

UNIVERSITY OF CALIFORNIA SCRIPPS INSTITUTION OF OCEANOGRAPHY

data report

PHYSICAL AND CHEMICAL DATA

GULF CRUISE 7303
6-23 March 1973

GULF CRUISE 7305
23-26 May 1973

SIO Reference 88-5
15 March 1988

UNIVERSITY OF CALIFORNIA
SCRIPPS INSTITUTION OF OCEANOGRAPHY

PHYSICAL AND CHEMICAL DATA

GULF CRUISE 7303
6-23 March 1973

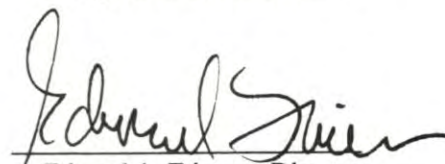
and

GULF CRUISE 7305
23-26 May 1973

Sponsored by
Marine Research Committee

SIO Reference 88-5
15 March 1988

Approved for distribution:


Edward A. Frieman, Director

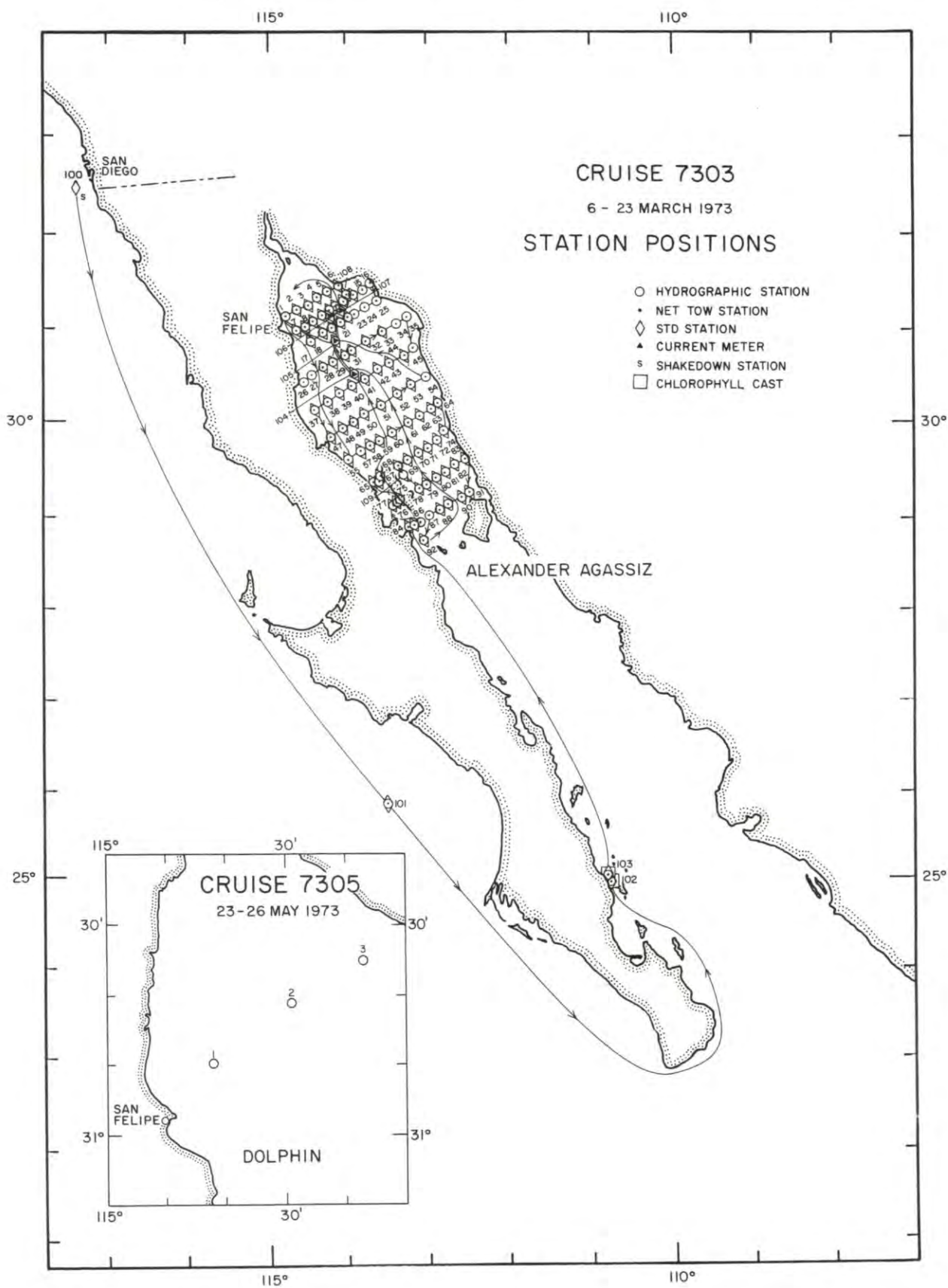
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GULF CRUISE 7305

INTRODUCTION

The data in this report were collected during a cruise in May 1973 aboard the RV *David Phillip Dolphin* on loan to the Scripps Institution of Oceanography, University of California, San Diego.

