

SARAWAK INLET

Rosette 1: 23 bottle

CRUISE NO:

9403

UTC DATE:

Sept. 6th 1994

VESSEL: John P. Tully

STATION NO:

Test

HYDRO No.:

1

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	23	2028	16.4	-0.42	✓	✓				
22	22	2027	15.6	5	✓	✓				
21	21	2025	15.2	10	✓	✓				
20	20	2022	15.0	15	✓	✓				
19	19	2021	14.6	20	✓	✓				
18	18	2020	14.6	25	✓	✓				
17	17	2019	13.2	30	✓	✓				
16	16	2018	12.4	40	✓	✓	Current went up + down but trig. NOT confirmed			
15	15	2017	11.4	49	✓	✓				
14	14	2015	11.4	75	✓	✓				
13	13	2014	11.4	75	✓	✓				
12	12	2013	11.2	75	✓	✓	Note: All samples taken are numbered to match the Niskin, i.e., Oxy #, Sal #, Niskin #.			
11	11	2012	11.0	99	✓	✓				
10	10	2010	11.6	99	✓	✓				
9	9	2009	10.6	100	✓	✓				
8	8	2008	10.6	150	✓	✓				
7	7	2007	10.8	150	✓	✓				
6	6	2006	10.8	150	✓	✓				
5	5	2005	10.8	173	✓	✓				
Therm. 4	4	2004	10.4	173	✓	✓	66314 1647	17.1 ds 9.335	T 431	9.391
3	3	2002	10.8	173	✓	✓				
2	2	2001	10.8	173	✓	✓				
1	1	2000	10.6	175	✓	✓				

ENTERED BY: Marie R
CHECKED BY:

Bottom Depth: 197
Cast No: 1 and 2

LOC UTC
Begin: 2351
Bottom: 2357
End: 0024

BEGIN POSITION (GPS)
LAT: 48° 38' 34.4
LONG: 123° 30' 13.6

BOTTOM POSITION (GPS)
LAT: 48° 38' 36.2
LONG: 123° 30' 11.0

END POSITION (GPS)
LAT: 48° 38' 22.8
LONG: 123° 29' 49.2

Comments
File 94030001 Down
94030002 Up

Rosette 1: 23 bottle

CRUISE NO:

9403

UTC DATE: 7 SEP 1994

VESSEL: John P. Tully

STATION NO:

MP04

HYDRO No.:

4.

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	24	1111	16.9	10	10	✓				
22	25	1119	12.8	50	50	✓				
21	26	1114	11.5	100	100	✓				
20	27	1113	11.7	100	101	✓				
19	28	1112	11.6	100	99.6	✓				
18	29	1120	11.8	150	149	✓				
17	30	1129	11.1	200	198	✓				
16	31	1128	12.1	300	301	✓	Leaking Niskin, lanyard caught			
15	32	1126	10.6	400	403	✓				
14	33	1125	11.8	400	402	✓				
13	34	1122	12.1	400	403	✓				
12	35	1121	11.9	600	603	✓				
11	36	1135	10.5	800	795	✓				
10	37	1134	10.8	1000	1013	✓				
9	38	1133	10.4	1000	1006	✓				
8	39	1132	11.8	1000	1000	✓				
7	40	1131	10.3	1200	1188	✓				
6	41	1130	10.9	1200		✓				
5	42	1141	10.0	1200		✓				
* 4	43	1140	10.9	B-20m		✓	T647	2.807	T431	5.520
3	44	1139	10.2	B-20		✓				
2	45	1138	10.6	B-20		✓				
1	46	1137	10.9	B-20		✓				

ENTERED BY: J.W.

CHECKED BY:

Bottom Depth: 1290

3 down

Cast No: 004 up

LOC UTC

Begin: 2006

Bottom: 2034

End: 2119

BEGIN POSITION (GPS)

LAT:

LONG:

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

P6314: 1294

Rosette 1: 23 bottle

CRUISE NO:

9403

UTC DATE:

Sept 8th

VESSEL: John P. Tully

STATION NO:

MP 13

HYDRO No.:

6

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	47	2002 ⁸	15.4	10	9	✓				
22	48	2001	11.8	50	49	✓				
21	49	2002	9.8	100	100	✓				
20	50	2004	9.3	150	150	✓				
19	51	2005	8.6	200	199	✓				
18	52	2006	8.2	300	299	✓				
17	53	2007	7.9	400	403	✓				
16	54	2008	8.5	400	402	✓				
15	55	2009	8.3	600	598	✓				
14	56	2010	8.6	800	798	✓				
13	57	2012	8.4	1000	1005	✓	Trig not confirmed	ok		
12	58	2013	8.3	1200	1201	✓				
11	59	2014	7.3	1400	1400	✓				
10	60	2015	8.0	1600	1603	✓				
9	61	2017	7.4	1800	1797	✓				
8	62	2018	8.1	2000	2002	✓				
7	63	2019	7.6	2200	2201	✓				
6	64	2020	8.4	2400	2394	✓	changed speed to	1.2 m/s		
5	65	2021	7.4	2600	2598	✓				
4	66	2022	8.4	2800	2800	✓	P647 1.637	-	P 280.8	
3	67	2025	7.4	2800	2800	✓				
2	68	2027	8.4	8-20	3017	✓				
1	69	2000	5.2	18-20	3020	✓			1 Missed trip. No high current	

ENTERED BY: 7.6
CHECKED BY: MR

Bottom Depth: ~ 2950
Cast No: 5 Downcast
6 Upcast

	LOC	UTC
Begin:		1944
Bottom:		2032
End:		2146

BEGIN POSITION (GPS)
LAT: 49° 02' . 638
LONG: 131° 39' . 883

BOTTOM POSITION (GPS)	
LAT:	49° 02' 92.7"
LONG:	131° 39' 23.8"

END POSITION (GPS)	
LAT:	49° 03 379
LONG:	131° 38. 317

Comments

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

SEP. 9/94

VESSEL: John P. Tully

STATION NO:

MP 18

HYDRO No.:

7/8

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	70	2000	11.0	10	10	✓				
22	71	2001	10.5	50	49	✓				
21	72	2002	7.4	100	99	✓				
20	73	2004	7.8	150	149	✓				
19	74	2005	2.2	200	198	✓				
18	75	2006	6.4	300	300	✓				
17	76	2007	5.8	400	399	✓				
16	77	2008	5.9	600	599	✓				
15	78	2009	5.9	800	800	✓				
14	79	2010	5.6	1000	1000	✓				
13	80	2012	5.3	1200	1200	✓				
12	81	2013	5.4	1400	1399	✓				
11	82	2014	4.9	1600	1598	✓				
10	83	2015	5.2	1800 *	1799	✓	T 451 2093	T 798	2.098	
9	84	2017	5.1	2000	2000	✓				
8	85	2018	4.5	2200	2202	✓				
7	86	2019	4.7	2400	2401	✓				
→ 6	87	2020	—	2600	2600	✓				
5	88	2021	4.8	2800	2801	✓				
4	89	2022	4.1	3000 *	2999	✓	T 647	T 577	A 6314	
3	90	2025	4.6	3250	3248	✓				
2	91	2027	4.3	3500	3500	✓ not.				
1	92	2028	4.2	B-25	3869	✓				
Bottle 6 not closed.										

ENTERED BY: Bm

CHECKED BY:

Bottom Depth: 3816

Cast No: 7 down
8 up.

LOC UTC

Begin: 2030-2133

Bottom: 2133

End: 2308

BEGIN POSITION (GPS)

LAT: 4925.07

LONG: 13639.67

BOTTOM POSITION (GPS)

LAT: 4924.85

LONG: 13639.78

END POSITION (GPS)

LAT: 4924.86

LONG: 13639.78

Comments

green line plotting?
Digital TO

PASHA - when arriving P26 # 11 14:51 - 15:02
 #9 14:17 & 14:33 12 1502 - 15:04
 #10 14:33 & 14:51 13 1504 - 15:07

Rosette 2: 12 bottle

CRUISE NO: 9403/1

UTC DATE: 11 sept '94

VESSEL: John P. Tully

STATION NO: MP26

HYDRO No.: 10-13 11

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample * Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)

							O ₂		bottle sal.	
25	11	93	2000	12.9	10 ?	✓	274.80		32.533	
50	10	94	2001	10.4	25	✓	302.53		32.674	
75	9	95	2002	8.9	50 (60)	✓	297.83		32.757	
100	8	96	2004	8.2	75 (100)	✓	284.10		32.953	
150	7	97	2005	7.6	100 (150)	✓	212.14		33.703	
200	6	98	2006	6.4	150 (200)	✓	158.27		33.831	
300	5	99	2007	6.3	200 (300)	✓	112.43		33.862	
400	4	100	2008	6.3	300 (400)	✓	73.49		33.957	
400	3	101	2009	6.5	400	✓	73.74		33.959	
1000	2	102	2010	5.8	400 (1000)	✓	21.59		34.340	
1000	* 1	103	2012	5.3	1000	✓	22.82	22.62	34.346	

ENTERED BY: FW

CHECKED BY: MR

Bottom Depth: 4204

Cast No: 9 AND 10 to 13

LOC

UTC

Begin: 1417

Bottom: 1433

End: 1507

BEGIN POSITION (GPS)

LAT: 50°00.371

LONG: 144°58.258

Bottom

LAT: 50°00.346

LONG: 144°58.254

END

LAT: 50°00.227

LONG: 144°58.306

P2099 996.4

T679 2.995 = 3.000

* 2 bottles tripped at 1000m consequently original sample depths must be shifted as shown in first column on the left hand side of sheet. No 10m sample was taken!

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

11 Sept '94

VESSEL: John P. Tully

STATION NO:

MP26

HYDRO No.:

15

#14 15:40 & 16:39
#15 16:43 & 18:26

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23				—						
22				—						
21	104	2041	7.4	500	500	✓				
20	105	2043	7.4	600	599	✓				
19	106	2044	* 7.4	800	798	✓				
18	107	2045	0.9	1000	1000	✓				
17	108	2047	5.9	1200	1199	✓				
16	109	2049	5.9	1400	1400	✓				
15	110	2051	6.0	1600	1600	✓				
14	111	2052	5.2	1800	1800	✓				
13	112	2057	3.4	2000	2000	✓				
12	113	2055	4.5	2200	2200	✓				
11	114	2056	2.2	2200	2200	✓				
* 10	115	2057	1.2	2400	2400	✓	T451	1.780	T798	1.784
9	116	2058	1.2	2600	2599	✓				
8	117	2059	1.1	2800	2800	✓				
7	118	2060	2.2	3000	3000	✓				
6	119	2061	2.3	3200	3200	✓				
5	120	2062	1.6	3400	3401	✓				
* 4	121	2063	2.8	3600	3601	✓	T647 -1.502	T577 1.488	P6374	3611
3	122	2064	3.6	3800	3801	✓	→ also			
2	123	2065	4.0	4000	4001	✓	→ also			
1	124	2066	12.8?	4200	4201	✓	Stay here a while, BM & JL take care of			
1	124	2067	2.3	4200	4201	✓				winch

ENTERED BY: FW

CHECKED BY: MR

Bottom Depth: 4211

Cast No: 94030014 Down
94030015 Up

	LOC	UTC
Begin:		1540
Bottom:		1639
End:		

BEGIN POSITION (GPS)

LAT: 50° 00. 095

LONG: 144° 58. 808

BOTTOM POSITION (GPS)

LAT: 49° 59. 897

LONG: 144° 58. 261

END POSITION (GPS)

LAT: 50 00 04 N

LONG: 144 57 76 W

Comments

* CHANGED THERMOMETER TO FLUKE

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

18 SEP 1994

VESSEL: John P. Tully

STATION NO:

Wool

HYDRO No.:

17

[illegible]

ENTERED BY: 7. W.

CHECKED BY: MR

Bottom Depth: 92 m

Cast No: 94030016 Downcast

9403 0017 Upcast

LOC	UTC
0000	0000
0001	0001
0002	0002
0003	0003
0004	0004
0005	0005
0006	0006
0007	0007
0008	0008
0009	0009
0010	0010
0011	0011
0012	0012
0013	0013
0014	0014
0015	0015
0016	0016
0017	0017
0018	0018
0019	0019
0020	0020
0021	0021
0022	0022
0023	0023
0024	0024
0025	0025
0026	0026
0027	0027
0028	0028
0029	0029
0030	0030
0031	0031
0032	0032
0033	0033
0034	0034
0035	0035
0036	0036
0037	0037
0038	0038
0039	0039
0040	0040
0041	0041
0042	0042
0043	0043
0044	0044
0045	0045
0046	0046
0047	0047
0048	0048
0049	0049
0050	0050
0051	0051
0052	0052
0053	0053
0054	0054
0055	0055
0056	0056
0057	0057
0058	0058
0059	0059
0060	0060
0061	0061
0062	0062
0063	0063
0064	0064
0065	0065
0066	0066
0067	0067
0068	0068
0069	0069
0070	0070
0071	0071
0072	0072
0073	0073
0074	0074
0075	0075
0076	0076
0077	0077
0078	0078
0079	0079
0080	0080
0081	0081
0082	0082
0083	0083
0084	0084
0085	0085
0086	0086
0087	0087
0088	0088
0089	0089
0090	0090
0091	0091
0092	0092
0093	0093
0094	0094
0095	0095
0096	0096
0097	0097
0098	0098
0099	0099

Begin: 1504

Bottom: 1506

End: 1516

BEGIN POSITION (GPS)

LAT: 53° 55.277

LONG: 164° 59 425

BOTTOM POSITION (GPS)

LAT: 53° 55. 240

LONG: 164° 59' 38.2"

END POSITION (GPS)

LAT: 53°55' 22S

LONG: 164° 59.179

Comments

Rosette 1: 23 bottle

CRUISE NO:

9403 / 1

UTC DATE:

19 SEP 1994

VESSEL: John P. Tully

STATION NO:

W002

HYDRO No.:

18

NISK. No.	SAMPLE No.	↓ OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23										
22										
21										
20										
19										
18										
17										
16										
15										
14										
13										
12										
11										
10										
9										
8	128	2054	7.2	10	10	✓				
7	129	2043	7.2	50	49.99	✓				
6	130	2044	7.2	50	50.0	✓				
5	131	2045	6.2	75	75.9	✓				
* 4	132	2047	5.6	100	98.42	✓	1647	5.265	T 577	5251 98
3	133	2049	5.6	100		✓				
2	134	2051	5.6	150	150	✓				
> 1	135	2052	5.0	B-20	173	✓				

ENTERED BY:

CHECKED BY:

Bottom Depth: 195

Cast No: 94030018 D
94030019 UP

LOC UTC

Begin: 0350

Bottom: 0358

End: 0412

BEGIN POSITION (GPS)

LAT:

LONG:

BOTTOM POSITION (GPS)

LAT: 53 44.65

LONG: 164 59.75

END POSITION (GPS)

LAT: 53 44.73

LONG: 164 59.22

Comments

8 bottles closed

Rosette 2: 12 bottle

CRUISE NO: 9403/1

UTC DATE: 19/9/94

VESSEL: John P. Tully

STATION NO: W003

HYDRO No.: 21

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
11	136	2055	8.4	10	10	✓				
10	137	2056	8	50	47	✓	broken linked : lanyard caught in bottle			
9	138	2057	5.2	100	99	✓				
8	139	2058	4.8	200	201	✓				
7	140	2059	4.4	300	298	✓				
6	141	2060	4.2	400	398	✓				
5	142	2061	4.2	600	599	✓				
4	143	2062	4.2	800	800	✓				
3	144	2063	3.8	1000	1000	✓				
2	145	2064	3.6	1250	1250	✓				
* 1	146	2065	3.4	B-20	1461	✓	p2099	1461.8db	T679	2.790

ENTERED BY:

CHECKED BY:

Bottom Depth: 1430

Cast No: 20 down
21 up

LOC UTC

Begin: 0615

Bottom: 0641

End: #21 0641-0719

BEGIN POSITION (GPS)

LAT:

LONG:

wind 15-20 knots.

@ 230°

CTDC

Rosette 1: 23 bottle

CRUISE NO:

9403

UTC DATE:

09/19/94

VESSEL: John P. Tully

STATION NO:

W004

HYDRO No.:

23

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	147	2000	9.4	10	10	✓	No current no confirm trigger twice			
22	148	2001	8.7	50	50	✓				
21	149	2002	5.5	100	100	✓				
20	150	2004	5.1	200	199	✓				
19	151	2005	5.0	300	300	✓				
18	152	2006	4.9	400	399	✓				
17	153	2007	4.8	600	601	✓				
16	154	2008	4.3	800	801	✓				
15	155	2009	4.1	1000	1002	✓				
14	156	2010	4.1	1250	1255	✓				
13	157	2012	3.9	1500	1502	✓				
12	158	2013	3.7	1750	1749	✓				
11	159	2014	3.5	2000	1998	✓				
* 10	160	2015	3.4	2250	2246	✓	T451	1.763	T798	1.766
9	161	2017	3.2	2500	2499.8	✓	Not confirmed current OK			
8	162	2018	3.1	2750	2750	✓				
7	163	2019	3.0	3000	2998	✓	Not confirmed but Ia OK			
6	164	2020	3.0	3250	3251	✓				
5	165	2021	3.0	3500	3487	✓				
* 4	166			3500	3496	✓	T647	1.461	T577	1.447
3	167				3682	✓				
2	168				3685	✓			* 3497	dbar
1	169			3687	3686	✓			SN P6314	

ENTERED BY: S Love

CHECKED BY:

Bottom Depth: 3698

Cast No: 0022 down

0023 up

LOC UTC

Begin: 0904

Bottom: 10:03

End: 11:32

BEGIN POSITION (GPS)

LAT: 53 14 94

LONG: 165 01 73

BOTTOM POSITION (GPS)

LAT: 53 14 52

LONG: 165 00 90

END POSITION (GPS)

LAT: 53 13 49

LONG: 165 03 82

Comments

NISK 1, 2, 34

SALINITY

SAMPLES ONLY

Rosette 1: 23 bottle

CRUISE NO:

9403

UTC DATE:

94/09/19

VESSEL: John P. Tully

STATION NO:

W005

HYDRO No.:

25 + 26 up
0.1m

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	170	1120	9.0	10	10	✓				
22	171	1112	4.0	50	50	✓				
21	172	1113	3.8	100	100	✓				
20	173	1114	3.6	200	201.3	✓				
19	174	1119	3.4	300	300.7	✓				
18	175	1111	3.4	400	397	✓				
17	176	1121	3.2	400	398	✓				
16	177	1122	3.0	600	598	✓	not confirmed in software			
15	178	1125	2.6	800	800	✓				
14	179	1126	2.6	1000	999.6	✓				
13	180	1128	2.42	1250	1249	✓				
12	181	1129	2.0	1500	1500	✓				
11	182	1130	2.6	1500	1499	✓				
10	183	1131	2.0	1750	1750	✓	NOT TAGGED TRY TWICE			
9	184	1132	1.8	2000	1998	✓	T451	1.970	T098	1.971
8	185	1133	1.8	2250	2249	✓				
7	186	1134	1.8	2500	2500	✓				
6	187	1135	1.6	2750	2748	✓	CURRENT OK BUT PRESSURE NOT			
5	188	1136	1.6	3000	3000	✓				
4	189	1137	1.6	3250	3250	✓	T647	1.482	T377	1.470
3	190	1138	1.6	3500	3500	✓	P6314	3.257		
2	191	1139	1.8	3750	3748	✓				
1	192	1140	1.4	4000	3986	✓				

ENTERED BY: John G. G. G.
CHECKED BY:

Bottom Depth: 3926 m

Cast No: 25 Down
26 up

LOC UTC
Begin: 13 30
Bottom: 14 29
End:

BEGIN POSITION (GPS)

LAT: 52° 57.900

LONG: 165° 00.155

BOTTOM POSITION (GPS)

LAT: 52° 59.76

LONG: 165° 00.58

END POSITION (GPS)

LAT:

LONG:

remains on 183

Comments

Consistent 24 SKIPPED -
THERE IS NO CAST # 24 !

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

19/9/94

VESSEL: John P. Tully

STATION NO:

W006

HYDRO No.:

27

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	193	1014		10	0	✓				
22	194	1010		50	50	✓				
21	195	1009		100	100	✓				
20	196	1008		200	200	✓				
19	197	1004		300	241	✓				
18	198	1003		300	266	✓	NO TRIG AT 300 TRY AGAIN.			
17	199	1028		400	401	✓				
16	200	1027		600	604	✓	Note < 1500 M bottle tripped without stopping the Rosette			
15	201	1026		1000	999	✓				
14	202	1025		1250	1250	✓				
13	203	1020		1250	1250	✓				
12	204	1016		1500	1498	✓				
11	205	1039		1750	1748	✓				
* 10	206	1036		2000	1999	✓	1834		1835	
9	207	1033		2250	2250	✓				
8	208	1032		2500	2500	✓				
7	209	1031		2750	2748	✓				
6	210	1029		3000	2994	✓				
5	211	1051		3000	2999	✓				
* 4	212	1047		3500	3500	✓				
3	213	1046		4000	4007	✓				
2	214	1045		4000	4003	✓	1459		1446	3499
1	215	1043		4134	4134	✓				

ENTERED BY: JWO

CHECKED BY:

Bottom Depth: ? 5000 +

No sander response

Cast No: 27/28

28'

LOC UTC

Begin: 1801

Bottom: 1909

End: 2049

BEGIN POSITION (GPS)

LAT: 52 44 79

LONG: 164 59 66

BOTTOM POSITION (GPS)

LAT: 52 44 22

LONG: 165 00 19

END POSITION (GPS)

LAT: 52 44 25

LONG: 164 59 77

Comments

4134

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

20/9/94

VESSEL: John P. Tully

STATION NO:

W 011

HYDRO No.:

30

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	216	1003	4.9	10	10	•				
22	217	1004	6.0	50	49	•				
21	218	1008	5.6	100	102	•				
20	219	1009	5.5	200	200	•				
19	220	1010	4.6	300	299	•				
18	221	1014	5.0	400	400	• 2 try OK NO TR				
17	222	1016	5.4	600	600	•				
16	223	1020	5.1	800	800	•				
15	224	1025	5.1	800	800	•				
14	225	1026	4.6	1000	1004	•				
13	226	1027	4.3	1200	1202	•				
12	227	1028	4.3	1500	1500	•				
11	228	1029	3.9	1750	1752	•				
* 10	229	1031	4.3	2000	2000	•	T451 1.913, T798 1.912			
9	230	1032	3.8	2250	2250	•				
8	231	1033	3.8	2500	2500	•				
7	232	1036	3.7	2750	2750	•				
6	233	1039	4.2	3000	3000	•				
5	234	1040	4.0	3250	3250	•				
* 4	235	1043	3.7	3500	3492	• TRIG#2 OK NO TRIG NO TA	T647 1.499, T577 1.486		P634 3497	
3	236	1045	3.431	4000	3996	•				
2	237	1046	3.4	4500	4500	•				
1	238	1047	3.2	B-20	5005	•				

ENTERED BY: SL

CHECKED BY:

Bottom Depth: 4872

Cast No: 29/30

LOC UTC

Begin: 2004

Bottom: 21:11

End: 23:04

BEGIN POSITION (GPS)

LAT: 50 29 45

LONG: 164 59.26

BOTTOM POSITION (GPS)

LAT: 50 28 63

LONG: 164 59 25

END POSITION (GPS)

LAT: 50 27 95

LONG: 164 59 57

Comments

3000/16 at test at 5000 metres

3700 max on present

Rosette 1: 23 bottle

CRUISE NO:

94031

UTC DATE:

21/9/94

VESSEL: John P. Tully

STATION NO:

W 012

HYDRO No.:

032

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	239	1111	9.0	10		x ✓				
22	240	1112	5.6	50	49	✓				
21	241	1113	4.7	100	100	✓				
20	242	1114	4.8	200	202	✓				
19	243	1119	4.8	300	295	✓				
18	244	1120	4.6	400	400	✓				
17	245	1121	4.7	600	601	✓				
16	246	1122	4.4	800	800	✓				
15	247	1125	4.7	1000	1005	✓				
14	248	1126	3.9	1250	1254	✓				
13	249	1128	4.0	1500	1498	✓				
12	250	1129	3.7	1750	1747	✓				
11	251	1130	4.3	2000	2001	✓				
10	252	1132	4.0	2250	2247	✓	T451	1791	T798	1792
9	253	1133	3.7	2500	2501	✓				
8	254	1134	3.6	2750	2570	✓				
7	255	1135	3.2	3000	2999	✓				
6	256	1136	3.7	3000	3000	✓				
5	257	1137	3.8	3500	3500	✓				
4	258	1138	3.6	4000	4003	✓	T647	1472	T577	1460
3	259	1139	3.1	4500	4501	✓				4009.
2	260	1140	3.1	4750	4752	✓				
1	261	1141	3.1	B-20	5101	✓				

ENTERED BY: DJS
CHECKED BY:

Bottom Depth: 4948 (5100 actual)

Cast No: 031 ↓
032 ↑

	LOC	UTC
Begin:		0232
Bottom:		0351
End:		0544

BEGIN POSITION (GPS)
LAT: 50° 00.04' N
LONG: 165° 00.19' W

BOTTOM POSITION (GPS)
LAT: 50° 00.37' N
LONG: 165° 00.13' W

END POSITION (GPS)
LAT: 50° 00.74' N
LONG: 164° 59.22' W

Comments

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

21/9/94

VESSEL: John P. Tully

STATION NO:

W 013

HYDRO No.:

34

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	262	1003	9.2	10	8.9	.				
22	263	1004	5.4	50	50	.				
21	264	1008	4.8	100	100	.				
20	265	1009	4.4	200	199	.				
19	266	1010	4.5	300	301	.				
18	267	1014	4.5	400	394	.				
17	268	1016	4.5	400	400	.				
16	269	1020	4.5	600	603	.				
15	270	1025	4.3	800	801	.				
14	271	1026	4.2	1000	1002	.				
13	272	1027	4.1	1250	1250	.				
12	273	1028	4.2	1500	1500	.				
11	274	1029	4.5	1750	1750	.				
* 10	275	1031	4.0	2000	2000	.	T 451	1.932	T 798	1.931
9	276	1032	3.8	2250	2249	.				
8	277	1033	3.8	2500	2500	.				
7	278	1036	3.7	2750	2750	.				
6	279	1039	3.8	3000	3001	.				
5	280	1040	3.7	3500	3500	.				
* 4	281	1043	3.9	4000	4000	.	T 577 T 647	1.459 1.473	P 6314	4009 Dmax
3	282	1045	3.6	4500	4500	.				
2	283	1046	3.7	? 5000	5001	.				
1	284	1049	3.6	B-5:		.				

ENTERED BY:

CHECKED BY:

Bottom Depth: 5085

Cast No:

LOC

UTC

Begin: 09:33

Bottom: 10:42

End: 12:42

BEGIN POSITION (GPS)

LAT: 49 29 923

LONG: 164 59 973

BOTTOM POSITION (GPS)

LAT: 49 29 62

LONG: 164 59 95

END POSITION (GPS)

LAT: 49 29 33

LONG: 165 00 13

Comments

Rosette 1: 23 bottle

CRUISE NO:

9903/1

UTC DATE:

94/9/21

VESSEL: John P. Tully

STATION NO:

W014

HYDRO No.:

35 + 36

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	295	2043	9.7	10	8	✓				
22	286	2044	7.3	50	48	✓				
21	287	2045	6.2	100	99	✓				
20	288	2047	5.9	200	198	✓				
19	279	2049	5.4	300	301	X ✓				
18	290	2051	5.4	400	400	✓				
17	291	2052	4.9	600	599	✓				
16	292	2054	4.8	800	801	✓				
15	293	2055	4.9	800	801	✓				
14	294	2056	4.5	1000	999	✓				
13	295	2057	4.1	1250	1249	✓				
12	296	2058	4.6	1500	1499	✓				
11	297	2059	5.0	1750	1755	X ✓				
10	298	2060	4.5	2000	2001	✓	T451	1.960	T798	1.959
9	299	2061	4.6	2250	2247	✓				
8	300	2062	4.1	2500	2500	✓				
7	301	2063	3.6	3000	3000	✓				
6	302	2064	3.7	3500	3498	✓				
5	303	2065	3.8	4000	3997	✓				
4	304	2066	3.9	4500	4500	✓	7647	1.500	T377	1.486
3	305	2067	3.9	4750	4751	✓			4507.	
2	306	2068	3.8	5000	5002	✓				
1	307	2069	3.5	B-7	5208	✓				

ENTERED BY: John G. Smith

CHECKED BY:

Bottom Depth: 5111

Cast No: Down 35

up 36.

LOC UTC

Begin: 0656 1656

Bottom: 1802

End: 1943

BEGIN POSITION (GPS)

LAT: 49° 00.245' N

LONG: 165° 00.439' W

BOTTOM POSITION (GPS)

LAT: 4859.93

LONG: 165 00 12

END POSITION (GPS)

LAT: 4900.47

LONG: 165 00 47

Comments

CTD on bottom 15218
#36 starts at 4500db

Rosette 1: 23 bottle

CRUISE NO:

9403

UTC DATE:

Sept 21, 1994

VESSEL: John P. Tully

STATION NO:

W015

HYDRO No.:

38

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	308	2000	10.2	10	8	✓				
22	309	2001	6.5	50	53	✓				
21	310	2002	5.9	100	99	✓				
20	311	2004	5.6	200	206	✓				
19	312	2005	5.6	300	304	✓				
18	313	2006	5.3	400	406	✓				
17	314	2007	5.4	600	602	•				
16	315	2008	5.0	800	798	•				
15	316	2009	4.7	1000	1002	•				
14	317	2010	4.6	1250	1252	•				
13	318	2012	4.6	1500	1506	•				
12	319	2013	5.2	1750	1765	•				
11	320	2014	4.6	2000	2002	•				
* 10	321	2015	4.7	2250	2249	•	T451	1.836	T798	1.834
9	322	2017	4.4	2500	2500	•				
8	323	2018	5.4	2750	2750	•				
7	324	2019	4.9	3000	3000	•				
6	325	2020	4.7	3250	3249	•				
5	326	2021	4.3	3500	3499	•				
* 4	327	2022	4.6	3750	3750	•	T647 T577	1.480 1.466	P6374	3759 d/h
3	328	2025	4.6	4000	3999	•				
2	329	2027	4.8	4250	4249	•				
1	330	2028	4.8	5251	5251	•				
						No 1a				

ENTERED BY: Skippy the Great

CHECKED BY: SL

Bottom Depth: 5290

Cast No: 37 ↓

38 ↑

LOC UTC

Begin: 21/SEPT 23:12

Bottom: 00:28

End: 22/SEPT 02:13

BEGIN POSITION (GPS)

LAT: 48 30 028

LONG: 165 00 007

BOTTOM POSITION (GPS)

LAT: 48 28 82

LONG: 164 58 80

END POSITION (GPS)

LAT: 48 27 97 N

LONG: 164 55 93 W

Comments

Drifters

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

SEP 22/94

VESSEL: John P. Tully

STATION NO:

W 016

HYDRO No.:

40

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	331	2043	5.7	10	8	✓				
22	332	2044	5.6	50	49	✓				
21	333	2045	5.5	100	99	✓				
20	334	2047	5.3	122	112	✓				
19	335	2049	5.0	200	200	✓				
18	336	2051	4.8	250	247	✓				
17	337	2052	4.7	300	300	✓				
16	338	2054	4.8	400	401	✓				
15	339	2055	4.5	600	597	✓				
14	340	2056	4.2	800	800	✓				
13	341	2057	3.9	1000	1001	✓				
12	342	2058	3.8	1250	1251	✓				
11	343	2059	3.5	1500	1502	✓				
10	344	2060	3.4	1750	1753	✓	T451 = 2101 / T798 = 2098			
9	345	2061	3.2	2000	2000	✓				
8	346	2062	3.1	2250	2245	✓				
7	347	2063	3.1	2500	2496	✓				
6	348	2064	3.0	2750	2750	✓				
5	349	2065	3.2	3000	3000	✓				
4	350	2066	3.0	3500	3498	✓	T647 1503 T577 1490 3507.			
3	351	2067	3.1	4000	3999	✓				
2	352	2068	3.2	4500	4500	✓				
1	353	2069	3.1	B-30	5132	✓				

ENTERED BY: F.W.

CHECKED BY:

Bottom Depth: 4940

Cast No: 39 down
40 up

	LOC	UTC
Begin:		0641
Bottom:		0753
End:		0939

BEGIN POSITION (GPS)

LAT: 48 00.00

LONG: 165 00.03

BOTTOM POSITION (GPS)

LAT: 48 00.03

LONG: 165 00.30

END POSITION (GPS)

LAT: 48 00.39

LONG: 165 00.46

Comments

ADIEZON GREASE - 13C

line tension 3900/35.

Rosette 1: 23 bottle

CRUISE NO:

9403

UTC DATE:

Sept 22/94

VESSEL: John P. Tully

STATION NO:

W017

HYDRO No.:

42 up

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	354	1003	10.9	10	9.4	Not confirmed tripped again				
22	355	1004	9.9	50	52	✓				
21	356	1008	6.7	100	99	✓				
20	357	1009	6.4	200	199	✓				
19	358	1010	5.7	300	300	✓				
18	359	1014	5.4	400	401	✓				
17	360	1016	5.0	600	604	✓				
16	361	1020	4.6	800	804	✓				
15	362	1025	4.4	1000	1003	✓				
14	363	1026	4.1	1250	1257	✓				
13	364	1027	3.8	1500	1499	✓				
12	365	1028	4.0	1750	1759	✓				
11	366	1029	4.0	2000	2005	✓				
* 10	367	1031	3.5	2250	2242	✓	T451	1.835	T798	1.831
9	368	1032	3.5	2500	2449	✓				
8	369	1033	3.5	2750	2745	✓				
7	370	1036	3.3	3000	2993	✓				
6	371	1039	3.3	3250	3494	✓				
5	372	1040	3.3	3500	3725	✓	T647	1.470	Pressure	
* 4	373	1043	3.2	4000	3998	✓	T577	1.457	P6314	4.003
3	374	1045	3.0	4500	4500	✓				
2	375	1046	2.9	5000	5000	✓				
1	376	1047	3.0	8-20	5343	✓				

ENTERED BY:
CHECKED BY: JFL

Bottom Depth: 5259

Cast No: 41, 42 up

LOC UTC
Begin: 13:16
Bottom: ~ 14:40
End:

BEGIN POSITION (GPS)
LAT: 47 30 00
LONG: 165 00 00

BOTTOM POSITION (GPS)
LAT: 47 31
LONG:

END POSITION (GPS)
LAT: 47 32.188
LONG: 164°56.70

Comments

* THERMOMETERS

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

22/9/94

VESSEL: John P. Tully

STATION NO:

W 018

HYDRO No.:

44.

