

CRUISE NO: COCC9204 / OP9215
STATION NO: MP 04

UTC DATE: 10 Sept 92
HYDRO No.: 1

VESSEL: J.P. Tully

NISK. No.	SAL. No.	OXY. No.	OXY. TEMP	WIRE OUT m., db	LEFT THERMOMETER			MIDDLE THERMOMETER			RIGHT THERMOMETER		
					SERIAL	AUX	MAIN	SERIAL	AUX	MAIN	SERIAL	AUX	MAIN
13	1	1003		0	> BOTTLE DIDN'T TRIP?								
12	2	1004		50									
11	3	1005		100									
10	4	1008		150									
9	5	1009		200									
8	5b	1010		250									
7	6	1011		300									
6	7	1014		400									
5	8	1016		500									
4	9	1017		600									
3	10	1018		700	> BOTTLE DIDN'T TRIP?								
2	11	1020		800									
1	12	1022		900									
				1000									
				1100									
				1200									
				1300									
				1400									
				1500									
				1600									
				1700									
				1800									
				1900									
				2000									
				2100									
				2200									
				2300									
				2400									
				2500									
				2600									
				2700									
				2800									
				2900									
				3000									

ENTERED BY:
CHECKED BY:

Bottom Depth: 1335m
Cast No:
Wire Angle:

LOC UTC
START: 0624 1122
DOWN: 0628 1127
MESS:
IN: 0715

START POSITION
LAT: 48 38.95
LONG: 126 39.27

MESS. POSITION
LAT:
LONG:

END POSITION
LAT:
LONG:

GPS: LOR: SAT:

COMMENTS
Net tow?:
Rosette cast?: yes

4 1200.7 * 1302 dB

CRUISE NO: COCC9204 / OP9215
STATION NO: MP12UTC DATE: 11/9/92
HYDRO No.: 2

VESSEL: J.P. Tully

NISK. No.	SAL. No.	OXY. No.	OXY. TEMP	WIRE OUT m..db	LEFT THERMOMETER			MIDDLE THERMOMETER			RIGHT THERMOMETER		
					SERIAL	AUX	MAIN	SERIAL	AUX	MAIN	SERIAL	AUX	MAIN
22	13	1003	16.6	0									
				"2.5"	16.10	16.114							
21	14	1004	12.6	50									
				50.2	10.529	10.534							
20	15	1005	11.42	100									
				100.3	8.333	8.343							
19	16	1008	—	150									
				149.7	7.036	7.039							
18	17	1009	—	200									
				198.1	6.330	6.334							
17	18	1010	—	300									
				303.5	5.597	5.599							
16	19	1011	10.2	400									
				405.0	4.764	4.768							
15	20	1014	8.8	600									
				601.9	4.123	4.125							
14	21	1016	7.24	800									
				805.0	3.581	3.580							
13	22	1017	8.0	1000									
				1001.9	3.220	3.213							
12	23	1018	8.0	1200									
				1201.3	2.826	2.825							
11	24	1020	7.8	1400									
				1401.8	2.535	2.533							
10	25	1022	7.6	1600									
				1600.2	2.296	2.293							
9	26	1025	7.42	1800									
				1800.9	2.100	2.097							
8	27	1026	6.8	2000									
				2000.6	1.957	1.953							
7	28	1027	6.64	2200									
				2200.1	1.849	1.844							
6	29	1028	6.2	2400									
				2394	1.771	1.766							
5	30	1029	6.4	2600									
				2598.8	1.697	1.690							
4	31	1030	6.02	2800									
					1.664	1.657							
3	32	1031	6.8										
					1.664	1.657							
2	33	1032	7.0	3000									
					1.658	1.650							
1	34	1033	7.6										
					1.658	1.650							

lanyard hung up - no sample

bottles did not release from Rosette

ENTERED BY:
CHECKED BY:Bottom Depth: 3320 → 3030
Cast No:
Wire Angle:LOC UTC
START: 4
DOWN: .
MESS:
IN:START POSITION
LAT: 48 58.78
LONG: 130 42.05MESS. POSITION
LAT:
LONG:END POSITION
LAT:
LONG:

GPS: LOR: SAT:

COMMENTS
Net tow?:
Rosette cast?:Pump - B 42-63
Temp N 42-63
Sal F 42-63
Oxy L 42-632799.6
2801.0
2995.0
2998.7

32 2995

32 2995

Thermistors

Copper

UTC DATE: 13/9/92
HYDRO No.: 3

VESSEL: J.P. Tully

ENTERED BY:

CHECKED BY:

Bottom Depth: 3660

Cast No: 3

Wire Angle:

LOC	UTC
1	1
2	2
3	3
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97	97
98	98
99	99
100	100

START: 10214

DOWN:

MESS:

IN:	10323
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START POSITION

LAT: 49 17.68

LONG: 134 42.94

MESS. POSITION

LAT:

LONG:

END POSITION

LAT: 49 18.980

LONG: 134 46.0 95

GPS: LOR: SAT:

COMMENTS

Net tow?:

Rosette cast?: yes

0214

last bottle 0323

$$\text{dup}_{1002^0} \rightarrow 1001.2$$

didn't send
firing signals

156 set noise
by
no random set

11 19 fired
at launch

CRUISE NO:
STATION NO:

COCC9204 / OP9215
MP20

UTC DATE:
HYDRO No.:

$Mn^{2+} + O_2 \rightarrow Mn^{4+}O_2 + NaOH + NaI$
13/9/92
413

VESSEL: J.P. Tully

ENTERED BY: Marie

CHECKED BY:

NISK. No.	SAL. No.	OXY. No.	OXY. TEMP	WIRE OUT m..db	LEFT THERMOMETER		MIDDLE THERMOMETER			RIGHT THERMOMETER							
					TIME SERIAL	AUX	MAIN	SERIAL	AUX	MAIN	SERIAL	AUX	MAIN				
22	55	1072	13.6	0	1044		14.107										
				0.7													
21	56	1069	10.8	50	1043		9.420?										
				48.3													
20	57	1068	9.0	2x100	1041		6.942?										
				100.3	101.1												
18	58	1067	8.2	150	1040		5.554										
				151.1													
17	59	1065	8.0	200	1038		4.980?		water "warmed" from 4.965 to 4.992 within 2.50ms								
				203.8													
16	60	1064	7.4	300	1036		4.178										
				303.2													
15	61	—	—	400	1033	X	Lanyard no release										
				399.8													
14	62	1063	6.8	600	1029		3.714?										
				601.9													
13	63	1062	6.8	800	1025		3.350										
				802.7													
12	64	—	—	1000	1021	X	Lanyard no release										
				999.6													
11	65	1061	6.4	1200	1017		2.744										
				1198.5													
10	66	1060	6.2	1400	1013		2.472										
				1401.3													
9	67	1058	6.4	1600	1010		2.272										
				1600.9													
8	68	1057	6.2	1800	1003		2.110										
				1800.5													
7	69	1056	6.0	2x2000	959		1.956										
				2004.6													
6	70	1054	6.0	2200	954		1.852										
				2198.7													
4	72	1051	6.2	2400	949		1.766										
				2396.2													
3	7225	—	—	2600	944	X	LANYARD DIDNT Release, no sample										
				2600.9													
2	7374	1050	6.2	2800	941		1.625										
				2799.4													
1	7475	1049	6.8	3000	937		1.586										
				3000.1													

Water "warmed" from 4.965 to 4.992 within 2.50ms.