The purpose of this cruise to the northern Gulf of California was the investigation of the daily fluctuation of the physical and chemical parameters and the currents. Three 24-hour anchor stations were occupied between San Felipe and the eastern shore of the Gulf.

These data were collected and processed by personnel of the Data Collection and Processing Group, Marine Life Research Group (DCPG*, MLRG), Scripps Institution of Oceanography, and of the Escuela Superior de Ciencias Marinas**, Universidad Autonoma de Baja California.

STANDARD PROCEDURES

Most of the hydrographic casts consisted of three to five Nansen bottles lowered to 25 meters, bottom depth permitting. The following data and samples were collected every two hours from the surface to the bottom: temperature, salinity, oxygen, nutrients, chlorophyll, pH and alkalinity. Tabulations in this report include the temperature, salinity, chlorophyll-a and phaeophytin. Because the *Dolphin* was not equipped as a research vessel and because the personnel were generally inexperienced, the data may not have the accuracy usually presented in these reports.

The temperatures were determined using one protected reversing thermometer at each level. Because the casts were lowered in very shallow water, the depths reported are corrected wire lengths.

Salinity samples were analyzed on inductive-type salinometers approximately two months after the cruise. The values are recorded to three decimal places.

Dissolved oxygen was determined by the Winkler method as modified by Carpenter (1965), using the equipment and procedure outlined by Anderson (1971). The oxygen procedures were carried out by inexperienced personnel and the resultant values show a scatter of $\pm 5\%$. They are tabulated in hundredths.

Chlorophyll data were processed by fluorometer at the Escuela Superior de Ciencias Marinas. Correspondence concerning these data should be directed to authors of publications listed in this report.

Four current meters which had been deployed some time prior to this cruise were recovered. The current meters were 10 meters off the bottom in water depths ranging between 80 and 170 meters.

A small bathymetric survey was made around Consag Rock. An area at more than 100 meters depth was discovered on the east side; the average depth in this area is about 35 meters.

TABULATED DATA

The reported hydrographic cast time is the Greenwich Mean Time (GMT) of the messenger release. The very shallow bottom depths were determined acoustically. Weather conditions have been coded using WMO code 4051.

The hydrographic cast data tabulated for only the observed depths includes temperature, salinity, oxygen, chlorophyll-a and phaeophytin with the computed values of sigma-t and thermoelectric anomaly, delta-t.

* Now the Oceanographic Data Facility (ODF).

** Now the Facultad de Ciencias Marinas.

PERSONNEL
GULF CRUISE 7305

Schwartzlose, Richard A. (Chief Scientist)	Academic Administrator	SIO
Badan, Antoine	Student	ESCM, UABC
Brown, Daniel M.	Development Engineer	SIO
Gendrop, Victor	Student	ESCM, UABC
Islas, Rene	Student	ESCM, UABC
Reyes, Mario	Department of Tourism	UABC
Sessions, Meredith H.	Development Engineer	SIO

ABBREVIATIONS USED:

ESCM	Escuela Superior de Ciencias Marinas, Ensenada, Baja California, Mexico
SIO	Scripps Institution of Oceanography, La Jolla, California, USA
UABC	Universidad Autonoma de Baja California,

STATION 1 A									RV DAVID PHILLIP DOLPHIN									GULF CRUISE 7305									STATION 1 B								
LATITUDE			LONGITUDE			MO/DAY/YR			MESSENGER TIME			BOTTOM			LATITUDE			LONGITUDE			MO/DAY/YR			MESSENGER TIME			BOTTOM								
31 10.5 N			114 42.0 W			05/23/73			1525 GMT			19 M			31 10.5 N			114 42.0 W			05/23/73			1755 GMT			19 M								
WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS				
330	12 KT	330 01 02	0	1015.9 MB	24.8 C	22.0 C	0/8	350	05 KT	350 01 02	0	1016.3 MB	25.7 C	22.6 C	0/8	350	05 KT	350 01 02	0	1016.3 MB	25.7 C	22.6 C	0/8	350	05 KT	350 01 02	0	1016.3 MB	25.7 C	22.6 C	0/8				
Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD	Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD	Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD	Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD
0	24.62	36.347	5.32	4.00	0.91	24.493	344.9	0.000	0	25.30	36.438	5.13	3.22	0.96	24.355	358.1	0.000	0	25.30	36.438	5.13	3.22	0.96	24.355	358.1	0.000	0	25.30	36.438	5.13	3.22	0.96	24.355	358.1	0.000
5	24.61	36.366	5.34	5.59	1.65	24.511	343.2	0.017	5	24.91	36.452		7.11	1.90	24.485	345.7	0.018	5	24.91	36.452		7.11	1.90	24.485	345.7	0.018	5	24.91	36.452		7.11	1.90	24.485	345.7	0.018
10	24.35	36.589	4.38	4.74	1.69	24.758	319.7	0.034	10	24.51	36.605		11.51	2.32	24.722	323.2	0.034	10	24.51	36.605		11.51	2.32	24.722	323.2	0.034	10	24.51	36.605		11.51	2.32	24.722	323.2	0.034
15		36.580	4.29	7.28	3.50				15		36.626		6.94	2.39				15		36.626		6.94	2.39				15		36.626		6.94	2.39			