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	377	2000	9.0	10	14					
22	378	2001	9.6	50	57					
21	379	2002	7.4	100	96					
20	380	2004	7.0	200	200					
19	381	2005	7.6	300	300					
18	382	2006	6.4	400	403					
17	383	2007	6.6	600	600					
16	384	2008	5.8	800	798					
15	385	2009	6.0	1000	999					
14	386	2010	5.2	1250	1250					
13	387	2012	5.0	1500	1500					
12	388	2013	6.0	1750	1750					
11	389	2014	5.8	2000	2000					
* 10	390	2015	4.2	2500	* 2499					
9	391	2017	5.2	3000	3000					
8	392	2018	5.0	3500	3504					
7	393	2019	5.5	4000	4000					
6	394	2020	4.7	4250	4250					
5	395	2021	5.4	4500	4500					
* 4	396	2022	6.2	4750	* 4747					
3	397	2025	6.0	5000	5001					
2	398	2027	5.6	B-100	5310					
1	399	2028	6.0	B-20	5411					

ENTERED BY: JL + 055

CHECKED BY:

Bottom Depth: 5326

Cast No: 43↓
44↑

	LOC	UTC
Begin:		2028
Bottom:		2137
End:		2319

BEGIN POSITION (GPS)

LAT: 46° 59.99' N

LONG: 164° 59.91' W

BOTTOM POSITION (GPS)

LAT: 47° 00.67' N

LONG: 164° 59.47' W

END POSITION (GPS)

LAT: 47° 00.24' N

LONG: 164° 59.84' W

Comments

5407
John did "DECK"

Rosette 2: 12 bottle

CRUISE NO: 9403/1

UTC DATE: 24/9/94

VESSEL: John P. Tully

STATION NO: W025

HYDRO No.: 49

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)

11	400	2000	14.3	10		✓				
10	401	2001	10.4	50	48.	✓				
9	402	2002	9.2	100	99.	✓				
8	403	2004	9.5	150	150	✓				
7	404	2005	9.4	200	201	✓				
6	405	2006	10.0	250	254	✓				
5	406	2007	9.9	250	252	✓				
4	407	2008	8.8	300	300	✓				
3	408	2009	8.2	400	399.	✓				
2	409	2010	7.8	500	497.	✓				
1	410	2012	7.3	600	598	✓				

ENTERED BY:

CHECKED BY:

Bottom Depth: 5540

Cast No: 48 down

49 up

LOC UTC

Begin: 2020

Bottom:

End:

BEGIN POSITION (GPS)

LAT: 4329.30

LONG: 165 00 51

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

STATION NO:

W 025

HYDRO No.:

51

VESSEL: John P. Tully

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	411	1111	6.4	600	599	.				
22	412	1112	5.7	800	799	.				
21	413	1113	5.0	1000	1000	.				
20	414	1114	4.5	1000	1000	.				
19	415	1119	4.9	1250	1248	.				
18	416	1120	5.2	1500	1502	.				
17	417	1121	4.9	1750	1750	.				
16	418	1122	4.6	2000	2001	.				
15	419	1125	4.4	2250	2250	.				
14	420	1126	4.3	2500	2500	.				
13	421	1128	4.2	2750	2750	.				
12	422	1129	3.6	3000	3000	.				
11	423	1130	4.4	3250	3249	.				
* 10	424	1132	4.2	3500	3501	.	T451	1.491	T798	1.493
9	425	1133	4.9	3750	3750	.				
8	426	1134	4.7	4000	3999	.				
7	427	1135	4.2	4000	4000	.				
6	428	1136	4.5	4250	4250	.				
5	429	1137	4.1	4500	4500	.				
* 4	430	1138	4.5	4750	4750	.	T647	1.514	T577	1.500
3	431	1139	4.5	5000	4999.9	.			P6314	4757 db
2	432	1140	4.7	B-100	5567	.				
1	433	1141	4.4	B-20	5686	.				

ENTERED BY:

CHECKED BY:

Bottom Depth: 5572

Cast No: 50 down
51 up

	LOC	UTC
Begin:	1124	2124
Bottom:		
End:		

BEGIN POSITION (GPS)
LAT: 4328.58
LONG: 16500.56

BOTTOM POSITION (GPS)
LAT:
LONG:

END POSITION (GPS)
LAT:
LONG:

Comments

Rosette 1: 23 bottle

CRUISE NO:

9403

UTC DATE:

25 SEPT 1997

VESSEL: John P. Tully

STATION NO:

W026

HYDRO No.:

53

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	434	1003	15.0	10	10.	✓				
22	435	1004	10.7	50	51	X✓				
21	436	1008	8.8	100	100.	✓				
20	437	1009	9.7	200	203	X✓				
19	438	1010	8.3	300	302.	✓				
18	439	1014	7.2	400	402.	✓				
17	440	1016	7.1	600	606	✓				
16	441	1020	6.0	600	604	✓				
15	442	1025	6.2	800	800	✓				
14	443	1026	5.4	1000	1000.	✓				
13	444	1027	4.8	1250	1249	✓				
12	445	1028	4.7	1500	1501	✓				
11	446	1029	5.4	1750	1749	X✓				
10	447	1031	4.7	2000	2000	✓	T451	1976	1977	
9	448	1032	4.6	2250	2251	✓				
8	449	1033	4.5	2500	2501	✓				
7	450	1036	4.3	3000	2997	✓				
6	451	1039	4.2	3500	3500	✓				
5	452	1040	4.3	4000	4002	✓				
4	453	1043	4.2	4500	4499	✓	T617	1487	1473	4510.
3	454	1045	4.1	5000	5001	✓				
2	455	1046	3.9	5500	5499	✓				
1	456	1047	4.2	B-30	5734	✓				

ENTERED BY:

CHECKED BY:

Bottom Depth: 5654

Cast No: 52

53

LOC UTC

Begin: 0339

Bottom: 0447

End: 0641

BEGIN POSITION (GPS)

LAT: 43 00.08

LONG: 164 59.81

BOTTOM POSITION (GPS)

LAT: 43 00.51

LONG: 164 59.45

END POSITION (GPS)

LAT: 43 01.08

LONG: 164 57.91

Comments

Rosette 1: 23 bottle

CRUISE NO: 9403
STATION NO: W027UTC DATE: 25/9/94
HYDRO No.: 54

VESSEL: John P. Tully

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	457	1111	15.0	50	52			This bottle will be at 50m		
22	458	1112	9.7	100	100					
21	459	1113	9.1	200	200					
20	460	1114	8.9	300	299					
19	461	1119	8.2	400	400					
18	462	1120	6.8	600	601					
17	463	1121	6.1	800	802					
16	464	1122	5.5	800	801					
15	465	1125	5.4	1000	1000					
14	466	1126	5.1	1250	1250					
13	467	1128	5.1	1500	1500					
12	468	1129	4.9	1750	1750					
11	469	1130	4.7	1750	1750	No In OK*2		EXTRA Bottle Trip at 1750M		
* 10	470	1132	4.8	2000	2000			1.969		1.971
9	471	1133	4.4	2250	2250					
8	472	1134	4.2	2500	2500					
7	473	1135	4.1	3000	3000					
6	474	1136	4.1	3500	3503					
5	475	1137	4.1	4000	4000					
* 4	476	1138	4.1	4500	4500		L 2647	1.487	R 577	1.474
3	477	1139	4.5	5000	5000				P 6314	4509
2	478	1140	4.3	5500	5500					
1	479	1141	4.3	B-20	5927					

ENTERED BY:

CHECKED BY:

Bottom Depth: 5822

Cast No: 54 down } same file
54 up. } for up & down

LOC	UTC
Begin:	1003
Bottom:	11:12
End:	13:10

BEGIN POSITION (GPS)

LAT: 42 29 98

LONG: 164 59.98

BOTTOM POSITION (GPS)

LAT: 42 30 18

LONG: 164 59 68

END POSITION (GPS)

LAT: 42 30 48

LONG: 164 59 35

Comments

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

Sept 25/94

VESSEL: John P. Tully

STATION NO:

W028

HYDRO No.:

56.157

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	480	2000	8.2	800	800.	✓				
22	481	2001	6.3	1000	1000.	✓				
21	482	2002	5.8	1000	1000	✓				
20	483	2004	5.2	1250	1249.	✓				
19	484	2005	4.8	1500	1500	✓				
18	485	2006	5.1	1750	1750	✓				
17	486	2007	4.8	2000	2000.	✓	lost power at 1815			
16	487	2008	5.3	2250	2249	✓				
15	488	2009	3.9	2500	2500.	✓				
14	489	2010	4.5	2750	2748.	✓				
13	490	2012	5.3	3000	2999.	✓				
12	491	2013	4.7	3250	3250	✓				
11	492	2014	4.6	3500	3500	✓				
10	493	2015	4.8	3750	*3750	✓	T451	1.470	T798	1.470
9	494	2017	4.3	4000	3998	✓				
8	495	2018	4.4	4250	4250	✓				
7	496	2019	4.1	4500	4550	✓				
6	497	2020	4.5	4750	4750	✓				
5	498	2021	4.2	5000	4999.	✓				
4	499	2022	4.3	5250	5249	✓	{ T647 P63145	1.578	T677	1.564
3	500	2025	4.5	5500	5498	✓		5256		
2	501	2027	4.4	5750	5749	✓				
1	502	2028	4.3	B-20	5912	✓				

ENTERED BY:

CHECKED BY:

Bottom Depth: 5780

Cast No:

LOC UTC

Begin: 1630

Bottom:

End:

BEGIN POSITION (GPS)

LAT: 41° 55.9

LONG: 164° 59.5

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

Max. load 4800 lb

94030060

STATION NO:

HYDRO No.:

VESSEL: John P. Tully

**Sample
Depth
db**

**Trip
Depth (db)**

Trip Confirmed

THERMOMETER 1
SERIAL Temp (oC

THERMOMETER 2
SERIAL Temp (oC)

ENTERED BY:

CHECKED BY:

Bottom Depth:

Cast No:

LOC

UTC

Begin:

21.55

Bottom:

22:10

End:

22:32

BEGIN POSITION (GPS)

LAT: 42 00 24

LONG: 164 57 25

END

42 00 15

UTC

164 57 16

22: 32

Rosette 1: 23 bottle

CRUISE NO:

9403 / 1

UTC DATE:

Sept 26 1994

VESSEL: John P. Tully

STATION NO:

W029

HYDRO No.:

62

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	514	1111	11.3	10	9	✓				
22	515	1112	10.3	50	50	✓				
21	516	1113	9.7	100	105	✓				
20	517	1114	9.2	200	206	✓				
19	518	1119	7.8	300	298	✓				
18	519	1120	6.4	400	403	✓				
17	520	1121	5.9	600	603	✓				
16	521	1122	5.3	800	805	✓				
15	522	1125	4.8	1000	1004	✓				
14	523	1126	4.5	1250	1245	✓				
13	524	1128	4.4	1500	1500	✓				
12	525	1129	4.2	1750	1748	✓				
11	526	1136	4.5	2000	2000	✓				
10	527	1132	4.2	2250	2250	✓				
9	528	1133	3.6	2500	2500	✓				
8	529	1134	3.5	2750	2748	✓				
7	530	1135	3.4	3000	2994	X✓	not confirmed first 11-B			
6	531	1136	3.3	3500	3498	✓				
5	532	1137	3.1	4000	3998	✓				
4	533	1138	3.1	4500	4497	✓				
3	534	1139	2.9	5000	4999	✓				
2	535	1140	2.8	5250	5250	✓				
1	536	1141	2.8	B-20	5594	✓				

ENTERED BY:	DJS
CHECKED BY:	

Bottom Depth: 5424

Cast No: 61 ↓
62 ↑

	LOC	UTC
Begin:		02:10
Bottom:		03:12
End:		05:00

BEGIN POSITION (GPS)	
LAT:	41° 29.8' N
LONG:	164° 59.82' W

BOTTOM POSITION (GPS)	
LAT:	41° 29.4' N
LONG:	164° 59.04' W

END POSITION (GPS)	
LAT:	41° 27.73 N
LONG:	164° 57.62' W

Comments	

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

26/9/94

VESSEL: John P. Tully

STATION NO:

W030

HYDRO No.:

64

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	537	2000	16.3	10	10	•				
22	538	2001	16.1	10	10	•				
21	539	2002	10.4	50	50	•				
20	540	2004	9.4	100	101	•				
19	541	2005	9.3	200	200	•				
18	542	2006	8.6	300	301	•				
17	543	2007	7.5	400	400	•				
16	544	2008	6.3	600	601	•				
15	545	2009	5.8	800	800	•				
14	546	2010	5.9	800	799	•				
13	547	2012	5.6	1000	1000	•				
12	548	2013	5.3	1250	1250	•				
11	549	2014	5.4	1500	1500	•				
10	550	2015	4.7	1750	* 1751	•	T 451	2.157	T 798	2.160
9	551	2017	4.6	2000	2000	•				
8	552	2018	4.6	2250	2250	•				
7	553	2019	4.7	2500	2500	•				
* 6	554	2020		3000	3001	•	* Bottle #6 (554) closed but empty!			
5	555	2021	4.5	3500	3500	•				
4	556	2022	4.5	4000	* 4000	•	T 647	1.454	T 577	1.440
3	557	2025	4.6	4500	4500	✓	P 6374	4009 dbar		
2	558	2027	4.6	5000	5000	✓				
1	559	2028	4.6	B-20	5497	✓				

ENTERED BY:

CHECKED BY:

Bottom Depth: 5317

Cast No: 63
64

LOC UTC

Begin:

Bottom:

End:

BEGIN POSITION (GPS)

LAT:

LONG:

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE: Sept 26/94

VESSEL: John P. Tully

STATION NO:

W031

HYDRO No.: 65,66, 67

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
							ROSETTE TRIGGERED ONE MARK PAST LAST BOTTLE (Likely 2 bottles at 3750, 1 at 600?)			
23	560	1003	6.2	600	595	✓				
22	561	1004	6.4	600	592	✓				
21	562	1008	5.8	800	811	✓				
20	563	1009	5.3	1000	1010	✓				
19	564	1010	5.3	1250	1266	✓				
18	565	1014	5.1	1500	1513	✓				
17	566	1016	4.9	1750	1765	✓				
16	567	1020	5.1	2000	1999	✓				
15	568	1025	4.5	2250	2243	✓				
14	569	1027	5.2	2500	2498	✓				
13	570	1028	4.7	2750	2747	✓				
12	571	1029	4.8	3000	3002	✓				
11	572	1031	5.2	3250	3250	✓				
* 10	573	1032	4.9	3500	3502	✓				
9	574	1033	4.1	3750	3743	✓				
? 8	575	1036	6.4	4000	3999	✓				
7	576	1039	4.9	4250	4246	✓				
6	577	1040	5.3	4500	4498	✓				
5	578	1043	4.9	4750	4748	✓				
* 4	579	1045	4.9	5000	4993	✓	1546	1533	4993	5484.1
3	580	1046	4.9	5500	5482	✓	(1.554)	(1.560)		5739.1
2	581	1047	5.2	B-100	5738	✓	CAST	67		5883.3
1	582	1051	5.3	B-20	5830	✓	TRIP ON	CAST 66		

ENTERED BY: JFG
CHECKED BY:

Bottom Depth: 5814

Cast No: WP 66 - Shift, it
WP 67 bottom

LOC	UTC
Begin:	1438
Bottom:	~ 1540
End:	1750

BEGIN POSITION (GPS)
LAT: 40° 29.2'
LONG: 165° 01.7'

BOTTOM POSITION (GPS)
LAT:
LONG:

END POSITION (GPS)
LAT:
LONG:

Comments
MISTAKENLY RESTARTED
CAST AFTER TRIP ON
BOTTOM BOTTLE

Rosette 2: 12 bottle

CRUISE NO: 9403/1

UTC DATE: Sept 26/94

VESSEL: John P. Tully

STATION NO: W031

HYDRO No.: 69

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
11	583	1147	11.1	10	8.	✓				
10	584	1148	11.5	50	49	✓				
9	585	1149	10.1	100	99	✓				
8	586	1150	9.8	150	148	✓				
7	587	1151	9.5	200	200	✓				
6	588	1152	9.3	250	251	✓				
5	589	1153	8.8	300	302	✓				
4	590	1154	8.8	300	300	✓				
3	591	1155	7.8	400	397	✓				
2	592	1156	7.0	500	502	✓				
1	593	1157	6.1	600	598	✓	T679	4.571	593.3	4.6

ENTERED BY:

CHECKED BY:

Bottom Depth: 5810

Cast No: 68 down
69 up.

LOC UTC

Begin: 1839

Bottom:

End:

BEGIN POSITION (GPS)

LAT: 4030.26

LONG: 16500.26

Rosette 1: 23 bottle

CRUISE NO:

940311

UTC DATE:

Sept 26/94

VESSEL: John P. Tully

STATION NO:

W032

HYDRO No.:

71

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	594	1060	12.2	10	9					
22	595	1062	12.4	50	50					
21	596	1063	11.1	100	98					
20	597	1064	10.4	200	204					
19	598	1065	10.2	200	204					
18	599	1067	8.7	400	401					
17	600	1068	7.4	500	498					
16	601	1069	7.3	600	598					
15	602	1072	6.2	800	798					
14	603	1079	6.0	1000	1000					
13	604	1110	6.1	1250	1257					
12	605	1084	5.0	1500	1509					
11	606	1087	4.6	2000	2000					
*10	607	1090	4.5	2250	2251		T 451	1.843	T 298	1.844
9	608	1092	4.4	2500	2498					
8	609	1095	4.7	2750	2750					
7	610	1096	4.2	3000	3000					
6	611	1097	4.2	3500	3503					
5	612	1100	4.2	4000	3999					
*4	613	1101	3.8	4500	4498		T 642	1.487	P 63743	4.501
3	614	1102	3.8	5000	4999		T 577	1.473		
2	615	1103	5.2	5500	5498					
1	616	1104	4.2	6-20	5670					

ENTERED BY:

CHECKED BY:

Bottom Depth: 5746

Cast No: 70 Down
71 up

LOC UTC

Begin: 22 44 26 Sept

Bottom: 23 59

End: 02 07 21 Sept

BEGIN POSITION (GPS)

LAT: 40 00

LONG: 165 00

BOTTOM POSITION (GPS)

LAT: 40° 01.07

LONG: 164° 59.67

END POSITION (GPS)

LAT: 40° 01.95

LONG: 164° 58'

Comments

Rosette 1: 23 bottle

CRUISE NO:

9403/1
W033

UTC DATE:

27 Sept 1997

VESSEL: John P. Tully

STATION NO:

HYDRO No.:

73

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	617	2000	17.6	10	10.	✓				
22	618	2001	12.4	50	50.	✓				
21	619	2002	11.4	100	100.	✓				
20	620	2004	10.9	200	200.	✓				
19	621	2005	9.9	300	304.	✓				
18	622	2006	8.9	400	401.	✓				
17	623	2007	7.0	600	602	✓				
16	624	2008	6.5	800	800.	✓				
15	615	2009	5.9	1000	1004.	✓				
14	626	2010	6.1	1250	1250	✓				
13	627	2012	5.6	1500	1500.	✓				
12	628	2013	5.5	1750	1752	✓				
11	629	2014	6.5	2000	2000	✓				
10	630	2015	5.3	2250	2255	✓	T451	18.28	1829	
9	631	2017	5.4	2500	2501	✓				
8	632	2018	5.3	2750	2750	✓				
7	633	2019	5.1	3000	3000	✓				
6	634	2020	5.1	3500	3500	✓				
5	635	2021	5.1	4000	4001	✓				
4	636	2022	5.2	4500	4500	✓	T647	1.486	1.473	4508
3	637	2025	5.3	5000	5001.	✓				
2	638	2027	5.1	5500	5498	✓				
1	639	2028	5.2	B-20	5658	✓				

ENTERED BY:

CHECKED BY:

Bottom Depth: 5531

Cast No: 72 down
73 up

LOC UTC

Begin: 0629

Bottom:

End:

BEGIN POSITION (GPS)

LAT:

LONG:

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

Wind 20-25 knots.
line tension 4400,
max 4600.

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

Sept 27/94

VESSEL: John P. Tully

STATION NO:

W034

HYDRO No.:

75

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	640	1003	9.1	500	511	✓				
22	641	1004	8.6	600	625	✓				
21	642	1008	7.7	800	804	✓				
20	643	1009	7.3	1000	1022	✓				
19	644	1010	7.1	1250	1248	✓				
18	645	1014	6.2	1500	1495	✓				
17	646	1016	6.9	1750	1736	✓				
16	647	1020	6.5	2000	1996	✓				
15	648	1025	6.5	2250	2240	✓				
14	649	1027	6.4	2500	2495	✓				
13	650	1028	6.6	2750	2749	✓				
12	651	1029	6.9	3000	3000	✓				
11	652	1031	7.0	3250	3242	✓				
10	653	1032	6.9	3500	3498	✓	T451	1.468	T —	1.469
9	654	1033	6.7	3750	3750	✓				
8	655	1030	6.7	4000	3999	✓				
7	656	1039	6.9	4250	4247	✓				
6	657	1040	6.8	4500	4499	✓				
5	658	1043	6.6	4750	4751	✓				
4	659	1045	6.7	5000	5002	✓	T647	1.548	T577	1.534
3	660	1046	7.2	5250	5244	✓			P —	5007db
2	661	1047	7.5	5250	5244	✓	Not confirmed first time			
1	662	1051	7.1	8-20	5518	✓	will show on cast 74			

ENTERED BY:

CHECKED BY:

Bottom Depth:

5434

Cast No:

74 01-1

75 up

LOC

UTC

Begin:

1247

Bottom:

1406/1412

End:

1558

BEGIN POSITION (GPS)

LAT: 38 59.95

LONG: 165 00.0257

BOTTOM POSITION (GPS)

LAT: 39° 00.12

LONG: 165 00.51

END POSITION (GPS)

LAT: 38° 59.59

LONG: 165° 03.59

Comments

Rosette 2: 12 bottle

CRUISE NO: 9403/1

UTC DATE: Sept 27/94

VESSEL: John P. Tully

STATION NO: W034

HYDRO No.: 77

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
11										
10										
9	663	1147	12.9	10	8	✓				
8	664	1148	13.8	50	59	✓				
7	665	1149	12.3	100	101	✓				
6	666	1150	12.0	150	146	✓				
5	667	1151	11.6	200	202	✓				
4	668	1152	11.0	250	260	✓				
3	669	1153	10.5	300	299	✓				
2	670	1154	9.6	400	391	✓				
1	671	1155	8.3	500	487	✓	T679	6.482	P2099	487.0

ENTERED BY:
CHECKED BY:

Bottom Depth:

Cast No: 76 down
77 up

LOC	UTC
Begin:	1649
Bottom:	1656
End:	1720

BEGIN POSITION (GPS)

LAT: 39° 00.09

LONG: 165° 00.5

Pressure reads 3 db
on deck!

Rosette 1: 23 bottle

CRUISE NO:

9403

UTC DATE:

27/9/94

VESSEL: John P. Tully

STATION NO:

W035

HYDRO No.:

79

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	672	1111	19.1	10	10	.				
22	673	1112	13.8	50	50	.				
21	674	1113	12.7	100	100	.				
20	675	1114	11.8	200	201	.				
19	676	1119	10.9	300	299	.				
18	677	1120	10.4	400	401	.				
17	678	1121	7.5	600	600	.				
16	679	1122	7.5	800	800	.				
15	680	1125	6.6	1000	1000	.				
14	681	1126	6.9	1250	1253	.				
13	682	1128	6.2	1500	1511	.				
12	683	1129	6.7	1500	1510	.				
11	684	1130	6.4	1750	1751	.				
10	685	1132	6.0	2000	2000	.	T451	1.958	T798	1.959
9	686	1133	6.4	2250	2250	.				
8	687	1134	6.6	2500	2500	.				
7	688	1135	6.6	3000	2999	.				
6	689	1136	6.5	3500	3499	.				
5	690	1137	5.8	4000	3999	.				
4	691	1138	6.5	4500	4502	.	T647	1.488	T577	1.473
3	692	1139	6.5	5000	4999	.	P6314	4512 dba		
2	693	1140	6.9	5500	5500	.				
1	694	1141	6.1	B-20	5619	.				

ENTERED BY:

CHECKED BY:

Bottom Depth: 5513

Cast No: 78

79

LOC

UTC

Begin:

2051

Bottom:

End:

BEGIN POSITION (GPS)

LAT:

3830.29

LONG:

16459.89

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

Sept 28/94

VESSEL: John P. Tully

STATION NO:

W036

HYDRO No.:

81

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	695	1060	19.8	10	10.	✓				
22	696	1062	14.8	50	50.	✓				
21	697	1064	12.7	100	98.	✓				
20	698	1065	11.9	200	200.	✓				
19	699	1067	10.8	300	300.	✓				
18	700	1068	9.5	400	401.	✓				
17	701	1069	7.5	600	600.	✓				
16	702	1072	6.5	800	798.	✓				
15	703	1079	5.8	1000	1006.	✓				
14	704	1084	5.3	1250	1251.	✓				
13	705	1087	5.1	1500	1505	✓				
12	706	1090	5.0	1750	1745	✓				
11	707	1092	4.7	2000	2003	✓				
10	708	1095	4.3	2250	2249	✓	T 451	1.827	T 798	1.827
9	709	1096	4.0	2500	2505	✓				
8	710	1097	4.6	2750	2748	✓	no current on foot A11-B			
7	711	1100	3.9	3000	2997	✓				
6	712	1101	3.9	3500	3503	✓				
5	713	1102	3.8	4000	3999	✓				
4	714	1103	3.8	4500	4496	✓	1488	1474	4503.	
3	715	1104	3.7	5000	5003	✓				
2	716	1105	3.5	5250	5248	✓				
1	717	1110	4.9	5497	5496	✓				

ENTERED BY: DJS
CHECKED BY:

Bottom Depth: 5370

Cast No: 80↓
81↑LOC UTC
Begin: 03:36
Bottom: 04:46
End:BEGIN POSITION (GPS)
LAT: 37° 59.92
LONG: 165° 00.21BOTTOM POSITION (GPS)
LAT: 37° 59.73
LONG: 165° 00.68END POSITION (GPS)
LAT:
LONG:

Comments

Duplicate
sample #
see
W037

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

Sept 28/94

VESSEL: John P. Tully

STATION NO:

W037

HYDRO No.:

83

Duplicate
Sample #

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	717	2000	20.0	10	10	.				
22	718	2001	14.6	50	51	.				
* 21	719	2002	4.8	100	100	.				
20	720	2004	11.9	200	202	.				
19	721	2005	10.2	300	303	.				
18	722	2006	9.3	400	402	.				
17	723	2007	8.1	500	505	.				
16	724	2008	7.3	600	603	.				
15	725	2009	6.6	800	802	.				
14	726	2010	6.3	1000	1009	.				
13	727	2012	5.7	1250	1251	.				
12	728	2013	5.9	1500	1503	.				
11	729	2014	5.7	1750	1751	.				
* 10	730	2015	6.0	2000	1998	.				
9	731	2017	4.9	2250	2250	.				
8	732	2018	5.9	2500	2496	.				
7	733	2019	5.0	3000	2998	.				
6	734	2020	5.3	3500	3495	.				
5	735	2021	5.1	4000	3997	.				
* 4	736	2022	5.2	4500	4499	.	T647	1.487	T577	1.473
3	737	2025	5.5	5000	4999	.	P6314	4503		
2	738	2027	5.5	5200	5200	.				
1	739	2028	5.4	B-10		.				

ENTERED BY:
CHECKED BY:

Bottom Depth: 5197
Cast No: 82 ↓
83 ↑

LOC UTC
Begin: 0956
Bottom:
End:

BEGIN POSITION (GPS)
LAT: 37 30 113
LONG: 165 00 108

BOTTOM POSITION (GPS)
LAT:
LONG:

END POSITION (GPS)
LAT:
LONG:

Comments

* PROBABLY A MISTRIP

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

Sept 28/94

VESSEL: John P. Tully

STATION NO:

W038

HYDRO No.:

85

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	740	1003	20.8	10	8.	✓				
22	741	1004	15.2	50	51.	✓				
21	742	1008	13.0	100	106.	✓				
20	743	1009	11.7	200	207.	✓				
19	744	1010	10.8	300	299.	✓				
18	745	1014	9.7	400	412.	✓				
17	746	1016	7.9	600	595.	✓				
16	747	1020	7.1	800	806.	X ✓				
15	748	1025	6.2	1000	1000.	✓				
14	749	1027	5.9	1250	1246.	✓				
13	750	1028	5.4	1500	1500.	✓				
12	751	1029	5.3	1750	1750.	✓				
11	752	1031	4.9	2000	2001.	✓				
10	753	1032	4.7	2250	*2250	✓	T451-1.792	T798-1.792		
9	754	1033	4.5	2500	2499.	✓				
8	755	1036	4.6	3000	3006.	✓				
7	756	1039	4.6	3500	3500.	✓				
6	757	1040	5.0	4000	3999.	✓				
5	758	1043	4.9	4500	4500.	✓				
4	759	1045	4.4	5000	4994.	✓	T647-1.546	T577-1.533	T6314 S	5000
3	760	1046	4.3	5500	5500.	✓				
2	761	1047	4.3	5750	5747.	✓				
1	762	1051	4.2	8-100	~6040	✓				
							STOPPED	100 m (±10m)	from bottom	>6000 db

ENTERED BY: f.w.

CHECKED BY:

Bottom Depth: 5730m

Cast No: 84 down

85 up

LOC UTC

Begin: 1633

Bottom: 1743

End: 1955

BEGIN POSITION (GPS)

LAT: 36 59.88

LONG: 164 59.96

BOTTOM POSITION (GPS)

LAT: 3700.06

LONG: 164 59.46

END POSITION (GPS)

LAT: 36 58.78

LONG: 164 58.96

Comments

Pressure sensor off scale
overranged.

Rosette 2: 12 bottle

CRUISE NO: 9403/1

UTC DATE: SEPT 28/94

VESSEL: John P. Tully

STATION NO: W039

HYDRO No.: 87

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)

11	763	1060	21.5	10	9.8	.				
10	764	1062	21.4	10	10	.				
9	765	1064	15.4	50	50	.				
8	766	1065	13.4	100	100	.				
7	767	1067	12.8	150	151	.				
6	768	1068	12.4	200	199	.				
5	769	1069	12.0	250	251	.				
4	770	1072	11.8	300	301	.				
3	771	1079	10.6	400	400	.				
2	772	1084	9.2	500	499	.				
1	773	1087	9.2	600	600	.				

ENTERED BY:
CHECKED BY:

Bottom Depth:
Cast No: 86 Down

	LOC	UTC
Begin:		2319
Bottom:		2332
End:		?

BEGIN POSITION (GPS)

LAT: 36 30

LONG: 165 001

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

29 Sept 1994

VESSEL: John P. Tully

STATION NO:

W 039

HYDRO No.:

89

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	774	1147	6.6	600	607 610	✓				
22	775	1148	6.1	800	810	✓				
21	776	1149	5.8	1000	1005	✓				
20	777	1150	4.5	1250	1252	✓				
19	778	1151	4.2	1500	1507	✓				
* 18	779	1152	✓	1750	1759	✓	Bottle did not close			
17	780	1153	3.3	2000	1916	✓				
16	781	1154	3.7	2250	2245	✓				
15	782	1155	3.3	2500	2499	✓				
14	783	1156	3.2	2750	2750	✓				
13	784	1157	4.2	3000	3000	✓				
12	785	1158	4.1	3250	3255	✓				
11	786	1160	3.3	3500	3506	✓				
+ 10	787	1161	3.8	3750	3747	✓	T451	1.483	T798	1.484
9	788	1163	4.1	4000	3984	✓				
8	789	1164	4.0	4000	3990	✓				
7	790	1165	4.4	4250	4246	✓				
6	791	1166	3.1	4500	4447	✓				
5	792	1167	4.1	4750	4745	✓				
+ 4	793	1168	4.1	5000	5002	✓	T647	1.533	T577	1.518
3	794	1169	4.0	5250	5247	✓			P 6314	5010 db
2	795	1170	3.1	5500	5499	✓				
1	796	1171	3.5	B-20	5992	✓				

ENTERED BY: DJS
CHECKED BY:

Bottom Depth: 5900

Cast No: 88 ↓
89 ↑

	LOC	UTC
Begin:		0027
Bottom:		0139
End:		0343

BEGIN POSITION (GPS)
LAT: 36° 31.16
LONG: 115° 00

BOTTOM POSITION (GPS)
LAT: 36° 31.95
LONG: 115° 01.02

END POSITION (GPS)
LAT: 36° 31.8
LONG: 115° 03.7'

Comments

* Bottle did not trip, layward still in pylon.

