with standardized mixtures of 32, 36 or 40% oxygen in balance nitrogen (Nitrox 32, Nitrox 36 and Nitrox 40). The principle of "Equivalent Air Depth" (EAD) is used to calculate the table depth relevant for a given diving depth. With EAN the EAD will be shallower than the actual diving depth. Nitrox diving will thus allow longer no-decompression bottom times or shorter decompression times compared to conventional air diving. Increasing the partial pressure of oxygen (pO_2) in the breathing mixture introduces the potential risk of acute and chronic oxygen toxicity and occupational exposure limits must be respected to avoid these side effects. For this reason, the oxygen fraction (FO_2) in the diver's breathing gas should be monitored closely. Experience has shown that gas manufacturers provide gas with an oxygen fraction deviating +/-1% from that being ordered. Such deviation will impact the EAD, pO_2 and maximum allowable (operational) depth (MOD) compared to that being planned for the standardized gas mixtures. These questions were addressed following three incidents of decompression sickness (DCS) on the Goliat field 2024. Thorough investigation did not disclose any relationship to nitrox diving or inappropriate gas mixtures. However, the incident sparked a discussion and further detailing of nitrox diving procedures to handle aspects related to oxygen toxicity and DCS probability. These factors have been handled in multiple project-specific internal and external memos, presentations, procedures and reports such as "Assessment of Oxygen Toxicity and Days Off Diving – Goliat 2025" Rev 1, dated 5.2.2025. However, they have not yet been summarized in a comprehensive report. A NUI-report by Segadal et al[1] stated that *If analyzed 0_2-% deviates from that ordered or there are fluctuations, the lowest O_2-% should be used for calculations* (author's translation). The NUI report does not detail the operational implementation of this advice.

2.2 REGULATIONS AND STANDARDS

The main guidance documents relevant for this discussion are NORSOK U-100:2023[2] and the Norwegian Diving and Treatment Tables[3].
NORSOK-U-100:2023[2] states

- *Clause 9.1.2.3 Shift arrangement. For surface orientated and TUP diving, the diving schedule should be arranged so that the divers have one day in every four, free from dives deeper than 9 msw, or the equivalent air depth (EAD). This arrangement shall continue till end of next shift. NOTE This arrangement is not justified to reduce risk for decompression related problems.*
- *Clause 11.1 Threshold values for pO_2 and O_2 exposure given in the NDTT shall be adhered to.*
- *Clause 11.4.1 Diving procedures: Diving procedures in accordance with NDTT shall be used, however, the restrictions given in Table 4 for maximum bottom time exposure limits shall be adhered to.*

The Norwegian Diving and Treatment Tables (NDTT) [3] states:

- Section "Oxygen toxicity"
  - *Serial 9: The Hyperoxic Exposure Should Not Exceed ESOT=660 and if ESOT exceeds 500 the diver should have two succeeding days without diving. For five days of diving followed by two days at surface ESOT=500 is allowed daily. A maximum of seven successive days of diving followed by two days off diving are allowed if the daily exposure doesn't exceed 450. Air in-water decompression dives may take place during the days "off diving" due to the minimal hyperoxic load during such dives.*
  - *Serial 12 Repeated dives: ....The surface intervals listed above are conservative to ensure protection from pulmonary oxygen toxicity. It may in some cases be justified to shorten these surface intervals, but a diving physician should be consulted if this is needed.*
- Section Nitrox Diving
  - *Serial 5. Safe oxygen limits......During the bottom phase of a dive, the pO_2 shall not exceed 1.5 bar, but it may be increased to 1.6 bar during in-water decompression.*

2.3 OBJECTIVE

The scope of this work was to identify factors influencing risk of oxygen toxicity and DCS probability in nitrox diving. The specific objects were to identify requirements for days off diving after multiday diving and pO_2 threshold to limit probability of acute oxygen toxicity. The third objective was to detail the operational management of FO_2 deviating from that being planned for. The report has been elaborated to serve as project-independent risk analysis.

