

SEA-BIRD ELECTRONICS, INC.

13431 NE 20th Street, Bellevue, Washington, 98005-2010 USA

Phone: (425) 643 - 9866 Fax (425) 643 - 9954 Email: seabird@seabird.com

SENSOR SERIAL NUMBER: 1348
CALIBRATION DATE: 26-Feb-11p

SBE 43 OXYGEN CALIBRATION DATA

COEFFICIENTS

Soc = 0.5388

Voffset = -0.5198

Tau20 = 1.66

A = -3.1314e-003

B = 1.3614e-004

C = -2.2679e-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

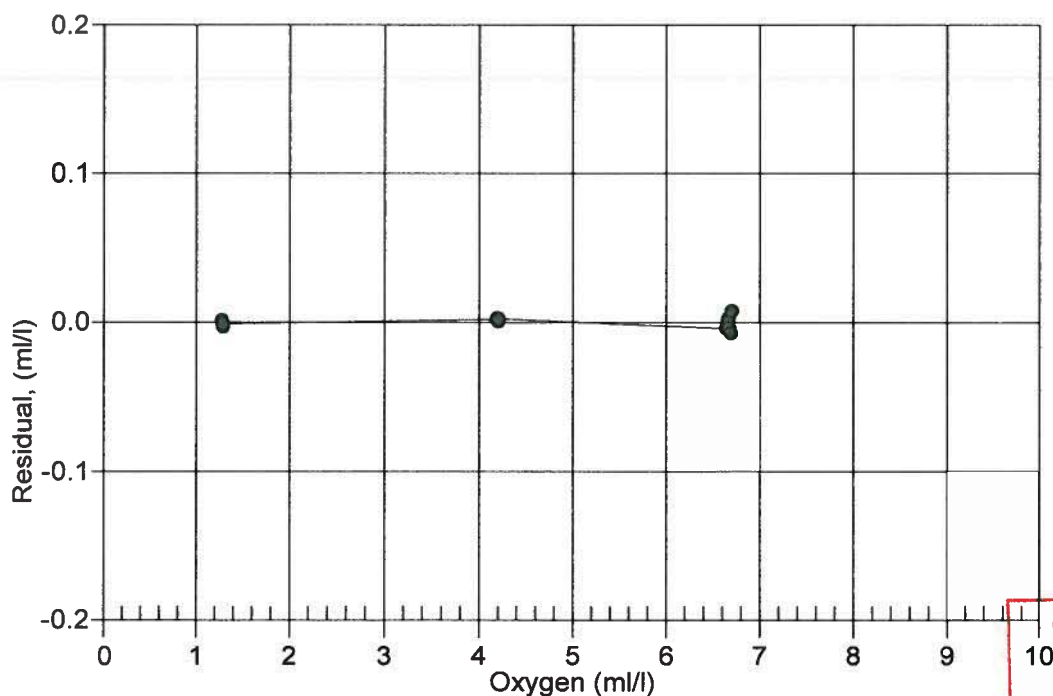
BATH OX (ml/l)	BATH TEMP ITS-90	BATH SAL PSU	INSTRUMENT OUTPUT(VOLTS)	INSTRUMENT OXYGEN(ml/l)	RESIDUAL (ml/l)
1.28	2.00	0.01	0.766	1.28	0.00
1.28	6.00	0.01	0.796	1.28	-0.00
1.28	26.00	0.02	0.951	1.28	-0.00
1.28	20.00	0.02	0.904	1.28	-0.00
1.29	12.00	0.01	0.843	1.29	-0.00
1.29	30.00	0.02	0.988	1.29	-0.00
4.19	6.00	0.01	1.426	4.19	0.00
4.19	26.00	0.02	1.933	4.20	0.00
4.20	12.00	0.01	1.576	4.20	0.00
4.20	20.00	0.02	1.778	4.20	0.00
4.20	30.00	0.02	2.044	4.20	0.00
4.20	2.00	0.01	1.331	4.21	0.00
6.64	30.00	0.02	2.926	6.63	-0.00
6.65	12.00	0.01	2.192	6.65	-0.00
6.66	6.00	0.01	1.960	6.66	0.00
6.67	2.00	0.01	1.806	6.67	-0.00
6.68	20.00	0.02	2.521	6.68	-0.01
6.70	26.00	0.02	2.778	6.70	0.01

Oxygen (ml/l) = Soc * (V + Voffset) * (1.0 + A * T + B * T² + C * T³) * OxSol(T,S) * exp(E * P / 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)



**CALIBRATION
AFTER
MODIFICATIONS**

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Phone: (425) 643 - 9866 Fax (425) 643 - 9954 Email: seabird@seabird.com