STATION 1 C									RV DAVID PHILLIP DOLPHIN									GULF CRUISE 7305									STATION 1 D								
LATITUDE			LONGITUDE			MO/DAY/YR			MESSENGER TIME			BOTTOM			LATITUDE			LONGITUDE			MO/DAY/YR			MESSENGER TIME			BOTTOM								
31 10.5 N			114 42.0 W			05/23/73			2020 GMT			19 M			31 10.5 N			114 42.0 W			05/23/73			2215 GMT			19 M								
WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS				
080	09 KT	070 02 02	0	1016.3 MB	25.2 C	23.0 C	0/8	110	14 KT	120 02 02	0	1015.2 MB	26.1 C	22.2 C	0/8	110	14 KT	120 02 02	0	1015.2 MB	26.1 C	22.2 C	0/8	110	14 KT	120 02 02	0	1015.2 MB	26.1 C	22.2 C	0/8				
Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD	Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD	Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD	Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD
0	25.51	36.312	5.23	2.54	0.68	24.195	373.3	0.000	0	25.18	36.189	5.26	2.88	0.34	24.204	372.5	0.000	0	25.18	36.189	5.26	2.88	0.34	24.204	372.5	0.000	0	25.18	36.189	5.26	2.88	0.34	24.204	372.5	0.000
5	24.80	36.392	5.57	5.25	1.51	24.473	346.9	0.018	5	24.23	36.270	5.67	12.53	2.27	24.553	339.3	0.018	5	24.23	36.270	5.67	12.53	2.27	24.553	339.3	0.018	5	24.23	36.270	5.67	12.53	2.27	24.553	339.3	0.018
10	24.74	36.387	5.28U	10.49	2.85	24.488	345.5	0.035	10	24.41	36.576	4.38	3.72	0.78	24.730	322.4	0.034	10	24.41	36.576	4.38	3.72	0.78	24.730	322.4	0.034	10	24.41	36.576	4.38	3.72	0.78	24.730	322.4	0.034
									15	24.44	36.615	4.21			24.750	320.4	0.050	15	24.44	36.615	4.21			24.750	320.4	0.050	15	24.44	36.615	4.21			24.750	320.4	0.050

STATION 1 E									RV DAVID PHILLIP DOLPHIN									GULF CRUISE 7305									STATION 1 F								
LATITUDE			LONGITUDE			MO/DAY/YR			MESSENGER TIME			BOTTOM			LATITUDE			LONGITUDE			MO/DAY/YR			MESSENGER TIME			BOTTOM								
31 10.5 N			114 42.0 W			05/24/73			0030 GMT			20 M			31 10.5 N			114 42.0 W			05/24/73			0240 GMT			20 M								
WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS				
110	10 KT	110 01 01	0	1013.2 MB	24.2 C	22.0 C	0/8	170	10 KT	140 02 03	0	1012.9 MB	24.5 C	20.9 C	0/8	170	10 KT	140 02 03	0	1012.9 MB	24.5 C	20.9 C	0/8	170	10 KT	140 02 03	0	1012.9 MB	24.5 C	20.9 C	0/8				
Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD	Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD	Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD	Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD
0	25.03	36.120	5.44	2.73	0.67	24.198	373.1	0.000	0	24.74	36.172	5.32	2.54	0.52	24.325	360.9	0.000	0	24.74	36.172	5.32	2.54	0.52	24.325	360.9	0.000	0	24.74	36.172	5.32	2.54	0.52	24.325	360.9	0.000
5	24.53	36.230	5.51	4.91	1.20	24.432	350.7	0.018	5	24.53	36.206	5.84	7.96	1.69	24.414	352.4	0.018	5	24.53	36.206	5.84	7.96	1.69	24.414	352.4	0.018	5	24.53	36.206	5.84	7.96	1.69	24.414	352.4	0.018
10	24.00	36.392	4.58	14.04	1.39	24.714	323.9	0.035	10	24.06	36.394	4.54	9.99	1.91	24.697	325.5	0.035	10	24.06	36.394	4.54	9.99	1.91	24.697	325.5	0.035	10	24.06	36.394	4.54	9.99	1.91	24.697	325.5	0.035
15	24.40	36.591	4.28	10.83	2.51	24.744	321.0	0.051	15	24.32	36.514	4.08	15.23	1.49	24.710	324.2	0.051	15	24.32	36.514	4.08	15.23	1.49	24.710	324.2	0.051	15	24.32	36.514	4.08	15.23	1.49	24.710	324.2	0.051