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

29 SEPT 1994

VESSEL: John P. Tully

STATION NO:

W040

HYDRO No.:

91

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	797	2043	21.2	10	10	•				
22	778	2044	15.5	50	50	•				
21	799	2045	13.7	100	100	•				
20	800	2047	12.5	200	201	•				
19	801	2049	11.6	300	301	•				
18	802	2051	10.6	400	400	•				
17	803	2052	8.2	600	601	•				
16	804	2054	7.5	800	800	•				
15	805	2055	7.4	1000	1000	•				
14	806	2056	7.4	1000	1000	•				
13	807	2057	6.6	1250	1251	X ✓ miss trip				
12	808	2058	7.0	1500	1501	•				
11	809	2059	6.4	2000	2003	✓				
10	810	2060	6.9	2250	X 2248	✓	T451	1.812	T798	1.812
9	811	2061	6.7	2500	2500	✓				
8	812	2062	6.8	2750	2750	✓				
7	813	2063	6.2	3000	3001	X ✓				
6	814	2064	6.6	3500	3500	✓				
5	815	2065	6.8	4000	4000	✓				
4	816	2066	6.1	4500	X 4501	✓	T647	1.491	T577	1.477
3	817	2067	6.0	5000	5001	✓	P6314	4509		
2	818	2068	6.4	5500	5502	✓				
1	819	2069	6.3	6000	5809	✓				

ENTERED BY:

CHECKED BY:

Bottom Depth: 5703

Cast No: 90 down
91 up

LOC UTC

Begin: 0721

Bottom: 0841

End: 1100

BEGIN POSITION (GPS)

LAT: 35 59.93

LONG: 165 00.04

BOTTOM POSITION (GPS)

LAT: 35 59.23

LONG: 165 00.76

END POSITION (GPS)

LAT: 35 58.21

LONG: 165 02.46

Comments

winds light & variable

Rosette 2: 12 bottle

CRUISE NO: 9403/1

UTC DATE: Sept 29/94

VESSEL: John P. Tully

STATION NO: W041

HYDRO No.: 93+94

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
11	820	1003	21.3	10	10.5	✓				
10	821	1004	15.3	50	49	✓				
9	822	1008	13.4	100	99	?	No voltage drop			
8	823	1009	13.5	100	160	✓				
7	824	1010	12.8	750	150	.				
6	825	1014	12.6	200	199	✓				
5	826	1016	12.0	250	249	✓				
4	827	1020	11.5	300	297	✓				
3	828	1025	10.7	400	395	✓				
2	829	1027	10.0	500	499	✓				
1	830	1028	8.9	600	603	✓	T679	5.372	P20995	598.2

ENTERED BY:
CHECKED BY:

Bottom Depth: 5829

Cast No: 92 down
93 up
94 up

LOC	UTC
Begin:	1404
Bottom:	1432
End:	

BEGIN POSITION (GPS)

LAT: 35 29 N

LONG: 164

Restarted data logging in
middle - after 400 m
up cast

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

Sept 29/94

VESSEL: John P. Tully

STATION NO:

W041

HYDRO No.:

96

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	831	2000	6.7	600	602	✓				
22	832	2001	5.8	800	800	✓				
21	833	2002	5.3	1000	1001	✓				
20	834	2004	4.6	1250	1249	✓				
19	835	2005	4.2	1500	1499	✓				
18	836	2006	3.9	1750	1749	✓				
17	837	2007	3.5	2000	1999	✓				
16	838	2008	3.6	2250	2249	✓				
15	839	2009	3.6	2500	2498	✓				
14	840	2010	3.4	2750	2750	✓				
13	841	2012	4.3.7	3000	3000	✓				
12	842	2013	3.7	3250	3251	✓				
11	843	2014	4.3.8	3500	3500	✓				
10	844	2015	3.8	3750	3750	✓	T 451	1.477	T 798	1.478
9	845	2017	3.2	4000	4000	✓				
8	846	2018	3.2	4250	4249	✓				
7	847	2019	3.4	4500	4500	✓				
6	848	2020	2.8	4750	4751	✗	Not confirmed first time + wrong record			
5	849	2021	3.0	5000	5001	✓				
4	850	2022	2.6	5250	5250	✓	T 647	1.549	T 577	1.535
3	851	2025	2.6	5500	5500	✓				
2	852	2027	2.6	5750	5749	✓				
1	853	2028	2.9	B-30	5928	✓				
							Two not confirmed, changed wiring, then ok			

ENTERED BY: JFG

CHECKED BY:

Bottom Depth: 5820

Cast No: 95 down

96 up

LOC UTC

Begin: 1457

Bottom: 1605

End:

BEGIN POSITION (GPS)

LAT: 35° 29.7

LONG: 165° 00.2

BOTTOM POSITION (GPS)

LAT: 35° 29.41

LONG: 165° 00.62

END POSITION (GPS)

LAT: 35° 28.8

LONG: 165° 01.09

Comments

Rosette 1: 23 bottle

CRUISE NO:

9403/1
W042

UTC DATE:

Sept 29 / 94

HYDRO No.:

98

VESSEL: John P. Tully

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
					2.0	surface				
23	854	1111	22.4	10	11	•				
22	855	1112	17.1	50	49.9	•				
21	856	1113	14.6	100	100	•				
20	857	1114	13.1	200	200	•				
19	858	1119	11.8	300	300	• #2 OK #1 No current				
18	859	1120	10.8	400	400	•				
17	860	1121	9.1	600	601	•				
16	861	1122	8.3	800	800	•				
15	862	1125	7.0	1000	1000	•				
14	863	1126	6.5	1250	1249	•				
13	864	1128	6.9	1500	1500	•				
12	865	1129	5.9	1750	1750	•				
11	866	1130	5.6	2000	2000	•				
*10	867	1132	5.8	2250	2250	•	T451	1.780	T798	1.780
9	868	1133	5.3	2500	2500	•				
8	869	1134	6.0	2750	2749	•				
7	870	1135	5.5	3000	3000	•				
6	871	1136	6.3	3500	3500	•				
5	872	1137	6.3	4000	3999	•				
*4	873	1138	6.3	4500	4500	•	{ T647 P 6314 S	1.487	T577	1.474
3	874	1139	6.2	5000	5000	•		4507		
2	875	1140	6.5	5500	5500	•				
1	876	1141	5.9	B-20	5825	•				

ENTERED BY:

CHECKED BY:

Bottom Depth: 5732

Cast No: 97 down
98 up

LOC UTC

Begin: 2113

Bottom:

End: 0046
31 Sept

BEGIN POSITION (GPS)

LAT: 35 00.01

LONG: 164 59.78

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

Sept 30/94

VESSEL: John P. Tully

STATION NO:

W043

HYDRO No.:

100

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	877	1147	22.2	10	10	✓				
22	878	1148	17.3	50	50	✓				
21	879	1149	14.9	100	100	✓				
20	880	1150	13.4	200	200	✓				
19	881	1151	12.5	300	300	✓				
18	882	1152	11.1	400	398	✓				
17	883	1153	8.6	600	602.	✓				
16	884	1154	7.5	800	799.	✓				
15	885	1155	7.0	1000	1005.	✓				
14	886	1156	6.9	1250	1246.	✓				
13	887	1157	6.5	1500	1508	✓				
12	888	1158	5.9	1750	1749	✓				
11	889	1160	5.6	2000	1993	✓				
10	890	1161	5.5	2250	* 2250	✓	T 451	1.812	T 798-1.814	
9	891	1163	5.2	2500	2500	✓				
8	892	1164	5.4	2750	2749.	✓				
7	893	1165	5.1	3000	2999.	✓				
6	894	1166	5.0	3500	3500	✓				
5	895	1167	5.0	4000	4000	✓				
4	896	1168	4.8	4500	4500	✓	T 647	1.491	T 577-1.479	P 4508
3	897	1169	4.7	5000	5002	✓				
2	898	1170	4.5	5500	5499	✓				
1	899	1171	4.5	B-20	5819	✓				

ENTERED BY:

JTS

CHECKED BY:

Bottom Depth:

5719 m

Cast No:

99↓

100↑

LOC

UTC

Begin:

03:55

Bottom:

05:11

End:

0716

BEGIN POSITION (GPS)

LAT:

34° 30.15

LONG:

165° 00.20

BOTTOM POSITION (GPS)

LAT:

34° 30.60

LONG:

165° 00.00

END POSITION (GPS)

LAT:

34 30.60

LONG:

164 59.57

Comments

wind 15 knots.

Rosette 2: 12 bottle

CRUISE NO: 9403 / 1

UTC DATE:

VESSEL: John P. Tully

STATION NO: W044

HYDRO No.: 102

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
11	900	1060	23.0	10	10	.				
10	901	1062	18.4	50	48	.				
9	902	1064	18.3	50	50	.				
8	903	1065	16.4	100	100	.				
7	904	1067	15.3	150	150	.				
6	905	1068	14.7	200	200	.				
5	906	1069	13.8	250	250	.				
4	907	1072	13.2	300	299	.				
3	908	1079	13.2	400	399	.				
2	909	1084	11.3	500	499	.				
1	910	1087	10.2	600	598	.	T679	6.109	P2099	595.3

ENTERED BY:
CHECKED BY:

Bottom Depth: 5706
Cast No:

	LOC	UTC
Begin:		11:10
Bottom:		1121
End:		1140

BEGIN POSITION (GPS)
LAT: 34 00 075
LONG: 764 59 633

34 00 034
164 59 54

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

Sept 30/94

VESSEL: John P. Tully

STATION NO:

W 044

HYDRO No.:

104

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	911	2043	8.7	600	609	✓				
22	912	2044	7.7	800	791	✓				
21	913	2045	6.9	1000	989	✓				
20	914	2047	6.6	1250	1193	✓				
19	915	2049	6.7	1250	2235	✓				
18	916	2051	7.0	1500	1472	✓				
17	917	2052	6.0	1750	1749	✓				
16	918	2054	6.2	2000	1991	✓				
15	919	2055	6.5	2250	2252	✓				
14	920	2056	6.5	2500	2484	✓				
13	921	2057	6.9	2750	2750	✓				
12	922	2058	7.3	3000	2991	✓				
11	923	2059	5.9	3250	3252	✓				
* 10	924	2060	6.2	3500	3496	✓	T547 1.522	T577 1.510	P6314	5006
9	925	2061	6.4	3750	3749	✓				
8	926	2062	5.7	4000	4000	✓				
7	927	2063	6.6	4250	4250	✓				
6	928	2064	6.1	4500	4499	✓				
5	929	2065	6.1	4750	4753	✓				
* 4	930	2066	6.3	5000	5000	✓	T451	1.489	745	1.490
3	931	2067	6.1	5250	5249	✓				
2	932	2068	6.1	5500	5497	✓				
1	933	2069	6.2	8-20	5793	✓				

ENTERED BY:

CHECKED BY:

Bottom Depth:

5698

Cast No:

103 down

104 up

LOC

UTC

Begin:

12:23

Bottom:

1333

End:

15:33

BEGIN POSITION (GPS)

LAT: 33 59 914

LONG: 164 59 402

BOTTOM POSITION (GPS)

LAT: 33°59' 52

LONG: 164°55.25

END POSITION (GPS)

LAT: 33°55.33N

LONG: 164°56.7'

Comments

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

30/9/94

VESSEL: John P. Tully

STATION NO:

W 045

HYDRO No.:

106

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	945	2000	9.6	600	605	•				
22	946	2001	8.2	800	797	•				
21	947	2002	7.5	1000	995	•				
20	948	2004	7.8	1000	995	• not Confirmed				
19	949	2005	7.7	1250	1248	✓				
18	950	2006	7.5	1500	1497	✓				
17	951	2007	7.0	1750	1751	✓				
16	952	2008	6.7	2000	2001	✓				
15	953	2009	6.7	2250	2248	✓				
14	954	2010	7.3	2500	2503	✓				
13	955	2012	6.5	2750	2747	✓				
12	956	2013	6.6	3000	2999	✓				
11	957	2014	6.7	3250	3250	✓				
10	958	2015	7.1	3500	* 3502	✓	T451	1.494	T798	1.495
9	959	2017	6.8	3750	3747	✓				
8	960	2018	7.2	4000	3998	✓				
7	961	2019	6.9	4250	4250	✓				
6	962	2020	7.2	4500	4500	✓				
5	963	2021	7.2	4750	4750	✓				
4	964	2022	7.5	5000	* 4998	✓	T647 P 6314	1.525	T577	1.511
3	965	2025	7.5	5250	5251	✓				
2	966	2027	7.6	5500	5504	✓				
1	967	2028	7.5	B-20	5977	✓				

ENTERED BY:

CHECKED BY:

Bottom Depth: 5850 m

Cast No: 105 down
106 up

LOC UTC

Begin:

Bottom: 2026

End: 22:21

BEGIN POSITION (GPS)

LAT:

LONG:

BOTTOM POSITION (GPS)

LAT: 33 29.69

LONG: 165 0072

END POSITION (GPS)

LAT: 33 28.011

LONG: 165 01.511

Comments

Rosette 2: 12 bottle

CRUISE NO: 9403/1
STATION NO: W045

UTC DATE: 30 Sept. '14
HYDRO No.: 107

VESSEL: John P. Tully

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
11	934	1003	24.4	10	9.9	•				
10	935	1004	19.8	50	49.8	•				
9	936	1008	20.0	100	100	•				
8	937	1009	18.1	150	150	•				
7	938	1010	17.0	200	201	•				
6	939	1014	17.2	200	200	•				
5	940	1016	16.1	250	250	•				
4	941	1020	16.5	300	300	•				
3	942	1025	15.7	400	399	•				
2	943	1027	14.5	500	498	•				
1	944	1028	13.9	600	600	•	T679	6.310	P2099	595.6

ENTERED BY:
CHECKED BY:

Bottom Depth:
Cast No: 107

LOC	UTC
Begin:	22:51
Bottom:	
End:	23:55

BEGIN POSITION (GPS)
LAT: 33° 28.0' N
LONG: 165° 01.5' W

Rosette 1: 23 bottle

CRUISE NO:

9403/1
W046

UTC DATE:

Oct 1/94

VESSEL: John P. Tully

STATION NO:

HYDRO No.:

109

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	968	1060	24.0	10	9.	✓				
22	969	1062	20.1	50	51.	✓				
21	970	1065	17.4	100	101.	✓				
20	971	1067	16.2	200	201.	✓				
19	972	1068	15.0	300	299.	✓				
18	973	1069	14.0	400	402.	✓				
17	974	1072	11.7	600	594.	✓				
16	975	1079	10.7	600	596.	✓				
15	976	1084	9.4	800	804	✓				
14	977	1087	7.3	1000	998	✓				
13	978	1090	6.8	1250	1247	✓				
12	979	1092	6.3	1500	1499	✓				
11	980	1095	8.4	1750	1751	✓				
10	981	1096	7.6	2000	2000	✓	T451	2.004	T798	2.004
9	982	1097	6.6	2500	2500	✓				
8	983	1100	7.8	2750	2746	✓				
7	984	1101	6.1	3000	2999	✓				
6	985	1102	6.1	3500	3500	✓				
5	986	1103	5.8	4000	4000	✓				
4	987	1104	6.0	4500	4500	✓	T647	1.474	T577	1.462
3	988	1105	6.0	5000	4999	✓				
2	989	1110	6.0	5500	5499	✓				
1	990	1106	6.0	B-20	5768	✓				

ENTERED BY:

DJS

CHECKED BY:

Bottom Depth:

5680

Cast No:

Dura 108

109

LOC

UTC

Begin:

0311

Bottom:

0427

End:

0631

BEGIN POSITION (GPS)

LAT:

3259.94 N

LONG:

16500.54 W

BOTTOM POSITION (GPS)

LAT:

3259.75

LONG:

16500.88

END POSITION (GPS)

LAT:

3259.41

LONG:

16500.63

Comments

Rosette 2: 12 bottle

CRUISE NO: 9403/1
STATION NO: W047

UTC DATE: Oct 1 / 94
HYDRO No.: 114

VESSEL: John P. Tully

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
11	991	1147	24.5	10	10	.				
10	992	1148	19.3	50	50	.				
9	993	1149	19.3	100	100	.				
8	994	1150	17.1	150	150	.				
7	995	1151	16.3	200	200	.				
6	996	1152	14.9	250	250	.				
5	997	1153	14.5	300	301	.				
4	998	1154	14.6	300	300	.				
3	999	1155	14.5	400	400	.				
2	1000	1156	12.6	500	499	.				
1	1001	1157	12.3	600	599	.	P 2099	594.1	T 679	5.913

ENTERED BY:
CHECKED BY:

Bottom Depth:

Cast No: 110 down
111 up

LOC	UTC
Begin:	1043
Bottom:	1055
End:	11:16

BEGIN POSITION (GPS)

LAT: 32 30 302

LONG: 164 59 752

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE: Oct 1/94

VESSEL: John P. Tully

STATION NO:

W047

HYDRO No.: 113

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
					597	✓				
23	1002	2043	9.3	600	596	✓				
22	1003	2044	9.2	800	797	✓				
21	1004	2045	9.2	800	798	✓				
20	1005	2047	8.4	1000	1060	✓				
19	1006	2049	9.2	1200	1203	✓				
18	1007	2051	8.4	1250	1249	✓				
* 17	1008	2052	10.94	1500	1499	✓				
16	1009	2054	6.7	1750	1754	✓				
15	1010	2055	6.5	2000	1995	✓				
14	1011	2056	6.8	2250	2249	✓				
13	1012	2057	6.9	2500	2500	✓				
12	1013	2058	7.5	2750	2747	✓				
11	1014	2059	7.6	3000	3000	✓				
* 10	1015	2060	8.2	3250	3249	✓	451	1.506	746	1.507
9	1016	2061	6.5	3500	3500	✓				
8	1017	2062	6.9	3750	3751	✓				
7	1018	2063	7.4	4000	3998	✓				
6	1019	2064	8.1	4250	4250	✓				
5	1020	2065	8.0	4500	4504	✓				
* 4	1021	2066	8.3	4750	4750	✓	647	1.503	577	1.490
3	1022	2067	7.5	5000	5000	✓			5314	4761
2	1023	2068	7.4	5500	5494	✓				
1	1024	2069	7.2	13-20	5670	✓				
* redrawn O ₂ after sat + nut.										

ENTERED BY:

CHECKED BY:

Bottom Depth: 5579

Cast No: down 112

up 113

LOC UTC

Begin: 1155

Bottom: 1304

End: 1753

BEGIN POSITION (GPS)

LAT: 32° 29.78

LONG: 164° 59.36

BOTTOM POSITION (GPS)

LAT: 32° 29.13

LONG: 164 58.92

END POSITION (GPS)

LAT: 32 28.33

LONG: 164 59.25

Comments

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

Oct 1/94

VESSEL: John P. Tully

STATION NO:

W048

HYDRO No.:

115

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	1025	1111	24.5	10	10	•				
22	1026	1112	20.2	50	50	•				
21	1027	1113	18.3	100	104	•				
20	1028	1114	15.5	200	204	•				
19	1029	1119	14.1	300	296	•				
18	1030	1120	13.0	400	399	•				
17	1031	1121	13.1	600	600	•				
16	1032	1122	9.5	800	799	•				
15	1033	1125	8.8	1000	999	•				
14	1034	1126	8.7	1250	1251	•				
13	1035	1128	9.0	1500	1501	✓				
12	1036	1129	8.1	1750	1746	✓				
11	1037	1130	8.3	2000	1999	✓				
10	1038	1132	7.9	2250	*2250	✓	T451	1.789	T798	1.791
9	1039	1133	7.9	2500	2501	✓				
8	1040	1134	7.8	2750	2750	✓				
7	1041	1135	7.7	3000	3000	✓				
6	1042	1136	7.9	3500	3500	✓				
5	1043	1137	7.9	4000	3999	✓				
4	1044	1138	8.0	4500	*4501	✓	T647	1.487	T577	1.473
3	1045	1139	8.4	5000	5000	✓	P6314	4510		
2	1046	1140	8.5	5500	5501	✓	CTD wire caught in bottle top.			
1	1047	1141	8.3	B-40	5984	✓				

ENTERED BY:

CHECKED BY:

Bottom Depth: 5897

Cast No: 114 down
115 up

LOC UTC

Begin:

Bottom:

End:

BEGIN POSITION (GPS)

LAT:

LONG:

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

wind 23 knots
rain squalls

Rosette 2: 12 bottle

CRUISE NO: 9403/1

UTC DATE: Oct 2/94

VESSEL: John P. Tully

STATION NO: W049

HYDRO No.: 117

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
11	1048	1003	24.8	10						
10	1049	1004	21.3	50	50	✓				
9	1050	1008	21.2	100	99	✓				
8	1051	1009	16.5	150	152	✓				
7	1052	1010	15.7	200	201	✓				
6	1053	1014	14.6	300	301	✓				
5	1054	1016	13.6	400	401	✓				
4	1055	1020	12.8	500	498	✓				
3	1056	1025	12.0	500	502					
2	1057	1027	9.1	600	599	✓				
1	1058	1028	7.6	800	793	✓	T 679	4.205	790.3	db

ENTERED BY: DJS
CHECKED BY:

Bottom Depth: 5885
Cast No: 116^W/117^U

	LOC	UTC
Begin:		02:06
Bottom:		02:20
End:		02:43

BEGIN POSITION (GPS)
LAT: 31 30.98
LONG: 165 00.22

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

Oct 2/94

VESSEL: John P. Tully

STATION NO:

W049

HYDRO No.:

119

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	1059	1060	8.0	800	803	✓				
22	1060	1062	7.7	1000	1004	✓				
21	1061	1065	7.4	1250	1253	✓				
20	1062	1067	6.6	1500	1500	✓				
19	1063	1068	5.6	1750	1750	✓				
18	1064	1069	5.6	2000	2001	✓				
17	1065	1072	5.4	2250	2248	✓				
16	1066	1079	5.2	2500	2552	✓				
15	1067	1084	5.1	2750	2748	✓				
14	1068	1087	5.1	3000	2999	✓				
13	1069	1090	5.0	3250	3251	✓				
12	1070	1092	4.8	3500	3499	✓				
* 11	1071	1095	4.7	3750	3749	✓				
10	1072	1096	4.8	4000	3998	✓	T451	1.474	T796	1.474
9	1073	1097	4.6	4250	4249	✓				
8	1074	1100	4.7	4500	4500	✓				
7	1075	1101	4.7	4750	4749	✓				
6	1076	1102	4.3	5000	5001	✓				
5	1077	1103	4.2	5250	5250	✓	OK second "A+B"			
4	1078	1104	4.3	5500	5499	✓	T647	1.564	T577	1.550
3	1079	1105	5.2	B-100	5902	✓				
2	1080	1106	4.6	B-50	5971	✓				
1	1081	1110	4.5	B-20	? 6000+	✓				

ENTERED BY: DSS BM

CHECKED BY:

Bottom Depth: 5844

Cast No: 118 ↓
119 ↑

	LOC	UTC
Begin:		0317
Bottom:		0433
End:		0637

BEGIN POSITION (GPS)

LAT: 3129.96

LONG: 165 00.06

BOTTOM POSITION (GPS)

LAT: 31 30.31

LONG: 165 00.78

END POSITION (GPS)

LAT: 3130.76

LONG: 16459.60

Comments

Rosette on bottom.

* Overshot depth by 50m had to return to depth.

Rosette 1: 23 bottle

CRUISE NO:

940311
W050

UTC DATE:

Oct 21 94

HYDRO No.:

121

VESSEL: John P. Tully

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	1082	2043	24.4	10	10	.				
22	1083	2044	19.8	50	51	.				
21	1084	2045	16.9	100	100	.				
20	1085	2047	15.0	200	201	.				
19	1086	2049	13.8	300	300	.				
18	1087	2051	12.6	400	400	.				
17	1088	2052	10.2	600	600	.				
16	1089	2054	8.5	800	799	.				
15	1090	2055	7.7	1000	1000	.				
14	1091	2056	7.4	1250	1253	not conf.				
13	1092	2057	7.1	1500	1502	.				
12	1093	2058	6.6	1750	1756	.				
11	1094	2059	6.7	2000	2002	.				
10	1095	2060	6.5 *	2250	2250	not conf.	451	1.808	798	1.808
9	1096	2061	6.3	2500	2500	.				
8	1097	2062	6.0	2750	2750	.				
7	1098	2063	6.3	3000	3004	.				
6	1099	2064	6.2	3500	3496	.				
5	1100	2065	6.1	4000	4000	.				
4	1101	2066	5.7 *	4500	4498	.	647 577	1.484 1.471	6314	4503
3	1102	2067	5.8	5000	4995	.				
2	1103	2068	6.1	5500	5499	.				
1	1104	2069	6.2	8-20	5819	.				

ENTERED BY:

CHECKED BY:

Bottom Depth:

5706

Cast No:

120 200-

121 up

LOC

UTC

Begin:

1013

Bottom:

1135

End:

1345

BEGIN POSITION (GPS)

LAT:

LONG:

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT: 31° 02.270'

LONG: 165° 01.412'

Comments

Rosette 2: 12 bottle

CRUISE NO: 9403/1

UTC DATE: Oct 2/94

VESSEL: John P. Tully

STATION NO: W051

HYDRO No.: 123

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
11	1105	1111	25.0	10	10	✓				
10	1106	1112	20.4	50	50	✓				
9	1107	1113	20.5	100	101	✓				
8	1108	1114	15.8	150	149	✓				
7	1109	1119		200	198	✓				
6	1110	1120	13.5	300	299	✓				
5	1111	1121	13.7	300	299	✓				
4	1112	1122	12.5	400	400	✓				
3	1113	1125	12.4	500	503	✓				
2	1114	1126	7.9	600	599	✓				
1	1115	1128	8.8	800	800	✓	T 679 4314		796.846	

ENTERED BY:
CHECKED BY:

Bottom Depth: 5438
Cast No: 122 Down
123 Up

LOC	UTC
Begin:	1735
Bottom:	1751
End:	

BEGIN POSITION (GPS)

LAT:

LONG:

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

Oct 2/94

VESSEL: John P. Tully

STATION NO:

W051

HYDRO No.:

125

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	1116	1147	7.2	800	802	✓				
22	1117	1148	7.1	1000	1000	✓				
21	1118	1149	6.4	1250	1252	✓				
20	1119	1150	7.6	1500	1499	✓				
19	1120	1151	6.2	1750	1752	✓				
18	1121	1152	6.6	2000	2001	✓				
17	1122	1153	6.8	2250	2252	✓				
16	1123	1154	7.4	2500	2500	✓				
15	1124	1155	6.1	2750	2743	✓				
14	1125	1156	6.5	3000	2999	✓				
13	1126	1157	6.5	3250	3251	✓				
12	1127	1158	7.3	3500	3501	✓				
11	1128	1160	6.1	3750	3748	✓				
10	1129	1161	6.3	4000	3997	✓	T 451	1471	T 798	1472
9	1130	1163	6.1	4250	4247	✓				
8	1131	1164	6.9	4500	4500	✓				
7	1132	1165	6.2	4750	4749	✓				
6	1133	1166	7.0	5000	5000	✓				
5	1134	1167	6.6	5250	5252	✓				
4	1135	1168	6.9	5500	5500	✓	T 647	1542	T 577	1528
3	1136	1169	6.7	B-50	5515	✓				5441
2	1137	1170	7.0	B-20	5546	✓				
1	1138	1171	7.4	B-20	5543	✓				

ENTERED BY:

CHECKED BY:

Bottom Depth: 5441

Cast No: 124
125

	LOC	UTC
Begin:		1841
Bottom:		2002
End:		2149

BEGIN POSITION (GPS)

LAT: 30 30.53

LONG: 164 59.89

BOTTOM POSITION (GPS)

LAT: 30 30.79

LONG: 165 00.27

END POSITION (GPS)

LAT: 30 30.93

LONG: 165 01.29

Comments

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

3 Oct '94

VESSEL: John P. Tully

STATION NO:

W052

HYDRO No.:

128

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	1139	2043	—	10	8.	✓				
22	1140	2044	—	50	51.	✓				
21	1141	2045	24.4	100	101.	✓				
20	1142	2047	19.5	200	203.	✓				
19	1143	2049	17.0	300	300.	✓				
18	1144	2051	15.1	400	403	✓				
17	1145	2052	13.5	600	599.	✓				
16	1146	2054	12.3	800	803.	✓				
15	1147	2055	9.2	1000	1000.	✓				
14	1148	2056	8.2	1250	1249.	✓				
13	1149	2057	7.9	1500	1502.	✓				
12	1150	2058	6.7	1750	1752.	✓				
11	1151	2059	6.5	2000	2000	✓				
10	1152	2060	6.3	2250	2252	✓	T451	2229	2231	
9	1153	2061	6.1	2500	2501.	✓				
8	1154	2062	6.1	2750	2750	✓				
7	1155	2063	6.4	3000	2998	X✓				
6	1156	2064	5.9	3500	3500	✓				
5	1157	2065	5.9	4000	3998	✓				
4	1158	2066	6.1	4500	4497	✓	1.476	T577=1.464	3509	
3	1159	2067	5.9	5000	4999	✓				
2	1160	2068	6.1	5500	5500	✓				
1	1161	2069	6.2	B-20	5519	✓				

ENTERED BY: DJS
 CHECKED BY:

Bottom Depth: 5519
 Cast No: 127↓
128↑

LOC UTC
 Begin: 04:05
 Bottom: 05:17
 End:

BEGIN POSITION (GPS)
 LAT: 30° 00.13'N
 LONG: 164° 59.97'W

BOTTOM POSITION (GPS)
 LAT: 30° 00.40'N
 LONG: 164° 59.87'W

END POSITION (GPS)
 LAT:
 LONG:

Comments
only 21 bottles
closed.

Rosette 2: 12 bottle

CRUISE NO: 9403/1

UTC DATE: Oct 3/94

VESSEL: John P. Tully

STATION NO: W053.

HYDRO No.: 130

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
11	1162	1111	25.2	10	9.0	.				
10	1163	1112	25.2	10	9.4	.				
9	1164	1113	25.1	50	49	.				
8	1165	1114	20.2	100	99	.				
7	1166	1119	16.9	150	150	.				
6	1167	1120	15.0	200	200	.				
5	1168	1121	14.3	250	248	.				
4	1169	1122	13.6	300	300	.				
3	1170	1125	12.1	400	400	.				
2	1171	1126	10.8	500	499	.				
1	1172	1128	9.7	600	600	.	P2099	596.5		
							T679	6.317		

ENTERED BY:
CHECKED BY:

Bottom Depth: 5419

Cast No: 129 down 4R

130 up

LOC	UTC
Begin:	1104
Bottom:	1119
End:	1141

BEGIN POSITION (GPS)

LAT: 29° 03' 19.0

LONG: 164° 59' 06

? 29° 30'

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

Oct 03/94

VESSEL: John P. Tully

STATION NO:

10053

HYDRO No.:

132

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	1173	1060	9.8	500	507	✓				
22	1174	1062	8.7	500	595	✓				
21	1175	1065	7.8	800	802	✓				
20	1176	1067	7.1	1000	1018	✓				
19	1177	1068	8.1	1000	1013	✓				
18	1178	1069	7.4	1250	1244	✓				
17	1179	1072	6.8	1500	1499	Not, two shots				
16	1180	1079	6.5	1750	1745	✓				
15	1181	1084	6.1	2000	1995	✓				
14	1182	1087	7.4	2250	2248	•				
13	1183	1090	6.4	2500	2504	•				
12	1184	1092	6.1	2750	2754	Not confirmed no permanent, so fired				
11	1185	1095	6.0	3000	3003	•				
* 10	1186	1096	6.4	3250	3253	•	T451	1.512	T798	1.512
9	1187	1097	6.4	3500	3497	•				
8	1188	1100	6.5	3750	3748	✓				
7	1189	1101	6.1	4000	3998	•				
6	1190	1102	6.8	4250	4250	• not conf.				
5	1191	1103	7.2	4500	4500	•				
* 4	1192	1104	7.0	4750	4749	•	T647	1.495	T577	1.482
3	1193	1105	6.8	5000	4999	•			P6345	4758
2	1194	1106	6.9	5250	5250	•				
1	1195	1110	6.2	5-10	5532	•				

ENTERED BY:

CHECKED BY:

Bottom Depth: 55-50

Cast No: 131 down?

132 up

LOC UTC

Begin: 1204

Bottom: 1322

End: 1522

BEGIN POSITION (GPS)

LAT: 29° 30' 21.5"

LONG: 164° 59' 20.9"

BOTTOM POSITION (GPS)

LAT: 29° 31' 50.5"

LONG: 164° 59' 2"

END POSITION (GPS)

LAT: 29° 32' 15"

LONG: 164° 59' 01"

Comments

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

Oct 4/94

VESSEL: John P. Tully

STATION NO:

W054

HYDRO No.:

134

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	1196	1003	25.8 ✓	10	11	•				
22	1197	1004	25.8 ✓	50	50	•				
21	1198	1008	18.6 ✓	100	100	•				
20	1199	1009	16.4	200	206.	X ✓				
19	1200	1010	14.6	300	299.	✓ ← ?				
18	1201	1014	13.4	400	405.	✓				
17	1202	1016	10.4	600	605.	✓				
16	1203	1020	9.2	800	793.	✓				
15	1204	1025	8.3	1000	1002.	✓				
14	1205	1027	8.4	1250	1257.	✓				
13	1206	1028	7.5	1500	1503.	✓				
12	1207	1029	7.4	1750	1748.	✓				
11	1208	1031	7.4	2000	1994.	✓				
* 10	1209	1032	7.3	2250	*2246.	✓	T451	1.807	T798	1.808
9	1210	1033	7.8	2500	2502.	✓				
8	1211	1036	7.4	2750	2753	✓				
7	1212	1039	7.5	3000	2999.	✓				
6	1213	1040	7.4	3500	3503.	✓				
5	1214	1043	7.2	4000	3998.	✓				
* 4	1215	1045	7.6	4500	*4498	✓				
3	1216	1046	7.5	5000	5001	✓	T647	1.473	T577	1.460
2	1217	1047	7.9	B-60	5350	✓				
1	1218	1051	8.5	B-30	5372	✓			P6314	4507 Dbv
	(1196 dup)	1052	25.8							
	(1197 dup)	1054	25.8							
	(1198 dup)	1056	18.6							

ENTERED BY:

CHECKED BY:

Bottom Depth: 5253

Cast No: 133 down
134 up.

LOC UTC

Begin: 1857

Bottom:

End:

BEGIN POSITION (GPS)

LAT: 29 00.03

LONG: 164 59.77

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

Wind 20-25 gusts to 30.

Rosette 2: 12 bottle

CRUISE NO: 9403/1

UTC DATE: Oct 4/94

VESSEL: John P. Tully

STATION NO: W055

HYDRO No.: 136

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)

11	1219	2043	26.2	10	10	✓				
10	1220	2044	22.2	50	50	✓				
9	1221	2045	22.3	100	101	✓				
8	1222	2047	19.2	150	153	✓				
7	1223	2049	16.8	200	200	✓				
6	1224	2051	15.6	300	302	✓				
5	1225	2052	14.0	400	402	✓				
4	1226	2054	11.0	600	602	✓				
3	1227	2055	11.1	600	603	✓				
2	1228	2056	9.6	800	790	✓				
* 1	1229	2057	9.0	1000	1003	✓	T679	3.822	P20915	997.3

ENTERED BY: DJS

CHECKED BY:

Bottom Depth: 533 8

Cast No: 135↓, 136↑

LOC UTC

Begin: 01:59

Bottom: 02:15

End:

BEGIN POSITION (GPS)

LAT: 28° 30.44'N

LONG: 165° 00.98'W

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

4 Oct '94

VESSEL: John P. Tully

STATION NO:

W055

HYDRO No.:

138

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	1230	1060	9.4	600	601.	✓				
22	1231	1062	7.8	800	800.	✓				
21	1232	1065	7.1	1000	1001.	✓				
20	1233	1067	7.5	1250	1252	✓				
19	1234	1068	6.9	1500	1500.	✓				
18	1235	1069	5.7	1750	1751.	✓				
17	1236	1072	5.3	2000	2000.	✓				
16	1237	1079	5.6	2250	2256.	✓				
15	1238	1084	5.1	2500	2499.	✓				
14	1239	1087	5.1	2750	2747	✓				
13	1240	1090	5.1	3000	3000	✓				
12	1241	1092	5.0	3250	3250	✓				
11	1242	1095	4.1	3500	3499	✓				
10	1243	1096	4.1	3750	3750	✓	T451	1.460	T798	1.461
9	1244	1097	3.8	4000	3987	✓				
8	1245	1100	4.1	4250	4248	✓				
7	1246	1101	4.1	4500	4501	✓				
6	1247	1102	4.0	4500	4501	✓				
5	1248	1103	4.0	4750	4750	✓				
4	1249	1104	4.8	5000	4995	✓	T647	1.501	1.489	5003.46.
3	1250	1105	3.7	5250	5248	✓				
2	1251	1106	4.1	B-50	5398	✓				
1	1252	1110	4.0	B-20	5426	X✓				

ENTERED BY: DJS
CHECKED BY:

Bottom Depth: 5328

Cast No: 1376
1387LOC UTC
Begin: 03:21
Bottom:
End:BEGIN POSITION (GPS)
LAT: 28° 29.948 N
LONG: 165° 00.021 WBOTTOM POSITION (GPS)
LAT:
LONG:END POSITION (GPS)
LAT:
LONG:

Comments

Rosette 1: 23 bottle

CRUISE NO:

9403/1
W056

UTC DATE:

Oct 4/94

VESSEL: John P. Tully

STATION NO:

HYDRO No.:

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23										
22										
21										
20										
19										
18										
17										
16										
15										
14										
13										
12										
11										
10										
9	1253	1147	22.7	50	82					
8	1254	1148	19.5	100	130					
7	1255	1149	17.7	200	231					
6	1256	1150	15.2	300	334					
5	1257	1151	13.9	400	436					
4	1258	1152	12.4	500	534					
3	1259	1153	11.2	600	644					
2	1260	1154	9.6	800	820					
1	1261	1155	10.2	1000	974					

Note ALL Depths taken without
stopping the rosette.