SENSOR SERIAL NUMBER: 1348
CALIBRATION DATE: 11-Feb-11p

SBE 43 OXYGEN CALIBRATION DATA

COEFFICIENTS

Soc = 0.5410

Voffset = -0.5173

Tau20 = 1.24

A = -2.5295e-003

B = 1.6082e-004

C = -2.8902e-006

E nominal = 0.036

NOMINAL DYNAMIC COEFFICIENTS

D1 = 1.92634e-4 H1 = -3.30000e-2

D2 = -4.64803e-2 H2 = 5.00000e+3

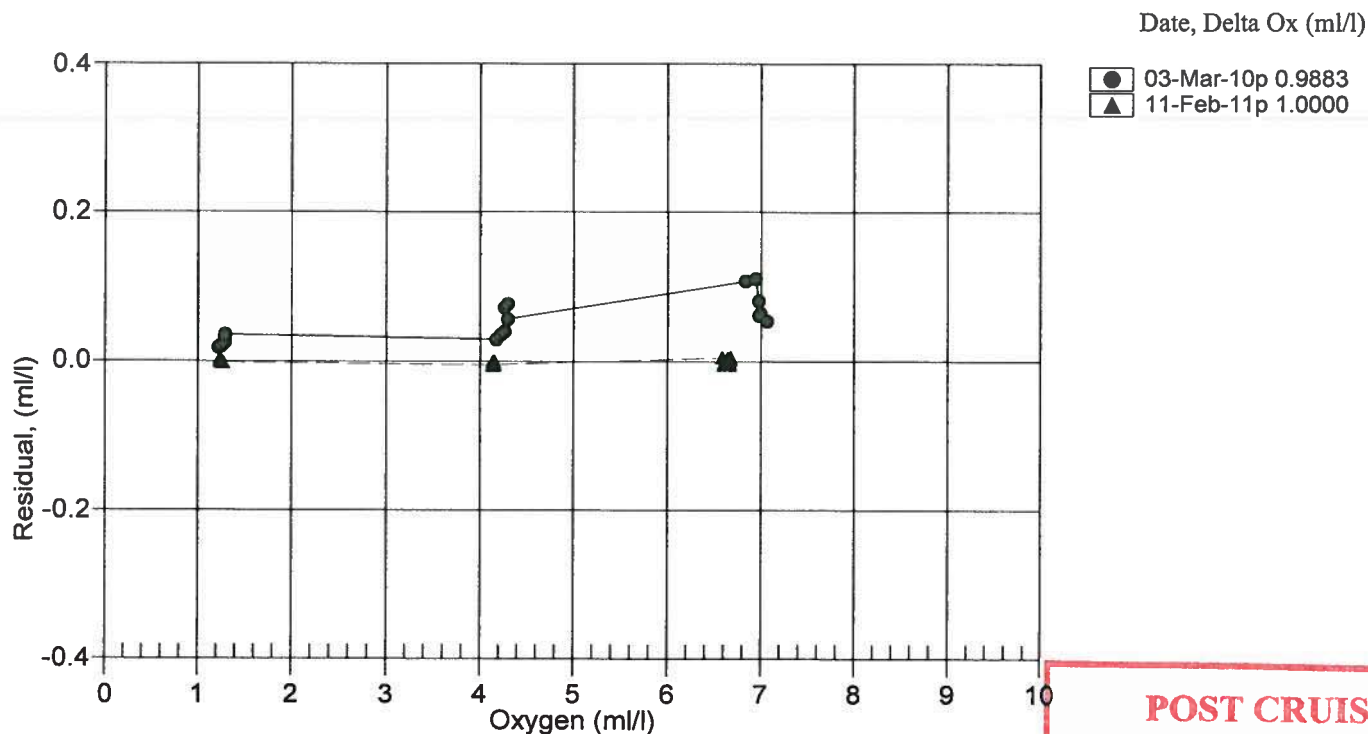
H3 = 1.45000e+3

BATH OX (ml/l)	BATH TEMP ITS-90	BATH SAL PSU	INSTRUMENT OUTPUT(VOLTS)	INSTRUMENT OXYGEN(ml/l)	RESIDUAL (ml/l)
1.23	6.00	0.01	0.781	1.23	0.00
1.23	2.00	0.01	0.754	1.23	0.00
1.23	12.00	0.02	0.823	1.23	-0.00
1.25	20.00	0.02	0.884	1.25	-0.00
1.26	26.00	0.02	0.930	1.26	-0.00
1.26	30.00	0.02	0.962	1.26	-0.00
4.14	6.00	0.01	1.403	4.13	-0.01
4.14	20.00	0.02	1.731	4.14	-0.00
4.14	30.00	0.02	1.977	4.14	-0.00
4.15	2.00	0.01	1.314	4.15	-0.00
4.15	12.00	0.02	1.547	4.15	-0.00
4.16	26.00	0.02	1.881	4.15	-0.00
6.58	30.00	0.02	2.839	6.58	0.01
6.60	26.00	0.02	2.682	6.59	-0.00
6.64	20.00	0.02	2.466	6.64	0.00
6.66	6.00	0.01	1.945	6.66	-0.00
6.66	12.00	0.02	2.173	6.67	0.01
6.67	2.00	0.01	1.798	6.68	0.00

Oxygen (ml/l) = Soc * (V + Voffset) * (1.0 + A * T + B * T² + C * T³) * OxSol(T,S) * exp(E * P / 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



**POST CRUISE
CALIBRATION**