STATION 1 G									RV DAVID PHILLIP DOLPHIN									GULF CRUISE 7305									STATION 1 H								
LATITUDE			LONGITUDE			MO/DAY/YR			MESSENGER TIME			BOTTOM			LATITUDE			LONGITUDE			MO/DAY/YR			MESSENGER TIME			BOTTOM								
31 10.5 N			114 42.0 W			05/24/73			0430 GMT			19 M			31 10.5 N			114 42.0 W			05/24/73			0655 GMT			19 M								
WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS				
120	04 KT		0	1013.2 MB	24.2 C	21.0 C	0/8				0	1013.5 MB	24.4 C	20.0 C	0/8				0	1013.5 MB	24.4 C	20.0 C	0/8				0	1013.5 MB	24.4 C	20.0 C	0/8				
Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD	Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD	Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD	Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD
0	24.78	36.268	5.37	4.57	0.74	24.386	355.2	0.000	0	24.90	36.386	5.37	4.74	1.05	24.438	350.2	0.000	0	24.90	36.386	5.37	4.74	1.05	24.438	350.2	0.000	0	24.90	36.386	5.37	4.74	1.05	24.438	350.2	0.000
5	24.69	36.302	5.51	3.72	2.55	24.438	350.1	0.018	5	24.94	36.391	5.41	3.72	1.10	24.430	351.0	0.018	5	24.94	36.391	5.41	3.72	1.10	24.430	351.0	0.018	5	24.94	36.391	5.41	3.72	1.10	24.430	351.0	0.018
10	24.52	36.580	4.47	9.82	3.37	24.700	325.3	0.035	10	24.62	36.592	4.28	6.77	2.88	24.679	327.2	0.035	10	24.62	36.592	4.28	6.77	2.88	24.679	327.2	0.035	10	24.62	36.592	4.28	6.77	2.88	24.679	327.2	0.035
15	24.51	36.631	4.17	13.71	2.69	24.741	321.3	0.051	15	24.64	36.658	4.16	9.99	3.04	24.722	323.1	0.051	15	24.64	36.658	4.16	9.99	3.04	24.722	323.1	0.051	15	24.64	36.658	4.16	9.99	3.04	24.722	323.1	0.051

STATION 1 I									RV DAVID PHILLIP DOLPHIN									GULF CRUISE 7305									STATION 1 J								
LATITUDE			LONGITUDE			MO/DAY/YR			MESSENGER TIME			BOTTOM			LATITUDE			LONGITUDE			MO/DAY/YR			MESSENGER TIME			BOTTOM								
31 10.5 N			114 42.0 W			05/24/73			0915 GMT			19 M			31 10.5 N			114 42.0 W			05/24/73			1055 GMT			19 M								
WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS				
110	05 KT		0	1013.2 MB	24.0 C	21.2 C	0/8				0	1013.2 MB	23.7 C	21.5 C	0/8	120	01 KT		0	1013.2 MB	23.7 C	21.5 C	0/8	120	01 KT		0	1013.2 MB	23.7 C	21.5 C	0/8				
Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD	Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD	Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD	Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD
0	24.89	36.400	5.16	3.55	0.95	24.452	348.9	0.000	0	24.81	36.368	4.28U	3.55	1.91	24.452	348.9	0.000	0	24.81	36.368	4.28U	3.55	1.91	24.452	348.9	0.000	0	24.81	36.368	4.28U	3.55	1.91	24.452	348.9	0.000
5	24.90	36.394	5.20	4.23	1.24	24.444	349.6	0.017	5	24.82	36.366	5.19	3.89	1.57	24.447	349.3	0.017	5	24.82	36.366	5.19	3.89	1.57	24.447	349.3	0.017	5	24.82	36.366	5.19	3.89	1.57	24.447	349.3	0.017
10	24.45	36.541	4.35	5.08	2.48	24.691	326.0	0.034	10	24.27	36.455	4.31	4.40	1.71	24.681	327.1	0.034	10	24.27	36.455	4.31	4.40	1.71	24.681	327.1	0.034	10	24.27	36.455	4.31	4.40	1.71	24.681	327.1	0.034
15	24.63	36.641	4.03	8.12	3.45	24.713	324.0	0.051	15	24.58	36.635	4.14	10.66	2.52	24.723	323.0	0.051	15	24.58	36.635	4.14	10.66	2.52	24.723	323.0	0.051	15	24.58	36.635	4.14	10.66	2.52	24.723	323.0	0.051

STATION 1 K									RV DAVID PHILLIP DOLPHIN									GULF CRUISE 7305									STATION 1 L								
LATITUDE			LONGITUDE			MO/DAY/YR			MESSENGER TIME			BOTTOM			LATITUDE			LONGITUDE			MO/DAY/YR			MESSENGER TIME			BOTTOM								
31 10.5 N			114 42.0 W			05/24/73			1300 GMT			20 M			31																				

M) THE OXYGEN BOTTLE ORDER FOR THIS CAST DIFFERS ON THE ORIGINAL DATA AND OXYGEN DETERMINATION SHEETS. THE OXYGEN VALUES ARE ASSUMED TO BE IN THE CORRECT ORDER.
N) THE SALINITY BOTTLE ORDER FOR THIS CAST DIFFERS ON THE ORIGINAL DATA AND SALINITY DETERMINATION SHEETS. THE SALINITY VALUES ARE ASSUMED TO BE IN THE CORRECT ORDER.