No Thermometer read, they would
be bad data set. Did not stop the
rosette. Rough sea conditions

ENTERED BY:
CHECKED BY:

Bottom Depth: 5019

Cast No:

LOC UTC

Begin:

Bottom:

End:

BEGIN POSITION (GPS)

LAT:

LONG:

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

4/10/94

VESSEL: John P. Tully

STATION NO:

W058

HYDRO No.:

143

DUP
FLASK
71

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
1113	DUP 23	1262	1111	21.6	10	.				
1119	DUP 22	1263	1114	21.8	50	.				
1121	DUP 21	1264	1120	21.9	100	.				
1125	DUP 20	1265	1122	15.7	200	.				
	19	1266	1126	13.6	300	.				
	18	1267	1128	12.2	400	.				
	17	1268	1129	7.5	600	.				
	16	1269	1130	8.2	800	.				
	15	1270	1132	9.0	1000	.				
	14	1271	1133	6.5	1250	.				
	13	1272	1134	5.8	1500	.				
	12	1273	1135	5.4	1750	.				
	11	1274	1136	4.3	2000	.				
	10	1275	1137	4.6	2250	.				
	9	1276	1138	4.9	2500	.				
	8	1277	1139	4.9	2750	.				
	7	1278	1140	4.3	3000	.				
	6	1279	1141	3.5	3250	.				
	5	1280	1142	3.2	3500	.				
	4	1281	1143	3.0	3750	.				
	3	1282	1144	2.8	4000	.				
	2	1283	1145	3.2	4500	.				
	1	1284	1146	3.6	B-20	.				

ENTERED BY:

CHECKED BY:

Bottom Depth: 4820

Cast No: 142

143 repeat

LOC

UTC

Begin: 2103

Bottom: 2218

End: 2354

BEGIN POSITION (GPS)

LAT: 27 00.51

LONG: 164 59.65

BOTTOM POSITION (GPS)

LAT: 27 01.00

LONG: 164 58.99

END POSITION (GPS)

LAT: 27 02.86

LONG: 164 57.90

Comments

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

Oct 5/94

VESSEL: John P. Tully

STATION NO:

W059

HYDRO No.:

147

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	1296	2043	8.1	600	600.	✓				
22	1297	2044	6.5	800	802.	✓				
21	1298	2045	6.0	1000	1004	✓				
20	1299	2047	5.6	1250	1251.	✓				
19	1300	2049	4.9	1500	1501.	✓				
18	1301	2051	3.8	1750	1749.	✓				
17	1302	2052	4.1	2000	2000.	✓				
16	1303	2054	3.8	2250	2251.	✓				
15	1304	2055	3.8	2500	2500	✓				
14	1305	2056	4.1	2750	2750	✓				
13	1306	2057	3.9	3000	3001.	✓				
12	1307	2058	3.9	3000	3000.	✓				
11	1308	2059	3.6	3250	3248.	✓				
10	1309	2060	3.1	3500	3503	✓	T451 1.469 T796 1.470			
9	1310	2061	2.6	3500	3504	✓				
8	1311	2062	8.7	3750	3751	✓				
7	1312	2063	2.8	4000	4001.	✓				
6	1313	2064	1.9	4000	4000.	X✓				
5	1314	2065	1.9	4250	4250.	✓				
4	1315	2066	1.4	4500	4504	✓	T647 1.461 T577 1.449 4513			
3	1316	2067	1.9	4750	4745	✓				
2	1317	2068	1.9	B-50	4768	✓				
1	1318	2069	1.7	B-20	4800	✓				

ENTERED BY: DJS
CHECKED BY: RM

Bottom Depth: 475+
Cast No: 146↓
147↑

LOC UTC
Begin: 0448
Bottom: 0559
End: 0742

BEGIN POSITION (GPS)
LAT: 26° 30.15
LONG: 165° 00.614

BOTTOM POSITION (GPS)
LAT: 26 30.40
LONG: 165 00.64

END POSITION (GPS)
LAT: 26 30.30
LONG: 165 00.71

Comments

Rosette 2: 12 bottle

CRUISE NO: 9403/1
STATION NO: W059

UTC DATE: Oct 5/94
HYDRO No.: 145

VESSEL: John P. Tully

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
11	1285	1060	24.0	10	8	✓				
10	1286	1062	23.6	50	47	✓				
9	1287	1065	21.0	75	73	✓				
8	1288	1067	19.1	100	99	✓				
7	1289	1068	18.9	150	151	✓				
6	1290	1069	15.5	200	199	✓				
5	1291	1072	13.4	300	299	✓				
4	1292	1079	11.4	400	395	✓				
3	1293	1084	11.4	400	397	✓				
2	1294	1087	10.1	500	500	✓				
1	1295	1090	8.8	600	608	✓ T679	6.778		P2099	603.2 db

ENTERED BY:
CHECKED BY:

Bottom Depth: 4757
Cast No: 145

LOC	UTC
Begin:	3:58
Bottom:	04:08
End:	04:18

BEGIN POSITION (GPS)
LAT: 26°29.15' N
LONG: 165°00.092'

Rosette 1: 23 bottle

CRUISE NO:

940311

UTC DATE:

Oct 5/94

VESSEL: John P. Tully

STATION NO:

1X060

HYDRO No.:

149 up

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	1319	1147	24.2	10	9	.				
22	1320	1148	24.1	50	50	.				
21	1321	1149	19.8	100	100	.				
20	1322	1150	17.5	200	200	.				
19	1323	1151	15.2	300	300	.				
18	1324	1152	12.6	400	400	.				
17	1325	1153	10.0	600	601	.				
16	1326	1154	8.3	800	800	.				
15	1327	1155	8.8	1000	1000	.				
14	1328	1156	7.8	1250	1255	no current				
13	1329	1157	7.7	1500	1503	.				
12	1330	1158	7.3	1750	1751	.				
11	1331	1160	6.6	2000	2000	.				
* 10	1332	1161	6.7	2250	2250	.	(2 mps or) caught - Did not reverse			
9	1333	1163	6.5	2500	2501	.				
8	1334	1164	6.5	2750	2750	.				
7	1335	1165	6.1	3000	3000	.				
6	1336	1166	6.1	3250	3253	.				
5	1337	1167	6.3	3500	3505	.				
* 4	1338	1168	6.1	3750	3754	.	T647	1.443	T577	1.429
3	1339	1169	5.9	4000	4003	.			P6314	37.66
2	1340	1170	6.1	4250	4272	no current				
1	1341	1171	5.2	8-20	4662	.				

ENTERED BY:

CHECKED BY:

Bottom Depth:

Cast No: 148 down
149 up

LOC UTC

Begin: 1102

Bottom: 1215

End: 1357

BEGIN POSITION (GPS)

LAT: 25° 59.700

LONG: 165° 00.352'

BOTTOM POSITION (GPS)

LAT: 25° 58.27

LONG: 165° 01.73

END POSITION (GPS)

LAT: 25° 57.73

LONG: 165° 01.9

Comments

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

Oct 5/94

VESSEL: John P. Tully

STATION NO:

W061

HYDRO No.:

151

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	1342	1111	—	10	7.	X ✓	Bottle did not close, not triggered.			
22	1343	1113	25.1	50	50.	✓ nt.				
21	1344	1114	19.5	100	101.	✓				
20	1345	1119	16.1	200	200.	✓				
19	1346	1120	14.0	300	297.	✓				
18	1347	1121	12.7	400	400.	✓				
17	1348	1122	9.3	600	598.	✓				
16	1349	1125	8.3	800	803.	✓				
15	1350	1126	8.0	1000	1005.	X ✓				
14	1351	1128	8.2	1250	1258	✓				
13	1352	1129	7.5	1500	1505.	✓				
12	1353	1130	7.0	1750	1752.	X ✓				
11	1354	1132	6.2	2000	2001.	✓				
10	1355	1133	6.4	2250	*2250	✓	T451	2.033	T798	2.032
9	1356	1134	5.9	2500	2495	✓				
8	1357	1135	6.0	2750	2743.	✓				
7	1358	1136	5.4	3000	3000	✓				
6	1359	1137	5.9	3500	3543.	✓				
5	1360	1138	5.2	3750	3747.	✓				
4	1361	1139	5.4	4000	*4000	✓	T647	1.449	T577	1.435
3	1362	1140	5.0	4250	4250.	✓				
2	1363	1141	4.8	4500	4501.	✓				
1	1364	1142	4.2	B-20	4938	✓				

ENTERED BY: B.M.
CHECKED BY:

Bottom Depth: 4867 m
Cast No: 150 down
151 up.

LOC	UTC
Begin:	1711
Bottom:	1815
End:	1955

BEGIN POSITION (GPS)
LAT: 25 30.16
LONG: 164 59.90

BOTTOM POSITION (GPS)
LAT: 25 30.52
LONG: 164 59.63

END POSITION (GPS)
LAT: 25 31.81
LONG: 164 59.76

Comments
22 bottles only
closed.

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

Oct 6/94

VESSEL: John P. Tully

STATION NO:

W062

HYDRO No.:

153

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	1365	1147	24.8	10	10	✓				
22	1366	1148	23.4	50	51	✓				
21	1367	1149	19.8	100	97	✓				
20	1368	1150	16.2	200	202	✓				
19	1369	1151	13.9	300	300	✓				
18	1370	1152	12.2	400	400	✓				
17	1371	1153	9.8	600	599	✓				
16	1372	1154	8.5	800	798	✓				
15	1373	1155	7.0	1000	1000	✓				
14	1374	1156	6.1	1250	1250	✓				
13	1375	1157	5.6	1500	1498	✓				
12	1376	1158	5.1	1750	1750	•				
11	1377	1160	4.7	2000	2000	•				
* 10	1378	1161	4.1	2250	* 2250	•	* T451	1.865	T7??	1.865
9	1379	1163	3.9	2500	2500	•				
8	1380	1164	4.3	2750	2749	•				
7	1381	1165	5.2	3000	2999	•				
6	1382	1166	4.2	3250	3250	•				
5	1383	1167	3.5+	3500	3500	•				
* 4	1384	1168	4.2	3750	* 3750	•	* T647	1.452	T5??	1.439 P 3757
3	1385	1169	4.4	4000	3998	•				
2	1386	1170	5.0	4500	4499	•				
1	1387	1171	/	B-20	5040	•	filled with air (no sample)			

ENTERED BY:

DJS

CHECKED BY:

Bottom Depth:

Cast No:

152 ↓

153 ↑

LOC

UTC

Begin:

23:54 5/14/94

Bottom:

01:00 6/10/94

End:

02:31 6/10/94

BEGIN POSITION (GPS)

LAT:

25° 00.13'

LONG:

164 59.947

BOTTOM POSITION (GPS)

LAT:

25° 00.39N

LONG:

164° 59.72W

END POSITION (GPS)

LAT:

25° 00.91N

LONG:

164° 59.70W

Comments

Rain during sample
drawing for O₂

Rosette 1: 23 bottle

CRUISE NO:

9403

UTC DATE:

6 Oct '94

VESSEL: John P. Tully

STATION NO:

W063

HYDRO No.:

155

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	1388	2043	25.3	10	10	✓				
22	1389	2044	25.1	50	49	✓				
21	1390	2045	21.0	100	101	✓				
20	1391	2047	17.3	200	200	✓				
19	1392	2049	13.7	300	300	✓				
18	1393	2051	11.8	400	400	✓				
17	1394	2052	8.7	600	601	✓				
16	1395	2054	8.0	800	*799	✓	T679	6.293		
15	1396	2055	7.1	1000	1002	✓				
14	1397	2056	6.5	1250	1248	✓				
13	1398	2057	6.8	1500	1500	✓				
12	1399	2058	6.0	1750	1752	✓				
11	1400	2059	5.8	2000	2002	✓				
10	1401	2060	5.3	2250	*2256	✓	T451	1.873	+798	1.869
9	1402	2061	5.3	2500	2508	✓				
8	1403	2062	5.7	2750	2744	✓				
7	1404	2063	5.4	3000	2999	✓				
6	1405	2064	5.6	3250	3249	✓				
5	1406	2065	5.6	3500	3499	✓				
4	1407	2066	5.7	3750	*3750	✓	T647	1.451	T577	1.437
3	1408	2067	5.8	4000	3799	✓				3759.15
2	1409	2068	6.1	4500	4500	✓				
1	1410	2069	6.2	B-20	4982	✓				

ENTERED BY: RM
CHECKED BY:

Bottom Depth: 4906.

Cast No: 154 down
155 up

	LOC	UTC
Begin:		0651
Bottom:		0802
End:		0951

BEGIN POSITION (GPS)
LAT: 24 29.96
LONG: 165 00.10BOTTOM POSITION (GPS)
LAT: 24 30.03
LONG: 165 00.04END POSITION (GPS)
LAT: 24 30.33
LONG: 164 59.18

Comments

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

Oct 6/94

VESSEL: John P. Tully

STATION NO:

W064

HYDRO No.:

157

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	1411	1111	26.4	10	10	✓				
22	1412	1113	24.5	50	48	✓				
21	1413	1114	22.4	100	101	✓				
20	1414	1119	20.0	200	199	✓				
19	1415	1120	15.7	300	301	✓				
18	1416	1121	13.5	400	403	✓				
17	1417	1122	10.6	600	598	✓				
16	1418	1125	9.5	800	795	✓	T679	6.410		
15	1419	1126	8.5	1000	1004	✓				
14	1420	1128	8.8	1250	1250	✓				
13	1421	1129	8.0	1500	1499	✓				
12	1422	1130	7.7	1750	1749	✓				
11	1423	1132	7.7	2000	1997	✓				
10	1424	1133	7.7	2250	2249	✓	T451	2.127	T798	2.125
9	1425	1134	7.7	2500	2560	✓				
8	1426	1135	7.8	2750	2748	✓				
7	1427	1136	8.0	3000	2998	✓				
6	1428	1137	7.5	3250	3250	✓				
5	1429	1138	7.5	3500	3500	✓				
4	1430	1139	7.8	3750	3751	✓	T647	1.443		
3	1431	1140	7.5	4000	3995	✓	T557	1.429	6314	3759
2	1432	1141	7.8	4250	4250	✓				
1	1433	1142	8.1	5-50	4360	✓				

ENTERED BY:

CHECKED BY:

Bottom Depth:

4349

Cast No:

156 20--

157 up

LOC

UTC

Begin:

1404

Bottom:

1504

End:

1656

BEGIN POSITION (GPS)

LAT: 23 59.710

LONG: 164 59.82

BOTTOM POSITION (GPS)

LAT: 23 59.29

LONG: 164 59 92

END POSITION (GPS)

LAT: 23 58.89

LONG: 165 00 82

Comments

Rosette 1: 23 bottle

CRUISE NO:

940 3/1

UTC DATE: Oct 6 / 94

VESSEL: John P. Tully

STATION NO:

10065

HYDRO No.: 159.

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	1434	1003	24.5	10	10	•				
22	1435	1004	23.9	50	50	•				
21	1436	1008	21.8	100	100	•				
20	1437	1009	19.0	200	201	•				
19	1438	1010	15.5	300	300	•				
18	1439	1014	12.5	400	402	•				
17	1440	1016	9.7	600	602	•				
16	1441	1020	9.3	800	* 800	•		T679	4074	
15	1442	1025	8.8	1000	1000	•				
14	1443	1027	8.8	1250	1250	•				
13	1444	1028	8.4	1500	1495	•				
12	1445	1029	8.1	1750	1747	•				
11	1446	1031	7.5	2000	2000	•				
10	1447	1032	7.9	2250	* 2259	•				
9	1448	1033	8.7	2250	2258	• no current	T451	1.886	T798	1.885
8	1449	1036	8.2	2500	2509	✓				
7	1450	1039	7.9	2750	2756	✓				
6	1451	1040	8.5	3000	2996	✓				
5	1452	1043	8.2	3250	3245	✓				
4	1453	1045	8.5	3500	*3494	✓	T647	1.466	T577	1.452
3	1454	1046	8.2	3750	3751	✓			3499.26	
2	1455	1047	8.4	4000	3796	✓				
1	1456	1051	8.4	B-20	4096	✓				

ENTERED BY: BM

CHECKED BY:

Bottom Depth: 4077.

Cast No: 158 down
159 up

LOC UTC

Begin: 2008

Bottom:

End:

BEGIN POSITION (GPS)

LAT: 23 30.05

LONG: 165 18.87

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

Oct 7/94

VESSEL: John P. Tully

STATION NO:

W066

HYDRO No.:

161

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	1457	1147	2.1	10	9	✓	Niskin not closed, not triggered			
22	1458	1148	2.1	50	49	✓				
21	1459	1149	2.1	100	100	✓				
20	1460	1150	2.1	200	200	✓				
19	1461	1151	2.1	300	298	✓				
18	1462	1152	2.1	400	405	✓				
17	1463	1153	2.1	600	605	✓				
* 16	1464	1154	2.1	800	801	✓	T679	6.460		
15	1465	1155	2.1	1000	996	✓				
14	1466	1156	2.1	1250	1246	✓				
13	1467	1157	2.1	1500	1501	✓				
12	1468	1158	2.1	1750	1750	✓				
11	1469	1160	2.1	2000	2001	✓				
* 10	1470	1161	0.0	2250	2251	✓	T451	2.159	T798	2.158
9	1471	1163	0.0	2500	2497	✓				
8	1472	1164	0.0	2750	2754	✓				
7	1473	1165	0.1	3000	2992	✓				
6	1474	1166	0.3	3250	3248	✓				
5	1475	1167	1.0	3500	3498	✓				
* 4	1476	1168	0.8	3750	3746	✓	but not confirmed also current was high ~200µA			
3	1477	1169	1.2	4000	3985	✓	T647	14.54	T577	14.41
2	1478	1171	1.4	4500	4499	✓				
1	1479	1172	1.0	3-20	4809	✓				

ENTERED BY: JSS
CHECKED BY:

Bottom Depth: 4740

Cast No: 160↓
161↑

.LOC	UTC
Begin:	03:13
Bottom:	04:17
End:	

BEGIN POSITION (GPS)	
LAT:	22° 55.077'N
LONG:	165° 28.005'W

BOTTOM POSITION (GPS)	
LAT:	22° 54.84'N
LONG:	165° 27.57'W

END POSITION (GPS)	
LAT:	
LONG:	

Comments

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

Oct 1/94

VESSEL: John P. Tully

STATION NO:

W067

HYDRO No.:

163

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	1480	1060		10	10	✓				
22	1481	1062		50	50	✓				
21	1482	1065		100	101	✓				
20	1483	1067		200	201	✓				
19	1484	1068		300	301	✓				
18	1485	1069		400	401	✓				
17	1486	1072		600	601	✓				
16	1487	1079		800	* 800	✓	T679	4.959		
15	1488	1084		1000	1001	✓				
14	1489	1087		1250	1253	✓				
13	1490	1090		1500	1500	✓				
12	1491	1092		1750	1751	✓				
11	1492	1095		2000	2000	✓				
10	1493	1096		2250	* 2252	✓	T451	1.880	T795	1.878
9	1494	1097		2500	2500	✓				
8	1495	1100		2750	2748	✓				
7	1496	1101		3000	3000	no current				
6	1497	1102		3250	3250	✓				
5	1498	1103		3500	3502	✓				
4	1499	1104		3750	* 3751	✓	T647-	1.446	T577	1.433
3	1500	1105		4000	4002	✓	P6314-	3762		
2	1501	1106		4500	4499	✓				
1	1502	1110		B-25	4718	✓				

ENTERED BY:

CHECKED BY:

Bottom Depth: 4664

Cast No: 162
163

LOC UTC

Begin:

Bottom:

End:

BEGIN POSITION (GPS)

LAT:

LONG:

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

Oct 7/94

VESSEL: John P. Tully

STATION NO:

W068

HYDRO No.:

165

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
20	23	1503	2043	10	10	✓				
19	22	1504	2044	50	50	✓				
18	21	1505	2045	100	100	✓				
17	20	1506	2047	200	199	✓				
16	19	1507	2049	300	299	✓				
15	18	1508	2051	425	475	✓				
14	17	1509	2052	600	600	✓				
13	16	1510	2054	800	801	✓	679	12.915		
12	15	1511	2055	1000	996	✓				
11	14	1512	2056	1250	1252	✓				
10	13	1513	2057	1500	1502	✓				
	12	1514	2058	1750	1751	✓				
	11	1515	2059	2000	2001	✓				
	10	1516	2060	2250	2250	✓	451	2.185	798	2.184
	9	1517	2061	2500	2499	✓				
	8	1518	2062	2750	2750	✓				
4	7	1519	2063	3000	3000	✓				
	6	1520	2064	3250	3249	✓				
	5	1521	2065	3500	3499	✓				
1	4	1522	2066	4000	4000	✓	647	1.466	6314	3508
	3	1523	2067	4250	4250	✓	577	1.451		
	2	1524	2068	4500	4500	✓				
	1	1525	2069	B-30	4678	✓				
							3 NISWINS WERE NOT FIRED - ROSETTE PIN STOPPED AT POSITION 20			

ENTERED BY:
CHECKED BY:

Bottom Depth:	4624
	164 Dm
Cast No:	165-4p

	LOC	UTC
Begin:		1505
Bottom:		1606
End:		1739

BEGIN POSITION (GPS)	
LAT:	21° 59' 102 N
LONG:	165° 42.19 W

BOTTOM POSITION (GPS)	
LAT:	21 53
LONG:	165- 71

END POSITION (GPS)
LAT:
LONG:

Comments
Beautiful sunrise

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

7/10/94

VESSEL: John P. Tully

STATION NO:

12069

HYDRO No.:

167

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	1523	1111		10	10	•	no sample			
22	1524	1113		50	50	•				
21	1525	1114		100	100	•				
20	1526	1119		200	200	•				
19	1527	1120		300	300	• not confirmed				
18	1528	1121		400	400	•				
17	1529	1122		600	600	•				
16	1530	1125		800	* 800	•	T629	5.732		
15	1531	1126		1000	1000	•				
14	1532	1128		1250	1250	•				
13	1533	1129		1500	1501	•				
12	1534	1130		1750	1750	•				
11	1535	1132		2000	2000	•				
10	1536	1133		2250	* 2250	•	T451	1.918	T798	1.916
9	1537	1134		2500	2502	•				
8	1538	1135		2750	2752	•				
7	1539	1136		3000	3003	•				
6	1540	1137		3250	3250	•				
5	1541	1138		3500	3499	✓				
* 4	1542	1139		3750	* 3750	✓	T647	1.455	T577	1.441
3	1543	1140		4000	3998	✓			Pressure	3759 db
2	1544	1141		4500	4500	✓				
1	1545	1142		B-20	4776	✓				

ENTERED BY: BSM + JSS
CHECKED BY:

Bottom Depth: 4696.

Cast No: 166. ↓
167 ↑

	LOC	UTC
Begin:		20:22
Bottom:		21:25
End:		23:16

BEGIN POSITION (GPS)	
LAT:	21° 30.00' N
LONG:	165° 49.75' W

BOTTOM POSITION (GPS)	
LAT:	21° 30.50' N
LONG:	165° 50.34'

END POSITION (GPS)	
LAT:	21° 31.1' N
LONG:	165° 50.97' W

Comments

Rosette 2: 12 bottle

CRUISE NO: 9403/1

UTC DATE: Oct 8/94

VESSEL: John P. Tully

STATION NO: W070

HYDRO No.: 169

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
11	1546	1003		10						
10	1547	1004		25	25	✓				
9	1548	1008		50	50	✓				
8	1549	1009		75	75	✓				
7	1550	1010		100	98	✓				
6	1551	1014		150	150	✓				
5	1552	1016		200	199	✓				
4	1553	1020		300	299	✓				
3	1554	1025		400	401	✓				
2	1555	1027		450	450	✓				
# 1	1556	1028		500	498	✓			P2099 S	499.6

ENTERED BY: J.W.
CHECKED BY:

Bottom Depth: 4841
Cast No: 168↓ 169↑

LOC	UTC
Begin:	02:58
Bottom:	0306
End:	0323

BEGIN POSITION (GPS)
LAT: 20° 53.942'N
LONG: 165° 58.647'W

Rosette 1: 23 bottle

CRUISE NO:

9403/1

UTC DATE:

Oct 8/94

VESSEL: John P. Tully

STATION NO:

W070

HYDRO No.:

171

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	1557	1060		500	501.	✓				
22	1558	1062		600	599.	✓				
21	1559	1065		800	800.	✓				
20	1560	1067		800	800	✓				
19	1561	1068		1000	1000.	✓				
18	1562	1069		1250	1250	✓				
17	1563	1072		1500	1502.	✓				
16	1564	1079		1750	1750	✓	T679	2-991		
15	1565	1084		2000	2000	✓				
14	1566	1087		2250	2250	✓				
13	1567	1090		2500	2500	X✓	Trips not confirmed both times!			
12	1568	1092		2750	2749	✓				
11	1569	1095		3000	3000	✓				
10	1570	1096		3000	2999	✓	T451	1.531	T798	1.530
9	1571	1097		3250	3252	✓				
8	1572	1100		3500	3501	✓				
7	1573	1101		3750	3750	✓				
6	1574	1103		4000	4002	✓				
5	1575	1104		4250	4250	✓				
4	1576	1105		4500	4502	✓	T647	1476	T577	1462
3	1577	1106		B-100 ⁴⁸⁴⁵	4847	✓				
2	1578	1108		B-50	4897	✓				
1	1579	1110		B-20	4925	✓				

ENTERED BY: J.W. + DJS
CHECKED BY:Bottom Depth: 4843
Cast No: 170↓
171↑

	LOC	UTC
Begin:		03:44
Bottom:		04:47
End:		0635

BEGIN POSITION (GPS)
LAT: 20° 53.944'N
LONG: 165° 58.677'WBOTTOM POSITION (GPS)
LAT: 20° 53.978'N
LONG: 165° 59.604'WEND POSITION (GPS)
LAT: 20 53.92
LONG: 166 00.42

Comments

Rosette 1: 23 bottle

CRUISE NO: 9403

UTC DATE: 9 Oct '94

VESSEL: John P. Tully

STATION NO: FREN

HYDRO No.: 179

[illegible]

ENTERED BY: 05 S

CHECKED BY:

Bottom Depth: 4907

Cast No:	178↓
	179↑

LOC UTC

Begin:

Bottom:

End:

BEGIN POSITION (GPS)

LAT:

LONG:

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

Rosette 2: 12 bottle

CRUISE NO: 9403

UTC DATE: 8 Oct '94

VESSEL: John P. Tully

STATION NO: FREON (WICFC)

HYDRO No.: 173

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
11	1580				1500.	✓				
10	1581				1500.	✓				
9	1582				1501.	✓				
8	1583				1500.	✓				
7	1584				1500.	✓				
6	1585				1501.	✓				
5	1586				1501.	✓				
4	1587				1501.	✓				
3	1588				1501.	✓				
2	1589				1500.	✓				
1	1590				1500.	✓	P 2099 S	1498.5		

ENTERED BY: BM
CHECKED BY:

Bottom Depth: 4905

Cast No: 172 down
173

	LOC	UTC
Begin:		1843
Bottom:		1907
End:		1933

BEGIN POSITION (GPS)
LAT: 20 59.27
LONG: 164 01.77

Rosette 1: 23 bottle

CRUISE NO:

9403

UTC DATE:

8/10/94

VESSEL: John P. Tully

STATION NO:

FREON (W1CFC)

HYDRO No.:

175

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	1591	1003			1506.	✓				
22	1592	1004			1505	✓				
21	1593	1008			1506.	✓				
20	1594	1009			1507.	✓				
19	1595	1010			1506.	✓				
18	1596	1014			1506.	✓				
17	1597	1016			1505.	✓				
16	1598	1020			1505.	XL	T679	2.895		
15	1599	1025			1504.	✓				
14	1600	1027			1504.	✓				
13	1601	1028			1504.	✓				
12	1602	1029			1504.	✓				
11	1603	1031			1504.	✓				
10	1604	1032			1504.	✓	T 451	2.898	T 798	2.896
9	1605	1033			1503	XL				
8	1606	1036			1502.	✓				
7	1607	1039			1504.	✓				
6	1608	1040			1502.	✓				
5	1609	1043			1502.	XX✓				
4	1610	1045			1503.	✓	T679	2.879	T577	2.867
3	1611	1046			1502.	✓			1509.06	
2	1612	1047			1503.	✓				
1	1613	1051			1502.	✓				

ENTERED BY: BM

CHECKED BY:

Bottom Depth: 4905

Cast No: 174 down
175 up

LOC UTC

Begin: 1952

Bottom: 2014

End: 2049

BEGIN POSITION (GPS)

LAT: 2059.81

LONG: 16402.33

BOTTOM POSITION (GPS)

LAT: 2059.93

LONG: 16402.51

END POSITION (GPS)

LAT: 2100.06

LONG: 16402.74

Comments

no freon samples
taken.

Rosette 1: 23 bottle

CRUISE NO:

9403/2

UTC DATE:

16/10/94

VESSEL: John P. Tully

STATION NO:

'x' (news)

HYDRO No.:

181

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23										
22										
21										
20										
19										
18										
17	16 53			10	9	.				
16	16 52			50	50	.	T679	27.37		
15	16 51			100	99	X NO SPINE TRIPPED 2				
14	16 50			150	149	.				
13	16 49			200	200	.				
12	16 48			300	299	.				
11	16 47			400	400	.				
10	16 46			600	599	.	T451	5.912	T798	5.909
9	16 45			800	800	.				
8	16 44			1000	1000	.				
7	16 43			1250	1250	.				
6	16 42			1500	1500	.				
5	16 41			1750	1750	.				
4	16 40			2250	2250	.	647 T467	1.938 T517 1.920	2256	dbar.
3	16 39			2500	2500	.	1211			
2	16 38			2750	2751	.				
1	16 37			2910	2958	.				

ENTERED BY: HUGH
CHECKED BY: RON

Bottom Depth:	2930
Cast No:	180 down
	181 up

	LOC	UTC
Begin:		01:13
Bottom:		01:59
End:		03:04

BEGIN POSITION (GPS)
LAT: 21 11.09
LONG: 158 32 28

BOTTOM POSITION (GPS)
LAT: 21 10.76
LONG: 158 32.79

END POSITION (GPS)
LAT: 21° 10.48'
LONG: 158° 33.23'

Comments
test cast off Hawaii

Rosette 1: 23 bottle

CRUISE NO:

9403/2

UTC DATE:

13/10/94

VESSEL: John P. Tully

STATION NO:

WØ 71

HYDRO No.:

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	1676	1052	27.8	10	10	.				
22	1675	1051	27.8	50	50	.				
21	1674	1047	24.4	100	99	.				
20	1673	1046	22.7	150	150	.				
19	1672	1045	20.4	200	196.6	.				
18	1671	1043	20.9	200	199.6	.				
17	1670	1040	17.4	300	300	.				
16	1669	1039	15.3	400	400	.	T 479	9.288		
15	1668	1036	13.0	600	599	x3				
14	1667	1032	12.8	800	800	.				
13	1666	1033	12.3	1000	997	.				
12	1665	✓1031	11.6	1250	1249.4	.				
11	1664	✓1029	10.2	1500	1498.6	.				
10	1663	✓1028	9.8	1750	1750	.	T451	2510	T 798	2507
9	1662	✓1027	9.4	2000	2000	.				
8	1661	✓1025	9.1	2250	2250	.				
7	1660	✓1020	8.8	2500	2501	.				
6	1659	✓1016	9.4	3000	3005	.				
5	1658	✓1014	8.8	3250	3256	.				
4	1657	✓1010	8.0	3500	3507	.	T647	1456	T577	1437
3	1656	✓1008	8.0	4000	4005	.				
2	1655	✓1004	9.1	4500	4502	2x				
1	1654	✓1003	9.4	B-20 4924	4924	.				