Bottom Depth:

Cast No:

Wire Angle:

LOC UTC

START: 0839 0m

DOWN: 10937 3000m

MESS: 1044 0m

IN: 1044 0m

START POSITION

LAT: 49 35.614

LONG: 138 30.615

MESS. POSITION

LAT:

LONG:

END POSITION

LAT: 49 36.954

LONG: 138 39.384

GPS: LOR: SAT:

COMMENTS

Net tow?:

Rosette cast?: yes

VESSEL:

ENTERED BY:

CHECKED BY:

Bottom Depth:

Cast No:

Wire Angle: 78°

LOC	UTC
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START: 10820

DOWN:	
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MESS: 03/8 | 10/8

PIN: 0343 1043

IN 0445 1145

START POSITION

LAT: 49 34 00

LONG: 13840.00

MESS. POSITION

LAT:

LONG:

END POSITION

LAT: 49 35.80

LONG: 13839.46

GPS: LOR: SAT:

COMMENTS

Net tow?:

Rosette cast?:

$\angle 12^\circ$ at base

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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Start 1149 11/2

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Ind 13.20

100

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[illegible]

CRUISE NO: COCC9204 / OP9215
STATION NO: MP26

UTC DATE: 17/7/92
HYDRO No.: 5B

VESSEL: J.P. Tully

NISK. No.	SAL. No.	OXY. No.	OXY. TEMP	WIRE OUT m..db	LEFT THERMOMETER		MIDDLE THERMOMETER			RIGHT THERMOMETER		
					UTC TIME SERIAL	TEMP (WIRE) AUX MAIN	SERIAL	AUX	MAIN	SERIAL	AUX	MAIN
20	79	1003	14.0	0								
19	80	1004	—	50	1142	13.281						
18	81	1005	9.8	100	1141	8.626						
17	82	1008	9.6	150	1140	5.304						
16	83	1009	9.2	200	1139	4.764						
15	84	1010	9.6	300	1136	4.464						
14	85	1011	9.6	400	1134	4.260						
13	86	1014	9.4	600	1132	4.052						
12	87	1016	9.4	800	1126	3.692						
11	88	1017	9.0	1000	1122	3.309						
10	89	1018	8.2	1200	1119	2.957						
9	90	1020	—	1400	1113	2.674						
8	91	1022	9.6	1600	1104	2.435						
7	92	1025	8.0	1800	1056	2.247						
6	93	1026	7.4	2000	1050	2.069						
5	94	1027	7.2	2200	1045	1.931						
4	95	1028	7.6	2400	1038	1.856						
3	96	1029	7.2	2600	1031	1.789						
2	97	1030	6.8	2800	1022	1.708						
1	98	1031	6.6	3000	1011	1.640						
				3000	1000	1.590						

ENTERED BY: NMP
CHECKED BY:

Bottom Depth:
Cast No:
Wire Angle:

LOC UTC
START: 10903
DOWN:
MESS:
IN: 1145

START POSITION
LAT: 4958.44
LONG: 14459.41

MESS. POSITION
LAT: 4957.56
LONG: 14459.33

END POSITION
LAT: 4956.00
LONG: 14459.96

GPS/ LOR: SAT:

COMMENTS
Net tow?:
Rosette cast?: ☒
Pres 161 - 186
Temp 161
Sal
oxy

B
Z
F
L

CRUISE NO: 92-15
STATION NO: MP26

UTC DATE: 17/9/92
HYDRO No.: 5A

VESSEL: Tully

ENTERED BY:
CHECKED BY:

NISK. No.	SAL. No.	OXY. No.	OXY. TEMP	WIRE OUT m..db	LEFT THERMOMETER			MIDDLE THERMOMETER			RIGHT THERMOMETER		
					SERIAL	AUX	MAIN	SERIAL	AUX	MAIN	SERIAL	AUX	MAIN
99	1032	6.0	3200	13051	15.5	1.80	6045	15.5	1.85	6554	15.5	29.60	
					15.8	1.81		15.7	1.85		15.7	29.59	
100	1033	5.4	3400	12058	15.6	1.77	10265	15.4	1.77	6054	15.7	31.30	
					16.0	1.78		15.7	1.77		15.8	31.26	
101	1034	5.2	3600	12384	15.8	1.73	6545	15.8	1.77	6564	15.9	35.40	
					16.1	1.735		15.8	1.78		15.8	35.36	
102	1035	4.8	3800	10261	16.0	1.75	6044	16.0	1.81	10277	16.1	30.15	
	1040	8.8			16.2	1.75		16.2	1.83		16.2	30.18	
103	1036	5.6	4000	12062	17.2	1.79	13056	17.0	1.27	10652	16.8	33.40	
	1042	8.6			17.3	1.79		17.2	1.28		16.8	33.40	
104	1038	6.0	4200	12064	16.6	1.78	12386	17.0	2.45	10653	17.0	35.10	
	1043	8.4			16.9	1.79		17.0	2.45		17.1	35.12	
								</					