STATION 2 A										RV DAVID PHILLIP DOLPHIN										GULF CRUISE 7305										STATION 2 B									
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM											
31 19.0 N		114 29.0 W		05/24/73		1727 GMT		29 M		31 19.0 N		114 29.0 W		05/24/73		2050 GMT		29 M		31 19.0 N		114 29.0 W		05/24/73		2050 GMT		29 M											
WIND	170	SPEED	14 KT	WAVES	170 02 03	WEA	0	BAROMETER	1015.2 MB	DRY	23.8 C	WET	19.9 C	CLOUDS	0/8	WIND	160	SPEED	14 KT	WAVES	160 02 03	WEA	0	BAROMETER	1014.9 MB	DRY	25.8 C	WET	21.6 C	CLOUDS	0/8								
Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD	Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD	Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD	Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD				
0	23.76	35.743	5.33	1.15	0.40	24.294	363.9	0.000	0	23.92	35.743	5.25	0.84	0.30	24.247	368.4	0.000	0	23.92	35.743	5.25	0.84	0.30	24.247	368.4	0.000	0	23.92	35.743	5.25	0.84	0.30	24.247	368.4	0.000				
5	23.66	35.749	5.32	1.03	0.29	24.328	360.7	0.018	5	23.87	35.738	5.24	0.93	0.30	24.258	367.3	0.018	5	23.87	35.738	5.24	0.93	0.30	24.258	367.3	0.018	5	23.87	35.738	5.24	0.93	0.30	24.258	367.3	0.018				
10	23.52	35.756	5.32	1.52	0.73	24.375	356.2	0.036	10	23.49	35.749	5.34	1.41	0.60	24.378	355.9	0.036	10	23.49	35.749	5.34	1.41	0.60	24.378	355.9	0.036	10	23.49	35.749	5.34	1.41	0.60	24.378	355.9	0.036				
15	22.69	35.773	5.30	2.79	0.78	24.628	332.1	0.053	15	22.57	35.811	4.87	7.28	1.73	24.691	326.1	0.054	15	22.57	35.811	4.87	7.28	1.73	24.691	326.1	0.054	15	22.57	35.811	4.87	7.28	1.73	24.691	326.1	0.054				
25	21.95	35.775	4.90	2.43	1.20	24.839	312.0	0.086	25	21.93	35.776	4.78	6.60	3.05	24.845	311.4	0.086	25	21.93	35.776	4.78	6.60	3.05	24.845	311.4	0.086	25	21.93	35.776	4.78	6.60	3.05	24.845	311.4	0.086				

STATION 2 C										RV DAVID PHILLIP DOLPHIN										GULF CRUISE 7305										STATION 2 D									
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM											
31 19.0 N		114 29.0 W		05/24/73		2240 GMT		29 M		31 19.0 N		114 29.0 W		05/25/73		0037 GMT		29 M		31 19.0 N		114 29.0 W		05/25/73		0037 GMT		29 M											
WIND	160	SPEED	17 KT	WAVES	160 03 03	WEA	0	BAROMETER	1013.5 MB	DRY	27.0 C	WET	20.2 C	CLOUDS	0/8	WIND	160	SPEED	15 KT	WAVES	160 03 03	WEA	1	BAROMETER	1012.5 MB	DRY	24.1 C	WET	20.0 C	CLOUDS	4/8 CI								
Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD	Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD	Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD	Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD				
0	23.79	35.752	5.32	1.46	0.39	24.292	364.1	0.000	0	23.93	35.748	5.43	1.21	0.52	24.248	368.3	0.000	0	23.93	35.748	5.43	1.21	0.52	24.248	368.3	0.000	0	23.93	35.748	5.43	1.21	0.52	24.248	368.3	0.000				
5	23.76	35.752	5.34	1.03	0.18	24.301	363.3	0.018	5	23.65	35.748	5.47	1.27	0.40	24.330	360.5	0.018	5	23.65	35.748	5.47	1.27	0.40	24.330	360.5	0.018	5	23.65	35.748	5.47	1.27	0.40	24.330	360.5	0.018				
10	23.53	35.742	5.39	1.33	0.51	24.361	357.5	0.036	10	23.31	35.741	5.59	1.21	0.63	24.424	351.5	0.036	10	23.31	35.741	5.59	1.21	0.63	24.424	351.5	0.036	10	23.31	35.741	5.59	1.21	0.63	24.424	351.5	0.036				
15	22.50	35.792	5.13	3.28	1.45	24.696	325.6	0.053	15	22.46	35.777	5.29	5.76	2.29	24.696	325.6	0.053	15	22.46	35.777	5.29	5.76	2.29	24.696	325.6	0.053	15	22.46	35.777	5.29	5.76	2.29	24.696	325.6	0.053				
25	21.90	35.776	4.70	2.67	0.96	24.854	310.6	0.085	25	21.80	35.762	4.71	4.57	1.86	24.871	308.9	0.085	25	21.80	35.762	4.71	4.57	1.86	24.871	308.9	0.085	25	21.80	35.762	4.71	4.57	1.86	24.871	308.9	0.085				

