SEA-BIRD ELECTRONICS, INC.

1808 136th Place N.E., Bellevue, Washington, 98005 USA

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

SENSOR SERIAL NUMBER: 1628
CALIBRATION DATE: 09-Dec-09p

SBE 43 OXYGEN CALIBRATION DATA

COEFFICIENTS

```
Soc =  0.3839
Voffset = -0.4645
Tau20 = 1.08

A =  1.9158e-004
B =  1.1456e-004
C = -1.6793e-006
E nominal =  0.036
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NOMINAL DYNAMIC COEFFICIENTS

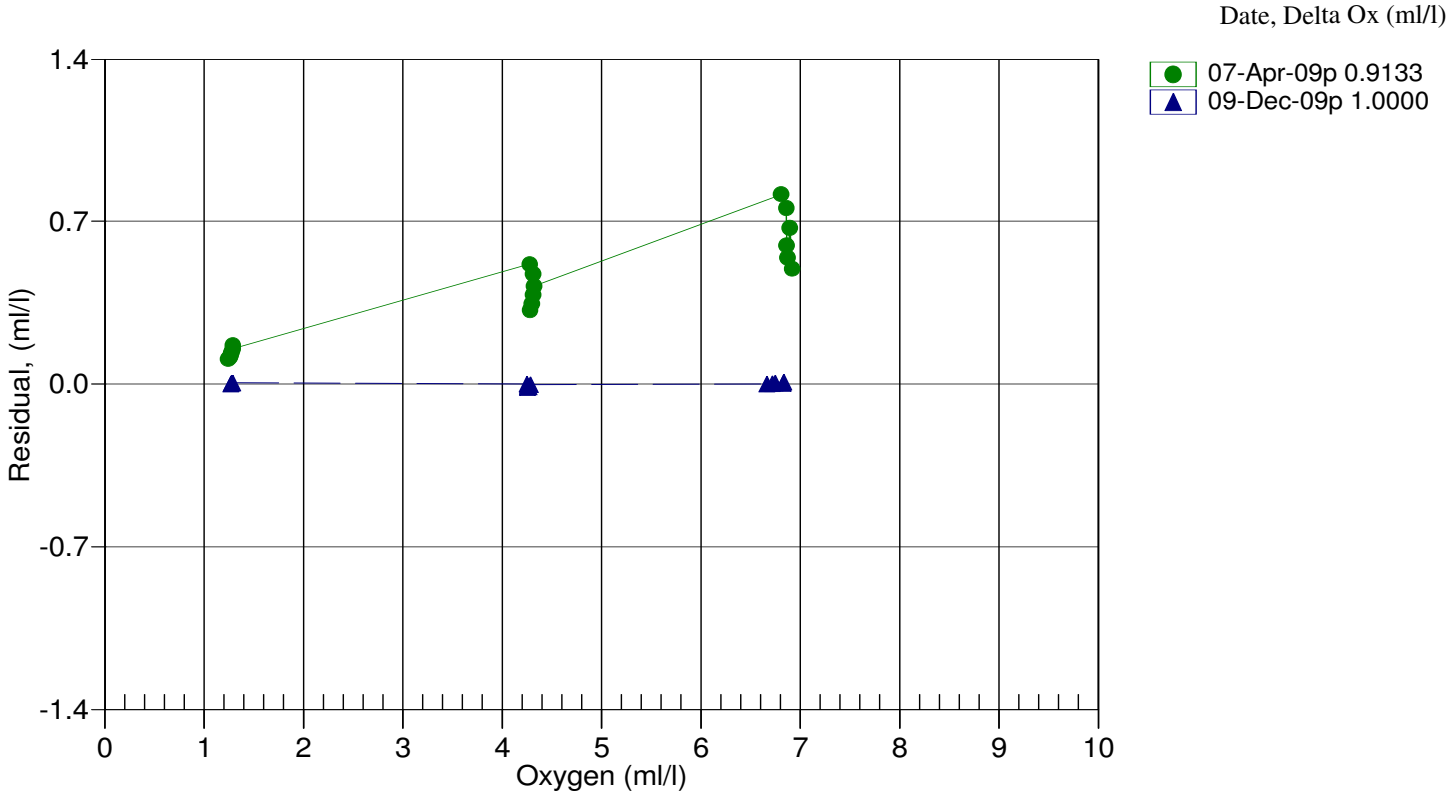
```
D1 =  1.92634e-4   H1 = -3.30000e-2
D2 = -4.64803e-2   H2 =  5.00000e+3
                   H3 =  1.45000e+3
```

BATH OX (ml/l)	BATH TEMP ITS-90	BATH SAL PSU	INSTRUMENT OUTPUT(VOLTS)	INSTRUMENT OXYGEN(ml/l)	RESIDUAL (ml/l)
1.27	2.00	0.00	0.806	1.27	-0.00
1.28	6.00	0.00	0.846	1.28	0.00
1.28	12.00	0.01	0.902	1.29	0.00
1.29	20.00	0.01	0.976	1.29	0.01
1.29	26.00	0.01	1.031	1.30	0.01
1.30	30.00	0.01	1.068	1.30	0.01
4.25	26.00	0.01	2.315	4.25	0.00
4.25	30.00	0.01	2.431	4.25	-0.00
4.25	2.00	0.00	1.604	4.24	-0.01
4.26	20.00	0.01	2.142	4.25	-0.01
4.27	6.00	0.00	1.731	4.26	-0.01
4.28	12.00	0.01	1.919	4.28	-0.00
6.66	30.00	0.01	3.551	6.66	0.00
6.72	26.00	0.01	3.392	6.72	0.00
6.74	20.00	0.01	3.131	6.75	0.00
6.82	12.00	0.01	2.786	6.83	0.00
6.83	6.00	0.00	2.500	6.84	0.01
6.84	2.00	0.00	2.306	6.85	0.01

Oxygen (ml/l) = Soc * (V + Voffset) * (1.0 + A * T + B * T^2 + C * T^3) * 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



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

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

SENSOR SERIAL NUMBER: 1628
CALIBRATION DATE: 25-Dec-09p

SBE 43 OXYGEN CALIBRATION DATA

COEFFICIENTS

Soc = 0.3765
Voffset = -0.4648
Tau20 = 1.08

A = -1.5559e-003
B = 1.8850e-004
C = -3.2707e-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)
1.27	2.00	0.00	0.815	1.27	0.00
1.27	6.00	0.01	0.855	1.27	0.00
1.28	12.00	0.01	0.914	1.28	0.00
1.28	20.00	0.01	0.991	1.28	0.00
1.28	30.00	0.01	1.092	1.29	0.01
1.28	26.00	0.01	1.051	1.29	0.00
4.27	30.00	0.01	2.540	4.28	0.00
4.28	20.00	0.01	2.216	4.27	-0.01
4.28	2.00	0.00	1.638	4.26	-0.01
4.28	26.00	0.01	2.408	4.28	-0.00
4.28	6.00	0.01	1.772	4.27	-0.01
4.29	12.00	0.01	1.968	4.28	-0.01
6.75	30.00	0.01	3.741	6.75	-0.00
6.79	20.00	0.01	3.248	6.79	-0.00
6.80	26.00	0.01	3.558	6.81	0.00
6.84	6.00	0.01	2.558	6.84	0.01
6.86	12.00	0.01	2.876	6.86	0.01
6.87	2.00	0.00	2.356	6.87	0.01

Oxygen (ml/l) = Soc * (V + Voffset) * (1.0 + A * T + B * T^2 + C * T^3) * 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