

SAMPLE TEMP
AT TIME OF
PICKLING (±0.1°C)

CRUISE NO: 9201
STATION NO: MP04

UTC DATE: 4 Feb 1992
CTD 15

①

VESSEL: TULLY

ENTERED BY:
CHECKED BY: BM

STATION: MP04
CRUISE: 9201
DATE: 4 Feb 91

BOTTOM DEPTH: 1330
CAST NO.: 1
WIRE ANGLE:

TIMES (UTC)
START: 1845
DOWN: 1931
MESS: 1941
UP:

START POSITION
GPS LAT:
GPS LONG:

END POSITION
GPS LAT:
GPS LONG:

COMMENTS
10L + 1.7L NISKINS
at mixed depths.
800m BOTTLE DID NOT
CLOSE
48328 12640.2

	WIRE				LEFT				MIDDLE				RIGHT			
	NISK.	SAL.	OXY.	OUT	P	THERMOMETER			P	THERMOMETER			P	THERMOMETER		
	No.	No.	No.	(m)	U	SERIAL	AUX	MAIN	U	SERIAL	AUX	MAIN	U	SERIAL	AUX	MAIN
10.0	8601	1	1045	0		5636	12.00	9.34		6536	11.7	9.33				
							9.5	9.28			9.3	9.28				
10.2	770	2	1046	10		11999	12.00	9.35		13727	11.8	9.34				
							9.2	9.30			9.1	9.29				
10.4	7685	3	1047	20		5384	11.8	9.31		7633	11.7	9.35				
							9.0	9.26			9.0	9.30				
10.2	550	4	1048	30		3685	12.0	9.30		7746	11.8	9.33				
							8.9	9.24			9.0	9.27				
10.2	7684	5	1049	50		6239	11.7	9.35		15555	11.7	9.36				
							8.9	9.28			9.0	9.31				
9.0	1716	6	1050	75		12029	11.9	7.78		3137	11.8	7.82				
							11.8	7.78			11.7	7.81				
8.8	7690	7	1051	100		6067	11.7	7.49		12023	11.4	7.51				
							9.1	7.45			8.9	7.46				
8.8	392	8	1052	125		7642	12.3	7.28		7625	12.0	7.29				
							9.2	7.24			9.2	7.25				
8.2	7695	9	1054	150		11981	11.4	7.12		6414	11.3	7.09				
							9.0	7.07			8.9	7.04				
8.8	630	10	1055	175		7636	12.1	7.34		7647	11.8	7.32				
							9.1	7.28			9.1	7.28				
8.6	7687	11	1056	200		7630	11.3	7.27		12074	11.4	7.23	12270	11.3	10.35	
							9.0	7.25			9.0	7.18		8.9	10.29	
8.4	543	12	1057	250		6521	12.0	6.90		6249	12.3	6.90	12149	14.3	9.07	
							9.0	6.85			8.8	6.83		9.1	8.97	
8.0	7694	13	1058	300		8886	11.3	6.54		5621	11.7	6.57	13791	12.0	9.20	
							9.0	6.50			9.0	6.50		8.9	9.15	
7.8	2314	14	1060	400		14040	12.0	6.00		6520	12.8	5.97	6161	14.6	11.52	
							9.0	5.94			8.9	5.90		9.2	11.39	
7.0	8581	15	1061	500		7638	12.4	5.25		13054	13.0	5.15	10148	13.6	9.70	
							9.0	5.20			8.9	5.08		8.9	9.57	
7.2	1719	16	1062	600		13897	12.3	4.87		6543	13.5	4.90	10150	14.2	10.40	
							8.8	4.80			8.8	4.87		8.9	10.28	
5.6	8573	16	1063	800		9278	12.5	4.30		13038	13.3	4.30	10149	12.2	11.60	
							8.8	4.22			9.0	4.23		8.8	11.50	
5.6	7683	17	1064	1000		6072	11.2	3.86		6545	11.9	3.83	12402	11.3	12.18	
							8.8	3.83			8.9	3.78		8.9	12.13	
5.2	8575	18	1065	1200		6546	10.7	3.26		12078	10.8	3.25	10147	10.8	14.38	
							9.0	3.25			8.9	3.22		8.8	14.31	

SAMPLE
TEMP $\pm 0.1^{\circ}\text{C}$
AT TIME OF
PICKLING.

CRUISE NO:

STATION NO:

UTC DATE:

Feb 5/92
CTD 23

VESSEL: TULLY

ENTERED BY:

CHECKED BY:

STATION: MP 12

CRUISE: 9201

DATE: 5 Feb 92

BOTTOM DEPTH: ~~2520~~

CAST NO.: 2

WIRE ANGLE: 5°

TIMES (UTC)

START: 2025

DOWN 2108

MESS: 2118

UP: 2126

START POSITION

GPS LAT:

GPS LONG:

END POSITION

GPS LAT:

GPS LONG:

COMMENTS

510 m for Frown
SW 7691

Extra at
510 m

②

CHECKED BY: *R.B.*

DATE: _____

WIRE ANGLE: 5°

UP: 2257 J m

GPS LONG:

GPS LONG: _____

1278 when (1500m) taken off wire.
Counter stopped counting. Cleared
tumbled wheel - counter counting again.
at 1687.
2188

SAMPLE TEMP $\pm 0.1^{\circ}\text{C}$
AT TIME OF
PICKLING

CRUISE NO:
STATION NO:

92-01-03

P16

UTC DATE:

FEB 6/92

CTD 27

3

VESSEL:

TULLY

ENTERED BY:

CHECKED BY:

STATION:

P16

CRUISE:

9201

DATE:

FEB 6/92

BOTTOM DEPTH:

CAST NO.:

WIRE ANGLE: est. 10°

TIMES (UTC)

START:

1970 1935

DOWN

2000

MESS:

2010

UP:

2015

START POSITION

GPS LAT:

GPS LONG:

END POSITION

GPS LAT:

GPS LONG:

COMMENTS

-SAMA BOTTLES +

THARMS AS P12

-COUNTER NOT WORKING

REPLACED E COUNTER

FROM CTD WINCH

49170

13440.0

WIRE				LEFT				MIDDLE				RIGHT			
NISK.	SAL.	OXY.	OUT	P	THERMOMETER			P	THERMOMETER			P	THERMOMETER		
No.	No.	No.	(m)	U	SERIAL	AUX	MAIN	U	SERIAL	AUX	MAIN	U	SERIAL	AUX	MAIN
	43	2023	0		5636	7.3	8.14		6536	7.0	8.12			.	.
		2025				7.5	8.13			7.3	8.13			.	.
	44	2027	10		11999	6.9	8.14		13727	6.8	8.15			.	.
						7.1	8.14			7.1	8.15			.	.
	45	2028	20		5384	6.7	8.10		7633	6.9	8.15			.	.
		2032				6.9	8.10			7.1	8.15			.	.
	46	2033	30		3685	6.3	8.10		7746	6.7	8.13			.	.
						6.5	8.09			6.9	8.12			.	.
	47	2034	50		6239	6.5	8.12		75555	6.8	9.92			.	.
		2035				6.7	8.10			7.0	9.92			.	.
	48	2036	75		12029	6.6	8.13		3137	6.5	8.16			.	.
						6.8	8.13			6.7	8.15			.	.
	49	2038	100		6067	6.8	7.25		12023	6.7	7.26			.	.
						7.0	7.27			6.8	7.26			.	.
	50	2039	125		7642	6.8	6.74		7625	6.8	6.74			.	.
						7.0	6.75			6.9	6.76			.	.
	51	2040	150		11981	6.5	6.91		6414	6.3	6.88			.	.
						6.7	6.91			6.5	6.88			.	.
	52	2041	175		7636	6.6	6.90		7647	6.7	6.90			.	.
						6.7	6.90			6.8	6.91			.	.
	53	2042	200		7630	6.7	6.75		12074	6.6	6.72	12270	6.4	8.46	
						6.8	6.76			6.8	6.71		6.5	8.45	
	54	2043	250		6521	6.6	6.36		6249	6.5	6.35	12149	6.4	8.41	
						6.7	6.37			6.6	6.35		6.4	8.41	
	55	2044	300		8886	6.9	6.06		5621	7.0	6.06	13791	6.6	8.62	
						7.1	6.04			7.1	6.06		6.8	8.63	
	56	2045	400		14040	6.8	5.30		6520	6.8	5.26	6161	6.7	10.63	
						7.0	5.30			6.9	5.26		6.8	10.62	
	57	2047	500		7638	7.0	4.90		13054	7.0	4.80	10148	6.6	9.20	
		2048				7.1	4.91			7.1	4.80		6.8	9.20	
	58	2049	600		13897	6.8	4.36		6543	6.8	4.36	10150	6.7	9.70	
						6.9	4.36			6.9	4.37		6.7	9.70	
	59	2051	800		9278	6.8	3.75		13038	7.1	3.77	10149	6.6	11.00	
		2052				6.9	3.75			7.1	3.77		6.7	10.98	
	60	2053	1000		6072	6.6	3.41		6545	7.0	3.37	12402	6.7	11.70	
		2054				6.7	3.41			7.1	3.37		6.8	11.70	

UTC DATE: CTD 27

VESSEL:

ENTERED BY:

CHECKED BY:

STATION:

CRUISE:

DATE:

BOTTOM DEPTH:

CAST NO.:

WIRE ANGLE:

TIMES (UTC)

START: 2040

DOWN 2120

MESS: 2125

UP: 2143

START POSITION

GPS LAT:

GPS LONG:

END POSITION

GPS LAT:

GPS LONG:

COMMENTS

[illegible]

SAMPLE TEMP $\pm 0.1^{\circ}\text{C}$
AT TIME OF
ACKLING.

CRUISE NO:
STATION NO:

9201
MP20

UTC DATE:

Feb 7/92
CTD 31

VESSEL: TULLY

ENTERED BY:

CHECKED BY:

STATION:

CRUISE:

DATE:

BOTTOM DEPTH: 3945

CAST NO.: 1

WIRE ANGLE: 5°

TIMES (UTC)

START: 1830

DOWN: 1852

MESS: 1902

UP: 1908

START POSITION

GPS LAT:

GPS LONG:

END POSITION

GPS LAT:

GPS LONG:

COMMENTS

BOTTLES / THERMS
AS FOR P16, P12

	WIRE	NISK. No.	SAL. No.	OXY. No.	OUT (m)	LEFT			MIDDLE			RIGHT		
						THERMOMETER			THERMOMETER			THERMOMETER		
						P	AUX	MAIN	P	AUX	MAIN	P	AUX	MAIN
8.2		66	1085		0	5636	7.5	7.60	6536	7.3	7.60			
							7.6	7.60		6.9	7.60			
8.0		67	1086		10	11999	7.2	7.60	13727	7.0	7.60			
							6.9	7.60		6.9	7.60			
8.0		68	1087		20	5384	7.0	7.58	7633	7.0	7.60			
							7.0	7.58		7.0	7.60			
8.0		69	1088		30	3685	7.0	7.57	7746	7.0	7.60			
							6.7	7.56		6.8	7.60			
8.0		70	1090		50	6239	7.0	7.54	15555	7.0	7.60			
							6.7	7.53		6.8	7.59			
8.0		71	1092		75	12029	7.1	7.53	3137	6.8	7.56			
							6.7	7.52		6.7	7.55			
8.0		72	1095		100	6067	7.0	7.47	12023	6.8	7.50			
							6.8	7.46		6.6	7.50			
7.2		73	1096		125	7642	7.2	5.84	7625	7.1	7.5			
							6.8	5.83		6.7				
7.4		74	1097		150	11981	6.8	5.54	6414	6.7	5.51			
							6.5	5.54		6.4	5.50			
7.2		75	2000		175	7636	7.0	5.27	7647	7.0	5.27			
							6.7	5.26		6.7	5.27			
6.8		76	2001		200	7630	6.8	4.89	12074	6.8	4.86	12147	6.8	6.70
							6.5	4.89		6.5	4.85		6.5	6.70
6.8		77	2002		250	6521	6.8	4.47	6249	6.6	4.47	12149	6.9	6.60
							6.4	4.46		6.3	4.47		6.5	6.60
6.6		78	2004		300	8886	6.7	4.23	5621	6.8	4.25	13791	6.7	6.89
							6.4	4.23		6.4	4.24		6.4	6.88
6.6		79	2005		400	14040	6.7	4.00	6520	6.5	3.97	6161	6.9	9.48
							6.4	4.00		6.3	3.96		6.6	9.47
6.2		80	2006		500	7638	6.7	4.02	10262	6.5	3.88	10148	6.6	8.44
							6.4	4.01		6.2	3.88		6.4	8.43
6.2		81	2007		600	13897	6.4	3.77	6543	6.6	3.78	10150	6.7	9.20
							6.2	3.76		6.3	3.77		6.4	9.20
5.8		82	2008		800	9278	6.4	3.38	13038	6.6	3.39	10149	6.5	10.73
							6.2	3.38		6.3	3.39		6.2	10.72
4.0		83	2009		1000	6072	6.4	3.11	6545	6.4	3.06	12402	6.5	11.42
							6.2	3.10		6.2	3.06		6.3	11.42

STATION NO:

9201

MP 20

Feb 7/92

C TA 31

VESSEL: TULLY

ENTERED BY:

CHECKED BY:

STATION:

CRUISE:

DATE:

BOTTOM DEPTH: 3945

CAST NO.: 2

WIRE ANGLE: 5°

TIMES (UTC)

START: 1915

DOWN 2009

MESS: 2014

UP: 2036

START POSITION

GPS LAT:

GPS LONG:

END POSITION

GPS LAT:

GPS LONG:

COMMENTS

200-0 mm
Pbulton Wand
@ 0.8 m/s
@ 2125.

LJ sin 2/32

CRUISE NO: 9102
STATION NO: MP26

UTC DATE: 92/2/9

5

VESSEL: JOHN P. TULLY

ENTERED BY: FRANK WHITNEY
CHECKED BY: WIK JOHNSON

39

	WIRE	NISK. No.	SAL. No.	OXY. No.	OUT (m)	LEFT			MIDDLE			RIGHT		
						THERMOMETER			THERMOMETER			THERMOMETER		
						P	AUX	MAIN	P	AUX	MAIN	P	AUX	MAIN
6.8		8601	91	1085	0	5636	7.2	6.36	6536	6.8	6.36			
6.4		7690	92	1086	10	6067	6.8	6.35	12023	6.7	6.36			
6.4		7685	93	1087	20	5384	6.6	6.33	7633	6.6	6.37			
6.4		7695	94	1088	30	11981	6.6	6.37	6414	6.5	6.33			
6.4				2022			6.5	6.36		6.4	6.33			
6.4		7684	95	1090	50	6239	6.4	6.35	15535	6.6	6.38			
6.4		7694	96	1092	75	8886	6.4	6.31	5621	6.6	6.32	13791	6.5	6.98
6.4		8573	97	1095	100	9278	6.3	6.33	13038	6.5	6.33	10149	6.5	7.20
5.8		7683	98	1096	125	6072	6.3	5.33	6545	6.4	5.29	12402	6.5	6.36
5.4		8575	99	1097	150	6546	6.4	5.10	12078	6.2	5.10	10147	6.3	6.43
5.2		7688	100	2000	175	12082	6.2	5.03	13843	6.2	5.04	13784	6.2	6.54
5.2		7687	101	2001	200	7630	6.3	5.02	12074	6.3	4.97	12147	6.5	6.78
4.8		7691	102	2002	250	10263	6.2	4.55	10264	6.2	4.55	10277	6.3	6.79
4.8		7689	103	2004	300	6595	6.2	4.55	13044	6.3	4.42	10279	6.3	
4.2		8583	104	2005	400	5847	6.2		6077	6.2	4.15	10281		
4.2		8581	105	2006	500	7638	6.2	4.01	10262	6.1	3.88	1048	6.2	8.40
3.8		7697	106	2007	600	8886	5.4	3.72	5621	5.4	3.72	13791	5.4	8.94
3.4		8573	107	2008	800	9278	5.3	3.71	13038	5.4	3.29	10149	5.4	10.51
3.0		7683	108	2009	1000	6072	5.2	3.03	6545	5.3	2.98	12402	5.4	11.33
							5.1	3.02		5.3			5.4	

STATION: MP26
CRUISE: 9201
DATE:

BOTTOM DEPTH: 4220
CAST NO.: 1
WIRE ANGLE: 15

local TIMES (UTC)
START:
DOWN 1918
MESS: 1925 0325
UP: 1947

START POSITION
GPS LAT:
GPS LONG:

END POSITION
GPS LAT:
GPS LONG:

COMMENTS
8.5m down.
thermometer broken or lost
UP 12147 UP 10278
P 12082
P 13843
UP 13784

9/02
MP 26

92/2/9

5

CHECKED BY:

CRUISE: 9201

BOTTOM DEPTH: 4251.7

CAST NO.:

WIRE ANGLE:

TIMES (UTC)

START: 0630 1055

DOWN 0735 1748

MESS: 0742 1151

UP: 0806 1215

START POSITION

GPS LAT:

GPS LONG:

END POSITION

GPS LAT:

GPS LONG:

COMMENTS: 600-4200m CAST:

COMMENTS	
X LOST	
XX DAMAGED	

1500m bottle slid down wire and caused deeper bottles to slide. Used pike pole to get 2000, 2500, 3000 on board. Last 3 (3500, 4190, 4200) came up on weightlift.

OCEAN CHEMISTRY

[illegible]

CO₂ - FLEON STORAGE STANDARDS / TESTING.

[illegible]

OCEAN CHEMISTRY

[illegible]

92-1
MP2A

4c

P	THERMOMETER	
U SERIAL	AUX	MAIN

[illegible]

9201
P26(2)

Feb 10/92

Tully

WIRE ANGLE: 50

PST TIMES (UTC)

UP: 2/23

GPS LONG:

GPS LONG:

UP 10278 taken
when bottle damaged
3500m volu mustel
2233 2000m VPH

92-01
M.J.O 5

$$\frac{92/2/12}{40}$$

2-2-15 by Sgpc

7

VESSEL: J.P. TULLY

ENTERED BY:

CHECKED BY:

STATION: MT 01

CRUISE: 0201

DATE: 02/2/12

BOTTOM DEPTH: 2772

CAST NO.:

WIRE ANGLE: 5

TIMES (UTC)

START: 2122

DOWN 2/4/1

MESS: 2150

UP: 2156

START POSITION

GPS LAT:

GPS LONG:

END POSITION

GPS LAT:

GPS LONG:

COMMENTS

5127.4
13224.3