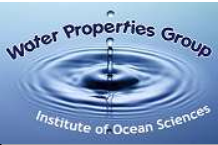


DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences



Cruise Number:			2023-069		Launch Daily Science Log		Print Daily Science Log Workbook												CTD/Rosette Status			
Vessel:			JP Tully														Trans. Cleaned	Fluoromet er Cleaned	PAR Status	Comments		
Event Number	Station Name	Cast Type	Firing Method	Time Code	Date Time (UTC) Computer ("dd-mm-yyyy hh:mm:ss")	Date Time (UTC) GPS ("dd-mm-yyyy hh:mm:ss")	Positional Information (DDD MM.MMM)		Sounder Depth (m)	Max Sampling Pressure	Sample Number		# of Bottles	Watch Keepers								
							Latitude	Longitude							Start	End						
1 SI	ROS	ROS	N/A	BE	26-07-2023 23:59:09	26-07-2023 23:59:07	48 39.288 N	123 30.198 W	182					Cindy Wright	yes	no	yes					
1 SI	ROS	ROS	N/A	BO	27-07-2023 00:02:31	27-07-2023 00:02:30	48 39.315 N	123 30.186 W		143				Cindy Wright								
1 SI	ROS	ROS	N/A	EN	27-07-2023 00:05:05	27-07-2023 00:05:04	48 39.323 N	123 30.181 W		143				Cindy Wright				sct 1552				
2	DRF	DRF	DE	DE	27-07-2023 13:52:29	27-07-2023 13:52:20	49 1.583 N	126 6.208 W	62					Charles Hannah				sct 1550				
3	DRF	DRF	DE	DE	27-07-2023 14:48:03	27-07-2023 14:47:52	49 8.82 N	126 20.41 W	82					Charles Hannah								
4 In transit to E0:	LOOP	LOOP	BE	BE	27-07-2023 15:32:09	27-07-2023 15:31:58	49 14.568 N	126 31.924 W	98		1	1	1	Cindy Wright	NA	NA						
5 E01-62	MOOR	MOOR	RE	RE	27-07-2023 19:44:22	27-07-2023 19:44:09	49 16.924 N	126 36.758 W	104	104				David Spear								
6 E01	ROS	ROS	N/A	BE	27-07-2023 20:37:57	27-07-2023 20:37:56	49 16.972 N	126 36.844 W	104					Cindy Wright	yes	no	yes					
6 E01	ROS	ROS	N/A	BO	27-07-2023 20:40:09	27-07-2023 20:40:05	49 16.986 N	126 36.846 W		100				Cindy Wright				db=-.14-.19				
6 E01	ROS	ROS	N/A	EN	27-07-2023 20:42:12	27-07-2023 20:42:11	49 17 N	126 36.85 W						Cindy Wright				chlmax=8m				
7 E01-63	MOR	MOR	DE	DE	27-07-2023 21:45:05	27-07-2023 21:44:53	49 17 N	126 36.874 W	104	104				David Spear								
8 E01	DRF	DRF	DE	DE	27-07-2023 21:53:55	27-07-2023 21:53:44	49 16.96 N	126 38.167 W	106					Charles Hannah				sct 1546 & 1523				
9	DRF	DRF	DE	DE	27-07-2023 22:39:11	27-07-2023 22:39:00	49 11.926 N	126 46.186 W	131					Charles Hannah				sct 1553				
10 E03-62	MOR	MOR	RE	RE	28-07-2023 00:37:06	28-07-2023 00:36:55	49 7.277 N	126 57.083 W	381	381				David Spear								
11 E03-63	MOR	MOR	DE	DE	28-07-2023 01:24:58	28-07-2023 01:24:47	49 5.73 N	126 56.077 W	400	400				David Spear								
12 E03	ROS	ROS	US	BE	28-07-2023 01:37:49	28-07-2023 01:37:46	49 5.702 N	126 55.993 W	396		2	15	14	Cindy Wright	yes	no	yes	electronic BE a bit late				
12 E03	ROS	ROS	US	BO	28-07-2023 01:41:50	28-07-2023 01:41:49	49 5.694 N	126 56.01 W		396	2	15	14	Cindy Wright								
12 E03	ROS	ROS	US	EN	28-07-2023 02:04:11	28-07-2023 02:04:08	49 5.658 N	126 56.012 W		396	2	15	14	Cindy Wright								
13 E03	DRF	DRF	DE	DE	28-07-2023 02:23:01	28-07-2023 02:22:49	49 6.707 N	126 57.246 W						Charles Hannah				sct 1522				