3 RISK ASSESSMENT

3.1 INTRODUCTION

Nitrox diving based on the EAD principle relies on the expectation that decompression according to the EAD would give similar DCS probability as air diving. Breathing hyperoxic gas may cause acute and chronic oxygen toxicity and occupational exposure limits should be respected to limit such toxicity. There is a requirement to adhere to recognized decompression tables. SubseaPartner uses the latest edition of the Norwegian Diving and Treatment Tables[3]. Though such diving is planned with the standardized Nitrox 32, 36 or 40 mixtures, experience has shown that oxygen fraction (FO_2) on delivery may exceed or subseed this nominal value. This calls for use of Equivalent Air Depth Tables not published in the printed version of the NDTT.

3.2 USING NON-STANDARDIZED NITROX MIXTURES

The NDTT[3] states *Ideally having many gas mixes available could minimize the decompression obligation for any profile. However, logistical considerations make it more prudent to use a set of standard mixes, thereby limiting the risk of confusion and error.* The recommendation for standardized mixtures is thus based on logistical and safety concern, not DCS probability. The safety challenge of non-standardized gas mixtures is related to the possibility for selecting incorrect EAD table and/or exposing the diver to a higher pO_2 than advisable. The first author of the NDTT was requested by "Høgskulen Vestlandet, Dykkerutdanningen" to provide EAD tables for non-standardized nitrox mixtures around 2015 (Jan Risberg, personal communication. SubseaPartner raised a similar request in 2019 and EAD tables for non-standardized nitrox mixtures have since been published electronically on the NDTT website (www.dykketabeller.no). Risks and mitigating actions to handle use of non-standardized gas mixtures and FO_2 variations will be discussed further below.

3.3 BREATHING GAS FO_2 - TOLERANCE LIMITS AND IMPACT ON EAD TABLE SELECTION

The Norwegian version of the NDTT stated in the "Utvidet og revidert utgave" 1991 that FO_2 tolerance in nitrox of divers' breathing gas should be +/- 1%. This was revised in the third edition (2006) stating that *The tolerance is +/- 0.5% for the oxygen and nitrogen in a nitrox mix.* The motivation for this change was the claim from the lead author at the time (Arne-Johan Arntzen) that nitrox mixtures were delivered with such tolerance from the gas manufacturers (Jan Risberg, personal communication 2025). Later experience has shown that this is not correct, the FO_2 accuracy of nitrox delivered from the gas manufacturer is +/- 1% of that ordered. Such a tolerance is compliant witn NS-EN-12021[4]. Though edition 4-6 of the NDTT retained the +/- 0.5% tolerance limit, this has not been challenged in the many public reviews of these revisions.
A 1% *increase* of FO_2 in the breathing gas concentration would increase pO_2 by 0.04-0.05 bar dependent on water depth. A 1% *decrease* in FO_2 would typically increase EAD with 0.5-0.6 msw dependent on diving depth. Such a change in EAD would have an ignorable effect on DCS risk since the uncertainty for DCS estimates (P_{DCS}) is many orders larger. To illustrate this: A dive to 37 msw for 15 min with Nitrox 32 (EAD 30.5 msw) has a P_{DCS}=0.93%. If FO_2 of the nitrox mixture erroneously was reduced to Nitrox 31 (EAD=31.1 msw) the same dive would have a P_{DCS}=0.96%). This difference is many orders less than the 95% confidence interval for P_{DCS} estimation (approximately 0.35%) (Luba Matity, 2025, personal communication).
Nevertheless, to implement a conservative interpretation of the NDTT and accommodate unintended minor FO_2 variations, I advise for a shortening of allowable no-decompression time. Shortening of no-decompression time could either be stipulated as a fixed time (e.g. 5 or 10 min) or selecting one or two shorter tabulated bottom times as printed in the NDDT. The NDTT has consistently implemented the selection of a shorter tabulated bottom time to cater for dive- or individual-specific risk factors. For this reason, the same principle is implemented to handle FO_2 variations in nitrox diving. Further details are presented in chapter 4.3.

3.4 DCS PROBABILITY

A recent review[5] concluded that DCS probability is similar comparing air and nitrox diving. I refer to the review for details. From this perspective it is equally safe to dive with nitrox compliant with EAD principle as air. The motivation for use of standardized Nitrox mixtures is logistical and safety aspects – not DCS probability.

3.5 ACUTE OXYGEN TOXICITY AND ALLOWABLE MAXIMUM PO_2

High pO_2 may expose the diver for acute oxygen toxicity. Acute oxygen toxicity affects the central nervous system and may cause loss of consciousness, drowning and potential death. The NDTT calls for a maximum pO_2 of 1.5 bar while IMCA guidance[6] advice for pO_2 not to exceed 1.4 bar. To comply with IMCA guidance SubseaPartner has internally establised the pO_2=1.4 bar limit. The 1.5 bar NDTT threshold value is based on the thorough review by Shykoff[7] reporting CNS oxygen toxicity in 1 106 experimental dives since 1970. No definite cases were reported for pO_2 ranging 1.3-1.7 atm and <1% dive-stopping incidents were reported for pO_2<= 1.4 atm. To the best of my knowledge, no oxygen seizure has been reported in Norwegian commercial nitrox diving operations. For this reason, a max pO_2=1.5 bar is considered safe for diving. While a SubseaPartner's self-imposed additional limitation will further reduce likelihood of acute oxygen toxicity it is not considered necessary based on available data.

3.6 PULMONARY OXYGEN TOXICITY (POT)

3.6.1 Background

Oxygen is known to cause POT. Exposure monitoring was previously done with the UPTD or OTU metric. A series of manuscripts have demonstrated that UPTD was an inaccurate measure of POT[8], that the exposure measure ESOT would more accurately and with similar ease allow POT calculation[9] and suggested new threshold limits[10]. The Diving Medical Advisory Committee (DMAC) has published Guidance Note DMAC 35[11] providing similar guidance. NDTT and DMAC35 advice two days off diving, or air diving only, following five consecutive days with daily exposure <=500 ESOT or following seven consecutive days with daily exposure <=450 ESOT.

3.6.2 The reason for limiting oxygen exposure

Prolonged oxygen exposure may reduce pulmonary function and cause chest discomfort and cough. Details of POT relevant for surface-oriented diving can be reviewed in a recent study[10] and only a summary will be provided here. The individual susceptibility for POT is highly variable. Symptoms of POT may exist without change in pulmonary function and vice versa. Symptoms of POT may present in the days following a hyperoxic exposure. The guidance for exposure limits (ESOT exposure limits) has been issued based on a worst-case scenario of maximum consecutive multiday diving to maximum allowable pO_2. There is sufficient data to support the validity of the five- and seven-days threshold limits of 450-500 ESOT, but assessment of lower exposure and different exposure patterns (e.g. 3+1) must be individually risk assessed. The allowance for risk assessment of other exposure patterns and exposure limits is detailed in NDTT[3] as well as DMAC 35[11].

3.6.3 POT risk assessment

With reference to section 2 in this chapter, the POT risk assessment has been made for:

- EADs of 9, 12 and 15 msw
- pO_2=1.4 bar with allowance for unplanned (and subject to management of change) a maximum of pO_2=1.5 bar

- Bottom time initially restricted to the maximum allowable for a no-decompression dive according to the NDTT[3]. The allowed bottom time will be calculated based on the Equivalent Air Depth. As explained in sections 3.3 and 4.3, the bottom time will be further shortened by at least one step to that printed in the tables.
- A shift rotation (days of nitrox diving/days of surface stay or air diving only) of either 3/1, 5/2 or 7/2)

Table 1 Pulmonary oxygen toxicity expressed as ESOT and expected decrement in Vital Capacity (VC) following a single "no-decompression" nitrox dive with maximum pO_2=1.5 bar to table depths ranging 9-15 msw adhering to NDTT[3]. Second column lists maximum allowed bottom time for a dive not mandating an in-water staged decompression stop (i.e. a "no-decompression dive"). Third column lists the one-step shorter bottom time as presented in the NDTT. BT: Bottom time.