STATION 2 E										RV DAVID PHILLIP DOLPHIN										GULF CRUISE 7305										STATION 2 F									
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM											
31 19.0 N		114 29.0 W		05/25/73		0237 GMT		29 M		31 19.0 N		114 29.0 W		05/25/73		0432 GMT		29 M		31 19.0 N		114 29.0 W		05/25/73		0432 GMT		29 M											
WIND	180	SPEED	05 KT	WAVES	180 02 03	WEA	1	BAROMETER	1012.2 MB	DRY	23.9 C	WET	20.8 C	CLOUDS	3/8 CI	WIND	170	SPEED	06 KT	WAVES		WEA		BAROMETER	1011.9 MB	DRY	23.3 C	WET	21.0 C	CLOUDS									
Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD	Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD	Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD	Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD				
0	23.53	35.747	5.45	1.52	0.50	24.365	357.2	0.000	0	23.60	35.752	5.34	1.58	0.90	24.348	358.7	0.000	0	23.60	35.752	5.34	1.58	0.90	24.348	358.7	0.000	0	23.60	35.752	5.34	1.58	0.90	24.348	358.7	0.000				
5	23.57	35.748	5.52	1.21	0.52	24.354	358.2	0.018	5	23.58	35.760	5.41	1.33	0.57	24.360	357.6	0.018	5	23.58	35.760	5.41	1.33	0.57	24.360	357.6	0.018	5	23.58	35.760	5.41	1.33	0.57	24.360	357.6	0.018				
10	23.52	35.742	5.48	1.46	0.73	24.364	357.2	0.036	10	23.57	35.754	5.37	1.64	0.67	24.358	357.8	0.036	10	23.57	35.754	5.37	1.64	0.67	24.358	357.8	0.036	10	23.57	35.754	5.37	1.64	0.67	24.358	357.8	0.036				
15	22.37	35.766	5.18	6.26	1.94	24.714	323.9	0.053	15	22.59	35.764	5.27	3.58	1.72	24.649	330.0	0.053	15	22.59	35.764	5.27	3.58	1.72	24.649	330.0	0.053	15	22.59	35.764	5.27	3.58	1.72	24.649	330.0	0.053				
25	21.85	35.767	4.84	6.26	3.71	24.861	309.9	0.085	25	22.00	35.779	4.75	6.26	3.39	24.828	313.0	0.085	25	22.00	35.779	4.75	6.26	3.39	24.828	313.0	0.085	25	22.00	35.779	4.75	6.26	3.39	24.828	313.0	0.085				

STATION 2 G										RV DAVID PHILLIP DOLPHIN										GULF CRUISE 7305										STATION 2 H									
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM											
31 19.0 N		114 29.0 W		05/25/73		0650 GMT		29 M		31 19.0 N		114 29.0 W		05/25/73		0825 GMT		29 M		31 19.0 N		114 29.0 W		05/25/73		0825 GMT		29 M											
WIND	110	SPEED	06 KT	WAVES		WEA		BAROMETER	1011.9 MB	DRY	23.3 C	WET	21.5 C	CLOUDS		WIND	070	SPEED	02 KT	WAVES		WEA		BAROMETER	1011.9 MB	DRY	23.1 C	WET	22.1 C	CLOUDS									
Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD	Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD	Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD	Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD				
0	23.65	35.762	5.26	1.27	1.09	24.341	359.4	0.000	0	23.87	35.786	5.12	1.27	0.40	24.294	363.9	0.000	0	23.87	35.786	5.12	1.27	0.40	24.294	363.9	0.000	0	23.87	35.786	5.12	1.27	0.40	24.294	363.9	0.000				
5	23.67	35.763	5.27	1.09	0.75	24.336	359.9	0.018	5	23.69	35.777	4.64	1.21	0.63	24.340	359.5	0.018	5	23.69	35.777	4.64	1.21	0.63	24.340	359.5	0.018	5	23.69	35.777	4.64	1.21	0.63	24.340	359.5	0.018				
10	23.46	35.760	5.36	1.15	0.40	24.395	354.3	0.036	10	23.47	35.766	5.19	1.09	1.50	24.397	354.1	0.036	10	23.47	35.766	5.19	1.09	1.50	24.397	354.1	0.036	10	23.47	35.766	5.19	1.09	1.50	24.397	354.1	0.036				
15	22.54	35.769	5.32	3.46	1.79	24.668	328.3	0.053	15	22.48	35.771	4.84	4.61	1.61	24.686	326.5	0.053	15	22.48	35.771	4.84	4.61	1.61	24.686	326.5	0.053	15	22.48	35.771	4.84	4.61	1.61	24.686	326.5	0.053				
25	22.14	35.783	4.84	4.73	2.24	24.791	316.5	0.085	25	22.15	35.798	4.59	7.45	3.49	24.800	315.7	0.085	25	22.15	35.798	4.59	7.45	3.49	24.800	315.7	0.085	25	22.15	35.798	4.59	7.45	3.49	24.800	315.7	0.085				