14	DRF	DRF	DE	DE	28-07-2023 10:07:00	28-07-2023 10:07:00	49 59.281 N	127 59.938 W						Charles Hannah				sct1554				
15 Quat2-2	MOR	MOR	RE	RE	28-07-2023 14:33:19	28-07-2023 14:33:06	50 28.514 N	127 49.268 W	132	132				Cindy Wright								
16 Quat2-3	MOR	MOR	DE	DE	28-07-2023 15:36:00	28-07-2023 15:35:50	50 28.484 N	127 49.219 W	132					David Spear								
17 Quat2	ROS	ROS	US	BE	28-07-2023 15:46:49	28-07-2023 15:46:44	50 28.448 N	127 49.065 W	134		16	29	14	Cindy Wright	yes	no	yes	accidentally labelled Quat1 labels not changed, will say Quat1 when it is Quat2				
17 Quat2	ROS	ROS	US	BO	28-07-2023 15:49:41	28-07-2023 15:49:37	50 28.446 N	127 49.065 W		131	16	29	14	Cindy Wright								
17 Quat2	ROS	ROS	US	EN	28-07-2023 16:05:43	28-07-2023 16:05:40	50 28.379 N	127 49.218 W		131	16	29	14	Cindy Wright								
18 Quat1-2	MOR	MOR	RE	RE	28-07-2023 17:22:56	28-07-2023 17:22:43	50 24.761 N	128 0.13 W	175					David Spear								
19 Quat1	ROS	ROS	N/A	BE	28-07-2023 18:14:53	28-07-2023 18:14:50	50 24.762 N	128 0.367 W	187					Cindy Wright	yes	no	yes					
19 Quat1	ROS	ROS	N/A	BO	28-07-2023 18:18:31	28-07-2023 18:18:28	50 24.738 N	128 0.388 W		185.5				Cindy Wright								
19 Quat1	ROS	ROS	N/A	EN	28-07-2023 18:22:03	28-07-2023 18:22:01	50 24.745 N	128 0.4 W						Cindy Wright								
20 Quat1-3	MOR	MOR	DE	DE	28-07-2023 18:44:32	28-07-2023 18:44:21	50 24.794 N	128 0.332 W	188					David Spear								
21 In transit	LOOP	LOOP	BE	BE	28-07-2023 21:01:16	28-07-2023 21:01:05	50 28.082 N	128 15.159 W	100		30	30		Cindy Wright	NA	NA						
22	DRF	DRF	DE	DE	28-07-2023 22:03:22	28-07-2023 22:03:09	50 33.886 N	128 33.225 W	190					Charles Hannah								
23 In transit	DRF	DRF	DE	DE	28-07-2023 23:51:20	28-07-2023 23:51:09	50 43.212 N	129 4.828 W	306					David Spear				sct1520				
24 Scott3-3	MOR	MOR	RE	RE	29-07-2023 01:22:21	29-07-2023 01:22:09	50 50.332 N	129 28.56 W	240					David Spear								
25 Scott3-4	MOR	MOR	DE	DE	29-07-2023 02:21:13	29-07-2023 02:21:01	50 50.468 N	129 28.81 W	241					David Spear								
26 Scott3	ROS	ROS	US	BE	29-07-2023 02:29:20	29-07-2023 02:29:14	50 50.504 N	129 28.886 W	239					Stephen Page	yes	no	yes	cast failed at 70m. Issue with computer. Swapped out to spare compuer				
27 Scott3	ROS	ROS	US	BE	29-07-2023 04:21:47	29-07-2023 04:23:15	50 50.509 N	129 28.883 W	238		31	46	16	Stephen Page	yes	no	yes					
27 Scott3	ROS	ROS	US	BO	29-07-2023 04:27:01	29-07-2023 04:28:30	50 50.514 N	129 28.886 W	238	237				Stephen Page								
27 Scott3	ROS	ROS	US	EN	29-07-2023 04:41:47	29-07-2023 04:43:15	50 50.505 N	129 28.891 W						Stephen Page				dp = 0.3				
28 CS01	ROS	ROS	US	BE	29-07-2023 06:50:23	29-07-2023 06:51:49	50 34.891 N	129 41.51 W	2102		47	69	23	Stephen Page	no	no	yes					
28 CS01	ROS	ROS	US	BO	29-07-2023 07:25:05	29-07-2023 07:26:34	50 34.874 N	129 41.544 W		2122	47	69	23	Stephen Page				lost communication with CTD at ~450m on upcast. Similar issue as earlier at Scott3, but for CTD port, not Pump port.				