ENTERED BY: H. MACLEAN

CHECKED BY:

Bottom Depth: 4886

Cast No: 182 down

183 up

LOC	UTC
1000	0800
1100	0900
1200	1000
1300	1100
1400	1200
1500	1300
1600	1400
1700	1500
1800	1600
1900	1700
2000	1800
2100	1900
2200	2000
2300	2100
2400	2200
0100	2300
0200	2400
0300	0100
0400	0200
0500	0300
0600	0400
0700	0500
0800	0600
0900	0700
1000	0800

Begin:

Bottom:

End:

BEGIN POSITION (GPS)

LAT:

LONG:

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

Rosette 2: 12 bottle

CRUISE NO: 9403/2

UTC DATE: 18/10/94

VESSEL: John P. Tully

STATION NO: W072

HYDRO No.: 185

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)

10	11	1687	1087	27.0	10	✓				
50	10	1686	1084	26.9	49	✓				
100	9	1685	1079	26.9	115	✓				
150	8	1684	1072	22.2	150					
200	7	1683	1069	22.3	199	✓				
300	6	1682	1068	16.4	300	✓				
400	5	1681	1067	15.4	400	✓				
600	4	1680	1065	12.9	600	✓				
800	3	1679	1063	12.9	798	✓	bottle sal too low			
1000	2	1678	1062	12.0	1009	✓				
1000	1	1677	1060	42/13.1	1002	✓			P20995	1004.0

ENTERED BY:
CHECKED BY:

Bottom Depth: 5094

Cast No: 184 down

185 up

LOC UTC

Begin:

Bottom:

End:

BEGIN POSITION (GPS)

LAT:

LONG:

Rosette 1: 23 bottle

CRUISE NO:

9403/2

UTC DATE:

10/19/94

VESSEL: John P. Tully

STATION NO:

wp72

HYDRO No.:

187

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23										
22										
21										
20										
19										
18	1705	2004	11.8	1000	1013					
17	1704	2002	11.6	1250	1238					
16	1703	1110	11.2	1500	1503		T 679	2.858		
15	1702	1109	10.2	1750	1753					
14	1701	1108	9.8	2000	1990					
13	1700	1107	9.6	2250	2230					
12	1699	1106	9.8	2500	2492					
11	1698	1105	9.5	2750	2754		T 798	1.543	T 451	1.544
* 10	1697	1104	9.5	3000	3003					
9	1696	1103	8.9	3250	3251	✓				
8	1695	1102	9.3	3500	3502	✓				
7	1694	1101	8.8	3750	3749	✓				
6	1693	1100	8.7	4000	3999	✓				
5	1692	1097	8.1	4250	4250	✓				
* 4	1691	1096	8.6	4500	4496	✓	T 647	1.451	T 577	1.433
3	1690	1095	7.9	4750	4735	✓			P 63145	4499
2	1689	1092	8.2	5000	4996	✓				
1	1688	1090	8.4	B-20	5142	✓				

ENTERED BY: H.M./J.L.
CHECKED BY:

Bottom Depth:
Cast No: 186 down
187 up

LOC UTC
Begin: 01:13:39
Bottom: 02:23:00
End: 03:59:54

BEGIN POSITION (GPS)
LAT: 20 00.26
LONG: 166 11.99

BOTTOM POSITION (GPS)
LAT: 20 01.52
LONG: 166 11.83

END POSITION (GPS)
LAT: 20 03.14
LONG: 166 13.35

Comments

b-40
bottom 20

last duplicate at 1000
duplicate at 200

Rosette 2: 12 bottle

CRUISE NO: 9403

UTC DATE: Oct 19/94

VESSEL: John P. Tully

STATION NO: W073

HYDRO No.: 189

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
11	1716	1029	27.5	10	9.1	✓				
10	1715	1028	27.5	50	49	✓				
9	1714	1027	23.0	100	100	✓				
8	1713	1025	21.0	150	150	✓				
7	1712	1020	20.3	200 (D)	199	✓				
↑ 6	1711	1016	20.0	200 (D)	199	✓				
↑ 5	1710	1010	16.5	300	299	✓				
→ 4	1709	1014	14.6	400	400	✓				
3	1708	1008	12.7	600	600	✓				
2	1707	1054	12.0	800	799	✓				
1	1706	1003	12.6	1000 *	999	✓	P20995	998.21bar		

ENTERED BY:
CHECKED BY:

Bottom Depth: 5270
Cast No: 188 down

189 up	
LOC	UTC
Begin:	
Bottom:	
End:	

BEGIN POSITION (GPS)
LAT:
LONG:

* = pause for thermometers

est depth = 5350

Rosette 1: 23 bottle

CRUISE NO: 9403
STATION NO: W073

UTC DATE: 19/10/94
HYDRO No.: 191

VESSEL: John P. Tully

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23										
22										
21										
20	1736	1103	12.8	1000	1001	✓				
19	1735	1102	11.2	1250	1253	✓				
18	1734	1101	11.4	1500	1513	✓	No current	2nd Try OK		
17	1733	1100	9.4	1750	1756	✓	CURRENT OK	NO Confirmation		
16	1732	1097	9.4	2000	* 2009	✓	T679	2.38		
15	1731	1096	9.2	2250	2247	✓				
14	1730	1095	9.3	2500	2494	✓				
13	1729	1092	9.6	2750	2736	✓				
12	1728	1090	8.3	3000	2988	✓	.674	Wire angles bad note errors in stop depth		
11	1727	1067	7.7	3250	3264	✓	.661			
10	1726	1065	7.7	3500	3457	✓	.682	T451	1.471	T798 1.472
9	1725	1063	8.4	3500	3487	✓	.688			
8	1724	1062	10.8	3750	* 3749	✓	.695			
7	1723	1060	10.0	4000	3993	✓	.695			
6	1722	1087	9.3	4250	4252	✓	.691			
5	1721	1084	7.4	4500	4496	✓	.694			
4	1720	1079	7.7	4750	* 4750	✓	no current S=34.698	T647	1.430	T577 1.413
3	1719	1072	8.6	5000	5003	✓				
2	1718	1069	7.0	5250	5252	✓			P63145	4760
1	1717	1068	8.9	B-20	5354	✓				

ENTERED BY:
CHECKED BY:

Bottom Depth: 5248
Cast No: 190
191

LOC UTC
Begin: 0951
Bottom:
End:

BEGIN POSITION (GPS)
LAT: 19 30.16
LONG: 166 19.08

BOTTOM POSITION (GPS)
LAT:
LONG:

END POSITION (GPS)
LAT:
LONG:

Comments

Rosette 2: 12 bottle

CRUISE NO: 94-03

UTC DATE: 94/10/19

VESSEL: John P. Tully

STATION NO: W074

HYDRO No.: 193

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
11	1747	2057	27.6	10	10					
10	1746	2056	24.1	50	50					
9	1745	2055	21.6	100	100					
8	1744	2054	20.0	150	147.9					
7	1743	2052	16.2	200	202					
6	1742	2051	13.3	300	301					
5	1741	2049	11.6	400	403					
4	1740	2047	11.9	600	595					
3	1739	2045	15.1	800	800					
2	1738	2044	15.1	1000	1000					
1	1737	2043	no sample	1000	1000					

ENTERED BY: H.M.

CHECKED BY:

Bottom Depth: 5466

Cast No: 192/193

LOC UTC

Begin: 1739

Bottom: 1754

End: 1826

BEGIN POSITION (GPS)

LAT: 19 00.14

LONG: 166 27.85

END POS

19 00.08

166 26.67

Rosette 1: 23 bottle

CRUISE NO:

94-03

UTC DATE:

94/10/19

VESSEL: John P. Tully

STATION NO:

Wd 74

HYDRO No.:

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NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	1770									
22	1769									
21	1768									
20	1767									
19	1766	2076								
18	1765	2075								
17	1764	2074								
16	1763	2073								
15	1762	2072								
14	1761	2071								
13	1760	2070								
12	1759	2069								
11	1758	2068								
10	1757	2067								
9	1756	2066								
8	1755	2065								
7	1754	2064								
6	1753	2063								
5	1752	2062								
4	1751	2061								
3	1750	2060								
2	1749	2059								
1	1748	2058								

ENTERED BY:

CHECKED BY: _____

Bottom Depth:

Cast No: _____

	LOC	UTC
1	1000	1000
2	1000	1000
3	1000	1000
4	1000	1000
5	1000	1000
6	1000	1000
7	1000	1000
8	1000	1000
9	1000	1000
10	1000	1000
11	1000	1000
12	1000	1000
13	1000	1000
14	1000	1000
15	1000	1000
16	1000	1000
17	1000	1000
18	1000	1000
19	1000	1000
20	1000	1000
21	1000	1000
22	1000	1000
23	1000	1000
24	1000	1000
25	1000	1000
26	1000	1000
27	1000	1000
28	1000	1000
29	1000	1000
30	1000	1000
31	1000	1000
32	1000	1000
33	1000	1000
34	1000	1000
35	1000	1000
36	1000	1000
37	1000	1000
38	1000	1000
39	1000	1000
40	1000	1000
41	1000	1000
42	1000	1000
43	1000	1000
44	1000	1000
45	1000	1000
46	1000	1000
47	1000	1000
48	1000	1000
49	1000	1000
50	1000	1000
51	1000	1000
52	1000	1000
53	1000	1000
54	1000	1000
55	1000	1000
56	1000	1000
57	1000	1000
58	1000	1000
59	1000	1000
60	1000	1000
61	1000	1000
62	1000	1000
63	1000	1000
64	1000	1000
65	1000	1000
66	1000	1000
67	1000	1000
68	1000	1000
69	1000	1000
70	1000	1000
71	1000	1000
72	1000	1000
73	1000	1000
74	1000	1000
75	1000	1000
76	1000	1000
77	1000	1000
78	1000	1000
79	1000	1000
80	1000	1000
81	1000	1000
82	1000	1000
83	1000	1000
84	1000	1000
85	1000	1000
86	1000	1000
87	1000	1000
88	1000	1000
89	1000	1000
90	1000	1000
91	1000	1000
92	1000	1000
93	1000	1000
94	1000	1000
95	1000	1000
96	1000	1000
97	1000	1000
98	1000	1000
99	1000	1000
100	1000	1000

Begin:

Bottom: _____

End:

BEGIN POSITION (GPS)

LAT: _____

LONG:

BOTTOM POSITION (GPS)

LAT: _____

LONG: _____

END POSITION (GPS)

LAT: _____

LONG: _____

Comments

Rosette 1: 23 bottle

CRUISE NO: 94-03 Leg 2
STATION NO: W075

UTC DATE: 94/10/19
HYDRO No.:

VESSEL: John P. Tully

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	1770	1142								
22	1769	1141								
21	1768	1140								
20	1767	1139								
19	1766	1138								
18	1765	1137								
17	1764	1136								
16	1763	1135								
15	1762	1134								
14	1761	1133								
13	1760	1132								
12	1759	1130								
11	1758	1129								
10	1757	1128								
9	1756	1126								
8	1755	1125								
7	1754	1122								
6	1753	1121								
5	1752	1120								
4	1751	1119								
3	1750	1116								
2	1749	1113								
1	1748	1111		B-20						

No Samples taken
Cast #807. due to rough sea
Cast. #194 on File

ENTERED BY:	
CHECKED BY:	
Bottom Depth:	
Cast No:	
LOC	UTC
Begin:	
Bottom:	
End:	
BEGIN POSITION (GPS)	
LAT:	
LONG:	
BOTTOM POSITION (GPS)	
LAT:	
LONG:	
END POSITION (GPS)	
LAT:	
LONG:	
Comments	

Rosette 1: 23 bottle

CRUISE NO:

9403

UTC DATE:

10/20/94

STATION NO:

wp 78

HYDRO No.:

203 (upcast)

VESSEL: John P. Tully

#0202 - downcast

#0203 - upcast with samples

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	1770	2069		10	109	✓				
22	1769	2068		50	99	✓				
21	1768	2067		100	100	✓				
20	1767	2066		150	146	✓				
19	1766	2065		200	199	✓				
18	1765	2064		300	299	✓				
17	1764	2063		400	401	✓				
* 16	1763	2062		462 ^{Sal} _{Min}	470	✓	6.122	34.217	T 679	6.734
15	1762	2061		600	565	X ✓				
14	1761	2060		800	798	✓	5.043	34.461		
13	1760	2059		1000	998	✓	4.240	34.508		
12	1759	2058		1250	1253	✓	3.542	34.543		
11	1758	2057		1500	1495	✓	2.672	34.572		
X 10	1757	2056		1750 *	1748	✓	2.426	34.576	T 451 2.413	T 798 2.413
9	1756	2055		2000	1999	✓	2.114	34.617		
8	1755	2054		2250	2247	✓	1.901	34.632		
7	1754	2052		2500	2502	✓	1.758	34.642		
6	1753	2051		3000	3000	✓	1.572	34.658		
5	1752	2049		3500	3498	✓	1.499	34.666		
X 4	1751	2047		4000	4001	✓	1.454	34.673	T 647 1.437	T 577 1.421
3	1750	2045		4500	4498	✓	1.425	34.680		4010.
2	1749	2044		5000	4997	✓	1.415	34.685		
1	1748	2043		5300	5290	✓	1.424	34.688		

ENTERED BY: H.M. / RMB
CHECKED BY:

Bottom Depth: 5350

Cast No: 202 down
203 up

	LOC	UTC
Begin:		1758
Bottom:		1920
End:		2133

BEGIN POSITION (GPS)

LAT: 1659.82

LONG: 16658.25

BOTTOM POSITION (GPS)

LAT: 1658.44

LONG: 16659.47

END POSITION (GPS)

LAT: 1658.80

LONG: 16658.75

Comments

tried to get 16 in
sat. by using 16

* = wait 30 sec for revolution

Rosette 1: 23 bottle

CRUISE NO:

9403/2

UTC DATE:

OCT 21 / 94

VESSEL: John P. Tully

STATION NO:

W079

HYDRO No.:

205

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	1793	1106	27.6	10	10	✓				
22	1792	1105	27.6	50	49	✓				
21	1791	1104	25.4	100	101	✓				
20	1790	1103	22.1	200	199	✓				
19	1789	1102	16.5	300	302	✓				
18	1788	1101	15.3	400	402	✓				
17	1787	1100	13.3	600	601	✓				
* 16	1786	1097	12.7	800	800	✓	5.299			
15	1785	1096	12.2	1000	1000	✓				
14	1784	1095	11.6	1250	1251	✓				
13	1783	1092	11.4	1500	1501	✓				
12	1782	1090	10.6	1750	1747	✓				
11	1781	1087	10.3	2000	2000	✓				
* 10	1780	1084	10.4	2250	2249	✓	1.894	1.894		
9	1779	1079	10.4	2500	2499	✓				
8	1778	1072	10.2	2750	2748	✓				
7	1777	1069	9.8	3000	2998	✓				
6	1776	1068	9.6	3250	3249	✓				
5	1775	1067	9.5	3500	3500	✓				
* 4	1774	1065	9.5	4000	3999	✓ OK #2 NO CURRENT	1.430	1.412	4009	
3	1773	1063	9.7	4500	4500	✓				
2	1772	1062	9.9	5000	5000	✓				
1	1771	1060	9.4	B-20	5342	✓				

ENTERED BY:

H.M./J.L.

CHECKED BY:

Bottom Depth: 5390

Cast No: 204 ↓

205 ↑

LOC UTC

Begin: 00:36:29

Bottom: 02:07:46

End: 03:57:55

BEGIN POSITION (GPS)

LAT: 16° 29.926' N

LONG: 167° 06.325' W

BOTTOM POSITION (GPS)

LAT: 16 29.80

LONG: 167 06.42

END POSITION (GPS)

LAT: 16 28.94

LONG: 167 06 66

Comments

23 bottle cast

Rosette 1: 23 bottle

CRUISE NO: 9403

UTC DATE: Oct 21 1994

VESSEL: John P. Tully

STATION NO: W080

HYDRO No.: 207

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	1816	1172	27.4	10	10.	✓				
22	1815	1171	27.3	50	49.	✓				
21	1814	1169	25.0	100	100.	✓				
20	1813	1168	19.3	200	202.	✓				
19	1812	1167	13.2	300	300.	✓				
18	1811	1166	11.2	400	403.	✓				
17	1810	1165	8.8	600	602.	✓				
* 16	1809	1164	8.2	800	* 801	✓ 30 secs then ↑		5.141		
15	1808	1163	7.6	1000	1000	✓				
14	1807	1161	6.6	1250	1251	✓				
13	1806	1160	6.6	1500	1500	✓				
12	1805	1158	5.9	1750	1751	✓				
11	1804	1157	5.8	2000	2000	✓				
* 10	1803	1156	5.6	2250	* 2251	✓		1.914		1.911
9	1802	1155	5.0	2500	2501.	✓				
8	1801	1154	5.1	2750	2752.	✓				
7	1800	1153	8.8	3000	3000	✓				
6	1799	1152	5.0	3250	3250	✓				
5	1798	1151	4.6	3500	3498	✓				
* 4	1797	1150	4.8	3750	* 3749	✓ 30 secs then ↑		1.440	1.422	3758
3	1796	1149	4.3	4000	4001.	✓				
2	1795	1148	4.3	4500	4499	✓				
1	1794	1147	4.0	B-20	4747	✓				

ENTERED BY: Robin Brown
CHECKED BY:

Bottom Depth: 4500
Cast No: 206 down
207 up

LOC UTC
Begin:
Bottom:
End:

BEGIN POSITION (GPS)
LAT:
LONG:

BOTTOM POSITION (GPS)
LAT:
LONG:

END POSITION (GPS)
LAT:
LONG:

Comments

WPB1

Rosette 1: 23 bottle

CRUISE NO:

9403/2

UTC DATE:

21 OCT 94

VESSEL: John P. Tully

STATION NO:

W081

HYDRO No.:

209

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	1839	1054	27.4	10	8	✓				
22	1838	1052	27.3	50	50	✓				
21	1837	1051	23.9	100	101	✓				
20	1836	1047	17.2	200	201	X 2ND TRIGGER				
19	1835	1046	12.4	300	300	✓				
18	1834	1045	11.2	400	402	✓				
17	1833	1040	9.4	600	602	✓				
16	1832	1039	8.5	800	801	✓	5.124			
15	1831	1036	7.7	1000	1002	✓				
14	1830	1033	7.5	1250	1251	✓				
13	1829	1032	6.7	1500	1501	✓				
12	1828	1031	6.8	1750	1751	✓				
11	1827	1029	5.9	2000	1998	✓				
10	1826	1028	5.8	2250	2251	✓	1.896	1.894		
9	1825	1027	5.7	2500	2500	✓				
8	1824	1025	5.5	2750	2751	✓				
7	1823	1020	5.6	3000	2998	✓				
6	1822	1016	5.1	3250	3250	✓				
5	1821	1014	5.1	3500	3499	✓				
4	1820	1010	5.2	4000	3999	X 2ND TRIGGER	1.423	1.404	4007	
3	1819	1008	5.3	4500	4500	✓				
2	1818	1004	5.0	5000	5001	✓				
1	1817	1003	4.2	B-20	5270	✓				

ENTERED BY:

CHECKED BY:

Bottom Depth: 5100

Cast No: 208 down
209 up

LOC UTC

Begin: 1332

Bottom: 1455

End: 1651

BEGIN POSITION (GPS)

LAT: 15 29.902

LONG: 167 209.73

BOTTOM POSITION (GPS)

LAT: 15 29.47

LONG: 167 21.97

END POSITION (GPS)

LAT: 15 29.27

LONG: 167 23.66

Comments

Rosette 1: 23 bottle

CRUISE NO: 94-03-kec2

UTC DATE: 21/10/94

VESSEL: John P. Tully

STATION NO: W082

HYDRO No.: 211
(210 downcast)

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	1862	1106	28.4	10	9.3	✓				
22	1861	1105	27.8	50	69.4	✓				
21	1860	1104	23.6	100	100	✓				
20	1859	1103	17.7	200	199	✓				
19	1858	1102	15.6	250	248	✓				
18	1857	1101	15.4	300	301	✓				
17	1856	1100	15.4	350	352	✓				
✓16	1855	1097	14.4	600	601	✓	T679	6.881		
15	1854	1096	11.7	800	800	✓				
14	1853	1095	11.8	1000	999	✓				
13	1852	1092	10.6	1250	1251	✓				
12	1851	1090	10.6	1500	1500	✓				
11	1850	1089	10.7	1750	1752	✓				
✓10	1849	1084	10.8	2000	1998	✓	T451	2.116	T798	2.115
9	1848	1079	9.5	2250	2249	✓				
8	1847	1072	9.7	2500	2500	✓				
7	1846	1069	9.5	2750	2750	✓				
6	1845	1068	9.9	3000	3000	✓				
5	1844	1067	9.3	3500	3500	✓				
*4	1843	1065	9.4	4000	4002	no current 2x(64) ✓	T647	1.424	T577	1.407 P6314 4010dbar
3	1842	1063	8.2	4500	4502	✓				
2	1841	1062	8.6	5000	4999	? current left				
1	1840	1060	8.0	13+20	5260	? current left				

ENTERED BY: RMB
CHECKED BY:

Bottom Depth:

Cast No: 211 (up cast)
210 (down cast)

LOC	UTC
Begin:	
Bottom:	
End:	

BEGIN POSITION (GPS)
LAT:
LONG:

BOTTOM POSITION (GPS)
LAT:
LONG:

END POSITION (GPS)
LAT:
LONG:

Comments

Rosette 1: 23 bottle

CRUISE NO:

9403/2

UTC DATE:

21/10/94

VESSEL: John P. Tully

STATION NO:

W083

HYDRO No.:

213

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	1885	2032	27.9	10	10	.				
22	1884	2028	27.1	50	50	.				
21	1883	2027	22.9	100	100	.				
20	1882	2025	14.7	200	202	.				
19	1881	2022	12.3	300	305	.				
18	1880	2021	12.3	400	402	.				
17	1879	2020	10.4	600	604	.				
16	1878	2019	9.4	800	804	.	5.229			
15	1877	2018	8.6	1000	1003	.				
14	1876	2017	7.9	1250	1248	.				
13	1875	2015	7.0	1500	1499	.				
12	1874	2014	6.9	1750	1751	.				
11	1873	2013	6.7	2000	2001	.				
10	1872	2012	6.2	2250	2248	.	1.925	1.922		
9	1871	2010	6.6	2500	2500	.				
8	1870	2009	6.1	2700*	2700	oops				
7	1869	2008	5.6	3000	3000	.				
6	1868	2007	5.9	3250	3247	.				
5	1867	2006	5.6	3500	3499	.	T647	T577		
4	1866	2005	5.5	4000	3996	.	1.605	1.386	4005	
3	1865	2004	5.1	4500	4499	.				
2	1864	2002	5.2	5000	5000	.				
1	1863	2001	5.4	B-201 5220m	5220	.				

ENTERED BY: H.M./J.L.
CHECKED BY:Bottom Depth: 5241
Cast No: 213
212 ↓LOC UTC
Begin: 02:15:16
Bottom: 03:23:09
End: 05:02:21BEGIN POSITION (GPS)
LAT: 14 29.91
LONG: 167 36.52BOTTOM POSITION (GPS)
LAT: 14 29.28
LONG: 167 39.10END POSITION (GPS)
LAT: 14 29.28
LONG: 167 39.13

Comments

Rosette 1: 23 bottle

CRUISE NO: 194-03

UTC DATE: 22/10/94

VESSEL: John P. Tully

STATION NO: W084

HYDRO No.: 215

[illegible]

ENTERED BY: RING

CHECKED BY:

Bottom Depth: 1581

Cast No: 214

215

LOC	UTC
1000	0800
1100	0900
1200	1000
1300	1100
1400	1200
1500	1300
1600	1400
1700	1500
1800	1600
1900	1700
2000	1800
2100	1900
2200	2000
2300	2100
2400	2200
0100	2300
0200	2400
0300	0100
0400	0200
0500	0300
0600	0400
0700	0500
0800	0600
0900	0700
1000	0800

Begin:

Bottom:

End:

BEGIN POSITION (GPS)

LAT:

LONG:

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

Rosette 1: 23 bottle

CRUISE NO:

9403/2

UTC DATE:

941022

VESSEL: John P. Tully

STATION NO:

W085

HYDRO No.:

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	1924	1106	27.6	10	8	.				
22	1923	1105	26.9	50	49	.				
21	1922	1104	22.3	100	99	.				
20	1921	1103	16.0	200	199	.				
19	1920	1102	12.9	300	300	.				
18	1919	1101	11.8	400	401	.				
17	1918	1100	10.6	600	600	.				
* 16	1917	1097	9.8	800	800	.	5.126			
15	1916	1096	7.0	1000	1000	.				
14	1915	1095	7.5	1250	1250	.				
13	1914	1092	6.9	1500	1502	.				
12	1913	1090	6.7	1750	1751	✓	1.921	1.918		
11	1912	1087	6.5	2000	2000	✓				
* 10	1911	1084	6.5	2250	2250	✓				
9	1910	1079	6.4	2500	2500	✓				
8	1909	1072	6.1	2750	2749	✓				
7	1908	1069	5.8	3000	3000	✓				
6	1907	1068	5.6	3250	3250	✓				
5	1906	1067	5.5	3500	3500	✓				
* 4	1905	1065	5.8	4000	4000	✓	1.406	1.387	4009	
3	1904	1063	5.8	4500	4500	✓				
2	1903	1062	5.8	5000	4999	✓				
1	1902	1060	5.8	B-50	5298	✓				

ENTERED BY:

SLane/HM

CHECKED BY:

Bottom Depth:

5172

Cast No:

216/217

LOC

UTC

Begin:

12:32

Bottom:

13:53

End:

15:48

BEGIN POSITION (GPS)

LAT:

13 29.57

LONG:

167 52.222

BOTTOM POSITION (GPS)

LAT:

13 29.30

LONG:

167 52.73

END POSITION (GPS)

LAT:

13 28.70

LONG:

167 53.73

Comments

Rosette 1: 23 bottle

CRUISE NO:

9403

UTC DATE:

22/10/94

VESSEL: John P. Tully

STATION NO:

W 86

HYDRO No.:

219

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	1947	1172	28.8	10	9.5	✓				
22	1946	1171	27.7	50	50	✓				
21	1945	1169	23.9	100	100	✓				
20	1944	1168	17.3	200	198	✓				
19	1943	1167	14.2	300	299	✓				
18	1942	1166	13.2	400	400	✓				
17	1941	1165	12.2	500	499	✓				
* 16	1940	1164	11.6	600	600	✓	T679	6.146		
15	1939	1163	10.0	800	799	✓				
14	1938	1161	9.2	1000	998	✓				
13	1937	1160	8.4	1250	1248	✓ Sent Twice				
12	1936	1158	8.4	1500	1500	✓				
11	1935	1157	7.9	1750	1747	✓				
* 10	1934	1156	7.9	2000	1998	✓	T451	2.054	T798	2.050
9	1933	1155	7.8	2250	2249	✓				
8	1932	1154	7.2	2500	2500	✓				
7	1931	1153	6.8	2750	2750	✓				
6	1930	1152	6.6	3000	3000	✓				
5	1929	1151	6.6	3500	3501	✓				
* 4	1928	1150	6.6	4000	4000	✓	T647	1.363	T577	1.346
3	1927	1149	6.4	4500	4500	✓				
2	1926	1148	6.3	5000	5000	✓				
1	1925	1147	6.8	8-20	5475	✓				

ENTERED BY:

CHECKED BY:

Bottom Depth: 5450

Cast No: 218/219

LOC UTC

Begin: 0800 1900

Bottom: 0910 2010

End: 1052² 2152

BEGIN POSITION (GPS)

LAT: 13° 00.3' N

LONG: 167° 58.92' W

BOTTOM POSITION (GPS)

LAT: 12° 59.91'

LONG: 167° 59.15'

END POSITION (GPS)

LAT: 12° 59.48'

LONG: 167° 59.76'

Comments

* LOOP SAMPLE

Rosette 1: 23 bottle

CRUISE NO:

9403/2

UTC DATE:

22/10/94

VESSEL: John P. Tully

STATION NO:

WQ87

HYDRO No.:

221

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
	23	1970	1107	10	9	.	NO SAMPLE			
9	22	1969	1105	50	51	.				
51	21	1968	1104	100	102	.				
102	20	1967	1103	200	203	.				
203	19	1966	1102	300	308	.				
308	18	1965	1101	400	403	.				
403	17	1964	1100	600	598	.				
598	* 16	1963	1097	800	795	.	6.442			
795	15	1962	1096	1000	995	.				
995	14	1961	1095	1250	1249	.				
1249	13	1960	1092	1500	1499	.				
1499	12	1959	1090	1750	1748	.				
1748	11	1958	1089	2000	2000	.				
2000	* 10	1957	1084	2250	2250	.	2.078	2.076		
2250	9	1956	1079	2500	2500	X not conf.				
	8	1955	1072	2750	2748	2ND TRIGGER not conf.				
	7	1954	1069	3000	3000	2ND TRIGGER				
	6	1953	1068	3250	3249	.				
	5	1952	1067	3500	3499	.				
	* 4	1951	1065	4000	4001	✓	1.372	1.353	4012	
	3	1950	1063	4500	4501	✓				
	2	1949	1110	5000	5000	✓				
	1	1948	1060	B-20	5545	✓				

ENTERED BY:

CHECKED BY:

Bottom Depth:

Cast No:

220/221

220 ↓ 221 ↑

LOC

UTC

Begin:

1:08

Bottom:

2:20

End:

4:29

BEGIN POSITION (GPS)

LAT: 12 29 987

LONG: 168 06 966

BOTTOM POSITION (GPS)

LAT: 12 29 35

LONG: 168 07 30

END POSITION (GPS)

LAT: 12 28.50

LONG: 168 08.12

Comments

* LOOP SAMPLE — BE 08:06 11 59.765
160 15.013

Rosette 1: 23 bottle

CRUISE NO: 9403/2

UTC DATE: 23/10/94

VESSEL: John P. Tully

STATION NO: W080

HYDRO No.: 223.

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	1992	1054	20.2	10	96	✓				
22	1991	1052	27.0	50	51	✓ 2x				
21	1990	1051	22.1	100	98	not confirmed prob. current high				
20	1989	1047	14.2	200	200	✓				
19	1988	1046	12.4	300	302	✓				
18	1987	1045	12.3	400	400	✓				
17	1986	1040	10.1	600	607	✓				
* 16	1985	1039	9.0	800	802	?		5.835		
15	1984	1036	8.0	1000	1002	✓				
14	1983	1033	7.5	1250	1251	✓				
13	1982	1032	6.8	1500	1496	✓				
12	1981	1031	6.4	1750	1753	✓				
11	1980	1029	6.0	2000	1995	✓				
* 10	1979	1028	6.1	2250	2252	✓		1.947		1.944
9	1978	1027	5.9	2500	2498	✓				
8	1977	1025	5.8	2750	2748	✓				
7	1976	1020	5.7	3000	2997	✓				
6	1975	1016	5.3	3250	3296	✓				
5	1974	1014	5.2	3500	3498	✓				
* 4	1973	1010	4.7	4000	3996	✓	1.369	1.361	1.351	4003.
3	1972	1008	4.6	4500	4495	✓				
2	1971	1004	4.2	5000	5000	✓				
1	1970	1003	5.1	B-20	5399	✓				

ENTERED BY: RMB
CHECKED BY:

Bottom Depth: 5420.

Cast No: 222 down
223 up

LOC	UTC
Begin:	
Bottom:	
End:	

BEGIN POSITION (GPS)
LAT:
LONG:

BOTTOM POSITION (GPS)
LAT:
LONG:

END POSITION (GPS)
LAT:
LONG:

Comments

Rosette 1: 23 bottle

CRUISE NO:

9403/2

UTC DATE:

94/10/23

VESSEL: John P. Tully

STATION NO:

W089

HYDRO No.:

225

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	2015	1172	28.1	10	11	.				
22	2014	1171	25.8	50	48	.				
21	2013	1169	19.2	100	99	.				
20	2012	1168	14.2	200	201	.				
19	2011	1167	13.2	300	304	.				
18	2010	1166	12.5	400	397	.				
17	2009	1165	11.3	600	596	.				
* 16	2008	1164	9.9	800	798	.	5.657			
15	2007	1163	8.1	1000	1000	.				
14	2006	1161	7.5	1250	1251	.				
13	2005	1160	7.1	1500	1500	.				
12	2004	1158	6.9	1750	1749	.				
11	2003	1157	NO SAMPLE	2000	2004	NO SAMPLE				
* 10	2002	1156	6.3	2250	2252	.	1.959	1.954		
9	2001	1155	6.6	2500	2502	.				
8	2000	1154	6.8	2750	2745	.				
7	1999	1153	5.5	3000	3001	.				
6	1998	1152	5.4	3250	3247	.				
5	1997	1151	5.9	3500	3498	.				
* 4	1996	1150	5.9	4000	3999	.	1.398	1.378	4010	
3	1995	1149	5.0	4500	4495	✓ 2ND TRIG.				
2	1994	1148	4.8	5000	5000	✓ OK 2ND TRY NO CURRENT				
1	1993	1147	5.3	B-20	5174	✓				

ENTERED BY: J.L./H.M.
CHECKED BY:

Bottom Depth: 5109

Cast No: 224/225

LOC UTC
Begin: 1343
Bottom: 1447
End: 1647

BEGIN POSITION (GPS)
LAT: 11 29 844
LONG: 168 22 138

BOTTOM POSITION (GPS)
LAT: 11 29 42
LONG: 168 22.62

END POSITION (GPS)
LAT: 11 28.58
LONG: 168 23.44

Comments

Rosette 1: 23 bottle

CRUISE NO:

94-03

UTC DATE:

Oct 23 /94

VESSEL: John P. Tully

STATION NO:

W090

HYDRO No.:

227 (upcast)
226 (down cast)

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
	23	2038	2028	10	8	✓	misfire			
10	22	2037	2032	29.8	49	✓				
50	21	2036	2025	27.1	120	✓				
120	20	2035	2022	17.4	201	✓				
200	19	2034	2021	14.7	299	✓				
300	18	2033	2020	14.4	401	✓				
400	17	2032	2019	12.2	602	✓				
600	*16	2031	2018	10.7	751	✓	T679	7.295		
750	15	2030	2017	8.9	1002	✓				
1000	14	2029	2015	8.4	1249	✓				
1250	13	2028	2014	8.2	1503	✓				
1500	12	2027	2013	7.1	1751	✓				
**1750	11	2026	2012	6.6	2001	✓				
	*10	2025	2010	5.6	2254	✓	T451	1.952	T798	1.949
	9	2024	2009	6.3	2500	✓				
	8	2023	2008	6.0	2752	✓				
	7	2022	2007	5.8	3006	✓				
	6	2021	2006	5.4	3252	✓				
	5	2020	2005	4.8	3498	✓				
	*4	2019	2004	5.0	3999	✓	T647	1.397	T577/1.380	P63145/4007
	3	2018	2002	5.1	4499	✓				
	2	2017	2001	5.4	4999	✓				
	1	2016	2000	5.1	5498	✓				

ENTERED BY: RMB
CHECKED BY:

Bottom Depth: 5410

Cast No: 227 ↑
226 ↓

LOC UTC
Begin: ↓ 0650
Bottom:
End:

BEGIN POSITION (GPS)
LAT:
LONG:

BOTTOM POSITION (GPS)
LAT:
LONG:

END POSITION (GPS)
LAT:
LONG:

Comments
216 ↓
217 ↑

2000 metre bottle not tripped

Rosette 1: 23 bottle

CRUISE NO:

9403/2

UTC DATE:

94-10-24

VESSEL: John P. Tully

STATION NO:

W091

HYDRO No.:

229

	NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
						Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
10	23	2068	1106	—	10	9	.				
50	22	2060	1105	28.4	50	48	.				
100	21	2059	1104	26.0	100	100	.				
200	20	2058	1103	19.0	200	200	.				
300	19	2057	1102	14.5	300	299	.				
400	18	2056	1101	13.4	400	401	.				
600	17	2055	1100	12.1	600	600	.				
	* 16	2054	1097	10.4	800	800	.	7.340			
	15	2053	1096	8.1	1000	1001	.				
	14	2052	1095	8.1	1250	1249	.				
	13	2051	1092	7.4	1500	1499	.				
	12	2050	1090	6.7	1750	1700	.				
	11	2049	1087	6.5	2000	2000	.				
	* 10	2048	1084	6.1	2250	2248	.	CTD 197	1.966	1.964	
	9	2047	1079	6.2	2500	2498	.				
	8	2046	1072	6.2	2750	2749	.				
	7	2045	1069	5.8	3000	2998	.				
	6	2044	1068	5.8	3250	3248	.				
	5	2043	1067	5.9	3500	3497	.				
	* 4	2042	1065	5.7	4000	3998	.	CTD 1418	1.404	1.387	4005
	3	2041	1063	5.5	4500	4498	.				
	2	2040	1062	5.4	5000	4998	.				
	1	2039	1060	5.6	B-25	5480	.				

