

VESSEL: TULLY

[illegible]

ENTERED BY: MARIE
CHECKED BY:

Bottom Depth: 1331

Cast No: _____

Wire Angle:

LOC	UTC
START:	2010
DOWN:	2044
MESS:	
IN:	2117

START POSITION
GPS LAT: 48°39.910
GPS LONG: 126°39.729

MESS. POSITION	
LAT:	48°38'.909
LONG:	126°38.979

SURF. POSITION
GPS LAT: 48° 38.771
GPS LONG: 126° 39.002

COMMENTS

O ₂ blank			
.007	.008	.004	.007
Standard	.720	.717	.718
Air bubble problem			

2700
3400

2734
2728

WOCE LOG 1992

CRUISE NO: 9309
STATION NO: MP12

UTC DATE: 17 MAY 1993
HYDRO No.: 2 CTD #12

VESSEL: TULLY

ENTERED BY: NHP
CHECKED BY:

Bottom Depth: 3265
Cast No:
Wire Angle:

LOC	UTC
START:	0812
DOWN:	0926
MESS:	
IN:	1115

START POSITION
GPS LAT: 48°58.181
GPS LONG: 130°39.774

MESS. POSITION
LAT: 48°58.226
LONG: 130°39.156

SURF. POSITION
GPS LAT: 48°58.020
GPS LONG: 130°38.089

COMMENTS

poor
poor
check
dry
poor

NISK. No.	SAL. No.	OXY. No.	OXY. TEMP	WIRE OUT (m)	actual depth	LEFT THERMOMETER				On therm. + temperature	MIDDLE THERMOMETER				RIGHT THERMOMETER			
					SERIAL	AUX	O ₂	MAIN		SERIAL	AUX	MAIN			SERIAL	AUX	MAIN	
22	14	1003	10.4	10	✓ 1000		1.1	47		9.215								
21	15	1004	10.4	50	✓ 50.6		1.1	27		8.9025								
20	16	1005	8.8	100	X 98.2		1.0	41		7.3732								
19	17	1008	8.4	150	✓ 150.2		.7	73		6.5265								
18	18	1009	7.2	200	✓ 200.7		.6	34		5.9973								
17	19	1010	7.0	300	✓ 300.7		.4	53		5.2809								
16	20	1011	6.2	400	X 400.6		.2	47		4.7370								
15	21	1014	6.0	600	600.6		.1	33		4.1055								
14	22	1016	6.2	800	✓ 800.3		.0	78		3.6745								
13	23	1020	5.6	1000	X 1001.3		.0	74		3.1299								
12	24	1022	5.2	1200	X 1200.6		.0	80		2.7813								
11	25	1025	4.8	1400	X 1401.2		.1	28		2.4858								
10	26	1026	4.6	1600	X 1601.8		.1	52		2.2419								
9	27	1027	4.6	1800	? 1800.1		.2	06		2.0665								
8	28	1028	4.6	2000	X 2001.8		.2	40		1.9320								
7	29	1029	4.4	2000	✓ 2000.9		.2	53		1.9335								
6	30	1031	4.4	2000	✓ 2001.1		.2	87		1.8355					Missed	Command	Keyboard	
5	31	1032	4.0	2400	X 2399.5		.3	31		1.7690								
4	32	1033	4.0	2600	X 2600.3		.3	54		1.7027								

Bottle
①

VESSEL: TULLY

ENTERED BY:	NHP
CHECKED BY:	

Bottom Depth:
Cast No:
Wire Angle:

	LOC	UTC
START:		
DOWN:		
MESS:		
IN:		

START POSITION
GPS LAT:
GPS LONG:

MESS. POSITION
LAT:
LONG:

SURF. POSITION
GPS LAT:
GPS LONG:

[illegible][illegible]

CRUISE NO:
STATION NO:9309
MP 16

UTC DATE:

HYDRO No.:

18/5/93
3 CTID 16

VESSEL: Tully

ENTERED BY:

CHECKED BY:

Bottom Depth: 3659

Cast No: 1

Wire Angle:

LOC UTC

START: 1358

DOWN: 1507

MESS:

IN: 1654

START POSITION

GPS LAT: 49° 19.117N

GPS LONG: 134° 44.346E

bottom

MESS. POSITION

LAT: 49° 19.515N

LONG: 134° 45.151W

SURF. POSITION

GPS LAT: 49 20.21

GPS LONG: 134 45.12

COMMENTS

23 bottles.