STATION 2 I										RV DAVID PHILLIP DOLPHIN										GULF CRUISE 7305										STATION 2 J									
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM											
31 19.0 N		114 29.0 W		05/25/73		1030 GMT		29 M		31 19.0 N		114 29.0 W		05/25/73		1230 GMT		28 M		31 19.0 N		114 29.0 W		05/25/73		1230 GMT		28 M											
WIND	080	SPEED	04 KT	WAVES		WEA		BAROMETER	1011.5 MB	DRY	23.8 C	WET	22.2 C	CLOUDS		WIND	00	SPEED	KT	WAVES	140 03 03	WEA	1	BAROMETER	1011.5 MB	DRY	23.6 C	WET	21.5 C	CLOUDS	2/8 CI								
Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD	Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD	Z	T	S	O2	CHL-A	PHAE0	SIGT	DT	DD	Z	T	S	O2	CHL-A								

STATION		3		B		RV DAVID PHILLIP DOLPHIN								GULF CRUISE 7305								STATION		3		C													
LATITUDE		31 25.0 N		LONGITUDE		114 17.0 W		MO/DAY/YR		05/26/73		MESSENGER TIME		0648 GMT		BOTTOM		29 M		LATITUDE		31 25.0 N		LONGITUDE		114 17.0 W		MO/DAY/YR		05/26/73		MESSENGER TIME		0900 GMT		BOTTOM		29 M	
WIND		SPEED		WAVES		WEA		BAROMETER		DRY		WET		CLOUDS		0/8		WIND		SPEED		WAVES		WEA		BAROMETER		DRY		WET		CLOUDS		0/8					
060		02 KT				0		1010.8 MB		23.6 C		21.2 C		0/8				100		06 KT				0		1010.2 MB		23.7 C		21.4 C		0/8							
Z		T		S		O2		CHL-A		PHAE0		SIGT		DT		DD		Z		T		S		O2		CHL-A		PHAE0		SIGT		DT		DD					
0				35.710		5.47		3.55		1.59								0				35.728		5.31		3.22		1.61											
5		23.64		35.716		5.44		4.06		0.76		24.309		362.5				10		23.68		35.723		5.33		4.57		0.90		24.303		363.1							
10		23.61		35.711		5.39		4.23		1.07		24.314		362.0				15		23.69		35.746		5.34		4.23		1.40		24.317		361.7							
15		23.68		35.728		5.32		5.42		1.50		24.306		362.7				25		23.74		35.765		5.19		6.94		1.74		24.317		361.8							

STATION		3		D		RV DAVID PHILLIP DOLPHIN								GULF CRUISE 7305								STATION		3		E													
LATITUDE		31 25.0 N		LONGITUDE		114 17.0 W		MO/DAY/YR		05/26/73		MESSENGER TIME		1055 GMT		BOTTOM		29 M		LATITUDE		31 25.0 N		LONGITUDE		114 17.0 W		MO/DAY/YR		05/26/73		MESSENGER TIME		1248 GMT		BOTTOM		29 M	
WIND		SPEED		WAVES		WEA		BAROMETER		DRY		WET		CLOUDS		0/8		WIND		SPEED		WAVES		WEA		BAROMETER		DRY		WET		CLOUDS		0/8					
360		13 KT				0		1010.2 MB		23.7 C		20.9 C		0/8				020		20 KT		140 04 04		0		1010.2 MB		22.3 C		21.1 C		0/8							
Z		T		S		O2		CHL-A		PHAE0		SIGT		DT		DD		Z		T		S		O2		CHL-A		PHAE0		SIGT		DT		DD					
0				35.751		5.27		4.57		0.74								0				35.785		5.10		6.43		1.45											
5		23.73		35.750		5.31		3.72		0.78		24.308		362.6				10		23.77		35.781		5.20		7.11		1.25		24.320		361.4							
10		23.74		35.747		5.29		4.06		1.40		24.303		363.1				15		23.78		35.773		5.22		6.77		1.27		24.311		362.3							
15		23.72		35.749		5.29		4.40		1.07		24.310		362.3				25		23.68		35.828		4.68		13.03		2.24		24.382		355.5							

