

SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 0387
CALIBRATION DATE: 11-Feb-10p

SBE 43 OXYGEN CALIBRATION DATA

COEFFICIENTS

Soc = 0.4982

Voffset = -0.4868

Tau20 = 2.47

A = -2.8273e-003

B = 1.3175e-004

C = -2.5845e-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)
1.29	2.00	0.01	0.755	1.29	-0.00
1.30	6.00	0.01	0.790	1.30	-0.00
1.32	12.00	0.01	0.845	1.32	0.00
1.33	20.00	0.01	0.919	1.34	0.00
1.34	26.00	0.02	0.979	1.35	0.01
1.35	30.00	0.02	1.021	1.36	0.01
4.35	2.00	0.01	1.391	4.34	-0.01
4.38	6.00	0.01	1.506	4.37	-0.01
4.41	12.00	0.01	1.682	4.40	-0.00
4.42	20.00	0.01	1.915	4.42	-0.00
4.43	26.00	0.02	2.100	4.43	0.00
4.43	30.00	0.02	2.229	4.43	0.00
7.02	30.00	0.02	3.250	7.02	-0.00
7.06	12.00	0.01	2.405	7.07	0.00
7.07	20.00	0.01	2.773	7.07	0.00
7.09	6.00	0.01	2.143	7.09	0.01
7.10	2.00	0.01	1.969	7.11	0.01
7.15	26.00	0.02	3.092	7.15	-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)