ENTERED BY: JL/H.M

CHECKED BY:

Bottom Depth: ~5500

Cast No: 228/229

LOC UTC

Begin: 0148

Bottom: 0304

End: 0448

BEGIN POSITION (GPS)

LAT: 10 29 937

LONG: 168 37 123

BOTTOM POSITION (GPS)

LAT: 10 29. 93

LONG: 168 37. 42

END POSITION (GPS)

LAT: 10 29. 83

LONG: 168 38. 18

Bottle 23 - didn't trip!

Comments

2055 - bottle 17

not sealed -

Rosette 1: 23 bottle

CRUISE NO: 94-03
STATION NO: W092

UTC DATE: 24/10/94
HYDRO No.: 231

VESSEL: John P. Tully

	NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
						Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
50	23	2084	1172	27.8	10	10	✓				
100	22	2083	1171	18.7	50	37	✓	move up to 40m			
200	21	2082	1169	15.9	100	119		move up to 80m ↓ 110m	① no trigger count no current	② current confirmed.	
300	20	2081	1168	14.8	200	205	✓				
400	19	2080	1167	14.0	300	301	✓				
600	18	2079	1166	13.3	400	403	✓				
800	17	2078	1165	11.7	600	605		① no trigger / no current ② current / confirmed.			
1000	* 16	2077	1164	10.4	800	800	✓	T679	4.542		
1250	15	2076	1163	10.3	1000	1000	✓				
1500	14	2075	1161	9.7	1250	1251	✓				
1750	13	2074	1160	9.1	1500	1498	✓				
2000	12	2073	1158	8.7	1750	1750	✓				
2250	11	2072	1157	8.5	2000	2001	✓				
2500	* 10	2071	1156	8.3	2250	2249	✓	T451	1.862	T798	1.859
2750	9	2070	1155	8.0	2500	2501	✓				
3000	8	2069	1154	7.9	2750	2749	✓				
3250	7	2068	1153	7.7	3000	3000	✓				
3500	6	2067	1152	7.2	3250	3251	✓				
4000	5	2066	1151	7.6	3500	3503	✓				
4500	* 4	2065	1150	7.9	4000	4000	✓	T647 T577	1.297 1.278	P63145	4510db
5000	3	2064	1149	8.0	4500	4502	✓				
5305	2	2063	1148	7.9	5000	4998	✓				
5305	1	2062	1147	7.9	13-20	5305	✓				

ENTERED BY: KMB
CHECKED BY:

Bottom Depth:
Cast No: 230 down
231 up

LOC	UTC
Begin:	
Bottom:	
End:	

BEGIN POSITION (GPS)
LAT:
LONG:

BOTTOM POSITION (GPS)
LAT:
LONG:

END POSITION (GPS)
LAT:
LONG:

Comments
watching the current and
batle trip info like a
hawk!

Rosette 1: 23 bottle

CRUISE NO:

9403/2

UTC DATE:

24-10-24

VESSEL: John P. Tully

STATION NO:

W093

HYDRO No.:

233

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	2107	2028		10	10	✓				
22	2106	2027	28.4	50	50	✓ POWER - YES CONFIRM NO				
21	2105	2025	18.8	100	99	✓				
20	2104	2022	14.6	200	199	✓				
19	2103	2021	13.4	300	300	✓				
18	2102	2020	12.9	400	402	✓				
17	2101	2019	11.6	600	604	✓				
16	2100	2018	10.2	800	800	✓	6.606			
15	2099	2017	8.8	1000	1000	✓				
14	2098	2015	8.3	1250	1250	✓				
13	2097	2014	7.6	1500	1500	✓				
12	2096	2013	7.3	1750	1750	✓				
11	2095	2012	6.9	2000	2000	✓				
10	2094	2010	7.0	2250	2248	✓	1.970	1.967		
9	2093	2009	6.4	2500	2501	✓				
8	2092	2008	6.4	2750	2750	✓				
7	2091	2007	6.3	3000	3000	✓				
6	2090	2006	6.2	3250	3248	✓				
5	2089	2005	6.3	3500	3499	✓				
4	2088	2004	6.0	4000	3997	✓ 2ND TRIGGER	1.394	1.375	4005	
3	2087	2002	6.0	4500	4498	✓				
2	2086	2001	10.3	5000	4999	✓ 2ND TRIGGER				
1	2085	2000	8.6	B-20	5256	✓				

ENTERED BY: J.L. / H.M.
CHECKED BY:

Bottom Depth: 5182

Cast No: 232
233 upcast

	LOC	UTC
Begin:		14:08
Bottom:		15:24
End:		17:05

BEGIN POSITION (GPS)
LAT: 09 29.8
LONG: 160 44.924BOTTOM POSITION (GPS)
LAT: 09 29.275
LONG: 160 45.35END POSITION (GPS)
LAT: 09 28.524
LONG: 160 46.08

Comments

06 59.78
148 45.06

Rosette 1: 23 bottle

CRUISE NO: 94-03

UTC DATE: 24/10/94

STATION NO: W094

HYDRO No.: 235

VESSEL: John P. Tully

[illegible]

ENTERED BY: *RMB*

CHECKED BY:

Bottom Depth: 4995

Cast No: 235 $\uparrow$

234 ↓

LOC	UTC
1000	0600
1100	0700
1200	0800
1300	0900
1400	1000
1500	1100
1600	1200
1700	1300
1800	1400
1900	1500
2000	1600
2100	1700
2200	1800
2300	1900
2400	2000
0100	2100
0200	2200
0300	2300
0400	2400
0500	0100
0600	0200
0700	0300
0800	0400
0900	0500
1000	0600

Begin: 20.01

Bottom:

End:

BEGIN POSITION (GPS)

LAT:

LONG:

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

duplicates at 900m + 300m
for oxygens etc.

Rosette 1: 23 bottle

CRUISE NO:

94-03

UTC DATE:

10/25/94

VESSEL: John P. Tully

STATION NO:

W095

HYDRO No.:

237

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	2153	1107	28.7	10	8	✓				
22	2152	1106	26.7	50	50	✓				
21	2151	1105	18.8	100	99	✓				
20	2150	1104	14.9	160	161	✓				
19	2149	1103	14.2	200	199	✓				
18	2148	1102	13.5	300	300	✓				
17	2147	1101	12.8	400	399	✓				
* 16	2146	1100	11.0	600	600	✓	7.058			
15	2145	1097	9.7	800	799	✓				
14	2144	1096	9.0	1000	1000	✓				
13	2143	1095	8.1	1250	1250	✓				
12	2142	1092	8.0	1500	1500	✓				
11	2141	1090	7.3	1750	1750	✓				
* 10	2140	1087	7.2	2000	2000	✓ 2ND TRG	2.103	2.106		
9	2139	1084	6.7	2250	2248	✓				
8	2138	1079	6.5	2500	2500	✓				
7	2137	1072	6.6	2750	2750	✓				
6	2136	1069	6.3	3000	3000	✓				
5	2135	1068	6.6	3250	3248	✓				
* 4	2134	1067	6.2	3500	3500	✓ BAD TRY ALL POWER/HOC CONFIRM	1.524	1.506	3509	
3	2133	1065	6.0	4000	4002	✓				
2	2132	1062	6.0	4500	4499	✓				
1	2131	1060	6.5	B-20	4956	✓				

ENTERED BY: H.M.
CHECKED BY:

Bottom Depth: 4948

Cast No: 236/237

LOC UTC
Begin: 0259
Bottom: 0407
End: 0553

BEGIN POSITION (GPS)
LAT: 08 30 070
LONG: 168 45 130

BOTTOM POSITION (GPS)
LAT: 08 30.39
LONG: 168 45.33

END POSITION (GPS)
LAT: 08 30.40
LONG: 168 45.85

Comments
NO CROSS FROM FINGER
STOPPED AT APPARENT
DEPTH - NOT DIST. FROM
BOTTOM

Rosette 1: 23 bottle

CRUISE NO:

9403/2

UTC DATE:

25/10/94

VESSEL: John P. Tully

STATION NO:

W096

HYDRO No.:

239

5172

11.
50
100
300
400
600
800
1000
1250
1500
1750
2251
2500
2750
3000
3250
3500
4000
4500
5000
5171

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
	23	2176	1172	10	11	✓				
	22	2175	1171	50	49	✓				
	21	2174	1169	100	100	✓				
	20	2173	1168	200	200	✓				
	19	2172	1167	300	300	✓				
	18	2171	1166	400	400	✓				
	17	2170	1165	600	599	✓				
	* 16	2169	1164	800 *	800	✓				
	15	2168	1163	1000	1000	✓				
	14	2167	1161	1250	1251	✓				
	13	2166	1160	1500	1500	✓				
	12	2165	1158	1750	1749	✓				
	11	2164	1157	2000	1999	✓				
	* 10	2163	1156	2250 *	2250	✓				
	9	2162	1155	2500	2499	✓				
	8	2161	1154	2750	2749	✓				
	7	2160	1153	3000	3000	✓				
	6	2159	1152	3250	3249	✓				
	5	2158	1151	3500	3498	✓				
	* 4	2157	1150	4000 *	3994	✓				
	3	2156	1149	4500	4500	✓				
	2	2155	1148	5000	4998	✓				
	1	2154	1147	5171	5172	✓				

2 Bottles Not trapped #23, #22

Trigger ok but not confirmed

T679 8.000

1457 1.991 1.988

1.364 1.345 4033

ENTERED BY: Rm3

CHECKED BY:

Bottom Depth: 5094.

Cast No: 238 down

239 up

LOC UTC

Begin: 22.3 09.13

Bottom:

End:

BEGIN POSITION (GPS)

LAT:

LONG:

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

Rosette 1: 23 bottle

CRUISE NO:

UTC DATE:

VESSEL: John P. Tully

STATION NO:

HYDRO No.:

241

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	2199	1056	25.9	10	9.3	✓				
22	2198	1054	20.5	50	47.4	✓				
21	2197	1052	20.4	100	99.0	✓				
20	2196	1047	14.6	200	200.7	✓				
19	2195	1046	13.4	300	300.5	✓				
18	2194	1045	13.1	400	401.7	✓				
17	2193	1040	11.9	600	602	✓				
* 16	2192	1039	11.1	800	798	✓	5.792			
15	2191	1036	9.8	1000	1001	✓				
14	2190	1033	8.3	1250	1251	✓				
13	2189	1032	7.9	1500	1497	✓				
12	2188	1031	7.5	1750	1749	✓				
11	2187	1029	7.3	2000	1999	✓	T451	T118		
* 10	2186	1028	7.0	2250	2250	✓	2045	2.041		
9	2185	1027	7.0	2500	2499	✓ 2ND TRIG				
8	2184	1025	6.7	2750	2748	✓				
7	2183	1020	6.8	3000	2998	✓				
6	2182	1016	6.6	3250	3252	✓				
5	2181	1014	6.9	3500	3500	✓	T647			
* 4	2180	1010	6.0	4000	3999	✓ 2ND TRIG	1.377	1.357	4007.	
3	2179	1008	6.6	4500	4499	✓ 2ND TRIG.				
2	2178	1004	5.9	5000	5000	✓				
1	2177	1003	6.2	8-20	5240	✓				

ENTERED BY: H M.

CHECKED BY:

Bottom Depth: 5155 -

Cast No: 240 down

241 mg

LOC	UTC
1000	0800
1100	0900
1200	1000
1300	1100
1400	1200
1500	1300
1600	1400
1700	1500
1800	1600
1900	1700
2000	1800
2100	1900
2200	2000
2300	2100
2400	2200
0100	2300
0200	2400
0300	0100
0400	0200
0500	0300
0600	0400
0700	0500
0800	0600
0900	0700
1000	0800

Begin:

Bottom:

End:

BEGIN POSITION (GPS)

LAT:

LONG:

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

Rosette 1: 23 bottle

CRUISE NO: 94.03

UTC DATE: 94-10-26

VESSEL: John P. Tully

STATION NO: W098

HYDRO No.: 243

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	2222	2069	28.4	10	9	•				
22	2221	2068	28.3	50	49	•				
21	2220	2067	20.4	100	98	•				
20	2219	2066	14.2	200	213	• No current 2nd try OK				
19	2218	2065	12.9	300	293	•				
18	2217	2064	12.5	400	410	• 2nd try OK				
17	2216	2063	12.2	600	585	•				
* 16	2215	2062	11.4	800	806	•	T679	7.738		
15	2214	2061	9.6	1000	972	• No current 2nd try OK				
14	2213	2060	8.9	1250	1250	•				
13	2212	2059	7.9	1500	1500	•				
12	2211	2058	7.9	1750	1750	•				
11	2210	2057	7.7	2000	2000	•				
* 10	2209	2056	7.1	2250	2250	•	T451	2.198	T798	2.192
9	2208	2055	7.0	2500	2499	•				
8	2207	2054	6.5	2750	2750	•				
7	2206	2052	6.1	3000	3000	•				
6	2205	2051	6.1	3250	3251	•				
5	2204	2049	6.3	3500	3501	• No current 2nd try OK				
* 4	2203	2047	6.3	4000	4007	•	T647 T577	1.518 1.499	P63145	3518
3	2202	2045	6.4	4500	4500	•				
2	2201	2044	6.2	5000	5003	•				
1	2200	2043	7.4	13-20M	5306	• 2nd try OK No confirm	slightly higher than	normal current		

ENTERED BY: *LM B*

CHECKED BY:

Bottom Depth: 5370

Cast No: 243↑
242↓

	LOC	UTC
Begin:		
Bottom:		
End:		

BEGIN POSITION (GPS)
LAT:
LONG:

BOTTOM POSITION (GPS)	
LAT:	
LONG:	

END POSITION (GPS)	
LAT:	
LONG:	

	Comments
# 2058	Broken replacement
# 2074	temp 11.2
	taken after alkalinitas

Rosette 1: 23 bottle

CRUISE NO:

9403

UTC DATE:

26/10/94

STATION NO:

wφ 99

HYDRO No.:

245

BE SURE TO RECHECK

ROSETTE POINTER POSN!

VESSEL: John P. Tully

check

picked up bottle with 150 m. 5500

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
	23	2245	1054	28.7	10	✓				
	22	2244	1052	22.7	50	✓				
	21	2243	1047	22.6	105	① not conf - missed current	OK			
	20	2242	1046	14.6	200	✓				
	19	2241	1045	14.4	301	✓				
	18	2240	1040	12.7	405	✓				
	17	2239	1039	12.4	601	✓				
600	16	2238	1036	11.2	805	✓	T 679	7594		
	15	2237	1033	9.3	1001	✓				
	14	2236	1032	8.6	1253	✓				
	13	2235	1031	7.3	1505	✓				
	12	2234	1029	7.5	1900	✓				
	11	2233	1028	6.6	2003	✓				
2000	10	2232	1027	6.7	2255	✓	T 451	2.239	T 798	2234
	9	2231	1025	6.4	2500	✓				
	8	2230	1020	6.6	2749	① Not confirmed - current went very high! ② not conf - current very high				
	7	2229	1016	6.1	3002	③ not confirmed - current very high! ④ CONF - normal current				
	6	2228	1014	6.0	3249	✓				
	5	2227	1010	5.8	3499	✓				
3500	4	2226	1008	5.9	4000	✓	T 647	1.530	T 577	1.511
	3	2225	1004	5.4	4500	✓				
	2	2224	1003	5.4	4999	✓				
	1	2223	1056	6.2	5302	✓				

ENTERED BY: H.M./RMB

CHECKED BY:

Bottom Depth: 5400

Cast No: 245 ↑

244 ↓

LOC UTC

Begin: 0607

Bottom:

End:

BEGIN POSITION (GPS)

LAT: 0630.043

LONG: 168 44.825

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

On completion of cast, rosette
pointer was at 24/CRD indicating
24 bottle hips. Two bottles

may have been tripped at the sample depth

check cast
numbers in
log book

← this bottle tripped by mistake on the fly - proceed
to 1500 m for next sample - Oops!

Rosette 1: 23 bottle

CRUISE NO: 94-03

UTC DATE: 26/10/94

VESSEL: John P. Tully

STATION NO: W100

HYDRO No.: 247

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	2268	1172	28.9	10	10	✓				
22	2267	1171	28.9	50	50	✓				
21	2266	1169	28.3	100	100	✓				
20	2265	1168	24.7	200	201	✓				
19	2264	1167	16.2	300	300	✓				
18	2263	1166	14.7	400	399	✓				
17	2262	1165	14.2	600	600	✓				
* 16	2261	1164	10.5	800	800	✓	9.043			
15	2260	1163	9.6	1000	1000	✓				
14	2259	1161	9.4	1250	1249	✓				
13	2258	1160	N.S.	1500	1498	✓	NO SAMPLE	Bottle not closed		
12	2257	1158	8.6	1750	1749	✓				
11	2256	1157	8.1	2000	1999	✓				
* 10	2255	1156	7.6	2250	2249	✓	2.268	2.264		
9	2254	1155	7.8	2500	2500	✓				
8	2253	1154	7.4	2750	2749	✓				
7	2252	1153	7.0	3000	3000	✓				
6	2251	1152	6.9	3250	3250	✓				
5	2250	1151	6.8	3500	3500	✓				
* 4	2249	1150	6.7	4000	3999	✓	1.543	1.524	3508	
3	2248	1149	6.4	4500	4501	✓				
2	2247	1148	9.3	5000	4999	✓				
1	2246	1147	7.6	B-50	5615	✓				

 ENTERED BY: SL/H.M.
 CHECKED BY:

Bottom Depth: ~ 5650

Cast No: 246/247

	LOC	UTC
Begin:		12 30
Bottom:		13 52
End:		15 55

BEGIN POSITION (GPS)		
LAT:	06 00	046
LONG:	168 44	916

BOTTOM POSITION (GPS)		
LAT:	06 00	209
LONG:	168 44	222

END POSITION (GPS)		
LAT:	06 00	718
LONG:	168 43	74

Comments

Rosette 2: 12 bottle

CRUISE NO: 9304

UTC DATE: 26/10/94

VESSEL: John P. Tully

STATION NO: w101 (shallow)

HYDRO No.: 249

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
11	2302	2012	29.9	10	8	✓				
10	2301	2010	29.6	50	48	✓		good, well mixed surface layer		
9	2300	2009	29.5	100	100	✓		big gradient ~ T 0.5		
8	2299	2008	26.8	150	149	✓				
7	2298	2007	21.9	200	199	✓		big SAL/T gradient here!		
6	2297	2006	14.8	300	302	✓				
5	2296	2005	14.0	400	406	✓				
4	2295	2004	12.9	600	599	✓				
3	2294	2002	12.8	800	800	✓				
2	2293	2001	10.6	1000	990	✓				
1	2292	2000	10.6	1000	995	✓		start #249 here		
								991.3 db * AITB - MAN * recorded in		

ENTERED BY: RMB

CHECKED BY:

Bottom Depth: 5549

Cast No: 249A
248B

LOC UTC

Begin:

Bottom:

End:

BEGIN POSITION (GPS)

LAT:

LONG:

note, CTD* 58483

bottle 1 tripped at bottom of 248 before starting new upcast side

bottle 2 trip (also at ~1000 m) is the first bottle trip recorded in #249

picked up bottom at 150 m off bottom

Rosette 1: 23 bottle

CRUISE NO: 94-03

UTC DATE: 24/10/94

VESSEL: John P. Tully

STATION NO: W101 Deep

HYDRO No.: 251

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
	23	2291	1107	1000	1003	✓				
	22	2290	1106	9.4	1250	✓				
	21	2289	1105	9.0	1500	✓				
1500	20	2288	1104	8.9	1750	✓				
1750	19	2287	1103	8.0	2000	✓				
2000	18	2286	1102	8.3	2000	✓				
2000	17	2285	1101	7.8	2250	✓				
✓ 2249	* 16	2284	1100	8.3	2500 *	✓	T679	2.086	CTD 1917	
2500	15	2283	1097	7.6	2750	✓				
2750	14	2282	1096	8.0	3000	✓				
3000	13	2281	1095	7.0	3250	✓				
3250	12	2280	1092	7.3	3500	✓				
3500	11	2279	1090	7.0	3750	✓				
✓ 3748	* 10	2278	1087	7.0	4000 *	✓	T451	1.501	T798	1.499
4000	9	2277	1084	6.3	4250	✓				
41250	8	2276	1079	6.6	4500	✓				
4500	7	2275	1072	6.0	4500	✓				
4500	6	2274	1069	6.1	4750	✓				
4750	5	2273	1068	5.5	5000	✓				
✓ 5000	* 4	2272	1067	5.5	5250 *	✓	T647 T577	1.259 1.240	P63145	5004
	3	2271	1065	5.7	5500	✓				
5695	2	2270	1062	5.1	B-70	✓				
	1	2269	1060	4.7	B-70	✓				

① not conf did not TRIP ② OK

10 metres off bottom

ENTERED BY: R12
CHECKED BY:

Bottom Depth: 5570 sounder
2 max = 5695 dbars
Cast No: 250 ↓ 251 ↑

LOC	UTC
Begin:	2032
Bottom:	
End:	

BEGIN POSITION (GPS)
LAT:
LONG:

BOTTOM POSITION (GPS)
LAT:
LONG:

END POSITION (GPS)
LAT:
LONG:

Comments

Rosette 1: 23 bottle

CRUISE NO:

9403/2

UTC DATE:

94-10-27

VESSEL: John P. Tully

STATION NO:

W102

HYDRO No.:

253

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	2325	1056	28.3	10	9	✓				
22	2324	1054	28.2	50	50	✓				
21	2323	1052	26.5	100	77	✓				
20	2322	1047	16.7	200	201	✓				
19	2321	1046	14.5	300	305	✓				
18	2320	1045	13.8	400	401	✓				
17	2319	1040	12.4	600	605	✓				
16	2318	1039	11.7	800 *	785	✓	5.938	CTD 5.554		
15	2317	1030	10.4	1000	1003	✓				
14	2316	1033	9.9	1250	1265	✓				
13	2315	1032	9.3	1500	1450	✓				
12	2314	1031	8.9	1750	1750	✓				
11	2313	1029	8.4	2000	2002	✓				
10	2312	1028	8.2	2250 *	2239	✓	2.030	2.028	CTD 2.037	
9	2311	1027	8.3	2500	2501	✓				
8	2310	1025	8.3	2750	2748	✓				
7	2309	1020	7.7	3000	3001	✓				
6	2308	1016	7.7	3250	3251	✓				
5	2307	1014	7.2	3500	3500	✓				
4	2306	1010	7.8	4000 *	3995	✓	1.395	1.376	4.004	
3	2305	1008	7.2	4500	4496	✓				
2	2304	1004	6.9	5000	4798	✓				
1	2303	1003	7.8	B-20	5701	✓				

very messy salinity

POINTER IS AT POSN 22
JUST LIKE IT IS
SUPPOSED TO BE

① did not trigger, no current
② OK

very heavy rain squalls during up cast
radio got soaked.

ENTERED BY: RM3

CHECKED BY:

Bottom Depth: 5650

Cast No: 253 ↑
252 ↓

LOC UTC

Begin:

Bottom: 22:33

End:

BEGIN POSITION (GPS)

LAT:

LONG:

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

WOCE CTD / 23 bottle rosette to
5660 metres following rosette
sinking.

Rosette 2: 12 bottle

CRUISE NO: 94-03/2

UTC DATE: 27/10/94

VESSEL: John P. Tully

STATION NO: W103 shallow

HYDRO No.: 255

CFL ✓
HMF
SML ✓

shallow cast

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
11	2336	1090	28.5	10	10					
10	2335	1087	28.5	50	50					
9	2334	1084	27.3	100	100					
8	2333	1079	22.3	150	150					
7	2332	1072	22.0	200	200					
6	2331	1069	14.5	300	301					
5	2330	1068	13.9	400	400	same ?				
4	2329	1067	12.7	600	600	} Advanced No ready light				
3	2328	1065	11.9	600	602					
2	2327	1062	10.7	800	805	} Advanced - No Ready light				
1	2326	1060	11.6	1000	999		997.1	shar		

ENTERED BY: _____

CHECKED BY: _____

Bottom Depth: _____

Cast No: 255 A

254 ↓

LOC	UTC
Begin:	14 43
Bottom:	14 55
End:	15 29

BEGIN POSITION (GPS)

LAT: 04 29.76

LONG: 168 45.07

Rosette 1: 23 bottle

CRUISE NO: 9304
STATION NO: W103 DeepUTC DATE: 27/10/94
HYDRO No.: 257

VESSEL: John P. Tully

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23		1172		1100						
22										
21	2357	1169	7.9	1000	1000	✓				
20	2356	1168	7.3	1250	1250	✓				
19	2355	1167	7.0	1250	1250	✓				
18	2354	1166	6.6	1500	1500	✓				
17	2353	1165	5.9	1750	1750	✓				
* 16	2352	1164	5.7	2000	2000	✓	T679	2.327		
15	2351	1163	5.2	2000	2000	✓				
14	2350	1161	5.2	2250	2250	✓				
13	2349	1159	4.6	2500	2500	✓				
12	2348	1160	7.8	2750	2750	✓				
11	2347	1158	5.5	3000	2999	✓				
* 10	2346	1156	5.2	3250	3250	✓	T451	1.584	T778	1.580
9	2345	1155	5.4	3250	3251	✓				
8	2344	1154	5.1	3500	3500	✓				
7	2343	1153	4.6	3750	3749	✓	STOPCOCK OPEN - NO SAMPLE			
6	2342	1152	5.2	4000	4000	✓				
5	2341	1151	4.2	4250	4250	✓				
* 4	2340	1150	4.4	4500	4499	✓	T647	12.55	T577	1.236
3	2339	1149	4.5	4750	4749	✓				
2	2338	1148	4.5	5-20=5005	5005	✓				
1	2337	1147	4.6	5-20=5005	5005	✓				

ENTERED BY: H.M.

CHECKED BY:

Bottom Depth: 5200 5020

Cast No: 256/257

LOC UTC

Begin: 16:11

Bottom: 17:16

End: 18:48

BEGIN POSITION (GPS)

LAT: 04 29.97

LONG: 168 45.16

BOTTOM POSITION (GPS)

LAT: 0429.67

LONG: 168 45.09

END POSITION (GPS)

LAT: 04 29.36

LONG: 168 44.59

Comments

NISK ✓ SAL OXY ✓ NUTS ✓ CFC ✓ T02 ✓ AIR ✓ O18 ✓ C13 ✓
x x x x x x x x x

Rosette 1: 23 bottle

CRUISE NO: 94-03
STATION NO: W104

UTC DATE: Oct 27 1994
HYDRO No.: 259

VESSEL: John P. Tully

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	2380	2028	29.5	10	10	•				
22	2379	2027	29.7	50	52	•				
21	2378	2025	27.8	100	100	•				
20	2377	2022	17.2	200	200	•				
19	2376	2021	15.1	300	300	•				
18	2375	2020	14.6	400	399	•				
17	2374	2019	12.5	600	600	•				
* 16	2373	2018	12.0	800	* 800	•	T679	7.271		
* 15	2372	2017	11.0	1000	999	• NO CURRENT No current OK second try	OK second try			
14	2371	2015	10.3	1250	1250	• OK second try				
13	2370	2014	9.4	1500	1499	•				
12	2369	2013	9.2	1750	1750	•				
11	2368	2012	8.5	2000	2000	•				
* 10	2367	2010	8.6	2250	* 2250	•	T451	2015	T798	2.011
9	2366	2009	8.4	2500	2499	•				
8	2365	2008	8.1	2750	2750	•				
7	2364	2007	7.6	3000	3000	•				
6	2363	2006	7.7	3250	3250	•				
5	2362	2005	7.5	3500	3500	•				
* 4	2361	2004	7.7	4000	* 3997	•	T647 T577	1.595 1.376	P63145	4006
3	2360	2002	7.4	4500	4500	• NO CURRENT	FIRST TRY	2nd OK		
2	2359	2001	8.3	5000	4998	•				
1	2358	2000	8.3	B-150	5360	• OK 2ND TRY NOT CONFIRMED	Current was normal, may have fixed two bottles.			

ENTERED BY: SL
CHECKED BY:

Bottom Depth: 5444
Cast No:

LOC	UTC
Begin:	
Bottom:	
End:	

BEGIN POSITION (GPS)
LAT:
LONG:

BOTTOM POSITION (GPS)
LAT:
LONG:

END POSITION (GPS)
LAT:
LONG:

Comments

Rosette 2: 12 bottle

CRUISE NO: 9403/2

UTC DATE: 94-10-27

VESSEL: John P. Tully

STATION NO: W145 shallow

HYDRO No.: 261

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
11	2391	1029	29.0	10	10	✓				
10	2390	1028	28.7	50	50	✓				
9	2389	1027	28.1	100	99	✓				
8	2388	1025	22.6	150	150	✓				
7	2387	1020	22.4	200	199	✓				
6	2386	1016	15.4	300	300	✓				
5	2385	1014	15.2	400	400	✓				
4	2384	1010	13.2	600 70	600	✓				
3	2383	1008	13.7	600 5	600	✓				
2	2382	1004	12.9	800	799	✓				
1	2381	1003	12.7	1000	998	✓				

ENTERED BY: A.M
CHECKED BY:

Bottom Depth: 5450
Cast No: 260/261

	LOC	UTC
Begin:		0435
Bottom:		0459
End:		0526

BEGIN POSITION (GPS)
LAT: 03 30.052
LONG: 163 44.98

poor seal bottle #1?

Rosette 1: 23 bottle

CRUISE NO:

9403

UTC DATE:

28/10/94

VESSEL: John P. Tully

STATION NO:

W105

HYDRO No.:

264

264

shark
squad23 bottles
tripped

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
* 23	2414	2071	10.6	1600 ?	1000 (?)	✓				
22	2413	2069	9.7	1000 } A	1000	✓	lost track here - I possibly tripped 3 bottles at 1000m.			
21	2412	2068	10.4	1000	1000	✓				
* 20	2411	2067	9.9	1250	1247	✓				
19	2410	2066	8.8	1500 } A	1501	✓				
* 18	2409	2065	9.4	1500	1502	✓				
17	2408	2064	8.1	1750	1751	✓				
* 16	2407	2063	7.3	2000 *	2000	✓	T679 2.205			
15	2406	2062	7.0	2250	2250	✓				
14	2405	2061	7.2	2500 } A	2501	✓				
13	2404	2060	6.6	2500	2501	✓				
12	2403	2056	6.8	2750	2749	✓				
* 11	2402	2055	6.4	3000	3000	✓	T451 1.565 T792 1.561			
10	2401	2054	6.3	3250 *	3250	✓				
9	2400	2052	6.5	3500	3500	✓				
8	2399	2051	6.5	3750	3746	✓				
* 7	2398	2049	5.5	4000	3999	✓				
6	2397	2057	4.3	4250	4250	✓	T647 T579 63145			
5	2396	2059	4.7	4500	4498	✓				
4	2395	2047	4.6	4750 *	4745	✓	no trip no current OK 1.236 1.216 4753 (GK)			
* 3	2394	2045	4.7	5000	4998	✓				
2	2393	2044	4.2	B-20 } D	5540	✓				
* 1	2392	2043	3.6	B-20 }	5540	✓	writing file 264			

ENTERED BY: JJ M / RMB

CHECKED BY:

Bottom Depth: 5458

Cast No: 264

263

LOC UTC

Begin:

Bottom:

End:

BEGIN POSITION (GPS)

LAT:

LONG:

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

pointer ended at
pos'n #23 RMB

Rosette 1: 23 bottle

CRUISE NO:

9403/2

UTC DATE:

94-10-28

VESSEL: John P. Tully

STATION NO:

W106

HYDRO No.:

266

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	2437	2028	28.7	10	10	.				
22	2436	2027	28.7	50	49	.				
21	2435	2025	27.3	100	100	.				
20	2434	2022	15.4	200	200	.				
19	2433	2021	14.9	300	300	.				
18	2432	2020	14.1	400	400	.				
17	2431	2019	12.8	600	601	.				
* 16	2430	2018	11.1	800	798	.	5.713			
15	2429	2017	9.8	1000	1000	.				
14	2428	2015	9.3	1250	1250	.				
13	2427	2014	8.7	1500	1500	.				
12	2426	2013	8.6	1750	1750	.				
11	2425	2012	8.2	2000	2001	.				
Y 10	2424	2010	7.4	2250	2250	.	1.958	1.955		
9	2423	2009	7.4	2500	2500	.				
8	2422	2008	7.7	2750	2750	.				
7	2421	2007	7.6	3000	3000	.				
6	2420	2006	8.0	3250	3249	.				
5	2419	2005	7.3	3500	3501	.				
X 4	2418	2004	7.2	4000	4000	.	1.377	1.358	4009	
3	2417	2002	7.0	4500	4499	.				
2	2416	2001	7.4	5000	5000	.				
1	2415	2000	7.0	B-20	5256	.				