23

NISK. No.	SAL. No.	OXY. No.	OXY. TEMP	WIRE OUT (m)	ACTUAL DEPTH SERIAL	LEFT THERMOMETER			Time SERIAL	MIDDLE THERMOMETER			RIGHT THERMOMETER		
						AUX	MAIN			AUX	MAIN		SERIAL	AUX	MAIN
	36	1054	9.8	10	✓ 10.0	1.146			16:48						
22	37	1056	9.2	50	✓ 50.3	1.160			16:47						
21	38	1057	8.2	100	✓ 100.0	1.024			16:45						
20	39	1058	7.2	150	✓ 150.8	.776			16:44						
19	40	1060	6.2	200	✓ 200.9	.690			16:42						
18	41	1061	5.4	300	✓ 300.1	.421			16:39						
17	42	1062	5.2	400	✓ 399.1	.251			16:36						
16	43	1063	4.8	600	✓ 599.3	.115			16:31						
15	44	1064	4.4	800	✓ 801.0	.070			16:25						
14	45	1065	4.0	1000	✓ 1001.5	.062			16:20						
13	46	1067	3.8	1200	✓ 1199.5	.072									
12	47	1068	3.8	1400	✓ 1402.0	.087									
11	48	1069	3.6	1600	✓ 1604.7	.131									
10	49	1072	3.6	1800	✓ 1802.6	.179									
9	50	1079	3.6	2000	✓ 1999.9	.239									
8	51	1080	3.2	2200	✓ 2197.4	.268									
7	52	1084	3.4	2400	✓ 2401.7	.312									
6	53	1086	3.4	2600	✓ 2602.2	.359									
5	54	1087	3.6	2800	✓ 2797.5	.394									

↑ end point detection

VESSEL: TULLY

ENTERED BY:

CHECKED BY:

Bottom Depth:

Cast No:

Wire Angle:

LOC

UTC

START:

DOWN:

MESS:

IN:

START POSITION

GPS LAT:

GPS LONG:

MESS. POSITION

LAT:

LONG:

SURF. POSITION

GPS LAT:

GPS LONG:

COMMENTS

[illegible]

4/059

- 93.09

CRUISE NO:
STATION NO:

93-09

P20

UTC DATE:

93-05-19

HYDRO No.:

4 CTD 20

VESSEL: TULLY

ENTERED BY:

CHECKED BY:

Bottom Depth:

Cast No:

Wire Angle:

LOC UTC

START:

DOWN:

MESS:

IN:

START POSITION

GPS LAT: 49 33.600

GPS LONG: 138 39.832

MESS. POSITION

LAT: 49 33.583

LONG: 138 40.173

SURF. POSITION

GPS LAT: 49 33.74

GPS LONG: 138 40.98

COMMENTS

NISK. No.	SAL. No.	OXY. No.	OXY. TEMP	WIRE OUT (m)	PRESS. SERIAL	LEFT THERMOMETER		TIME SERIAL	MIDDLE THERMOMETER		RIGHT THERMOMETER		
						AUX	MAIN		AUX	MAIN	SERIAL	AUX	MAIN
22	59	1054	9.2°	10	X		1.175 (1.196)	0326		non end point			
21	60	1056	8.8°	50	✓		1.195	0324					
20	61	1057	7.4	100	✓		1.080	0322					
19	62	1058	6.8	150	✓		.736	0320					
18	63	1060	5.8	200	✓		.636	0319					
17	64	1061	5.2	300	✓		.308	0316					
16	65	1062	5.2	400	✓		.214	0314					
15	66	1063	4.8	600			.136	0310					
* 14	67	1064	4.8	800			.100	0305					
* 13	68	1065	4.6	1000			.098	0305					
12	69	1067	4.8	1000	1000		.068	0301					
11	70	1068	4.2	1200	1198.9		.070	0258					
10	71	1069	4.6	1400	1401.8		.090	0253					
9	72	1072	4.0	1600	1599.3		.122	0250					
8	73	1079	4.4	1800	1801.5		.198	0247					
7	74	1080	3.8	2000	2000.2		.242	0243					
6	75	1084	4.0	2200	2200		.267	0240					
5	76	1086	3.8	2400	2399		.289	0236					
4	77	1087	4.4	2600	2601.2		.326	0232					

VESSEL: TULLY

ENTERED BY:

CHECKED BY:

Bottom Depth:

Cast No:

Wire Angle:

LOC

UTC

START:

DOWN:

MESS:

IN:

START POSITION

GPS LAT:

GPS LONG:

MESS. POSITION

LAT:

LONG:

SURF. POSITION

GPS LAT:

GPS LONG:

COMMENTS

[illegible]

VESSEL: Tully

ENTERED BY:

CHECKED BY:

Bottom Depth:

Cast No:

Wire Angle:

LOC

UTC

START:

DOWN:

MESS:

IN:

START POSITION

GPS LAT:

GPS LONG:

MESS. POSITION

LAT:

LONG:

SURF. POSITION

GPS LAT:

GPS LONG:

COMMENTS

NISK. No.	SAL. No.	OXY. No.	OXY. TEMP	WIRE OUT (m)	LEFT THERMOMETER		MIDDLE THERMOMETER		RIGHT THERMOMETER																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
					SERIAL	AUX	MAIN	SERIAL	AUX	MAIN	SERIAL	AUX	MAIN																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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* 50m above bottom please

CRUISE NO:
STATION NO:9309
MP23

UTC DATE:

93-5-20

HYDRO No.:

5 CTD23 Page 1/2

VESSEL: TP Tully

ENTERED BY: NARIC
CHECKED BY:

NISK. No.	SAL. No.	OXY. No.	OXY. TEMP	WIRE OUT (m)	LEFT Pressure THERMOMETER					UTC Time	MIDDLE THERMOMETER					O ₂	RIGHT THERMOMETER				
					SERIAL	AUX	MAIN				SERIAL	AUX	MAIN				SERIAL	AUX	MAIN		
22	81	1054	8.9	10	✓ 10.1					2250						1.278					
* 21	82	1056	7.4	50	✓ 50.6	T 451	-6.795			2248						1.205					
20	83	1057	6.4	100	✓ 100.1	T 347	-6.790			2246						1.044					
19	84	1058	5.8	150	✓ 148.1					2244						.754					
18	85	1060	5.2	200	X 198.4					2242						.628					
17	86	1061	5.0	300	300.6					2239						.345					
16	87	1062	4.8	400	400.5					2236						.208					
15	88	1063	4.6	600	600.5					2231						.107					
14	89	1064	4.2	800	800.2					2226						.093					
13	90	1065	4.0	1000	998.6					2221						.079					
12	91	1067	3.8	1000	999.2					2221						.087					
11	92	1068	3.8	1200	1200.6					2212						.081					
10	93	1069	4.0	1400	1402.4					2208						.101					
9	94	1072	3.6	1600	1601.8					2204						.136					
8	95	1079	3.2	1800	1803.1					2159						.184					
7	96	1080	3.4	2000	1998.4					2153						.238					
6	97	1084	3.4	2000	2001.1					2153						.234					
5	98	1086	3.4	2200	2199.9					2147						.281					
4	99	1087	3.0	2400	2400.2					2142						.316					

Bottom Depth: 4072
Cast No: 23
Wire Angle:

LOC	UTC
START:	2040
DOWN:	2126
MESS:	
IN:	2253

START POSITION
GPS LAT: 49°46.010
GPS LONG: 141°40.288

MESS. POSITION
LAT: 49°46.129
LONG: 141°40.442

SURF. POSITION
GPS LAT: 49°46.287
GPS LONG: 141°40.660

COMMENTS

VESSEL: TULLY

Nick

ENTERED BY: ~~MARIE~~*

CHECKED BY:

Bottom Depth: 4267

Cast No: 30

Wire Angle:

LOC

UTC

START:	0504
--------	------

DOWN:

MESS:

IN:

START POSITION

GPS LAT: 50° 00.81

GPS LONG: 145° 00.46

DOWNMESS. POSITION

LAT:

LONG:

SURF. POSITION

GPS LAT:

GPS LONG:

COMMENTS

[illegible]

* at least she was present last time
Nick is a poor substitute

CRUISE NO: 9309
 STATION NO: MP26

 UTC DATE: MAY 22nd
 HYDRO No.: 6 CTD#27
VESSEL: TULLY
 ENTERED BY: MARIE *
 CHECKED BY:

NISK. No.	SAL. No.	OXY. No.	OXY. TEMP	WIRE OUT (m)	LEFT				MIDDLE				RIGHT			
					PRESSURE SERIAL	THERMOMETER AUX	THERMOMETER MAIN		TEMP SERIAL	THERMOMETER AUX	THERMOMETER MAIN		TIME SERIAL	THERMOMETER AUX	THERMOMETER MAIN	
23	103	1106	8.0	10	✓ 10.8	1.147			7.807				1842			
22	104	1107	7.2	50	✓ 48.1	1.139			6.558				1840			
21	105	1108	6.4	100	✓ 99.2	1.051			5.702	T451	5.736		1838	T647	5.765	
20	106	1109	5.8	150	✓ 149.0	.751			5.872				1837			
19	107	1110	5.8	200	X 198.0	.647			5.252				1835			
18	108	1111	5.4	300	✓ 298.4	.457			4.415				1832			
17	109	1112	5.2	400	✓ 401.1	.272			4.135				1830			
16	110	1113	4.8	500	✓ 499.9	.191			3.862	extra acid added			1827			
15	111	1114	4.8	500	X 500.5	.184	.186		3.858				1826			
14	112	1116	4.8	600	✓ 599.4	.142			3.690				1823			
13	113	1117	4.4	800	✓ 797.9	.103			3.355				1818			
12	114	1119	4.6	1000	✓ 1001.2	.089			2.996				1812			
11	115	1120	4.4	1200	? 1199.0	.079			2.723				1803			
10	116	1121	4.4	1400	✓ 1400.4	.077			2.486				17:56			
9	117	1122	3.8	1600	X 1599.3	.107			2.297				17:49			
8	118	1123	3.8	1800	✓ 1799.9	.155			2.126				17:42			
7	119	1125	3.8	2000	✓ 2000.5	.203			1.986				17:35			
6	120	1126	3.6	2200	✓ 2199.3	.249			1.871				1727			
5	121	1127	3.6	2200	✓ 2199.3	.252			1.871				17:26			

 Bottom Depth:
 Cast No:
 Wire Angle:

LOC	UTC
START:	2253
DOWN:	2358
MESS:	
IN:	0142

 START POSITION
 GPS LAT: 50°00.036
 GPS LONG: 144°59.850

 MESS. POSITION
 LAT: 50 00 39.0
 LONG: 144 49 61.8

 SURF. POSITION
 GPS LAT: 49°59.903
 GPS LONG: 145°00.218

COMMENTS

* who takes full responsibility

UTC DATE: _____
HYDRO No.: 6

VESSEL:

CHECKED BY:

Wire Angle:

IN:

GPS LONG:

LONG:

GPS LONG:

COMMENTS

[illegible]

CRUISE NO: 9309
 STATION NO: P26 (2)

 UTC DATE: MAY 24/93
 HYDRO No.: 7 CTD#32.
VESSEL: Tully

PAGE 1/2

NISK. No.	SAL. No.	OXY. No.	OXY. TEMP	WIRE OUT (m)	LEFT			MIDDLE			RIGHT		
					DEPTH SERIAL	THERMOMETER AUX	MAIN	SERIAL	AUX	MAIN	TIME SERIAL	THERMOMETER AUX	MAIN
23	126	1003	8.0	10	✓ 10.2	1.194	.		.	.	1919	.	.
22	127	1004	7.2	50	? 50.3	1.176	.	T451	6.980	T647	6.972	1917	.
21	128	1005	6.0	100	? 100.2	.939	.	.	.	.	1916	.	.
20	129	1008	6.0	150	X 150.6	.696	.	.	.	.	1914	.	.
19	130	1009	5.9	200	X 199.5	.583	.	problems with probe stability changed colorimeter			1912	.	.
18	131	1010	4.8	300	X 300.1	.372	.				1910	.	.
17	132	1011	4.8	400	✓ 400.1	.273	.	.	.	.	1907	.	.
16	133	1014	4.6	600	600.8	.138	.	.	.	.	1900	.	.
15	134	1016	4.2	800	800.3	.106	.	.	.	.	1849	.	.
14	135	1020	4.4	1000	1000.6	.091	.	.	.	.	1847	.	.
13	136	1022	4.0	1200	1199.9	.084	.	.	.	.	1835	.	.
12	137	1025	4.0	1400	1399.9	.095	.	.	.	.	1828	.	.
11	138	1026	3.8	1600	1600.2	.125	.	.	.	.	1821	.	.
10	139	1027	3.8	1800	1799.9	.177	.	.	.	.	1811	.	.
9	140	1028	3.6	2000	1999.2	.221	.	.	.	.	1801	.	.
8	141	1029	3.6	2200	2200.9	.272	.	.	.	.	1753	.	.
7	142	1031	3.6	2400	2400.2	.296	.	.	.	.	1746	.	.
6	143	1032	3.2	2600	2600.2	.361	.	.	.	.	1739	.	.
5	144	1033	3.4	2800	2799.6	.388	.	.	.	.	1732	.	.

 ENTERED BY: NHP
 CHECKED BY:

 Bottom Depth:
 Cast No: 32
 Wire Angle:

LOC	UTC
START:	1608
DOWN:	1720
MESS:	
IN:	1922

 BE START POSITION
 GPS LAT: 49° 59.99
 GPS LONG: 144° 59.90

 BO MESS. POSITION
 LAT: 50° 00.00
 LONG: 145° 00.29

 SURF. POSITION
 GPS LAT: 50° 00.452
 GPS LONG: 145° 01.017

COMMENTS

V₅ = .005V₂ = .717

VESSEL:

PAGE 2/2

[illegible]

ENTERED BY: NHP

CHECKED BY:

Bottom Depth:
Cast No: 32
Wire Angle:

LOC	UTC
START:	
DOWN:	
MESS:	
IN:	

START POSITION
GPS LAT:
GPS LONG:

MESS. POSITION
LAT:
LONG:

SURF. POSITION
GPS LAT:
GPS LONG:

[illegible]

CRUISE NO: 9309
 STATION NO: R16

 UTC DATE: 93-05-26
 HYDRO No.: 8 CTD 41
VESSEL: TULLY

NISK. No.	SAL. No.	OXY. No.	OXY. TEMP	WIRE OUT (m)	LEFT				MIDDLE				RIGHT			
					pressure, SERIAL	THERMOMETER AUX	MAIN		Time SERIAL	THERMOMETER AUX	MAIN		SERIAL	THERMOMETER AUX	MAIN	
23	149	1106	8.8	10	9.8	1.1	2.2	.	1857	.	.	.	.	.	.	.
22	150	1107	7.8	50	49.0	1.1	3.2	.	1856	.	74.59	74.68	.	.	.	.
21	151	1108	6.4	100	100.7	.	7.3	.	1854	.	.	.	.	.	.	.
20	152	1109	6.0	150	148.7	.	7.7	.	1852	.	.	.	.	.	.	.
19	153	1110	5.8	200	201.6	.	5.8	.	1850	.	.	.	.	.	.	.
18	154	1111	5.0	300	299.5	.	3.3	.	1847	.	.	.	.	.	.	.
17	155	1112	5.2	400	400.6	.	2.3	.	1845	.	.	.	.	.	.	.
16	156	1113	5.4	400	393.7	.	2.3	.	1	.	dead battery Route not stopped when triggered					
15	157	1114	5.2	600	600.9	.	1.2	.	1836	.	.	.	.	.	.	.
14	158	1116	5.2	800	800.8	.	0.8	.	1830	.	Acoustic sample lost, altimeter reported after magnetic attached.					
13	159	1117	4.6	1000	1000.7	.	0.7	.	1803	.	.	.	.	.	.	.
12	160	1119	4.0	1200	1200.0	.	0.7	.	1817	.	.	.	.	.	.	.
11	161	1120	4.0	1400	1399.0	.	1.0	.	1812	.	.	.	.	.	.	.
10	162	1121	3.6	1600	1601.3	.	1.2	.	1803	.	.	.	.	.	.	.
9	163	1122	4.0	1800	1800.0	.	1.7	.	1757	.	.	.	.	.	.	.
8	164	1123	3.6	2000	2002.5	.	2.2	.	1745	.	.	.	.	.	.	.
7	165	1125	3.8	2200	2199.0	.	2.6	.	1736	.	.	.	.	.	.	.
6	166	1126	3.4	2200	2200.2	.	2.6	.	1735	.	.	.	.	.	.	.
5	167	1127	3.4	2400	2398.2	.	3.1	.	1727	.	.	.	.	.	.	.

 ENTERED BY: BH
 CHECKED BY:

 Bottom Depth: 3775
 Cast No:
 Wire Angle:

LOC	UTC
START:	1555
DOWN:	1656
MESS:	
IN:	

 SE START POSITION
 GPS LAT: 51°04.06'
 GPS LONG: 140°14.201

 BO MESS. POSITION
 LAT: 51°04.0
 LONG: 140°14.0

 EN SURF. POSITION
 GPS LAT: 51°03.89'
 GPS LONG: 140°13.43

COMMENTS

DUP

VESSEL: TULLY

ENTERED BY: _____
CHECKED BY: _____

Bottom Depth:
Cast No:
Wire Angle:

LOC	UTC
START:	
DOWN:	
MESS:	
IN:	

START POSITION
GPS LAT:
GPS LONG:

MESS. POSITION
LAT:
LONG:

SURF. POSITION
GPS LAT:
GPS LONG:

[illegible][illegible]

CRUISE NO: 9309
 STATION NO: R9

 UTC DATE: 93-05-28
 HYDRO No.: 9 CTD # 49
VESSEL: JP TULLY

ENTERED BY:

CHECKED BY:

NISK. No.	SAL. No.	OXY. No.	OXY. TEMP	WIRE OUT (m)	LEFT			MIDDLE			RIGHT		
					DEPTH SERIAL	THERMOMETER AUX	MAIN	TEMPA SERIAL	THERMOMETER AUX	MAIN	TIME SERIAL	THERMOMETER AUX	MAIN
22	172	1106	10.2	10	9.6	1.09	6				0523		
21	173	1107	8.1	50	50.1	1.1	47				0521		
20	174	1108	6.8	100	96.8	1.0	60				0519		
19	175	1109	6.2	150	152.3	.73	2				0516		
18	176	1110	5.8	200	198.9	.57	6				0513		
17	177	1111	5.0	300	300.7	.36	2				0509		
16	178	1112	4.4	400	402.9	.20	3				0505		
15	179	1113	4.6	600	593.6	.10	4				0459		
14	180	1114	4.4	600	592.9	.10	4				0459		
13	181	1116	4.2	800	802.9	.06	1				0443		
12	182	1117	3.6	1000	1002.3	.06	8				0436		
11	183	1119	3.6	1200	1200.9	.06	9				0429		
10	184	1120	3.6	1400	1400.9	.09	3				0421		
9	185	1121	3.4	1600	1602.8	.13	4				0416		
8	186	1122	3.4	1600	1601.3	.13	5				0415		
7	1800	187	1123	3.6	1800	1800.5	.12	2			0407		
6	2000	188	1125	3.4	2000	1999.9	.23	2	1.927		0358		
5	2400	189	1126	3.2	2200	2200.3	.30	9	1.783		0351		
4	2400	190	1127	3.2	2400	2399.2	.32	1	1.723		0344		

Bottom Depth: 3519Cast No: 1

Wire Angle:

LOC	UTC
START: <u>1915</u>	<u>0215</u>
DOWN: <u>2020</u>	<u>0320</u>
MESS:	
IN: <u>2230</u>	<u>0530</u>

 RF START POSITION
 GPS LAT: 5118.96
 GPS LONG: 13515.13

 BO MESS. POSITION
 LAT: 5119.22
 LONG: 13514.41

 SURF. POSITION
 GPS LAT: 5119.61
 GPS LONG: 13514.28

 COMMENTS
ROSETTE CAST
22 depths

ENTERED BY:
CHECKED BY:

Bottom Depth:	
Cast No:	
Wire Angle:	

	LOC	UTC
START:		
DOWN:		
MESS:		
IN:		

START POSITION
GPS LAT:
GPS LONG:

MESS. POSITION
LAT:
LONG:

SURF. POSITION
GPS LAT:
GPS LONG:

[illegible][illegible]

VESSEL: TULLY

ENTERED BY: _____
CHECKED BY: _____

Bottom Depth:
Cast No: 53
Wire Angle:

LOC	UTC
START:	2205
DOWN:	2305
MESS:	
IN:	

START POSITION
GPS LAT: 51°27.416
GPS LONG: 132°23.6

MESS. POSITION
LAT: 51° 27.441
LONG: 132° 23.612

SURF. POSITION
GPS LAT:
GPS LONG:

COMMENTS

flask 1123 stopper
broken.

21. Julius

NISK. No.	SAL. No.	OXY. No.	OXY. TEMP	WIRE OUT (m)	LEFT THERMOMETER			MIDDLE THERMOMETER			RIGHT THERMOMETER					
					PRESSURE SERIAL	AUX	MAIN	TIME SERIAL	AUX	MAIN	SERIAL	AUX	MAIN			
* Dup 25	22	1943	1106	10.4	100	8.5	11.29	1.179	1742	.	.	.	THERMO	.	.	.
20	21	1944	1107	10.0	10	8.7	11.28	1.161	1746	.	.	.	9.715	.	.	.
19	20	195	1108	9.4	50	42.2	11.27	1.065	1745	.	.	.	8.269	.	.	.
18	19	196	1109	8.8	100	98.9	11.26	.867	1743	.	.	.	7.510	.	.	.
17	18	197	1110	8.6	150	148.0	11.25	.607	1741	.	.	.	7.155	.	.	.
16	17	198	1111	7.8	200	198.8	11.23	.512	1739	.	.	.	6.619	.	.	.
15	16	199	1112	6.8	300	314.0	11.22	.415	1735	.	.	.	5.579	.	.	.
	14	200	1113	6.8	300	304.1	11.21	.419	1735	.	.	.	5.6563	.	.	.
13	14	201	1114	6.4	400	400.1	11.20	.292	1731	.	.	.	5.010	.	.	.
12	13	202	1116	5.8	600	599.9	11.19	.107	1724	.	.	.	4.291	.	.	.
11	12	203	1117	5.6	800	799.1	11.17	.064	1719	.	.	.	3.705	.	.	.
10	11	204	1119	5.2	1000	998.7	11.16	.060	1713	.	.	.	3.200	.	.	.
9	10	205	1120	4.8	1200	1199.7	11.14	.070	1709	.	.	.	2.842	.	.	.
8	9	206	1121	4.4	1400	1400.2	11.13	.090	1704	.	.	.	2.537	.	.	.
7	8	207	1122	4.6	1600	1599	11.12	.133	1657	.	.	.	2.262	.	.	.
6	7	208	1123	4.4	1800	1800	11.11	.179	1647	air bubble in pipe			2.089	.	.	.
5	6	209	1125	4.2	2000	1998.6	11.10	.224	1636	.	.	.	1.945	.	.	.
	5	210	1126	3.8	2200	2198	11.09	.224	1628	.	.	.	1.849	.	.	.
4	4	210	1128	3.8	2400	2399	11.09	.296	1619	.	.	.	1.761	.	.	.
	3	211	11287	3.8	2400	2399	11.08	.293	1619	.	.	.	1.761	.	.	.

VESSEL:

ENTERED BY:
CHECKED BY:

Bottom Depth:
Cast No:
Wire Angle:

LOC	UTC
START:	
DOWN:	
MESS:	
IN:	

START POSITION
GPS LAT:
GPS LONG:

MESS. POSITION
LAT:
LONG:

SURF. POSITION
GPS LAT:
GPS LONG:

[illegible][illegible]