Bottom Depth:
Cast No: 1
Wire Angle: 0-15°

LOC UTC
START: 10243
DOWN: 2050 0350
MESS: 2120 0420
IN: 2320 10620

START POSITION
LAT:
LONG:

MESS. POSITION
LAT: 49° 58.501
LONG: 145° 00.560

END POSITION
LAT: 49° 58.522
LONG: 145° 00.559

GPS: LOR: SAT:

COMMENTS

Net tow?:
Rosette cast?:

Bottle cast first

ENTERED BY:
CHECKED BY:

Bottom Depth: 4059
Cast No:
Wire Angle: 15-8

	LOC	UTC
START:	1820	0120
DOWN:		
MESS:	1939	0239
IN:		

START POSITION
LAT:
LONG:

MESS. POSITION
LAT: 52 37.188
LONG: 145 03.471

END POSITION
LAT:
LONG:

GPS:	LOR:	SAT:
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COMMENTS	
Net tow?:	
Rosette cast?:	☒

[illegible]

CRUISE NO: COCC9204 / OP9215
 STATION NO: 11209

 UTC DATE: 20/9/92
 HYDRO No.: 75

VESSEL: J.P. Tully

 ENTERED BY: NHP
 CHECKED BY: ?

NISK. No.	SAL. No.	OXY. No.	OXY. TEMP	WIRE OUT m., db	LEFT THERMOMETER			MIDDLE THERMOMETER			RIGHT THERMOMETER		
					SERIAL	AUX	MAIN	SERIAL	AUX	MAIN	O ₂ SERIAL	AUX	MAIN
21	130	1045	11.0	0							1.095		
				8.0	2100	11.2042		853470					
20	131	1046	7.4	50							1.258	plot	
				48.3	2058	5.683		750					
19	132	1047	—	100									
				101.9	2056	3.980		~725400					
18	133	1048	6.2	150							.333	02.336	plot
				150.5	2054	3.743		730092					
17	134	1049	5.8	200							.209		
				178.0	2052	3.645		730853					
16	135	1050	6.2	300							.092		
				300.6	2050	3.812		731260					
15	136	1051	6.0	400							.089		
				401.9	2048	3.748		731984					
14	137	1052	5.058	600							.068		
				601.5	2044	3.427		738180					
13	138	1054	5.6	800							.067		
				799.3	2041	3.078		.734830					
12	139	1056	5.44	1000							.075		
				998.4	2037	2.765		731839					
11	140	1057	5.42	1200							.092		
				1201.4	2032	2.511		.729650					
10	141	1058	4.8	1400							.125		
				1401.5	2027	2.298		.728151					
9	142	1060	4.8	1600							.162		
				1600.5	2021	2.142		729529					
8	143	1061	5.0	1800							.206		
				1801.3	2015	1.997		727080					
7	144	1062	4.8	2000							.259		
				2000.0	2008	1.876		.727005					
	6 2201.1	145	1063	4.2							.299	plot	
146	(5 2198.1)	145b	1064	—									
147	1	146	1065	4.42							.346		
				2400	2000	1.785		.727335					
				2399.7	1952	1.714		.728800					
148	3	147	1067	4.4							.377	378	
			1087	3.2									
149	2	148	1068	4.0							.412	410	
			1090	5.0									
150	1	149	1069	4.64							.454	476	
			1092	4.8									
				2999.6	1925	1.565		.730930					

 Bottom Depth: 4060 m
 Cast No:
 Wire Angle:

LOC		UTC
START:		1825
DOWN:		
MESS:		1925
IN:		2100

START POSITION	
LAT:	54 59.94
LONG:	144 59.46

Start upcast

MESS. POSITION	
LAT:	55 00.82
LONG:	144 58.88

END POSITION	
LAT:	55 01.72
LONG:	144 58.70

GPS: LOR: SAT:

COMMENTS

 Net tow?:
 Rosette cast?: ☒

VESSEL: TULLY

ENTERED BY:

CHECKED BY:

Bottom Depth: 4060

Cast No: _____

Wire Angle:

LOC	UTC
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97	97
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99	99
100	100

START: 0421 | 11/21

DOWN: 544

MESS: 539 | 1239

IN: 1-57

START POSITION

LAT:

LONG:

MESS. POSITION

LAT: 54 59 755

LONG: 14501273

END POSITION

LAT:

LONG:

GPS: LOR: SAT:

COMMENTS

Net tow?:

Rosette cast?

[illegible]

CRUISE NO: COCC9204 / OP9215
 STATION NO: MP26

 UTC DATE: 22 SEPT 1992
 HYDRO No.: 8A

VESSEL: J.P. Tully

 ENTERED BY: - NRIP
 CHECKED BY: ?

 Bottom Depth: 4265
 Cast No:
 Wire Angle:

	LOC	UTC
START:		1000
DOWN:		
MESS:		1047
IN:		

START POSITION	
LAT:	50 00.41
LONG:	144 58.63

MESS. POSITION	
LAT:	50 00.79
LONG:	144 58.74

END POSITION	
LAT:	
LONG:	

GPS:	LOR:	SAT:

COMMENTS	
Net tow?:	
Rosette cast?:	✓
#16 - TOP VALVE LOOSE	
CHECK O ₂ VALUES	

NISK. No.	SAL. No.	OXY. No.	OXY. TEMP	WIRE OUT m..db	LEFT THERMOMETER			MIDDLE THERMOMETER			RIGHT THERMOMETER		
					DEPTH SERIAL	TIME AUX	TEMP MAIN	COND. SERIAL	AUX	MAIN	O ₂ SERIAL	AUX	MAIN
3 - 34	22	155	1045	13.6	0	119		13.250	894204		1057		
38 - 48	21	156	1046	10.8	50	50.2		8.720	803800		1.234		
			1087	10.2							1.221		
72 - 101	20	157	1047	8.6	100	100.1		5.720	746942		1.136		
			1090	7.6							1.130		
	19	158	1048	8.0	150	142.7	12.09	4.860	748221	.49	.763		
	18	159	1049	7.4	200	200.6	12.08	4.530	747202	.2	.527		
166 - 190	17	160	1072	7.2	300	296.3	12.05	4.154	742255	.49	.294		
194 - 218	16	161	1051	6.8	400	402.0	12.02	4.047	744182	.47	.199		
222 - 242	15	162	1052	6.2	600	599.6	11.58	3.715	742836	.09	.100		
	14	163	1054	6.0	800	797.2	11.54	3.276	738186	.72	.083		
	13	DUP 164	1056	5.8		799.8					.093		
286 - 303	12	164.5	1057	5.6	1000	999.0	11.49	2.935	734725	.30	.072		
	11	1656	1058	5.2	1200	1201.1	11.44	2.635	731870	.31	.073		
326 - 346	10	1667	1060	6.2	1400	1396.9		2.409	730112	.8	.104		
	9	1678	1061	6.0	1600	1598.0	11.35	2.217	728900	.13	.145		
	8	1689	1062	5.6	1800	1800.2	11.29	2.096	728076	.14	.194		
397 - 424	7	16920	1063	5.2	2000	1999.6	11.22	1.923	727893	.20	.250		
428 - 451	6	1701	1064	5.2	2200	2195.7	11.16				.293		
	5	FIONA				2198.3		1.836	728314	.35			
455 - 481	4	17X2	1065	5.2	2400	2399.1	11.10	1.752	728713	.51	.331		
	3	1723	1067	4.8	2600	2600.4	11.03	1.678	729350	.677	.370		
	2	1784	1068	4.8	2800	2800.6	10.55	1.678	730143	.616	.410		
	1	1745	1069	4.8	3000	2999.7	10.47	1.574	731207		.453		

