

TABLE 1. Changes in the CO₂ system parameters and components for a given initial condition by apparent oxygen utilization (AOU) and by carbonate dissolution. A 0.10 mM AOU is 2.24 ml/liter AOU at STP. The concentrations for the CO₂ system components as well as ΣCO₂ and ΔCO₂ are expressed in mM

| | Initial condition | AOU (mM) | | | | Carbonate dissolution (mM) | |
|--|-------------------|----------|-------|-------|-------|----------------------------|-------|
| | | 0.065 | 0.130 | 0.195 | 0.260 | 0.050 | 0.100 |
| ΔCO ₂ | 0 | 0.050 | 0.100 | 0.150 | 0.200 | 0.050 | 0.100 |
| ΣCO ₂ | 2.200 | 2.250 | 2.300 | 2.350 | 2.400 | 2.250 | 2.300 |
| Carbonate alkalinity (meq/liter) | 2.487 | 2.487 | 2.487 | 2.487 | 2.487 | 2.587 | 2.687 |
| P _{CO₂} (ppm) | 350 | 460 | 610 | 830 | 1,160 | 310 | 290 |
| pH | 8.200 | 8.106 | 8.001 | 7.884 | 7.753 | 8.264 | 8.321 |
| (H ₂ CO ₃) + (CO ₂) | 0.012 | 0.016 | 0.021 | 0.028 | 0.040 | 0.011 | 0.010 |
| (HCO ₃ ⁻) | 1.889 | 1.982 | 2.072 | 2.157 | 2.234 | 1.892 | 1.894 |
| (CO ₃ ²⁻) | 0.299 | 0.253 | 0.208 | 0.165 | 0.126 | 0.348 | 0.397 |