28 CS01	ROS	ROS	US	EN	29-07-2023 08:28:55	29-07-2023 08:30:24	50 34.865 N	129 41.583 W		2122	47	69	23	Stephen Page								
29 CS01	NET	NET	BO	BO	29-07-2023 09:20:40	29-07-2023 09:20:30	50 34.859 N	129 41.54 W	2104	250				Stephen Page								
29 CS01	NET	NET	EN	EN	29-07-2023 09:27:04	29-07-2023 09:26:50	50 34.844 N	129 41.564 W		250				Stephen Page								

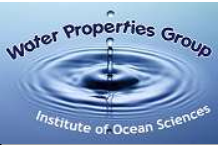
We had issues getting the TSG pressure valves pushing enough water. Flows to both Valve 1 and 2 were erratic and ever changing. On Wed July 27th, 11:00 ish, Lindsay noticed that a valve top of the debubble was wide open. He closed it down slightly and flow resumed normally. So, the first day or so of TSG will show weird flow ratings

E03-62 was hit and moved 2 miles to the north. The rosette cast does not reflect this and was done at the position for E03-63

TSG: around midnight on July 29th (PDT), the flow to the TSG started to go down. Notice it had no flow in V1 or V2 at 07:00 PDT. Played with valves and outflows, and then there was a spike in flow and flow resumed. We believe it to be a clog somewhere in the line. We do suspect though, there is an issue with the debubbler since the start of the cruise.

DAILY SCIENCE LOG

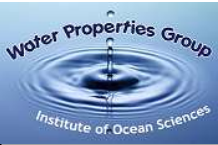
Ocean Sciences Division, Institute of Ocean Sciences



Cruise Number:			2023-069		Launch Daily Science Log		Print Daily Science Log Workbook												CTD/Rosette Status				
Vessel:			JP Tully																				
Event Number	Station Name	Cast Type	Firing Method	Time Code	Date Time (UTC) Computer ("dd-mm-yyyy hh:mm:ss")	Date Time (UTC) GPS ("dd-mm-yyyy hh:mm:ss")	Positional Information (DDD MM.MMM)		Sounder Depth (m)	Max Sampling Pressure	Sample Number		# of Bottles	Watch Keepers	Trans. Cleaned	Fluoromet er Cleaned	PAR Status	Comments					
							Latitude	Longitude			Start	End											
30	Scott2-7	MOR		RE	29-07-2023 14:14:22	29-07-2023 14:14:13	51 7.768 N	129 28.387 W	287					David Spear									
31	Scott2	ROS	N/A	BE	29-07-2023 14:54:02	29-07-2023 14:55:29	51 7.68 N	129 28.531 W	288					Cindy Wright	yes	no	no	db=0.2db		Issues due to ports on the original computer. Deck unit changed out for Scotts7. Changed out to SN0508			
31	Scott2	ROS	N/A	BO	29-07-2023 14:58:44	29-07-2023 15:00:12	51 7.682 N	129 28.492 W		286				Cindy Wright									
31	Scott2	ROS	N/A	EN	29-07-2023 15:03:31	29-07-2023 15:04:59	51 7.675 N	129 28.486 W						Cindy Wright									
32	Scott2-8	MOR		DE	29-07-2023 16:09:36	29-07-2023 16:09:27	51 7.687N	129 28.570 W						David Spear									
33		DRF		DE	29-07-2023 16:09:57	29-07-2023 16:03:48	51 7.596 N	129 28.736 W															
34	CI04	ROS	N/A	BE	29-07-2023 17:12:33	29-07-2023 17:13:59	51 13.177 N	129 16.06 W	287					Cindy Wright	yes	no	no						
34	CI04	ROS	N/A	BO	29-07-2023 17:17:43	29-07-2023 17:19:09	51 13.188 N	129 16.049 W		284				Cindy Wright									
34	CI04	ROS	N/A	EN	29-07-2023 17:22:38	29-07-2023 17:24:06	51 13.203 N	129 16.046 W						Cindy Wright									