ENTERED BY:

SC/HM

CHECKED BY:

Bottom Depth:

5098

Cast No:

266↑

265↓

LOC

UTC

Begin:

1226

Bottom:

1338

End:

1537

BEGIN POSITION (GPS)

LAT: 03 00 066

LONG: 168 45 124

BOTTOM POSITION (GPS)

LAT: 03 00 452

LONG: 168 45 746

END POSITION (GPS)

LAT: 03 01 339

LONG: 168 46 274

Comments

Rosette 1: 23 bottle

CRUISE NO:

9403/2

UTC DATE:

28-10-94

VESSEL: John P. Tully

STATION NO:

W107 deep

HYDRO No.:

270

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23										
22	2470	2069		1000	1005	•				
21	2469	2068	9.7	1000	1005	•				
20	2468	2067	9.5	1250	1247	✓				
19	2467	2066	8.6	1500	1502	✓				
18	2466	2065	8.2	1500	1502	✓				
17	2465	2064	7.9	1750	1750	✓				
* 16	2464	2063	7.7	2000 +	2001	✓	T 451	2.601		
15	2463	2062	7.3	2250	2248	✓				
14	2462	2061	7.0	2500	2497	✓				
13	2461	2060	6.7	2750	2749	① no trigger ② OK				
12	2460	2058	6.7	3000	3000	✓				
11	2459	2055	6.4	3000	3000	✓				
* 10	2458	2054	6.5	3250 *	3248	✓	T 798	1.636	T 679	1.640
9	2457	2052	6.2	3500	3500	① high current no conf	② OK			
8	2456	2051	6.4	3750	3750	✓				
7	2455	2049	5.9	4000	4001	✓				
6	2454	2059	6.6	4250	4252	✓				
5	2453	2057	5.9	4500	4499	✓				
* 4	2452	2047	5.9	4750 *	4752	① no trigger ② OK	T 647	1.256	T 577	1.237
3	2451	2045	5.9	5000	5001	✓				
2	2450	2044	5.9	B-20	5461	✓				
1	2449	2043	4.9	B-20	5461	✓ seemed OK, but did not draw blue line				

ENTERED BY: LMB

CHECKED BY:

Bottom Depth: 5401

Cast No: 2701

2691

LOC UTC

Begin: 0936 2036

Bottom:

End:

BEGIN POSITION (GPS)

LAT:

LONG:

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

2 no trigger, 1 high current
2 bottles not triggered
#22-23

Rosette 2: 12 bottle

CRUISE NO: 94 03

UTC DATE: 28/10/94

VESSEL: John P. Tully

STATION NO: W 107 (shallow).

HYDRO No.: 268 ↑

Sh

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
11	2448	1157	30.1	10	6.0					
10	2447	1156	30.0	50	49	✓				
9	2446	1155	28.9	100	96	✓				
8	2445	1154	28.7	150	147	✓				
7	2444	1153	23.0	200 (210)	200	✓				
6	2443	1152	17.3	300 (240)	240	✓				
5	2442	1151	15.9	400	399	✓				
4	2441	1150	14.6	600	598	✓				
3	2440	1149	14.3	600	599	✓				
2	2439	1148	14.2	800	800	✓				
1	2438	1147	12.4	1000	999	✓	T20995	995.8		

ENTERED BY:

CHECKED BY:

Bottom Depth: 5400

Cast No: 268 ↑ 267 ↓

LOC

UTC

Begin: 0820

1920

Bottom:

1935

End:

BEGIN POSITION (GPS)

LAT:

LONG:

* 1 = normal current; no trip confirmed

Rosette 1: 23 bottle

CRUISE NO: 9403/2
STATION NO: W108

UTC DATE: 94-10-29
HYDRO No.: 0272

2 VESSEL: John P. Tully
HI CURRENT NO CONFIRM.
NORM CURRENT NO CONFIRM.

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	2493	1056		10	10					
22	2492	1054		50	50	1				
21	2491	1052		100	100	1				
20	2490	1047		200	197	1				
19	2489	1046		300	300	1				
18	2488	1045		400	400	2				
17	2487	1040		600	600	1				
16	2486	1039		800 *	800	1				
15	2485	1036		1000	1002	1				
14	2484	1033		1250	1250	1				
13	2483	1032		1500	1501	1				
12	2482	1031		1750	1750.4	1				
11	2481	1029		2000	1999.0	1				
10	2480	1028		2250 *	2249.6	1				
9	2479	1027		2500	2500	1				
8	2478	1025		2750	2750	1				
7	2477	1020		3000	3000	1				
6	2476	1016		3250	3250	1				
5	2475	1014		3500	3500	1				
4	2474	1010		4000 *	4000	1				
3	2473	1008		4500	4498	1				
2	2472	1004		5000	5002	1				
1	2471	1003		B-20	5 TRIGS	5400.				
					NONE CONFIRMED					

No samples drawn
bottle trips are
totally screwed up

ENTERED BY:
CHECKED BY:

Bottom Depth: 5400 m

Cast No: 272 ↑
271 ↓

LOC UTC
Begin:
Bottom:
End:

BEGIN POSITION (GPS)
LAT:
LONG:

BOTTOM POSITION (GPS)
LAT:
LONG:

END POSITION (GPS)
LAT:
LONG:

Comments
problems with bottle trip confirmation
after rosette repairs.

Rosette 1: 23 bottle

neck
0271

CRUISE NO:

9403/2

UTC DATE:

94-10-29

VESSEL: John P. Tully

STATION NO:

W100

HYDRO No.:

SIT

NLTB

TRIGGER

POWER ON

UP

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	2493	1056		10						
22	2492	1054		50						
21	2491	1052		100						
20	2490	1049		200						
19	2489	1046		300						
18	2488	1045		400						
17	2487	1040		600						
16	2486	1039		800						
15	2485	1036		1000						
14	2484	1033		1000						
13	2483	1032		1250						
12	2482	1031		1500						
11	2481	1029								
10	2480	1028		2000						
9	2479	1027								
8	2478	1025		2500						
7	2477	1020								
6	2476	1016		3000						
5	2475	1014								
4	2474	1010								
3	2473	1008		3						
2	2472	1004		4000						
1	2471	1003			5002	① not tripped	② not tripped	③ not tripped		

ENTERED BY:

CHECKED BY:

Bottom Depth: 5419

Cast No:

LOC UTC

Begin:

Bottom:

End:

BEGIN POSITION (GPS)

LAT:

LONG:

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

Rosette 2: 12 bottle

CRUISE NO: 9403/2

UTC DATE: 29/10/94

VESSEL: John P. Tully

STATION NO: W108 D

HYDRO No.: 276

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
11	2481	1029	5.5	1750	1750	.				
* 10	2480	1028	5.2	2000	2000	.	#198	2282	T679	2.653
9	2479	1027	5.1	2250	2233	.				
8	2478	1025	4.9	2500	2502	.				
7	2477	1020	4.6	2750	2750	.				
6	2476	1016	4.5	3000	3002	.				
5	2475	1014	4.4	3250	3249	.				
4	2474	1010	4.2	3500	3500	.				
3	2473	1008	4.4	4000	4001	.				
2	2472	1004	4.1	4500	4502	.				
* 1	2471	1003	4.1	5000	5000	.	T647	1.254	T577	1.234
						.				
						.				

ENTERED BY: H.M.

CHECKED BY:

Bottom Depth: 5399

Cast No: 275 ↓
276 ↑

	LOC	UTC
Begin:		1254
Bottom:		1359
End:		1533

BEGIN POSITION (GPS)			
LAT:	01	59	915
LONG:	168	45	065

Rosette 2: 12 bottle

CRUISE NO: 94-03

UTC DATE: 29/10/94

VESSEL: John P. Tully

STATION NO: W108 S.

HYDRO No.: 278

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
	11	2492	1054	10	10	.				
*	10	2491	1052	8.2	50	49	NO SAMPLE			
	9	2490	1047	29.5	100	100	.			
	8	2489	1046	29.5	200	199	.			
	7	2488	1045	28.4	300	300	.			
	6	2487	1040	15.6	400	399	.			
	5	2486	1039	14.1	600	600	.			
	4	2485	1036	13.4	800	801	.			
	3	2484	1033	11.1	1000	1000	.			
	2	2483	1032	9.3	1250	1250	.			
	* 1	2482	1031	9.0	1500	.				
								T 641	4.658	4.639
									T 577	

ENTERED BY: H.M
CHECKED BY:

Bottom Depth: 5390
Cast No: 277

278 upcast

LOC	UTC
Begin:	1644
Bottom:	1713
End:	1748

BEGIN POSITION (GPS)
LAT: 02 00 . 124
LONG: 168 45. 122

Bottle #10 didn't trip

1000
CTD
11

Rosette 1: 23 bottle

CRUISE NO:

94-03

UTC DATE:

94-10-30

VESSEL: John P. Tully

STATION NO:

109

HYDRO No.:

280

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	2516			10	10	.				
22	2515			50	49	.				
21	2514			100	101	.				
20	2513			200	201	No current 2nd try OK				
19	2512			300	303	.				
18	2511			400	404	.				
17	2510			600	603	.				
* 16	2509	1151	30.4	800	801	.	T451	29.87		
15	2508	1150		1000	999	.				
14	2507	1149	29.5	1250	1249	.				
13	2506	1148	17.1	1500	1500	.				
12	2505	1147	16.6	1750	1750	.				
11	2504	2012	16.0	2000	2000	No current 2nd try OK				
* 10	2503	2010	13.9	2250	2250	.	T798	7.554	T679	7.557
9	2502	2009	12.8	2500	2499	.				
8	2501	2008	11.3	2750	2750	.				
7	2500	2007	10.5	3000	3000	.				
6	2499	2006	9.8	3250	3250	Probably bottle 1				
5	2498	2005	9.3	3500	3500	.				
* 4	2497	2004	9.4	4000	3997	.	T647	2.327	T577	2.308
3	2496	2002	8.7	4500	4498	.				
2	2495	2001	8.7	5000	4999	.				
1	2494	2000	9.6	B-20	5455	.				

ENTERED BY:

CHECKED BY:

Bottom Depth: 5373

Cast No: 279 down
280 up

LOC UTC

Begin: 2244

Bottom: 2345

End: 0141

BEGIN POSITION (GPS)

LAT:

LONG:

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

Rosette 1: 23 bottle

CRUISE NO:

9403

UTC DATE:

30/10/94

VESSEL: John P. Tully

STATION NO:

118

HYDRO No.:

281/282

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
no sample	23	2539	1172	10	19	.				
no sample	22	2538	1171	50	49	.				
no sample	21	2537	1169	100	99	.				
no sample	20	2536	1168	200	200	.				
no sample	19	2535	1167	300	301	.				
no sample	18	2534	1166	400	402	.				
	17	2533	1165	600	599	.				
	16	2532	1164	800	801	.	T 451	29.69		
	15	2531	1163	1000	1000	.				
	14	2530	1161	1250	1249	.				
	13	2529	1160	1500	1503	.				
	12	2528	1158	1750	1751	.				
	11	2527	1157	2000	2000	.				
	10	2526	1156	2250	2252	.	T 798	5.884	T 679	7.302
	9	2525	1155	2500	2499	.				
	8	2524	1154	2750	2746	.				
	7	2523	1153	3000	3000	.				
	6	2522	1152	3250	3250	.				
	5	2521	2018	3500	3499	.				
	4	2520	2017	4000	3998	.	T 647	2038	T 577	2018
	3	2519	2015	4500	4499	.				
	2	2518	2013	5000	5000	.				
	1	2517	2014	B-20	5443	.				

ENTERED BY: H.M. / RMB

CHECKED BY:

Bottom Depth: 5450 m

Cast No: 281 ↓ 282 ↑

LOC UTC

Begin:

Bottom:

End:

BEGIN POSITION (GPS)

LAT:

LONG:

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

bottom 4 bottles - no trip -

Rosette 1: 23 bottle

CRUISE NO:

9403

UTC DATE:

30/10/94

VESSEL: John P. Tully

STATION NO:

W111

HYDRO No.:

283/284

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	2562	1107	29.5	10	10	•				
22	2561	1106	29.9	50	50	•				
21	2560	1105	27.7	100	100	•				
20	2559	1104	17.9	200	200	•				
19	2558	1103	15.6	300	300	• 2ND TRIG (1ST TO HIGH)				
18	2557	1102	14.0	400	399	•				
17	2556	1101	11.6	600	599	•				
16	2555	1100	11.1	800	800	•	T451	5.796		
15	2554	1099	9.0	1000	1000	•				
14	2553	1096	8.6	1250	1250	• 2ND TRIG (1ST NO FIRM)				
13	2552	1057	7.5	1500	1500	•				
12	2551	1056	7.6	1750	1750	•				
11	2550	1054	7.3	2000	2000	•				
10	2549	1052	6.7	2250	2235	•	T798	1.998	T679	2.000
9	2548	1047	6.4	2500	2500	•				
8	2547	1046	6.5	2750	2749	•				
7	2546	1045	5.9	3000	3000	•				
6	2545	1040	6.4	3250	3250	•				
5	2544	1039	6.0	3500	3498	•				
4	2543	1036	5.7	4000	4000	•	T647	1.408	T577	1.389
3	2542	1033	5.3	4500	4500	•				
2	2541	1032	5.5	5000	5000	•				
1	2540	1031	6.5	B-20	5568	• 2ND TRIG (1ST TO HIGH)				

ENTERED BY: H.M.

CHECKED BY:

Bottom Depth: 5580

Cast No: 283↓ 284↑

LOC UTC

Begin: 1533

Bottom: 1642

End: 1841

BEGIN POSITION (GPS)

LAT: 00 29 828

LONG: 168 45 234

BOTTOM POSITION (GPS)

LAT: 00 29.34

LONG: 168 45.65

END POSITION (GPS)

LAT: 00 28.76

LONG: 168 46.33

Comments

all bottles tripped.

pointer at posn #23

Rosette 1: 23 bottle

CRUISE NO:

94-03

UTC DATE:

30-10-1994

VESSEL: John P. Tully

STATION NO:

W112

HYDRO No.:

286

the Equator!

picked up plager at
2-500m

5430m

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	2585	2071	29.9	10	10	•				
22	2584	2069	30.2	50	50	•				
21	2583	2068	28.5	100	101	•				
20	2582	2067	19.0	200	200	•				
19	2581	2066	15.8	300	300	•				
18	2580	2065	14.1	400	399	•				
17	2579	2063	12.2	600	598	•				
*16	2578	2064	11.3	800	800	•	T451	5.819		
15	2577	2062	9.5	1000	999	•				
14	2576	2061	9.1	1250	1250	•				
13	2575	2060	8.2	1500	1500	•				
12	2574	2056	7.9	1750	1751	•				
11	2573	2055	7.3	2000	2000	•				
*10	2572	2054	8.0	2250	2250	•	T798	1.972	T679	1.978
9	2571	2052	7.2	2500	2500	•				
8	2570	2051	7.8	2750	2751	•				
7	2569	2049	7.3	3000	2999	•				
6	2568	2059	7.2	3250	3250	•				
5	2567	2057	7.5	3500	3500	•				
*4	2566	2047	7.7	4000	4000	•	T647	1.402	T577	1.385
3	2565	2045	6.5	4500	4500	•				
2	2564	2044	6.5	5000	5000	•				
1	2563	2043	7.5	5000	5642	•				

ENTERED BY: RMB

CHECKED BY:

Bottom Depth: 5550

Cast No: 286 ↑

285 ↓

LOC UTC

Begin:

Bottom:

End:

BEGIN POSITION (GPS)

LAT:

LONG:

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

Rosette 1: 23 bottle

CRUISE NO: 9403

STATION NO: W 113 (deep)

UTC DATE: 31/10/94
HYDRO No.: 289/290

VESSEL: John P. Tully

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	2619	2028				no sample taken				
22	2618	2027	7.9	1000 } ₀	1006	.				
21	2617	2025	7.5	1000 } ₀	1005	.				
20	2616	2022	6.8	1250	1244	① high current no conf.	② OK			
19	2615	2021	5.8	1500	1504	.				
18	2614	2020	5.6	1750	1747	.				
17	2613	2019	5.7	2000 } ₀	1998	.	missed flush			
16	2612	1151	5.6	2000 } ₀	1998	.		T 451	2.210	
15	2611	1150	4.9	2250	2249	.				
14	2610	1149	5.1	2500	2496	.				
13	2609	1148	4.6	2750	2748	.				
12	2608	1147	5.5	3000	2998	.				
11	2607	2012	4.1	3250	3249	.				
10	2606	2010	4.0	3500 } ₀ *	3502	.	wait 30 sec	T 798	1.562	T 679
9	2605	2009	4.0	3500 } ₀	3501	.				
8	2604	2008	4.0	3750	3749	.				
7	2603	2007	3.6	4000	4000	.				
6	2602	2006	3.6	4250	4250	.				
5	2601	2005	3.9	4500	4500	.				
4	2600	2004	3.3	4750 *	4751	.	2ND TRIG (NO CURRENT)	T 647	1.222	T 587
3	2599	2002	3.1	5000	5000	.				
2	2598	2001	3.8	B-20 } ₀	5530	.				
1	2597	2000	3.2	B-20 } ₀	5530	.				

ENTERED BY: H.M / RMB
CHECKED BY:

Bottom Depth: 5450 m
(5550)
Cast No: 289 ↓ 290 ↑

	LOC	UTC
Begin:		
Bottom:		
End:		

BEGIN POSITION (GPS)
LAT:
LONG:

BOTTOM POSITION (GPS)
LAT: _____
LONG: _____

END POSITION (GPS)
LAT:
LONG:

Comments
deep cast at W113

Rosette 2: 12 bottle

CRUISE NO: 9403

UTC DATE: 31/10/94

VESSEL: John P. Tully

STATION NO: W 113

HYDRO No.: 287/288

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
11	2596	1157	28.8	10	10	.				
10	2595	1156	28.7	50	50	.				
9	2594	1155	28.1	100	100	.				
8	2593	1154	21.0	150	150	.				
7	2592	1153	18.6	200	201	.				
6	2591	1152	18.8	300	300	.				
5	2590	2018	15.1	400	400	.				
4	2589	2017	14.5	600	600	.				
3	2588	2015	13.2	600	600	.				
2	2587	2013	12.9	800	800	.				
1	2586	2014	15.2	1000	1000	.	T647	4.664	A 2099	995.9

ENTERED BY: H.M

CHECKED BY:

Bottom Depth:

Cast No: 287/288 ↑

LOC

UTC

Begin: 1550

Bottom: 1610

End: 1640

BEGIN POSITION (GPS)

LAT: 00 30 . 35 S

LONG: 168 45.25

Rosette 1: 23 bottle

CRUISE NO:

9403/2

UTC DATE:

31/10/94



1/NOV/94

VESSEL: John P. Tully

STATION NO:

W114

HYDRO No.:

292 JP

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	2642	1107	29.8	10	10	NO CURRENT				
22	2641	1106	30.0	50	52	•				
21	2640	1105	28.7	100	100	•				
20	2639	1104	18.1	200	200	•				
19	2638	1103	15.9	300	300	•				
18	2637	1102	15.2	400	402	•				
17	2636	1101	13.6	600	601	•				
* 16	2635	1100	12.8	800	800	•	T451	5.653		
15	2634	1097	11.5	1000	999	•				
14	2633	1096	11.2	1250	1247	•				
13	2632	1057	10.4	1500	1499	•				
12	2631	1054	10.3	1750	1750	• NO CURRENT				
11	2630	1056	10.2	2000	2000	•				
* 10	2629	1052	10.8	2250	2247	•	T798	2.026	T679	2.029
9	2628	1047	11.7	2500	2501	•				
8	2627	1046	9.9	2750	2750	•				
7	2626	1045	8.8	3000	2999	•				
6	2625	1040	9.0	3500	3499	• HI CURRENT				
5	2624	1039	8.3	4000	4000	•				
* 4	2623	1036	9.3	4500	4500	•	T647	1.298	T577	1.278
3	2622	1033	9.2	5000	4999	•				
2	2621	1032	8.6	5500	5501	•				
1	2620	1031	10.5	B-20	5889	•				

ENTERED BY:

CHECKED BY:

Bottom Depth: 5774

Cast No:

LOC UTC

Begin: 23:11

Bottom: 00:19

End: 0229

BEGIN POSITION (GPS)

LAT: 01 00 207 S

LONG: 168 45 011 W

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

Rosette 2: 12 bottle

CRUISE NO: 94-03

UTC DATE: 01-11-1994

VESSEL: John P. Tully

STATION NO: W115 (shallow)

HYDRO No.: 296

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
11	2676	2056	29.6	10	10	.				
10	2675	2055	29.4	50	47.0	.				
9	2674	2054	29.2	50	46.	.				
8	2673	2052	28.6	100	101	.				
7	2672	2051	23.0	150	150	.				
6	2671	2049	22.8	200	199	.				
5	2670	2047	14.9	300	300	.				
4	2669	2045	14.0	400	400	.				
3	2668	2044	11.4	600	605	.				
2	2667	2043	11.1	800	803	.				
1	2666	2071	8.6	1000	999	.		997.3		
						.				
						.				

ENTERED BY: RMB
CHECKED BY:

Bottom Depth:
Cast No: 295 ↓ 296 ↑

LOC	UTC
Begin:	0702
Bottom:	
End:	

BEGIN POSITION (GPS)
LAT:
LONG:

Salinity max at 150 m

1st bottle temp logged in 0225!
returned to 1000m, then started a new file

Rosette 1: 23 bottle

CRUISE NO:

9403

UTC DATE:

01/11/94

VESSEL: John P. Tully

STATION NO:

W 115 (deep)

HYDRO No.:

293

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	2665	1173	8.9	1000	1003	•				
22	2664	1172	8.5	1250	1251	•				
21	2663	1171	7.8	1500	1499	✓				
20	2662	1169	7.8	1500	1499	✓				
19	2661	1168	7.1	1750	1750	•				
18	2660	1167	7.2	2000	2000	• no trig OK				
17	2659	1166	6.8	2250	2250	•				
* 16	2658	1165	7.0	2500	2499	•	T451	1.875		
15	2657	1163	6.9	2750	2749	•				
14	2656	1161	6.5	3000	3002	•				
13	2655	1160	6.1	3250	3249	•				
12	2654	1158	6.7	3500	3499	•				
11	2653	1157	5.9	3500	3499	• no trig/no current OK				
* 10	2652	1156	6.3	3750	3750	•	T798	1.465	T679	1.471
9	2651	1155	5.9	4000	3997	•				
8	2650	1154	5.9	4250	4251	•				
7	2649	1153	5.4	4500	4500	•				
6	2648	1152	5.6	4750	4750	•				
5	2647	2018	6.5	5000	5000	• 2ND TRIG HI CURRENT				
* 4	2646	2017	6.0	5000	5000	•	T647	1.241	T577	1.223
3	2645	2015	5.8	5250	5248	•				
2	2644	2013	5.7	5500	5500	•				
1	2643	2014	5.9	B-20	6000	•				

ENTERED BY: H.M. / RMB
CHECKED BY:

Bottom Depth: 6040

Cast No: 293 down
293 up

LOC UTC
Begin:
Bottom:
End:

BEGIN POSITION (GPS)

LAT:

LONG:

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

deep cast first, then shallow
casts

Pile 0293 contains up and down cast.

002 ALK SP C13

Rosette 1: 23 bottle

CRUISE NO:

94-03

UTC DATE:

Nov 1, 1994

VESSEL: John P. Tully

STATION NO:

W116

HYDRO No.:

297

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	2699	1092	28.5	10	9	.				
22	2698	1090	27.9	50	48	.				
21	2697	1087	17.8	100	100	.				
20	2696	1084	15.1	200	199	.				
19	2695	1079	14.6	300	301	.				
18	2694	1072	12.4	400	401	.				
17	2693	1069	12.0	600	600	.				
* 16	2692	1068	11.4	600	600	.	7451	5.683		
15	2691	1067	11.4	800	800	.				
14	2690	1065	10.7	800	800	.				
13	2689	1062	9.5	1000	1000	.				
12	2688	1060	9.0	1000	1000	.				
11	2687	1029	8.6	1250	1250	NO CURRENT OK 2ND TRY				
* 10	2686	1028	8.7	1500	1500	HIGH CURRENT OK 2ND TRY	7498	3.056	7679	3.060
9	2685	1027	8.1	1500	1500	.				
8	2684	1025	8.1	1750	1750	.				
7	2683	1020	7.6	2000	2000	.				
6	2682	1016	7.7	2000	2000	.				
5	2681	1014	7.4	2250	2250	OK 2ND TRY NO CURRENT				
* 4	2680	1010	7.4	2500	2500	.	7647	1.883	7577	1.865
3	2679	1008	7.1	2750	2750	OK 2ND TRY HIGH CURRENT				
2	2678	1004	7.5	3000	3000	.				
1	2677	1003	8.5	B-20	3313	.				

ENTERED BY:

SL

CHECKED BY:

Bottom Depth:

3255

Cast No:

297/298

LOC

UTC

Begin:

1243

Bottom:

1334

End:

BEGIN POSITION (GPS)

LAT:

02 00 193 S

LONG:

168 44 772 W

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

Rosette 2: 12 bottle

CRUISE NO: 9403

UTC DATE: 01/11/94

VESSEL: John P. Tully

STATION NO: W 117 shallow

HYDRO No.: 299/300

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
11	2710	1147	30.3	10	10	.				
10	2709	2010	30.1	50	49	.				
9	2708	2009	29.6	100	99	.				
8	2707	2008	25.4	150	150	.				
7	2706	2007	25.2	150	150	.				
6	2705	2006	25.0	200	199	.				
5	2704	2005	17.8	300	300	.				
4	2703	2004	14.8	400	400	.				
3	2702	2002	12.1	600	601	.				
2	2701	2001	10.9	800	800	.				
1	2700	2000	11.7	1000	1000	.	P 20995	995.9		

ENTERED BY: H. M.

CHECKED BY:

Bottom Depth: 5306 m

Cast No: 299 ↓ 300 ↑

	LOC	UTC
Begin:		1750
Bottom:		1808
End:		1836

BEGIN POSITION (GPS)

LAT: 02 30 . 167

LONG: 168 44 . 760

32.3°C in the shaded trailer

Rosette 1: 23 bottle

CRUISE NO: 9403
STATION NO: W117 deep

UTC DATE: 01/11/94
HYDRO No.: 301/302

VESSEL: John P. Tully

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	2733	1142	8.5	1000	1000	.				
22	2732	1141	8.8	1000	1000	.				
21	2731	1140	7.8	1000	999	.				
20	2730	1139	7.5	1250	1249	.				
19	2729	1138	6.7	1500	1499	.				
18	2728	1137	6.6	1750	1748	.				
17	2727	1136	6.4	2000	1998	.				
16	2726	1135	6.3	2000	1998	① high current - no trip ② high current ③ OK	T451	2.039		
15	2725	1134	5.5	2250	2245	.				
14	2724	1133	5.4	2500	2449	.				
13	2723	1132	5.4	2750	2748	.				
12	2722	1130	5.5	3000	2998	.				
11	2721	1129	5.2	3250	3249	.				
10	2720	1128	5.3	3500	3500	.	T798	1.498	T679	1.503
9	2719	1126	5.2	3500	3500	.				
8	2718	1125	4.7	3750	3748	① high current ② OK				
7	2717	1122	4.3	4000	4000	.				
6	2716	1121		4250	4249	Bottle 6 came up with bottom cap open. NO SAMPLE				
5	2715	1120	5.2	4500	4503	.				
4	2714	1119	5.0	4750	4747	① no trigger ② OK	T647	2.362	T577	2.340
3	2713	1114	4.2	5000	4999	.				
2	2712	1113	4.2	B-20	5420	.				
1	2711	1111	4.7	B-20	5420	.				

ENTERED BY: RMB
CHECKED BY:

Bottom Depth: 5320
5120
Cast No: 301 ↓ 302 ↑

	LOC	UTC
Begin:	0809	1909
Bottom:	0820	2019
End:		

BEGIN POSITION (GPS)
LAT: 02 30.383
LONG: 168 45.027

BOTTOM POSITION (GPS)
LAT:
LONG:

END POSITION (GPS)
LAT:
LONG:

Comments
short warm up of CTD on deck

4750
5000

Rosette 1: 23 bottle

CRUISE NO:

9403/12

UTC DATE:

94/11/02

VESSEL: John P. Tully

STATION NO:

W118

HYDRO No.:

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	2756	1107	29.2	10	10	•				
22	2755	1106	29.0	50	50	•				
21	2754	1105	28.4	100	100	•				
20	2753	1104	18.2	200	200	•				
19	2752	1103	16.2	300	300	•				
18	2751	1102	15.5	400	400	•				
17	2750	1101	13.8	600	599	•				
✓ 16	2749	1100	12.9	800	800	•	T451	5.657		
15	2748	1097	11.6	1000	999	•				
14	2747	1096	11.1	1250	1250	•				
13	2746	1057	10.1	1500	1495	•				
12	2745	1054	10.1	1750	1750	•				
11	2744	1056	9.8	2000	1999	•				
✓ 10	2743	1052	10.2	2250	2250	•	T798	1.971	T679	2.247
9	2742	1047	13.3	2500	2497	•				
8	2741	1046	12.5	2750	2750	•				
7	2740	1045	9.0	3000	2998	•				
6	2739	1040	9.6	3250	3248	•				
5	2738	1039	7.9	3500	3500	•				
✓ 4	2737	1036	8.3	4000	4000	•	T647	1.390	T577	1.370
3	2736	1033	8.1	4500	4500	•				
2	2735	1032	8.5	5000	5000	•				
1	2734	1031	—	B-20	5455	•				

ENTERED BY: J.L/H.M.

CHECKED BY:

Bottom Depth:

5350

Cast No:

303/304

LOC

UTC

Begin:

0058

Bottom:

02:02

End:

03:59

BEGIN POSITION (GPS)

LAT: 03 00 052 S

LONG: 168 45 112

BOTTOM POSITION (GPS)

LAT: 03 00 361 S

LONG: 168 45 519

END POSITION (GPS)

LAT: 03 00 89

LONG: 168 46.13

Comments

#1 bottle empty

heavy rain during this profile

Rosette 2: 12 bottle

CRUISE NO: 9403

UTC DATE: 02/11/94

VESSEL: John P. Tully

STATION NO: W119

HYDRO No.: 305-306

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
11	2767	1147	29.2	10	9	.				
10	2766	2010	29.1	50	48	.				
9	2765	2009	28.7	100	98	.				
8	2764	2008	26.1	150	148	.				
7	2763	2007	26.1	150	149	.				
6	2762	2006	26.0	200	200	.				
5	2761	2005	18.5	300	297	.				
4	2760	2004	13.9	400	401	.				
3	2759	2002	12.5	600	600	.				
2	2758	2001	11.1	800	799	.				
1	2757	2000	9.8	1000 *	999	.		997.6		

ENTERED BY: RMB

CHECKED BY:

Bottom Depth: 4995

Cast No: 305 ↓ 306 ↑

LOC

UTC

Begin:

Bottom:

End:

BEGIN POSITION (GPS)

LAT:

LONG:

heavy rain during cast

rosette pointer was at CTD posn at the end of the cast.

Rosette 1: 23 bottle

CRUISE NO:

9403

UTC DATE:

02/11/94

VESSEL: John P. Tully

STATION NO:

W 119 (deep)

HYDRO No.:

308

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	2790	1095	28.1	100	100	•				
22	2789	1092	17.7	200	200	•				
21	2788	1090	14.6	300	300	•				
20	2787	1087	13.8	400	396	•				
19	2786	1084	12.9	600	599	•				
18	2785	1079	11.1	800	798	•				
17	2784	1072	9.8	1000	999	•				
*16	2783	1069	8.9	1250 *	1249	•	7451	3.851		
15	2782	1068	8.4	1500	1501	① hi-current ② OK				
14	2781	1067	8.3	1750	1749	•				
13	2780	1065	7.3	2000	1996	•				
12	2779	1062	7.3	2250	2246	① no trip no current ② OK				
11	2778	1060	7.2	2500	2497	•				
*10	2777	1029	7.1	2750 *	2743	•	7798	1.718	T679	1.721
9	2776	1028	7.1	3000	3000	•				
8	2775	1027	6.8	3250	3248	•				
7	2774	1025	6.7	3500	3500	•				
6	2773	1020	7.3	3750	3750	•				
5	2772	1016	6.8	4000	4001	•				
*4	2771	1010	7.7	4250 *	4250	•	T647	1.328	T577	1.306
3	2770	1008	7.2	4500	4498	•				
2	2769	1004	7.6	4750	4750	① hi-current ② OK				
1	2768	1003	8.1	B-20	5077	① hi-current ② OK				

ENTERED BY: RMB
CHECKED BY:

Bottom Depth: 4990
Cast No: 307↓
308 up cast

	LOC	UTC
Begin:		0821
Bottom:		0920
End:		1110

BEGIN POSITION (GPS)
LAT: 03 29.78 S.
LONG: 168 44 56

BOTTOM POSITION (GPS)
LAT: 03 29.82 S.
LONG: 168 44 09

END POSITION (GPS)
LAT: 03 30.18 S.
LONG: 168 44 11

Comments
20 m from bottom

Rosette 1: 23 bottle

CRUISE NO:

940312

UTC DATE:

94/11/02

VESSEL: John P. Tully

STATION NO:

W120

HYDRO No.:

309/310

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	2813	2070	29.2	10	11					
22	2812	2069	29.6	50	50					
21	2811	2068	28.3	100	100					
20	2810	2067	20.1	200	200					
19	2809	2066	15.6	300	300	2ND TRIG HI CURRENT				
18	2808	2065	14.7	400	400					
17	2807	2064	12.3	600	600					
16	2806	2063	11.2	800	800	2ND TRIG HI CURRENT	T451	5.760		
15	2805	2062	10.0	1000	1000					
14	2804	2061	9.2	1250	1249					
13	2803	2060	8.6	1500	1498					
12	2802	2059	8.3	1750	1749					
11	2801	2057	8.1	2000	2000					
10	2800	2056	8.2	2250	2250		T798	1.976	T679	1.979
9	2799	2055	8.0	2500	2498					
8	2798	2054	8.5	2750	2750					
7	2797	2052	8.3	3000	3000	2ND TRIG HI CURRENT				
6	2796	2051	8.2	3250	3250					
5	2795	2049	7.5	3500	3500	2ND TRIG HI CURRENT				
4	2794	2047	8.9	3750	3749		T647	1.427	T577	1.406
3	2793	2045	7.7	4000	4000					
2	2792	2044	7.6	4500	4499					
1	2791	2043	7.9	5200	5140					

ENTERED BY: J.L. / H.M.

