

SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 1685
CALIBRATION DATE: 03-Nov-10p

SBE 43 OXYGEN CALIBRATION DATA

COEFFICIENTS

Soc = 0.5408
Voffset = -0.5205
Tau20 = 1.81

A = -3.3575e-003
B = 1.7114e-004
C = -3.5024e-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)
1.25	2.00	0.01	0.761	1.25	0.00
1.26	6.00	0.02	0.791	1.26	-0.00
1.26	12.00	0.02	0.837	1.26	-0.00
1.28	20.00	0.02	0.903	1.28	0.00
1.29	26.00	0.02	0.957	1.30	0.00
1.29	30.00	0.02	0.994	1.30	0.00
4.12	6.00	0.02	1.408	4.12	-0.00
4.13	12.00	0.02	1.555	4.13	-0.00
4.17	20.00	0.02	1.765	4.17	0.00
4.18	2.00	0.01	1.324	4.18	-0.00
4.20	26.00	0.02	1.936	4.20	0.00
4.22	30.00	0.02	2.060	4.22	0.00
6.49	30.00	0.02	2.887	6.49	-0.00
6.62	20.00	0.02	2.497	6.62	-0.00
6.63	12.00	0.02	2.184	6.64	0.00
6.67	6.00	0.02	1.958	6.67	0.00
6.67	2.00	0.01	1.804	6.68	0.00
6.70	26.00	0.02	2.777	6.70	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)