35	CI04	NET		BE	29-07-2023 18:32:51	29-07-2023 18:32:39	51 19.185 N	129 3.142 W	260					Cindy Wright	NA	NA							
35	CI04	NET		BO	29-07-2023 18:43:03	29-07-2023 18:42:53	51 19.159 N	129 3.1 W		250				Cindy Wright									
35	CI04	NET		EN	29-07-2023 18:47:25	29-07-2023 18:47:15	51 19.162 N	129 3.117 W		250				Cindy Wright									
36	CI04	ROS	US	BE	29-07-2023 19:09:45	29-07-2023 19:11:10	51 19.15 N	129 3.057 W	260		70	84	15	Lucius Perreault	yes	no	no						
36	CI04	ROS	US	BO	29-07-2023 19:17:31	29-07-2023 19:18:58	51 19.142 N	129 3.066 W	260	257	70	84	15	Lucius Perreault									
36	CI04	ROS	US	EN	29-07-2023 19:37:48	29-07-2023 19:39:16	51 19.138 N	129 3.1 W		257	70	84	15	Lucius Perreault									
37	CI03b	ROS		BE	29-07-2023 20:57:00	29-07-2023 20:58:27	51 23.081 N	128 44.986 W						Lucius Perreault	yes	no							
37	CI03b	ROS		BO	29-07-2023 21:03:06	29-07-2023 21:04:32	51 23.067 N	128 45.002 W	226	223				Lucius Perreault									
38	In Transit	LOOP		BE	29-07-2023 21:58:11	29-07-2023 21:57:59	51 26.589 N	128 33.96 W	208		85	85	1	Cindy Wright	NA	NA							
39	CI02	ROS	N/A	BE	29-07-2023 22:22:33	29-07-2023 22:23:59	51 28.047 N	128 29.983 W	200					Cindy Wright	yes	no	no						
39	CI02	ROS	N/A	BO	29-07-2023 22:26:20	29-07-2023 22:27:48	51 28.046 N	128 29.971 W		196.5				Cindy Wright									
39	CI02	ROS	N/A	EN	29-07-2023 22:30:02	29-07-2023 22:31:28	51 28.045 N	128 29.966 W						Cindy Wright									
40	HAK1-7	MOR		RE	30-07-2023 00:33:15	30-07-2023 00:33:04	51 42.832 N	128 14.054 W	136					David Spear									
41	HAK1	ROS	N/A	BE	30-07-2023 01:32:01	30-07-2023 01:33:27	51 42.706 N	128 14.149 W	141					Stephen Page	yes	no	no						
41	HAK1	ROS	N/A	BO	30-07-2023 01:35:45	30-07-2023 01:37:11	51 42.706 N	128 14.148 W		138				Stephen Page									
41	HAK1	ROS	N/A	EN	30-07-2023 01:38:03	30-07-2023 01:39:29	51 42.709 N	128 14.14 W		138				Stephen Page				dp = 0.2					
42	HAK1	DRF		DE	30-07-2023 01:44:58	30-07-2023 01:46:25	51 42.543 N	128 14.232 W						Charles Hannah				SCT 1547					
43	CI01	NET		BE	30-07-2023 02:39:01	30-07-2023 02:38:49	51 35.727 N	128 18.172 W	156					Stephen Page	NA	NA							
43	CI01	NET		BO	30-07-2023 02:43:27	30-07-2023 02:43:15	51 35.721 N	128 18.195 W	156	146				Stephen Page									
43	CI01	NET		EN	30-07-2023 02:45:46	30-07-2023 02:45:34	51 35.717 N	128 18.196 W	156	146				Stephen Page									
44	CI01	ROS	US	BE	30-07-2023 03:08:02	30-07-2023 03:09:29	51 35.7 N	128 18.228 W	156		86	100	15	Stephen Page	yes	no	yes	PAR sensor back on for CI01					
44	CI01	ROS		BO	30-07-2023 03:11:08	30-07-2023 03:12:34	51 35.703 N	128 18.226 W		153				Stephen Page									
44	CI01	ROS		EN	30-07-2023 03:27:44	30-07-2023 03:29:10	51 35.708 N	128 18.19 W		153				Stephen Page									
																					DIC missed on previous cast. Sample numbers 9094, 9095, 101. Samples were originally mislabelled using 94 and 95 again when they were already used for the previous cast.		