CHECKED BY:

Bottom Depth: 4800 ~ 5150

Cast No: 309↓ 310↑

LOC UTC

Begin: 1423

Bottom: 1535

End: 1727

BEGIN POSITION (GPS)

LAT: 03 59 96

LONG: 168 45 05

BOTTOM POSITION (GPS)

LAT: 03 59 65

LONG: 168 45 50

END POSITION (GPS)

LAT: 03 59 16

LONG: 168 46 18

Comments

Rosette 2: 12 bottle

CRUISE NO: 94-03

UTC DATE: 02/11/94

VESSEL: John P. Tully

STATION NO: W121

HYDRO No.: 312

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
11	2824	1129	30.4	10	9	.				
10	2823	1128	30.3	25	25	.				
9	2822	1126	30.2	50	50	.				
8	2821	1125	29.4	75	73	.				
7	2820	1122	29.0	100	95	.				
6	2819	1120	28.3	125	123	.				
5	2818	1121	25.5	150	148	.				
4	2817	1119	21.9	175	173	.				
3	2816	1114	17.5	200 (210)	208	.				
2	2815	1113	16.5	250	248	.				
1	2814	1111	14.8	300	302	.	P20995	299.1		

ENTERED BY: RMB
CHECKED BY:

Bottom Depth:

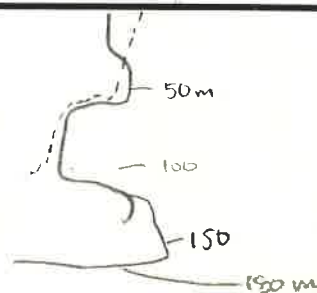
Cast No: 312 ↑

311 ↓

LOC	UTC
Begin:	2055
Bottom:	
End:	

BEGIN POSITION (GPS)
LAT: 04 29.91
LONG: 168 44.96

- extended cast, pointer was at point #10



Rosette 1: 23 bottle

CRUISE NO:

94-03

UTC DATE:

02/11/94

VESSEL: John P. Tully

STATION NO:

W121 deep

HYDRO No.:

314

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	2847	1173	28.5	100	100	•				
22	2846	1172	20.8	200	198	•				
21	2845	1171	16.1	300	299	•				
20	2844	1169	15.5	400	400	•				
19	2843	1168	13.3	600	598	•				
18	2842	1167	12.9	800	798	•				
17	2841	1166	11.8	800	798	•				
x 16	2840	1165	11.4	1000	1004	•	T451	4.865		
15	2839	1163	10.2	1250	1250	•				
14	2838	1161	10.0	1500	1500	•				
13	2837	1160	8.5	1750	1748	•				
12	2836	1158	9.2	1750	1748	OK 2ND TRY HI CURRENT				
11	2835	1157	8.2	2000	1998	•				
x 10	2834	1156	8.6	2250	2250	•	T798	2.040	T679	2.229
9	2833	1155	8.1	2500	2500	•				
8	2832	1154	8.4	2750	2749	•				
7	2831	1153	7.8	3000	2999	•				
6	2830	1152	7.9	3250	3250	•				
5	2829	2018	7.4	3500	3500	•				
x 4	2828	2017	8.1	4000	3999	2ND TRY OK HI CURRENT	T647	1.395	T577	1.375
3	2827	2015	6.9	4500	4500	•				
2	2826	2014	6.6	5000	OK 2ND TRY NO CURRENT	•				
1	2825	2013	6.2	5200	5356	•				

ENTERED BY: RMB
CHECKED BY:

Bottom Depth: 5246

Cast No: 314↑
313↓LOC UTC
Begin: 1104 2204
Bottom:
End:BEGIN POSITION (GPS)
LAT:
LONG:BOTTOM POSITION (GPS)
LAT:
LONG:END POSITION (GPS)
LAT:
LONG:Comments
overlap with shallow cast.

Rosette 1: 23 bottle

CRUISE NO:

94-03

UTC DATE:

03/11/94

VESSEL: John P. Tully

STATION NO:

W122

HYDRO No.:

315 / 316

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	2870	2070	29.0	10	9.0	.				
22	2869	2069	28.7	50	49	.				
21	2868	2068	19.4	100	100	.				
20	2867	2067	16.3	200	203	.				
19	2866	2066	14.7	300	301	.				
18	2865	2065	14.3	400	403	.				
17	2864	2064	12.3	600	601	.				
16	2863	2063	12.2	800 *	799	.	T451	4.860	Nurkin leaked.	
15	2862	2062	10.2/14.7	1000	1001	.				
14	2861	2061	10.1	1250	1295	.				
13	2860	2060	9.3	1500	1498	.				
12	2859	2059	9.3	1750	1750	.				
11	2858	2057	8.8	2000	2000	.				
10	2857	2056	8.7	2250 *	2248	.	T198	1.870	T619	1.874
9	2856	2055	8.3	2500	2500	.				
8	2855	2054	8.8	2750	2750	.				
7	2854	2052	8.0	3000	3000	.				
6	2853	2051	7.7	3250	3250	.				
5	2852	2049	8.0	3500	3499	.				
4	2851	2047	8.2	4000 *	3999	.	T647	1.316	T577	1.296
3	2850	2045	7.9	4500	4500	.	3B TARE 1ST W.C. / 2ND COND			
2	2849	2044	8.3	5000	4999	.				
1	2848	2043	8.3	B-20	5655	.				

ENTERED BY: H.M. / RMB

CHECKED BY:

Bottom Depth: 5556 READ

~ 5675 ACTUAL

Cast No: 315 ↓ 316 ↑

LOC UTC

Begin: 0233

Bottom:

End:

BEGIN POSITION (GPS)

LAT: 05 00 011

LONG: 168 45 066

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

Rosette 2: 12 bottle

CRUISE NO: 94-03

UTC DATE:

VESSEL: John P. Tully

STATION NO: W123 (shallow)

HYDRO No.: 318

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
11	2881	1060	29.4	10	10	•				
10	2880	1029	29.3	50	50	•				
9	2879	1028	29.0	100	100	•				
8	2878	1027	26.2	150	150	•				
7	2877	1025	21.0	200	202	•				
6	2876	1020	16.1	300	301	•				
5	2875	1016	14.7	400]	400	•		•		
4	2874	1010	15.2	400	400	•		•		
3	2873	1008	13.7	600	600	•				
2	2872	1004	13.0	800	800	•				
1	2871	1003	12.0	1000 *	999	•	P20995	997.3		

ENTERED BY: RMB

CHECKED BY:

Bottom Depth: 5322

Cast No: 318↑
317↓

LOC

UTC

Begin: 10:41

Bottom: 1055

End: 11:23

BEGIN POSITION (GPS)

LAT: 05 30 .031

LONG: 168 44 974

EN

05 30 228

168 45 308

(check time)

Rosette 1: 23 bottle

CRUISE NO:

9403/2

UTC DATE:

94/11/03

VESSEL: John P. Tully

STATION NO:

W123

HYDRO No.:

320

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	2904	2036	11.2	600	600	.				
22	2903	2035	10.0	800	800	.				
21	2902	2034	9.1	1000	1004	.				
20	2901	2033	8.4	1000	1003	2nd try OK NO CURRENT				
19	2800	2032	8.0	1250	1254	.				
18	2899	2028	7.5	1500	1501	.				
17	2898	2027	7.2	1500	1500	.				
16	2897	2025	7.1	1750	1750	.	T451	2.619		
15	2896	2022	6.8	2000	2001	.				
14	2895	2021	6.9	2000	2000	.				
13	2894	2020	6.0	2250	2250	.				
12	2893	2019	6.2	2500	2499	.				
11	2892	2012	6.0	2750	2749	.				
10	2891	2010	6.0	3000	3000	.	T798	1.680	T679	1.757
9	2890	2009	6.4	3250	3250	.				
8	2889	2008	6.2	3500	3500	.				
7	2888	2007	5.6	3750	4750	.				
6	2887	2006	5.6	4000	4000	.				
5	2886	2005	5.5	4250	4250	.				
4	2885	2004	5.4	4500	4503	.	T647	1.322	T577	1.302
3	2884	2002	5.5	4750	4751	.				
2	2883	2001	5.6	5000	5000	.				
1	2882	2000	5.5	B-20	5398	.				

ENTERED BY:

CHECKED BY:

Bottom Depth:

Cast No: 319
320

LOC UTC

Begin: 1149

Bottom: 1308

End: 1453

BEGIN POSITION (GPS)

LAT: 05 30.88 S

LONG: 168 45.09 W

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

Rosette 1: 23 bottle

CRUISE NO:

9403

UTC DATE:

03/11/94

VESSEL: John P. Tully

STATION NO:

W 124

HYDRO No.:

321 / 322

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	2927	1107	29.3	10	10	.				
22	2926	1106	29.6	50	51	.				
21	2925	1105	28.7	100	101	.				
20	2924	1104	21.4	200	201	.				
19	2923	1103	16.0	300	300	.				
18	2922	1102	14.8	400	400	.				
17	2921	1101	12.9	600	597	.				
*16	2920	1100	12.1	800	800	.	*T451	5.840		
15	2919	1097	10.8	1000	997	.				
14	2918	1096	9.9	1250	1248	.				
13	2917	1057	9.1	1500	1497	.				
12	2916	1056	9.0	1750	1746	.				
11	2915	1054	8.4	2000	1998	.				
*10	2914	1052	8.3	2250	2248	.	*T480	2026	T 679	2.534
9	2913	1047	7.9	2500	2499	.				
8	2912	1046	8.0	2750	2750	.				
7	2911	1045	7.4	3000	3001	.				
6	2910	1040	7.4	3500	3502	.				
5	2909	1039	7.4	4000	4004	.				
*4	2908	1036	7.7	4500	4499.1	.	*T647	1.325	T577	1.305
3	2907	1033	6.9	5000	5006	.				
2	2906	1032	7.8	5500	5499	.				
1	2905	1031	6.5	6000	5652	.				

ENTERED BY: HM

CHECKED BY:

Bottom Depth: 5650 READ

ACTUAL

Cast No: 321 ↓

322 ↑

LOC UTC

Begin:

Bottom:

End:

BEGIN POSITION (GPS)

LAT:

LONG:

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

uplifting @ 10:05 LOC

Rosette 2: 12 bottle

CRUISE NO: 9403/2
STATION NO: 0125 SHALLOW

UTC DATE: 03 NOV 1994
HYDRO No.: 324

VESSEL: John P. Tully

[illegible]

ENTERED BY: *JLone*
CHECKED BY:

Bottom Depth: 5520

Cast No:

	LOC	UTC
Begin:	03/11/94	2347
Bottom:	04/11/94	00:09
End:	04/11/94	00:36

BEGIN POSITION (GPS)	
LAT:	06 30 068 S
LONG:	168 45 130 W

Rosette 1: 23 bottle

CRUISE NO:

9403/2

UTC DATE:

04/11/94

VESSEL: John P. Tully

STATION NO:

W125

HYDRO No.:

325/326/327*

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	2961	1173	9.6	600	600	• DUP	SHALLOW			
22	2960	1172	8.6	800	800	• DUP	SHALLOW			
21	2959	1171	7.4	1000	998	• 2ND TRIP NO CURRENT	SHALLOW			
20	2958	1169	7.8	1000	999	• DUP	SHALLOW			
19	2957	1168	6.4	1250	1249	•				
18	2956	1167	6.4	1500	1500	•				
17	2955	1166	6.1	1750	1749	•				
*16	2954	1165	5.8	2000	2000	•	* T451	2.251		
15	2953	1163	5.4	2250	2249	•				
14	2952	1161	5.0	2500	2500	• 2ND TRIP HI CURRENT				
13	2951	1160	4.7	2750	2750	•				
12	2950	1158	4.7	3000	3000	•				
11	2949	1157	4.7	3000	3000	•				
*10	2948	1156	4.8	3250	3248	•	* T798	1.594	T679	1.595
9	2947	1155	4.4	3500	3500	•				
8	2946	1154	4.4	3500	3500	•				
7	2945	1153	5.0	3750	3750	•				
6	2944	1152	4.0	4000	3999	•				
5	2943	2018	4.0	4000	3999	• 2ND TRIP HI CURRENT NO CURRENT				
*4	2942	2017	4.6	4250	4251	•	* T647	1.352	T577	1.331
*3	2941	2015	4.7	4500	4502	•				
2	2940	2014	5.3	5000	5000	•				
1	2939	2013	3.9	B-20	5631	•				

ENTERED BY: JL/H.M.

CHECKED BY:

Bottom Depth:

Cast No: 325↓

326/327↑* (Log)

LOC UTC

Begin: 0050

Bottom: 0207

End: 0405

BEGIN POSITION (GPS)

LAT: 06 30. 104 S

LONG: 168 45. 045

BOTTOM POSITION (GPS)

LAT: 06 30. 327

LONG: 168 45. 144

END POSITION (GPS)

LAT: 06 30. 509

LONG: 168 45. 24

Comments

Rosette 1: 23 bottle

CRUISE NO:

9403

UTC DATE:

04/11/94

VESSEL: John P. Tully

STATION NO:

W 126

HYDRO No.:

328/329

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	2984	2038	C	10	9.	✓				
22	2983	2036		50	49.	✓				
21	2982	2034		100	97.	✓				
20	2981	2033		200	202.	X✓				
19	2980	2032		300	302.	✓				
18	2979	2028		400	404.	✓				
17	2978	2027		600	602.	✓				
X 16	2977	2025		800 *	802	✓	T451	5.222		
15	2976	2022		1000	1001.	✓				
14	2975	2021		1250	1254.	X✓				
13	2974	2020		1500	1502.	✓				
12	2973	2019		1750	1750	✓				
11	2972	2012		2000	1996	•				
X 10	2971	2010		2250 X	2244	0 no trip 2 OK	T798	2.023	T679	2.269
9	2970	2009		2500	2497	•				
8	2969	2008		2750	2749	•				
7	2968	2007		3000	2999	•				
6	2967	2006	8.6	3250	3248	•				
5	2966	2005	8.6	3500	3500	•				
X 4	2965	2004	7.4	4000 X	3995	•	T647	1.377	T577	1.354
3	2964	2002	7.2	4500	4499	•				
2	2963	2001	7.1	5000	4999	•				
1	2962	2000	7.4	5-20	5782	•				

ENTERED BY: RMB

CHECKED BY:

Bottom Depth: 5500m

Cast No: 328 ↓

329 ↑

LOC

UTC

Begin: 2000

0700

Bottom: 2115

End:

BEGIN POSITION (GPS)

LAT:

LONG:

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

23 closed

Rosette 2: 12 bottle

CRUISE NO: 9403/2

UTC DATE: 04 NOV 1994

VESSEL: John P. Tully

STATION NO: W127

HYDRO No.: 331

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
11	2995	1129	28.2	10	10	•				
10	2994	1128	28.1	50	50	•				
9	2993	1126	28.1	50	50	•				
8	2992	1125	27.1	100	100	•				
7	2991	1122	22.5	200	201	•				
6	2990	1121	16.9	300	302	•				
5	2989	1120	14.7	400	401	•				
4	2988	1119	13.7	500	500	•				
3	2987	1114	12.7	600	602	•				
2	2986	1113	11.9	800	795	•				
1	2985	1111	11.9	1000	1005	•	P20995	1002.8		

ENTERED BY: J Love
CHECKED BY:

Bottom Depth: 5257
Cast No: 331/UPCAST

LOC	UTC
Begin:	12:54
Bottom:	
End:	

BEGIN POSITION (GPS)
LAT: 07 30 135 S
LONG: 168 44 838

Gap in data (795^{720M}) ALT B IN VPRO MODE

Rosette 1: 23 bottle

CRUISE NO:

9403/2

UTC DATE:

04 NOV 1994

VESSEL: John P. Tully

STATION NO:

W127 Deep

HYDRO No.:

333

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	3018	1107	12.3	400	410	•	DUP ON	SHALLOW CAST		
22	3017	1106	12.0	500	503	•	DUP ON	SHALLOW CAST		
21	3016	1105	10.7	600	600	•	DUP ON	SHALLOW CAST		
20	3015	1104	10.7	800	800	•	DUP ON	SHALLOW CAST		
19	3014	1103	8.8	1000	997	•	DUP ON	SHALLOW CAST		
18	3013	1102	8.8	1250	1247	•				
17	3012	1101	8.6	1500	1498	•				
*16	3011	1100	7.9	1500	1498	•	* T 451	2.454		
15	3010	1097	7.2	1750	1749	•				
14	3009	1096	7.7	2000	1999	•				
13	3008	1057	7.4	2250	2250	•				
12	3007	1056	7.0	2500	2500	•				
11	3006	1054	7.0	2750	2749	•				
*10	3005	1052	6.8	3000	3000	•	* T 679	1.758	T 798	1.646
9	3004	1047	6.6	3250	3250	•				
8	3003	1046	6.4	3500	3499	•				
7	3002	1045	6.4	3750	3750	•				
6	3001	1046	6.4	4000	4000	•				
5	3000	1039	6.4	4250	4250	•				
*4	2999	1036	6.9	4500	4500	•	* T 577	1.305	T 647	1.328
3	2998	1033	6.9	4750	4750	•				
2	2997	1032	6.8	5000	5000	•				
1	2996	1031	6.3	B-20	5370	•				
						2ND TRY NO CURRENT				

ENTERED BY:

J. L. Owe / H.M.

CHECKED BY:

Bottom Depth:

5250

5375 ACTUAL

Cast No:

333

LOC

UTC

Begin:

14:08

Bottom:

15:22

End:

17:17

BEGIN POSITION (GPS)

LAT: 07 29 990 S

LONG: 168 44 938 W

BOTTOM POSITION (GPS)

LAT: 07 30 469

LONG: 168 44 42

END POSITION (GPS)

LAT: 07 31 894

LONG: 168 43 15

Comments

Thin cast overlaps the
shallow cast by 5 bottles

Rosette 1: 23 bottle

CRUISE NO: 94-03

UTC DATE: 04/11/94

VESSEL: John P. Tully

STATION NO: W 128

HYDRO No.: 335

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	3041	1095	29.1	10	10	•				
22	3040	1092	29.2	50	50	•				
21	3039	1090	28.1	100	100	•				
20	3038	1087	23.0	200	200	•				
19	3037	1084	14.2	400	400	•				
18	3036	1079	12.3	600	602	•				
17	3035	1072	11.1	800	804	•				
* 16	3034	1069	9.7	1000 ✓*	1003	•	T451	4.922		
15	3033	1068	8.9	1250	1252	•				
14	3032	1067	9.0	1500	1502	•				
13	3031	1065	8.2	1750	1750	•				
12	3030	1062	7.8	2000	1998	•				
11	3029	1060	7.4	2250	2250	•				
* 10	3028	1029	7.4	2500 ✓*	2498	•	T798	1.843	T679	1.918
9	3027	1028	7.0	2750	2746	•				
8	3026	1027	7.3	3000	2997	•				
7	3025	1025	6.6	3250	3245	•				
6	3024	1020	6.8	3500	3457	•				
5	3023	1016	6.3	3750	3750	•				
* 4	3022	1010	7.3	4000 ✓*	3999	•	T647	1.399	T577	1.378
3	3021	1008	7.0	4500	4497	•				
2	3020	1004	7.7	B-20	4999	•				
1	3019	1003	1.3	B-20	4999	•				

ENTERED BY: RMB

CHECKED BY:

Bottom Depth: 4890

Cast No: 335 ↑
334 ↓

LOC UTC

Begin: 20.20

Bottom: 21.30

End:

BEGIN POSITION (GPS)

LAT: 08 00.207

LONG: 168 44.997

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

30 meters off bottom

Rosette 1: 23 bottle

CRUISE NO:

9403/2

UTC DATE:

94-11-05

VESSEL: John P. Tully

STATION NO:

W129

HYDRO No.:

336/337

NISK No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	3064	2070	29.0	10	9	.				
22	3063	2069	28.0	50	49	.				
21	3062	2068	22.1	100	100	.				
20	3061	2067	16.6	200	200	.				
19	3060	2065	12.5	300	302	.				
18	3059	2066	10.9	400	401	.				
17	3058	2064	9.9	600	605	.				
16	3057	2063	9.3	800	803	2ND TRIG NO CONFIRM	T451	5.373		
15	3056	2062	8.5	1000	1001	.				
14	3055	2061	7.6	1250	1250	.				
13	3054	2060	7.1	1500	1500	.				
12	3053	2059	6.7	1750	1750	.				
11	3052	2057	6.6	2000	2000	.				
10	3051	2056	6.3	2250	2250	.	T798	1.991	T679	1.994
9	3050	2055	6.6	2500	2500	.				
8	3049	2054	5.8	2750	2750	2ND TRIG NO CURRENT				
7	3048	2052	5.7	3000	2999	.				
6	3047	2051	5.8	3250	3250	.				
5	3046	2049	5.2	3500	3500	.				
4	3045	2047	5.3	3750	3750	.	T647	1.430	T577	1.408
3	3044	2045	5.6	4000	4000	.				
2	3043	2044	5.1	4500	4499	.				
1	3042	2043	5.2	B-20	5215	.				

ENTERED BY: J.L. / 4M

CHECKED BY:

Bottom Depth: 5090 READ

5240 ACTUAL

Cast No: 336↓

337↑

LOC UTC

Begin: 0150

Bottom: 0259

End: 0445

BEGIN POSITION (GPS)

LAT: 08 30. 070

LONG: 168 44. 980

BOTTOM POSITION (GPS)

LAT: 08 30 324

LONG: 168 44 32

END POSITION (GPS)

LAT: 08 31. 764

LONG: 168 45. 28

Comments

Rosette 1: 23 bottle

CRUISE NO:

9403/2

UTC DATE:

05/11/94

VESSEL: John P. Tully

STATION NO:

W 130

HYDRO No.:

338/339

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	3087	1107	28.4	10	95					
22	3086	1106	28.7	50	98					
21	3085	1105	28.0	100	97					
20	3084	1104	26.4	150	146	no trig OK				
19	3083	1103	23.2	200	197					
18	3082	1102	14.4	400	402					
17	3081	1101	12.1	600	597					
* 16	3080	1100	11.5	800 ✓	797					
15	3079	1097	10.3	1000	1004					
14	3078	1096	9.5	1250	1252					
13	3077	1057	8.8	1500	1499					
12	3076	1056	8.9	1750	1749					
11	3075	1054	8.3	2000	1997					
* 10	3074	1052	8.3	2250 ✓	2248		T798	1.995	T679	1.998
9	3073	1047	8.3	2500	2501					
8	3072	1046	8.2	2750	2749					
7	3071	1045	8.0	3000	2997					
6	3070	1040	7.8	3250	3250					
5	3069	1039	7.8	3500	3500					
* 4	3068	1036	8.3	3750 ✓	3745		T647	1.447	T577	1.425
3	3067	1033	8.5	4000	3999					
2	3066	1032	8.2	4500	4501					
1	3065	1031	7.7	B-20	4769					

ENTERED BY: RMB

CHECKED BY:

Bottom Depth: 4620

Cast No: 338 ↓

339 ↑

LOC UTC

Begin: 0746

Bottom:

End:

BEGIN POSITION (GPS)

LAT: 09 00.040 S

LONG: 168 59.944 W

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

Rosette 1: 23 bottle

CRUISE NO:

9403/2

UTC DATE:

94-11-05

VESSEL: John P. Tully

STATION NO:

W131

HYDRO No.:

341

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	3110	1142	28.9	10	10	•				
22	3109	1141	28.8	50	49	•				
21	3108	1140	28.2	100	100	•				
20	3107	1139	22.4	200	200	•				
19	3106	1138	16.6	300	300	•				
18	3105	1137	13.8	400	400	•				
17	3104	1136	11.2	600	600	•				
* 16	3103	1135	—	800	800	•	T451	5.484	NO WATER SAMPLE	
15	3102	1134	9.0	1000	1000	•				
14	3101	1133	8.2	1250	1249	•				
13	3100	1132	7.9	1500	1500	•				
12	3099	1130	7.9	1750	1750	•				
11	3098	1129	7.4	2000	2000	•				
* 10	3097	1128	7.0	2250	2250	•	T798	1.988	T679	1.992
9	3096	1126	7.0	2500	2500	•				
8	3095	1125	6.9	2750	2750	•				
7	3094	1122	6.7	3000	3000	•				
6	3093	1121	6.5	3250	3250	•				
5	3092	1120	6.5	3500	3500	•				
* 4	3091	1119	6.6	4000	4000	•	T647	1.368	T577	1.345
3	3090	1114	6.7	4500	4500	•				
2	3089	1113	6.6	5000	4998	•				
1	3088	1111	6.6	B-20	5412	•				

ENTERED BY: J.L./H.M.

CHECKED BY:

Bottom Depth: 5262

Cast No: 340 Down 341 Up

LOC UTC

Begin: 13:29

Bottom: 14:43

End: 16:34

BEGIN POSITION (GPS)

LAT: 09 30 12.7 S

LONG: 168 59 972 W

BOTTOM POSITION (GPS)

LAT: 09 30 471 S

LONG: 169 00 070

END POSITION (GPS)

LAT: 09 31 213

LONG: 169 00 125

Comments

16-bottom valve open
nico sleeve caught
in groove.

Rosette 1: 23 bottle

CRUISE NO:

940312

UTC DATE:

05 NOV 1994

VESSEL: John P. Tully

STATION NO:

W132

HYDRO No.:

343

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	3133	2001	28.7	10	10	•				
22	3132	2000	28.5	50	50	•				
21	3131	1173	28.0	100	100	•				
20	3130	1172	23.3	190	190	•				
19	3129	1171	18.3	300	300	•				
18	3128	1169	15.2	400	400	•				
17	3127	1168	12.9	600	599	•				
*16	3126	1167	12.8	800	800	•	T451	5.340		
15	3125	1166	10.8	1000	996	•				
14	3124	1165	10.3	1250	1249	•				
13	3123	1164	9.5	1500	1498	•				
12	3122	1163	9.3	1750	1748	① no trip ② OK				
11	3121	1161	9.0	2000	2000	① no trip ② OK				
*10	3120	1160	9.0	2250 ✓	2249	•	T798	1.984	T679	1.989
9	3119	1158	9.5	2500	2499	•				
8	3118	1157	8.9	2750	2750	•				
7	3117	1156	8.3	3000	2998	•				
6	3116	1155	8.3	3500	3500	•				
5	3115	1154	8.0	4000	3999	① hi current ② OK				
*4	3114	1153	9.1	4500 ✓	4500	•	T647	1.111	T577	1.090
3	3113	1152	8.6	4750	4748	•				
2	3112	1151	8.8	5000	4998	•				
1	3111	1150	8.4	B-20	5370	•				

ENTERED BY: RMB

CHECKED BY:

Bottom Depth: 5226

Cast No: 343 ↑

342 ↓

LOC UTC

Begin:

Bottom: 2149

End:

BEGIN POSITION (GPS)

LAT:

LONG:

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

15m off the bottom

Rosette 1: 23 bottle

CRUISE NO:

9403/2

UTC DATE:

94-11-

VESSEL: John P. Tully

STATION NO:

W133

HYDRO No.:

354/355

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	3156	2001	29.3	10	10	•				
22	3155	2000	28.8	50	50	•				
21	3154	1173	26.4	100	100	•				
20	3153	1172	23.9	150	148	•				
19	3152	1171	19.6	200	200	•				
18	3151	1169	16.0	300	300	•				
17	3150	1168	14.1	400	400	•				
* 16	3149	1167	13.0	600	605	•	* T451	5.234		
15	3148	1166	12.8	800	800	• 2ND TRIG HI CURRENT				
14	3147	1165	11.9	1000	1000	•				
13	3146	1164	11.6	1000	1000	• 2ND TRIG NO CURRENT				
12	3145	1163	12.7	1250	1250	•				
11	3144	1161	10.7	1500	1500	•				
* 10	3143	1160	10.8	1750	1750	• 2ND TRIG NO CURRENT	* T798	2.399	T679	2.894
9	3142	1159	10.0	2000	2000	• 2ND TRIG HI CURRENT				
8	3141	1157	10.0	2000	2000	•				
7	3140	1156	9.3	2250	2248	•				
6	3139	1155	9.6	2500	2500	• 2ND TRIG NO CURRENT				
5	3138	1154	10.7	2750	2750	•				
* 4	3137	1153	9.6	3000	2999	•	* T647	1.644	T577	1.622
3	3136	1152	9.6	3250	3250	•				
2	3135	1151	11.4	3500	3504	•				
1	3134	1150	9.0	3500	3502	•				

ENTERED BY: H.M.
CHECKED BY:

Bottom Depth:
Cast No: 354↓
355↑

LOC	UTC
Begin:	1556
Bottom:	1658
End:	1831

BEGIN POSITION (GPS)
LAT: 10 29 93
LONG: 170 00 31

BOTTOM POSITION (GPS)
LAT: 10 29 95
LONG: 170 01 35

END POSITION (GPS)
LAT: 10 30 18
LONG: 170 02 65

Comments

SAL OXY
MWS CFC
TCO2 ALK

Rosette 1: 23 bottle

CRUISE NO: 94-03

UTC DATE: 07/11/94

VESSEL: John P. Tully

STATION NO: W134

HYDRO No.: 0357

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	3179	1142		10	10					
22	3178	1141		10	10					
21	3177	1140		50	50					
20	3176	1139		100	99					
19	3175	1138		150	149					
18	3174	1137		200	200	No Confirm		may not have tripped!		
17	3173	1136		300	300					
* 16	3172	1135		400 *	400		T451	9.380		
15	3171	1134		600	601					
14	3170	1133		800	800					
13	3169	1132		1000	1000					
12	3168	1130		1250	1261					
11	3167	1129		1500	1500					
* 10	3166	1128		1500 *	1500		T798	2.920	T679	2.920
9	3165	1126		1750	1756					
8	3164	1125		2000	2000					
7	3163	1122		2000	2000					
6	3162	1121		2250	2239					
5	3161	1120		2500	2496					
* 4	3160	1119		2750 *	2743		T647	1.749	T577	1.727
3	3159	1114		3000	2997	T. not comp				
2	3158	1113		3000	2997			note: I forgot to stop at 3250	3250	Am Brown
1	3157	1111		3500	3507			oops!		

USE PREVIOUS WAST TEMPS AS
THERMO - PROBE NOT OPERATING PROPERLY.
WILL BE CHECKED BY T. LOVE

ENTERED BY: RMB

CHECKED BY: /

Bottom Depth:

Cast No: 0357 ↑

0356 ↓

LOC UTC

Begin:

Bottom:

End:

BEGIN POSITION (GPS)

LAT:

LONG:

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

forgot to stop @ 3250 m.

Rosette 1: 23 bottle

CRUISE NO:

9403/2

UTC DATE:

94/11/08

VESSEL: John P. Tully

STATION NO:

W135

HYDRO No.:

358/359

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	3202	1107	29.4	10	10	•				
22	3201	1106	26.8	50	50	•				
21	3200	1105	23.5	100	100	•				
20	3199	1104	18.1	150	150	•				
19	3198	1103	13.7	200	200	•				
18	3197	1102	11.2	300	300	•				
17	3196	1101	9.9	400	400	•				
16	3195	1100	9.1	600	600	•	* 4.267			
15	3194	1097	9.5	800	800	•				
14	3193	1096	8.3	1000	1000	•				
13	3192	1057	7.9	1000	1000	•				
12	3191	1056	7.8	1250	1250	•				
11	3190	1054	7.5	1500	1500	•				
10	3189	1052	7.6	1750	1748	•	* 2.204		2.205	
9	3188	1047	7.5	2000	2000	•	5TH TRIG 2ND + 2 HD			
8	3187	1046	6.9	2000	2001	•				
7	3186	1045	6.6	2250	2220	•	2ND TRIG NO CURRENT			
6	3185	1040	7.2	2500	2499	•				
5	3184	1039	6.7	2750	2749	•				
4	3183	1036	6.4	3000	3001	•	* 1.615	1.	1.593	
3	3182	1033	6.8	3250	3248	•				
2	3181	1032	5.9	3500	3500	•	2ND TRIG NO CURRENT			
1	3180	1031	6.2	3500	3500	•				

ENTERED BY: H.M.

CHECKED BY:

Bottom Depth:

Cast No: 358 ↓

359 ↑

LOC UTC

Begin: 0327

Bottom: 0430

End: 0602

BEGIN POSITION (GPS)

LAT: 11 30 234

LONG: 170 00 147

BOTTOM POSITION (GPS)

LAT: 11 30 50

LONG: 169 59 81

END POSITION (GPS)

LAT: 11 30 56

LONG: 169 59 35

Comments

NOTE # of TRIGS @

2000 m DUP

Rosette 1: 23 bottle

CRUISE NO:

9403

UTC DATE:

8/11/94

VESSEL: John P. Tully

STATION NO:

W 136

HYDRO No.:

360/361

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	3225	1142		10	12					
22	3224	1141	28.7	50	57					
21	3223	1140	28.6	100	90					
20	3222	1139	28.3	150	153					
19	3221	1138	25.5	200	199					
18	3220	1137	23.2	300	303					
17	3219	1136	18.5	400	400					
16	3218	1135	15.7	600 *	603		7451	9.784		
15	3217	1134	12.9	800	798					
14	3216	1133	12.5	1000 }	999	Current off not confirmed	Did not try second bottle	as first 1000 was OK.		
13	3215	1132	10.7	1000 }	998	No SA				
12	3214	1130	10.1	1250	1245					
11	3213	1129	9.5	1500	1501					
10	3212	1128	9.1	1750 ✓*	1753		T798	2.493	T679	2.674
9	3211	1126	8.9	2000 }	1995					
8	3210	1125	8.8	2000 }	1999					
7	3209	1122	8.7	2250	2254					
6	3208	1121	8.5	2500	2499	① nothing ② OK				
5	3207	1120	8.3	2750	2749					
4	3206	1119	9.8	3000 ✓*	2999		T647	1.683	T577	1.661
3	3205	1114	10.4	3250	3244	① nothing ② OK				
2	3204	1113	9.8	3500 }	3506					
1	3203	1111		3500 }	3506					

ENTERED BY: RMB

CHECKED BY:

Bottom Depth: 4980

Cast No: 360

361

LOC UTC

Begin:

Bottom:

End:

BEGIN POSITION (GPS)

LAT:

LONG:

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments

Bottle 23 not closed

Rosette 1: 23 bottle

CRUISE NO:

UTC DATE:

VESSEL: John P. Tully

STATION NO:

HYDRO No.:

NISK. No.	SAMPLE No.	OXY. Flask	OXY. TEMP	Sample Depth db	ROSETTE OPERATION		THERMOMETER 1		THERMOMETER 2	
					Trip Depth (db)	Trip Confirmed	SERIAL	Temp (oC)	SERIAL	Temp (oC)
23	3248	1095		10						
22	3247	1092		50						
21	3246	1090		100						
20	3245	1087		150						
19	3244	1084		200						
18	3243	1079		300						
17	3242	1072		400						
16	3241	1069		600 *						
15	3240	1068		800						
14	3239	1067		1000						
13	3238	1065		1000						
12	3237	1062		1250						
11	3236	1060		1500						
10	3235	1029		1750 *						
9	3234	1028		2000						
8	3233	1027		2000						
7	3232	1025		2250						
6	3231	1020		2500						
5	3230	1016		2750						
4	3229	1010		3000 *						
3	3228	1008		3250						
2	3227	1004		3500						
1	3226	1003		3500						

ENTERED BY:

CHECKED BY:

Bottom Depth:

Cast No:

LOC

UTC

Begin:

Bottom:

End:

BEGIN POSITION (GPS)

LAT:

LONG:

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments