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SENSOR SERIAL NUMBER: 1875

SBE 43 OXYGEN CALIBRATION DATA

CALIBRATION DATE: 17-Dec-19

 COEFFICIENTS:
 A = -4.4018e-003
 NOMINAL DYNAMIC COEFFICIENTS

 Soc = 0.5876
 B = 1.9281e-004
 D1 = 1.92634e-4
 H1 = -3.300000e-2

 Voffset = -0.4803
 C = -2.6391e-006
 D2 = -4.64803e-2
 H2 = 5.00000e+3

 Tau20 = 1.67
 E nominal = 0.036
 H3 = 1.45000e+3

| BATH<br>OXYGEN (ml/l) | BATH<br>TEMPERATURE (° C) | BATH<br>SALINITY (PSU) | INSTRUMENT<br>OUTPUT (volts) | INSTRUMENT<br>OXYGEN (ml/l) | RESIDUAL<br>(ml/l) |
|-----------------------|---------------------------|------------------------|------------------------------|-----------------------------|--------------------|
| 1.16                  | 6.00                      | 0.00                   | 0.711                        | 1.16                        | -0.00              |
| 1.16                  | 12.00                     | 0.00                   | 0.750                        | 1.16                        | -0.00              |
| 1.16                  | 2.00                      | 0.00                   | 0.685                        | 1.15                        | -0.01              |
| 1.17                  | 20.00                     | 0.00                   | 0.805                        | 1.18                        | 0.00               |
| 1.18                  | 26.00                     | 0.00                   | 0.847                        | 1.19                        | 0.00               |
| 1.18                  | 30.00                     | 0.00                   | 0.874                        | 1.19                        | 0.00               |
| 3.93                  | 2.00                      | 0.00                   | 1.177                        | 3.93                        | -0.00              |
| 3.94                  | 6.00                      | 0.00                   | 1.267                        | 3.95                        | 0.00               |
| 3.96                  | 12.00                     | 0.00                   | 1.402                        | 3.96                        | 0.00               |
| 3.97                  | 30.00                     | 0.00                   | 1.799                        | 3.98                        | 0.00               |
| 3.97                  | 26.00                     | 0.00                   | 1.711                        | 3.98                        | 0.01               |
| 3.97                  | 20.00                     | 0.00                   | 1.579                        | 3.98                        | 0.00               |
| 6.73                  | 2.00                      | 0.00                   | 1.674                        | 6.73                        | -0.00              |
| 6.78                  | 6.00                      | 0.00                   | 1.832                        | 6.78                        | 0.00               |
| 6.85                  | 12.00                     | 0.00                   | 2.072                        | 6.84                        | -0.00              |
| 6.87                  | 26.00                     | 0.00                   | 2.604                        | 6.87                        | -0.00              |
| 6.87                  | 30.00                     | 0.00                   | 2.757                        | 6.86                        | -0.00              |
| 6.90                  | 20.00                     | 0.00                   | 2.386                        | 6.90                        | -0.01              |

V = instrument output (volts); T = temperature (°C); S = salinity (PSU); K = temperature (°K)

Oxsol(T,S) = oxygen saturation (ml/l); P = pressure (dbar)

Oxygen (ml/l) = Soc \* (V + Voffset) \*  $(1.0 + A * T + B * T^2 + C * T^3) * Oxsol(T,S) * exp(E * P / K)$ 

Residual (ml/l) = instrument oxygen - bath oxygen