45	CI01	ROS	US	BE	30-07-2023 04:02:13	30-07-2023 04:03:41	51 35.697 N	128 18.187 W	156	50	9094, 9095, 101		3	Stephen Page	yes	no	yes						
45	CI01	ROS		BO	30-07-2023 04:03:16	30-07-2023 04:04:41	51 35.697 N	128 18.187 W		50			3	Stephen Page									
45	CI01	ROS		EN	30-07-2023 04:06:44	30-07-2023 04:08:09	51 35.696 N	128 18.181 W		50			3	Stephen Page									
46	in transit	DRF		DE	30-07-2023 04:41:41	30-07-2023 04:41:29	51 38.384 N	128 24.47 W						Charles Hannah				SCT 1551					
47	in transit	DRF		DE	30-07-2023 05:18:53	30-07-2023 05:18:43	51 42.181 N	128 33.04 W						Charles Hannah				SCT 1545					
48	in transit	DRF		DE	30-07-2023 05:53:01	30-07-2023 05:52:49	51 45.289 N	128 40.078 W	79					Charles Hannah				SCT1526					
49	in transit	DRF		DE	30-07-2023 06:27:01	30-07-2023 06:26:50	51 48.697 N	128 47.783 W	75					Charles Hannah				SCT 1555					
50	MS02	ROS		BE	30-07-2023 08:24:20	30-07-2023 08:25:46	52 0.007 N	129 14.175 W	180					Charles Hannah	yes	no							
50	MS02	ROS		BO	30-07-2023 08:28:57	30-07-2023 08:30:23	52 0.003 N	129 14.157 W	180	177				Charles Hannah									
50	MS02	ROS		EN	30-07-2023 08:32:12	30-07-2023 08:33:37	52 0.004 N	129 14.158 W	180	177				Charles Hannah									
51	MT09	NET		BE	30-07-2023 12:33:46	30-07-2023 12:33:36	52 7.683 N	130 17.173 W	444					Stephen Page	NA	NA							
51	MT09	NET		BO	30-07-2023 12:39:34	30-07-2023 12:39:21	52 7.688 N	130 17.164 W	444	250				Stephen Page									
51	MT09	NET		EN	30-07-2023 12:44:17	30-07-2023 12:44:07	52 7.692 N	130 17.121 W		250				Stephen Page									

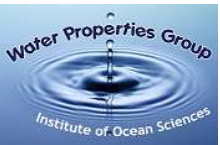
DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences



Cruise Number:			2023-069		Launch Daily Science Log		Print Daily Science Log Workbook												CTD/Rosette Status			
Vessel:			JP Tully																			
Event Number	Station Name	Cast Type	Firing Method	Time Code	Date Time (UTC) Computer ("dd-mm-yyyy hh:mm:ss")	Date Time (UTC) GPS ("dd-mm-yyyy hh:mm:ss")	Positional Information (DDD MM.MMM)		Sounder Depth (m)	Max Sampling Pressure	Sample Number		# of Bottles	Watch Keepers	Trans. Cleaned	Fluoromet er Cleaned	PAR Status	Comments				
							Latitude	Longitude			Start	End										
52	MT09	ROS	US	BE	30-07-2023 12:58:46	30-07-2023 13:00:11	52 7.689 N	130 17.131 W	444		102	119	18	Charles Hannah	yes	no	yes					
52	MT09	ROS	US	BO	30-07-2023 13:07:59	30-07-2023 13:09:25	52 7.68 N	130 17.139 W	444	442				Charles Hannah								
52	MT09	ROS	US	EN	30-07-2023 13:32:43	30-07-2023 13:34:08	52 7.696 N	130 17.126 W						Charles Hannah								
53	In Transit	LOOP		BE	30-07-2023 15:17:46	30-07-2023 15:17:34	52 13.386 N	130 42.511 W	179		120	120		Cindy Wright	NA	NA						
