

SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 0463
CALIBRATION DATE: 05-Mar-08p

SBE 43 OXYGEN CALIBRATION DATA

COEFFICIENTS

Soc = 0.3429

Boc = 0.0000

Voffset = -0.4724

TCor = 0.0023

PCor = 1.350e-04

| BATH OX (ml/l) | BATH TEMP ITS-90 | BATH SAL PSU | INSTRUMENT OUTPUT(VOLTS) | INSTRUMENT OXYGEN(ml/l) | RESIDUAL (ml/l) |
|-------------------|---------------------|-----------------|-----------------------------|----------------------------|--------------------|
| 1.29 | 30.00 | 0.01 | 1.143 | 1.30 | 0.00 |
| 1.29 | 26.00 | 0.01 | 1.100 | 1.29 | -0.00 |
| 1.30 | 20.00 | 0.01 | 1.041 | 1.30 | -0.00 |
| 1.30 | 12.00 | 0.01 | 0.965 | 1.31 | 0.01 |
| 1.31 | 6.00 | 0.00 | 0.908 | 1.32 | 0.01 |
| 1.32 | 2.00 | 0.00 | 0.868 | 1.32 | -0.00 |
| 4.19 | 26.00 | 0.01 | 2.503 | 4.18 | -0.01 |
| 4.21 | 20.00 | 0.01 | 2.317 | 4.20 | -0.01 |
| 4.24 | 30.00 | 0.01 | 2.665 | 4.25 | 0.01 |
| 4.24 | 12.00 | 0.01 | 2.071 | 4.24 | 0.01 |
| 4.24 | 6.00 | 0.00 | 1.875 | 4.24 | 0.00 |
| 4.25 | 2.00 | 0.00 | 1.744 | 4.23 | -0.02 |
| 6.64 | 30.00 | 0.01 | 3.901 | 6.64 | 0.01 |
| 6.66 | 26.00 | 0.01 | 3.700 | 6.65 | -0.01 |
| 6.70 | 20.00 | 0.01 | 3.405 | 6.68 | -0.01 |
| 6.77 | 12.00 | 0.01 | 3.033 | 6.80 | 0.03 |
| 6.84 | 6.00 | 0.00 | 2.741 | 6.86 | 0.02 |
| 6.86 | 2.00 | 0.00 | 2.526 | 6.84 | -0.02 |

$$\text{oxygen (ml/l)} = (\text{Soc} * (\text{V} + \text{Voffset})) * \exp(\text{Tcor} * \text{T}) * \text{Oxsat}(\text{T},\text{S}) * \exp(\text{Pcor} * \text{P})$$

V = voltage output from SBE43, T = temperature [deg C], S = salinity [PSU]

Oxsat(T,S) = oxygen saturation [ml/l], P = pressure [dbar], Residual = instrument oxygen - bath oxygen