EAD table depth (msw)	Allowable max no-deco BT (min)	One-step-shorter no-deco BT (min)	ESOT for one-step shorter BT (min)	Reduction in VC (%)
15	90	80	202	<0.1
12	160	150	380	0.3
9	240	225	569	0.7

As shown in Table 1, the maximum POT dose for any single dive to a table depth of 15 msw (or deeper) is 202 ESOT. This dose is expected to cause <0.1 % reduction in vital capacity (VC)[9] which should be compared to the approximate 3 % coefficient of variation in this variable. For all practical purposes this means that it would be impossible to measure any effect on pulmonary function following even multiday exposure to pO_2=1.5 bar for 80 min. The model would assume that no residual effect (i.e. ESOT=0) would exist after 18 h post dive. Even a short 12 h surface interval will cause a residue of only 4 ESOT which would be biologically ignorable. A day off diving (or air diving only) would further "zero" the expected POT effect of three days of nitrox diving.
The concern for POT is relevant for *multiday* exposure to maximum allowed bottom times for table depth 12 msw and in particular 9 msw. Multiday exposure to pO_2=1.5 bar for 150 min (table depth 12 msw) would probably be tolerable for more than five days, but it is not sufficient data to conclude on the expected POT development if hyperoxic exposure is extended beyond this. A multiday exposure to pO_2=1.5 bar for 225 min (table depth 9 msw) would be expected to cause some POT.

Table 2 Allowable bottom time and required multiday break for nitrox dives with pO_2=1.4 and 1.5 bar. BT> Bottom time

ESOT threshold	Diving pattern (days diving/days off)	Allowable BT (min) with pO_2=1.4 bar	Allowable BT (min) with pO_2=1.5 bar
660	1/2	305	260
500	5/2	231	197
450	7/2	208	177

Table 2 shows allowable bottom time for nitrox dives with pO_2=1.4 and 1.5 bar. For nitrox dives these limits can only be exceeded for EAD table depth 9 msw and shallower. For table depth 12 msw and deeper there is no reason to reduce bottom time for no-decompression dives based on risk for POT.
A diver exposed to pO2=1.5 bar for EAD depths of 12 and 9 msw may be exposed to a significant hyperoxic burden (Table 1 and Table 2). However, to reach a pO_2 of 1.5 bar at EADs of 12 and 9 msw, Nitrox 46 and Nitrox 50 respectively are required. EANs with FO_2 exceeding 40% is uncommon in commercial diving. For this reason, I have prepared a scenario for Nitrox 40 dives with maximum allowed bottom-times for EADs ranging 9-21 msw (Table 3). As can be seen, diving with Nitrox 40 will limit VC decrement to 0.1 %, in practice not a clinically relevant effect.

Table 3 Expected reduction in vital capacity (VC) for maximum allowable no-decompression (no-deco) nitrox dives with Nitrox 40 for diving depths ranging 15-27 msw.

Diving depth (msw)	EAD (msw)	EAD table depth (msw)	Max no-deco BT (min)	ESOT for max no-deco BT	Reduction VC (%)
27	18.1	21	45	168	<0.1
26	17.3	18	60	186	<0.1
22	14.3	15	90	210	0.1
18	11.3	12	160	222	0.1
15	9	9	240	240	0.1

As explained above there is very limited data on pulmonary function and pulmonary symptoms following short-period (3 days) and low exposure (<<500 ESOT). The only similar exposure known to me is a study by Shykoff[12] published 2007 reporting symptoms and pulmonary function testing following a daily exposure dose of 328. No symptoms nor pulmonary function changes were observed in these experiments even though she exposed the divers for five consecutive days.