54	GH2	ROS	N/A	BE	30-07-2023 16:02:02	30-07-2023 16:03:29	52 15.613 N	130 51.97 W	184					Cindy Wright	yes	no	yes					
54	GH2	ROS	N/A	BO	30-07-2023 16:05:49	30-07-2023 16:06	52 15.62 N	130 51.96 W		180.8				Cindy Wright				timed out NMEA. GPS from seasave				
54	GH2	ROS	N/A	EN	30-07-2023 16:09:07	30-07-2023 16:10:33	52 15.632 N	130 51.975 W						Cindy Wright								
55	GH1	ROS	N/A	BE	30-07-2023 17:18:37	30-07-2023 17:20:04	52 23.79 N	130 57.965 W	121					Cindy Wright	yes	no	yes					
55	GH1	ROS	N/A	BO	30-07-2023 17:22:08	30-07-2023 17:23:33	52 23.804 N	130 57.976 W		117				Cindy Wright								
55	GH1	ROS	N/A	EN	30-07-2023 17:24:25	30-07-2023 17:25:50	52 23.821 N	130 57.987 W						Cindy Wright								
56	Juan1-5	MOR		DE	30-07-2023 19:29:22	30-07-2023 19:29:10	52 31.086 N	131 23.874 W	225					David Spear								
57	Juan3-1	MOR		RE	30-07-2023 20:57:24	30-07-2023 20:47:12	52 33.726N	131 26.550 W						David Spear								
58	Juan2-4	MOR		RE	30-07-2023 21:47:46	30-07-2023 21:47:34	52 31.144 N	131 25.516 W	223					David Spear				release time a bit late				
59	Juan2	ROS	US	BE	30-07-2023 21:58:11	30-07-2023 21:59:34	52 31.245 N	131 25.922 W	243		139	141	3	Cindy Wright	yes	no	yes					
59	Juan2	ROS	US	BO	30-07-2023 22:02:14	30-07-2023 22:03:40	52 31.269 N	131 25.963 W		224	139	141	3	Cindy Wright								
59	Juan2	ROS	US	EN	30-07-2023 22:12:16	30-07-2023 22:13:40	52 31.278 N	131 25.981 W			139	141	3	Cindy Wright								
60	JPS1	NET		BE	30-07-2023 23:31:36	30-07-2023 23:31:24	52 36.34 N	131 40.141 W	136					Cindy Wright	NA	NA						
60	JPS1	NET		BO	30-07-2023 23:36:12	30-07-2023 23:35:59	52 36.34 N	131 40.164 W		125				Cindy Wright								
61	JPS1	ROS	US	BE	30-07-2023 23:49:58	30-07-2023 23:51:23	52 36.353 N	131 40.222 W	131		150	162	13	David Spear	yes	no	yes					
61	JPS1	ROS	US	BO	30-07-2023 23:52:48	30-07-2023 23:54:12	52 36.351 N	131 40.224 W		128	150	162	13	David Spear								
61	JPS1	ROS	US	EN	31-07-2023 00:07:18	31-07-2023 00:08:42	52 36.35 N	131 40.214 W		128	150	162	13	David Spear								
62	JPS2	ROS		BE	31-07-2023 00:39:32	31-07-2023 00:40:57	52 34.961 N	131 37.306 W	234					Lucius Perreault	yes	no	yes					
62	JPS2	ROS		BO	31-07-2023 00:45:40	31-07-2023 00:47:07	52 34.961 N	131 37.361 W	243	246				Lucius Perreault								
62	JPS2	ROS		EN	31-07-2023 00:49:58	31-07-2023 00:51:25	52 34.961 N	131 37.355 W	241					Lucius Perreault								
63	JPS3	NET		BE	31-07-2023 01:36:23	31-07-2023 01:36:11	52 33.271 N	131 29.842 W	318					Cindy Wright	NA	NA						
63	JPS3	NET		BO	31-07-2023 01:45:32	31-07-2023 01:45:21	52 33.272 N	131 29.866 W		250				Cindy Wright								
63	JPS3	NET		EN	31-07-2023 01:49:46	31-07-2023 01:49:35	52 33.268 N	131 29.871 W		250				Cindy Wright								
