

SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 0463
CALIBRATION DATE: 17-Sep-08p

SBE 43 OXYGEN CALIBRATION DATA

COEFFICIENTS

Soc = 0.3432

Voffset = -0.4755

Tau20 = 1.18

A = -3.1971e-004

B = 1.9101e-004

C = -3.7851e-006

E nominal = 0.036

NOMINAL DYNAMIC COEFFICIENTS

D1 = 1.92634e-4

D2 = -4.64803e-2

NOMINAL DYNAMIC COEFFICIENTS

D1 = 1.92634e-4

| BATH OX (ml/l) | BATH TEMP ITS-90 | BATH SAL PSU | INSTRUMENT OUTPUT(VOLTS) | INSTRUMENT OXYGEN(ml/l) | RESIDUAL (ml/l) |
|-------------------|---------------------|-----------------|-----------------------------|----------------------------|--------------------|
| 1.24 | 2.00 | 0.00 | 0.849 | 1.24 | 0.00 |
| 1.24 | 12.00 | 0.01 | 0.947 | 1.24 | 0.00 |
| 1.24 | 6.00 | 0.00 | 0.889 | 1.24 | 0.00 |
| 1.25 | 20.00 | 0.01 | 1.025 | 1.25 | 0.00 |
| 1.25 | 26.00 | 0.01 | 1.084 | 1.25 | -0.00 |
| 1.26 | 30.00 | 0.01 | 1.127 | 1.25 | -0.00 |
| 4.14 | 30.00 | 0.01 | 2.626 | 4.14 | 0.00 |
| 4.14 | 20.00 | 0.01 | 2.296 | 4.13 | -0.00 |
| 4.15 | 26.00 | 0.01 | 2.496 | 4.15 | -0.00 |
| 4.16 | 12.00 | 0.01 | 2.054 | 4.15 | -0.00 |
| 4.16 | 6.00 | 0.00 | 1.862 | 4.16 | -0.00 |
| 4.17 | 2.00 | 0.00 | 1.730 | 4.17 | -0.00 |
| 6.66 | 26.00 | 0.01 | 3.719 | 6.66 | 0.00 |
| 6.67 | 20.00 | 0.01 | 3.414 | 6.67 | 0.00 |
| 6.67 | 30.00 | 0.01 | 3.941 | 6.67 | -0.00 |
| 6.71 | 12.00 | 0.01 | 3.024 | 6.71 | -0.00 |
| 6.72 | 6.00 | 0.00 | 2.715 | 6.72 | 0.00 |
| 6.75 | 2.00 | 0.00 | 2.507 | 6.75 | -0.00 |

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

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

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

Date, Delta Ox (ml/l)