VESSEL:

ENTERED BY: *AB*

CHECKED BY:

Bottom Depth: 4265

Cast No:

Wire Angle:

LOC	UTC
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START: 0615 | 13/5

DOWN: 0735

MESS: 07161416

~~N:kr~~ 07441.

START POSITION

LAT: 49 59 981

LONG: 145 00 28

MESS. POSITION

LAT: _____

LONG: _____

END POSITION

LAT:

LONG:

GPS LOR: SAT:

COMMENTS

Net tow?:

Rosette cast? ☒

Quesada, J. O.

31 Oct 1965

0744

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1. *Journal of Management Education*, 2000, 24(1), 10-19.

3200
0.00

[illegible]

CRUISE NO: COCC9204 / OP9215
 STATION NO: MR16

 UTC DATE: Sep 26/92
 HYDRO No.: 9

346

VESSEL: J.P. Tully

 ENTERED BY: - NHP/MR
 CHECKED BY: ?

O ₂	NISK. No.	SAL. No.	OXY. No.	OXY. TEMP	WIRE OUT m..db	LEFT THERMOMETER				MIDDLE THERMOMETER				RIGHT THERMOMETER			
						depth SERIAL	time CUT TEMP AUX	time MAIN		SERIAL	AUX	MAIN		SERIAL	AUX	MAIN	
1055	21	181	1045	12.0	10	10.2	13.22	5	0416								
1210	20	182	1046	9.8	50	49.9	9.158		0414								
1134	19	183	1047	8.2	100	99.8	6.375		0413								
853	18	184	1048	7.4	150	152.6	5.378		0411								
121	17	185	1049	6.8	200	200.2	4.795		0409								
315	16	186	1051	7.0	300	300.9	4.178		0407								
1227	15	187	1052	6.2	400	397.8	3.986		0404								
122	14	188	1054	5.8	600	607.7	3.672		0400								
113	13	189	1056	5.8	800	807.1	3.346		0354								
1084	12	190	1057	5.6	1000	1002.5	3.014		0349								
	11	191	————	————	1200	1194.6	2.687		0346	NISKIN Busted							
	10	192	————	————	1400	1390.9	2.466		0342	Support broken on NISKIN							
	9	193	————	————	1600	1591.3	2.266		0339	Cap lost							
	8	194	————	————	1800	1804.6	2.084		0331	Support on NISKIN Broken							
	7	195	————	————	2000	1986.3	1.956		0327	Bottle broken							
293	6	196	1058	4.8	2200	2200.2	1.845		0324								
327	5	197	1060	4.8	2400	2396.2	1.768		0319								
363	4	198	1061	4.6	2600	2599.4	1.688		0314								
366	3	199	1062	4.8		2598.6	1.687		0313	Lanyard in cap.							
399	2	200	1063	4.6	2800	2800.0	1.635		0307								
438	1	201	1064	4.6	3000	3000.2	1.589		0302								

 Bottom Depth: 3760
 Cast No:
 Wire Angle:

LOC	UTC
START:	10217
DOWN:	
MESS:	10302
IN:	10416

START POSITION
LAT: 51 04.27
LONG: 140.14.16

start up MESS. POSITION
LAT: 51 04.66
LONG: 140.14.39

END POSITION
LAT: ?
LONG: ?

GPS	LOR:	SAT:
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COMMENTS
Net tow?:
Rosette cast?: ☒

 no CO₂

1065	14.6
1067	14.4
1068	14.4

CHECKED BY:

Wire Angle:

IN:

LONG:

LONG:

LONG:

GPS: LOR: SAT:

Rosette cast?

[illegible]