

SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 0463
CALIBRATION DATE: 25-Feb-11p

SBE 43 OXYGEN CALIBRATION DATA

COEFFICIENTS

Soc = 0.4836
Voffset = -0.4806
Tau20 = 1.20

A = -1.7675e-003
B = 8.0002e-005
C = -1.6304e-006
E nominal = 0.036

NOMINAL DYNAMIC COEFFICIENTS

D1 = 1.92634e-4 H1 = -3.30000e-2
D2 = -4.64803e-2 H2 = 5.00000e+3
H3 = 1.45000e+3

BATH OX (ml/l)	BATH TEMP ITS-90	BATH SAL PSU	INSTRUMENT OUTPUT(VOLTS)	INSTRUMENT OXYGEN(ml/l)	RESIDUAL (ml/l)
1.28	12.00	0.02	0.838	1.29	0.00
1.28	20.00	0.02	0.905	1.28	-0.00
1.28	30.00	0.02	0.997	1.29	0.00
1.29	6.00	0.01	0.790	1.29	0.00
1.29	2.00	0.01	0.757	1.29	0.00
1.29	26.00	0.02	0.960	1.29	-0.00
4.21	30.00	0.02	2.168	4.21	0.00
4.22	26.00	0.02	2.049	4.22	0.00
4.22	2.00	0.01	1.383	4.21	-0.01
4.22	20.00	0.02	1.873	4.21	-0.00
4.22	6.00	0.01	1.490	4.22	-0.00
4.22	12.00	0.02	1.653	4.22	-0.00
6.47	30.00	0.02	3.075	6.47	-0.00
6.54	26.00	0.02	2.914	6.54	0.01
6.54	12.00	0.02	2.297	6.54	0.00
6.56	6.00	0.01	2.051	6.56	0.00
6.56	20.00	0.02	2.649	6.56	-0.00
6.68	2.00	0.01	1.913	6.68	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)