STATION		3		F		RV DAVID PHILLIP DOLPHIN								GULF CRUISE 7305								STATION		3		G													
LATITUDE		31 25.0 N		LONGITUDE		114 17.0 W		MO/DAY/YR		05/26/73		MESSENGER TIME		1443 GMT		BOTTOM		29 M		LATITUDE		31 25.0 N		LONGITUDE		114 17.0 W		MO/DAY/YR		05/26/73		MESSENGER TIME		1650 GMT		BOTTOM		29 M	
WIND		SPEED		WAVES		WEA		BAROMETER		DRY		WET		CLOUDS		0/8		WIND		SPEED		WAVES		WEA		BAROMETER		DRY		WET		CLOUDS		0/8					
040		22 KT		140 04 04		3		1011.9 MB		23.2 C		16.9 C		0/8				020		12 KT		140 03 04		3		1016.3 MB		24.1 C		17.0 C		0/8							
Z		T		S		O2		CHL-A		PHAE0		SIGT		DT		DD		Z		T		S		O2		CHL-A		PHAE0		SIGT		DT		DD					
0				35.701		5.31		6.60		1.60								0				35.668		5.33		6.77		1.91											
5		23.61		35.705		5.54		7.28		1.57		24.309		362.4				10		23.61		35.680		5.31		8.29		1.35		24.291		364.2							
10		23.62		35.700		5.40		6.94		1.10		24.303		363.1				15		23.62		35.672		5.33		10.83		1.55		24.282		365.1							
15		23.63		35.701		5.21		6.43		1.61		24.301		363.3				25		23.55		35.688		5.20		6.77		1.75		24.314		362.0							

STATION		3		H		RV DAVID PHILLIP DOLPHIN								GULF CRUISE 7305								STATION		3		I													
LATITUDE		31 25.0 N		LONGITUDE		114 17.0 W		MO/DAY/YR		05/26/73		MESSENGER TIME		1855 GMT		BOTTOM		29 M		LATITUDE		31 25.0 N		LONGITUDE		114 17.0 W		MO/DAY/YR		05/26/73		MESSENGER TIME		2100 GMT		BOTTOM		29 M	
WIND		SPEED		WAVES		WEA		BAROMETER		DRY		WET		CLOUDS		0/8		WIND		SPEED		WAVES		WEA		BAROMETER		DRY		WET		CLOUDS		0/8					
300		09 KT		150 02 04		0		1013.2 MB		24.4 C		18.1 C		0/8				240		02 KT		140 01 03		0		1012.9 MB		24.8 C		18.9 C		0/8							
Z		T		S		O2		CHL-A		PHAE0		SIGT		DT		DD		Z		T		S		O2		CHL-A		PHAE0		SIGT		DT		DD					
0		24.00		35.692		5.08		4.23		0.59		24.185		374.3		0.000		0				35.789		4.76		4.57		0.58											
5		23.66		35.681		5.15		5.59		1.81		24.277		365.5		0.019		5		23.92		35.741		5.39		6.94		1.58		24.245		368.5							
10		23.62		35.686		5.16		8.97		1.80		24.292		364.1		0.037		10		23.85		35.737		5.04		13.71		1.57		24.263		366.9							
15		23.60		35.695		4.96		12.87		1.61		24.305		362.9		0.055		15		23.77		35.735		5.10		13.37		1.90		24.285		364.8							

STATION		3		J		RV DAVID PHILLIP DOLPHIN								GULF CRUISE 7305								STATION		3		K													
LATITUDE		31 25.0 N		LONGITUDE		114 17.0 W		MO/DAY/YR		05/26/73		MESSENGER TIME		2256 GMT		BOTTOM		29 M		LATITUDE		31 25.0 N		LONGITUDE		114 17.0 W		MO/DAY/YR		05/27/73		MESSENGER TIME		0043 GMT		BOTTOM		29 M	
WIND		SPEED		WAVES		WEA		BAROMETER		DRY		WET		CLOUDS		0/8		WIND		SPEED		WAVES		WEA		BAROMETER		DRY		WET		CLOUDS		0/8					
210		10 KT		160 01 03		0		1012.2 MB		25.0 C		21.0 C		0/8				190		10 KT		160 02 03		0		1011.5 MB		24.8 C		22.0 C		0/8							
Z		T		S		O2		CHL-A		PHAE0		SIGT		DT		DD		Z		T		S		O2		CHL-A		PHAE0		SIGT		DT		DD					
0				35.770		5.00		4.06		0.92								0		24.44		35.710		4.96		2.54		0.19		24.067		385.5		0.000					
10		23.92		35.747		5.12		15.23		1.49		24.250		368.1				10		23.92		35.705		5.46		4.23		0.43		24.218		371.1		0.038					
15		23.80		35.763		5.00		12.70		1.94		24.298		363.6				15		23.74		35.725		5.19		10.49		2.37		24.286		364.6		0.056					
25		23.91		35.994		3.97		5.92		3.56		24.439		350.0				25		23.93		35.976		4.29		10.49		2.69		24.420		351.9		0.092					

FOR CASTS F THROUGH K STATION 3, SLIGHTLY MORE SCATTER THAN NORMAL WOULD BE EXPECTED IN THE OXYGEN DATA BECAUSE THE REAGENT LEVELS WERE LOW, AND THERE WERE MINOR PROBLEMS WITH THE TITRATION APPARATUS.

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