64	JPS3	ROS	US	BE	31-07-2023 01:59:32	31-07-2023 02:00:58	52 33.264 N	131 29.875 W	325		163	174	12	Stephen Page	yes	no	yes					
64	JPS3	ROS	US	BO	31-07-2023 02:06:04	31-07-2023 02:07:29	52 33.264 N	131 29.868 W		322	163	174	12	Stephen Page								
64	JPS3	ROS	US	EN	31-07-2023 02:23:30	31-07-2023 02:24:54	52 33.252 N	131 29.857 W		322	163	174	12	Stephen Page								
65	JPS4	ROS	US	BE	31-07-2023 03:04:28	31-07-2023 03:05:54	52 31.121 N	131 23.559 W	357		121	138	18	Stephen Page	yes	no	yes					
65	JPS4	ROS	US	BE	31-07-2023 03:04:31	31-07-2023 03:05:58	52 31.121 N	131 23.559 W			121	138	18	Stephen Page	NA	NA	no					
65	JPS4	ROS	US	BO	31-07-2023 03:10:40	31-07-2023 03:12:04	52 31.118 N	131 23.56 W		361.3	121	138	18	Stephen Page								
65	JPS4	ROS	US	EN	31-07-2023 03:33:36	31-07-2023 03:35:03	52 31.11 N	131 23.595 W		361.3	121	138	18	Stephen Page				dp = 0.3				
66	JPS5	ROS		BE	31-07-2023 04:13:44	31-07-2023 04:15:09	52 31.4 N	131 18.738 W	246					Charles Hannah	yes	no						
66	JPS5	ROS		BO	31-07-2023 04:19:41	31-07-2023 04:21:06	52 31.403 N	131 18.739 W	246	243				Charles Hannah								
66	JPS5	ROS		EN	31-07-2023 04:24:47	31-07-2023 04:26:14	52 31.396 N	131 18.734 W		243				Charles Hannah								
67	JPS5	NET		BE	31-07-2023 04:36:00	31-07-2023 04:35:49	52 31.406 N	131 18.729 W	246					Stephen Page	NA	NA						
67	JPS5	NET		BO	31-07-2023 04:39:51	31-07-2023 04:39:39	52 31.395 N	131 18.708 W		235				Stephen Page								
67	JPS5	NET		EN	31-07-2023 04:43:39	31-07-2023 04:43:27	52 31.386 N	131 18.703 W						Stephen Page								
68	JPS6	ROS	US	BE	31-07-2023 05:26:07	31-07-2023 05:27:33	52 32.158 N	131 10.661 W	173					Charles Hannah	yes	no	yes					
68	JPS6	ROS		EN	31-07-2023 05:47:23	31-07-2023 05:48:49	52 32.119 N	131 10.632 W	173	171	175	187	13	Charles Hannah								
69	JPS7	NET		BE	31-07-2023 06:26:42	31-07-2023 06:26:32	52 33.949 N	131 5.916 W	134	124				Stephen Page	NA	NA						
69	JPS7	NET		BO	31-07-2023 06:29:33	31-07-2023 06:29:19	52 33.949 N	131 5.914 W	134	124				Stephen Page								
69	JPS7	NET		EN	31-07-2023 06:31:47	31-07-2023 06:31:34	52 33.941 N	131 5.906 W	134	124				Stephen Page								
70	JPS7	ROS		BE	31-07-2023 06:44:36	31-07-2023 06:46:01	52 33.926 N	131 5.875 W	134					Charles Hannah	yes	no	yes					
70	JPS7	ROS		BO	31-07-2023 06:48:03	31-07-2023 06:49:29	52 33.918 N	131 5.872 W	13	131				Charles Hannah								
70	JPS7	ROS		EN	31-07-2023 06:51:01	31-07-2023 06:52:27	52 33.918 N	131 5.872 W	134	131				Charles Hannah								
71	JPS7	DRF		DE	31-07-2023 06:55:24	31-07-2023 06:56:51	52 33.918 N	131 5.869 W	134					Charles Hannah				SCT 1578				

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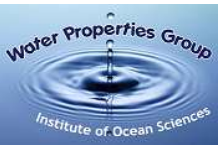