3.6.4 POT risk assessment – conclusion

For nitrox dives with $FO_2 \leq 40\%$: There is no reason to expect development of clinically relevant POT even in the absence of multiday breaks.
For nitrox dives with $FO_2 > 40\%$: Multiday diving with maximum allowable no-decompression bottom times to table depths 9 or 12 msw may cause clinically relevant POT unless multiday break is introduced.

3.7 MULTIDAY BREAK

3.7.1 Introduction

NORSOK U-100:2023[2] calls for one day off diving, or shallow diving only, after three consecutive days of diving. The standard does not qualify this recommendation or provide any background for the recommendation. However, it states that the one-day-off is not motivated by a "risk of decompression" (presumably intended to signify DCS risk). Compliance with NDTT with respect to POT will require two days off diving (or air diving only) following seven days of nitrox diving. The two standards (NDTT and NORSOK U-100:2023) are thus not synchronized for a diving pattern of three-days-on-one-day off. Section 3.3 above has discussed one alternative solution: A specific risk assessment of the POT exposure limits. An alternative approach would be to risk assess an alternative shift rotation.

3.7.2 Multiday break – risk assessment

A multiday break can't be justified based on DCS risk[13]. In contrast: Multiday diving will protect from DCS. (It should be noted that this strictly refers to multiday diving, not repetitive diving.) NORSOK U-100:2023 clearly states that the multiday break is not justified by DCS risk assessment but does on the other hand not give any alternative explanation for the multiday break advice. From the diver's perspective it could be assumed that a day off diving would be appreciated if immersion, underwater work or breathing compressed breathing gas was considered strenuous or challenging. If that was the case it seems illogical to allow diving shallower than 9 msw on the day off diving since these factors (immersion, cold, underwater work, breathing compressed breathing gas) would hardly differ significantly from other dives to moderate depth (<< 30 msw).

3.7.3 Multiday break- conclusion

For multiday no-decompression nitrox diving with $FO_2 \leq 40\%$ the decision to run a 3/1, 5/2 or 7/2 shift system should be evaluated based on practical and logistical concerns in collaboration with the divers' safety delegate. The rota should be planned with 5/2 or 7/2 for maximum allowed no-decompression multiday nitrox dives if dives are planned with $FO_2 > 40\%$ to table depths 9 or 12 msw.

4 MITIGATING ACTIONS

4.1 DOWNSTREAM OXYGEN ANALYZER TO BE USED FOR PLANNING

It is recognized that pre-dive measured FO_2 may deviate from that being delivered to the diver. For this reason, the downstream analyzer should be used for planning of dive as well as modification of dive plan in the event of FO_2 subseeding or exceeding the allowable range during the dive.

4.2 ALLOWABLE MAXIMUM MOD

pO_2 should subseed 1.5 bar. It is advised that the MOD should be planned such:

- Plan dives with a MOD based on a FO_2 1% higher than that measured of the gas mixture. Round measured FO_2 according to conventional rules and use Table 4.
    - Example 1
      Measured FO_2=40.50%. Round up to 41% and add 1%. MOD should be calculated for FO_2=42% i.e. 25 msw for a maximum pO_2=1.5 bar.
    - Example 2
      Measured FO_2=40.4%. Round down to 40% and add 1%. MOD should be calculated for FO_2=41% i.e. 26 msw for a maximum of pO_2=1.5 bar.

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4.3 CALCULATION OF EAD AND ALLOWABLE BOTTOM TIME FOR NO-DECOMPRESSION DIVES

- Pre-dive EAD should be planned to use the printed NDTT[3] as well as the electronic (www.dykketabeller.no) nitrox EAD tables.
- Pre-dive calculation of EAD should be based on FO_2 rounded according to conventional rules (see section 4.1 above)
- Planning of allowable no-decompression time should adhere to the procedure below to ensure a conservative approach to potential inaccuracies of FO_2 reading:
    - Initially use the rounded FO_2 of that measured pre-dive to decide the EAD table to use. Secondly investigate if a 1% reduction of FO_2 would impact (increase) air table depth to be used. Unless a 1% reduction in FO_2 impacts air table depth, the allowable bottom time should be reduced with one step (table bottom time).
    - If a 1% reduction in FO_2 would dictate use of a deeper air table, the allowable no-decompression bottom time for this deeper table should be used. No further reduction of allowable bottom time is required.
    - Bottom time reduction as per dive-specific and individual risk factors as explained in the NDTT should be imposed in addition to this.
        - Example 1.
          Question: A strenuous dive is planned for with Nitrox 40 to 23 msw. Pre-dive FO_2=39.6%. The diver is 40 years old, well trained, BMI 25. What is allowable maximum bottom time?
          Answer: Use a rounded FO_2=40%. The Nitrox 40 table calls for the 18 msw air table to be used. The nitrox 39 EAD table would still advice for the 18 msw decompression table. The 18 msw air table allows 60 min no-decompression time. The one-step shorter bottom time would be 55 min. There is no requirement for additional bottom time reduction since there are no individual risk factors. The dive should be planned for a bottom time not exceeding 55 min.
        - Example 2.
          Question: A strenuous dive is planned for a Nitrox 36 dive to 28 msw. Pre-dive FO_2=36.4%. The diver is 55 years old, overweight and not physically fit (not a great start for a dive…). What is allowable bottom time?
          Answer: FO_2 should be rounded down and allows use of the nitrox 36 table and the 21 msw air table. The nitrox 35 table calls for the use of the 24 msw air table for this table depth. As a first step respect the 35 min bottom time allowed for a no-decompression air dive to 24 msw. Due to the three individual risk factors as well as the strenuous dive factor, the bottom time should be reduced one additional step. The bottom time should thus not be allowed to exceed 30 min.

4.4 OXYGEN MONITOR ALARM AND ACTIONS IN THE EVENT OF HIGH AND LOW ALARM

The high and low oxygen monitor alarm should be adjusted to 1.5% of the nominal (integer/rounded) nitrox mixture.

- Example
  A dive is planned with Nitrox 40. Pre-dive FO_2 is 39.6%. High and low alarm should be 41.5 and 38.5% respectively. MOD should be adjusted if the high alarm is voiced while EAD should be adjusted if the low alarm is voiced. EAD should not be adjusted in the event of a high alarm and MOD should not be adjusted in the event of a low alarm.

4.5 MULTIDAY BREAK

For nitrox mixes with $FO_2 \leq 40\%$ this should be handled by the employees (safety delegate) and employer as it is not a medical problem as long as the other shift-arrangements (time off) in NORSOK U-100:2023 are respected. The rota should be planned with 5/2 or 7/2 for maximum allowed no-decompression multiday nitrox dives with $FO_2 > 40\%$ to table depths 9 and 12 msw.

5 HANDLING OF DEVIATIONS FROM RECOMMENDED PRACTICE

Deviations from recommended practice (presented above in section 4) should be handled as internal non-conformances. Unintentional deviations from recommended practice *but compliant with NDTT*[3] should not initiate change in decompression procedures or call for precautionary recompression.

6 MOD TABLES FOR NITROX MIXTURES

The table below shows maximum operational depth (MOD) for Nitrox mixtures ranging 30-45% depending on allowable pO_2 threshold.

FO_2 (%)	MOD (msw) (pO_2=1.4 bar)	MOD (msw) (pO_2=1.5 bar)
30	36	40
31	35	38
32	33	36
33	32	35
34	31	34
35	30	32
36	28	31
37	27	30
38	26	29
39	25	28
40	25	27
41	24	26
42	23	25
43	22	24
44	21	24
45	21	23

Table 4 Allowable maximum operational diving depth (MOD) for nitrox mixture ranging 30-45% depending on oxygen fraction in breathing gas (FO_2) and allowable maximum pO_2. When this table is used for operational planning remember to add the 1% safety factor for MOD.

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