2023-069

Launch Daily Science Log

***Print Daily Science
Log WorkBook***

Vessel:			JP Tully		Science Log		Log Workbook							CTD/Rosette Status			Institute of Ocean Sciences		
Event Number	Station Name	Cast Type	Firing Method	Time Code	Date Time (UTC) Computer ("dd-mm-yyyy hh:mm:ss")	Date Time (UTC) GPS ("dd-mm-yyyy hh:mm:ss")	Positional Information (DDD MM.MMM)		Sounder Depth (m)	Max Sampling Pressure	Sample Number		# of Bottles	Watch Keepers	Trans. Cleaned	Fluorometer Cleaned	PAR Status	Comments	
							Latitude	Longitude			Start	End							
72	JPS8	ROS	N/A	BE	31-07-2023 07:51:53	31-07-2023 07:53:20	52 33.958 N	130 52.856 W	150	146				Stephen Page	yes	no	yes	dp = 0.2	
72	JPS8	ROS		BO	31-07-2023 07:54:49	31-07-2023 07:56:14	52 33.949 N	130 52.865 W							Stephen Page				
72	JPS8	ROS		EN	31-07-2023 07:57:27	31-07-2023 07:58:51	52 33.942 N	130 52.871 W							Stephen Page				
73	JPS8	DRF		DE	31-07-2023 08:07:36	31-07-2023 08:07:25	52 33.975 N	130 52.566 W	151					Charles Hannah					
74	In transit	LOOP		BE	31-07-2023 08:45:06	31-07-2023 08:44:56	52 29.421 N	130 48.536 W	144		188	188	1	Stephen Page	NA	NA			
75		DRF		DE	31-07-2023 10:02:43	31-07-2023 10:02:33	52 29.036 N	130 36.855 W						Stephen Page				SCT 1539	
76	JPS9	ROS	N/A	BE	31-07-2023 11:01:28	31-07-2023 11:02:54	52 33.929 N	130 26.038 W	180					Stephen Page	yes	no	yes		
76	JPS9	ROS	N/A	BO	31-07-2023 11:04:42	31-07-2023 11:06:07	52 33.919 N	130 26.029 W		177				Stephen Page					
76	JPS9	ROS	N/A	EN	31-07-2023 11:07:46	31-07-2023 11:09:11	52 33.914 N	130 26.019 W						Stephen Page				dp = 0.2	
77	JPS9	DRF		DE	31-07-2023 11:17:03	31-07-2023 11:16:49	52 34.257 N	130 25.934 W						Stephen Page				SCT 1529	
78		DRF		DE	31-07-2023 12:35:02	31-07-2023 12:34:49	52 47.775 N	130 24.639 W	139					Charles Hannah				sct 1516	
79	In transit	DRF		DE	31-07-2023 13:40:06	31-07-2023 13:39:56	52 59.087 N	130 23.684 W	160					Charles Hannah					
80	SRN1-6	MOR		RE	31-07-2023 14:31:08	31-07-2023 14:30:58	53 6.58 N	130 23.139 W	200					David Spear					
81	SRN1	ROS	US	BE	31-07-2023 15:36:19	31-07-2023 15:37:43	53 6.529 N	130 23.005 W	201			189	202	14	Cindy Wright	yes	no	yes	
81	SRN1	ROS	US	BO	31-07-2023 15:40:09	31-07-2023 15:41:32	53 6.534 N	130 23.024 W		198	189	202	14	Cindy Wright					
81	SRN1	ROS	US	EN	31-07-2023 15:56:58	31-07-2023 15:58:23	53 6.55 N	130 23.06 W		198	189	202	14	Cindy Wright					
82	SRN1-6	DRF		DE	31-07-2023 16:07:01	31-07-2023 16:06:48	53 6.644 N	130 23.059 W						Lucius Perreault					
83	HECS1	ROS	US	BE	31-07-2023 18:06:33	31-07-2023 18:07:59	53 23.541 N	130 45.588 W	181			203	216	14	Cindy Wright	yes	no	yes	
83	HECS1	ROS	US	BO	31-07-2023 18:09:59	31-07-2023 18:11:24	53 23.535 N	130 45.62 W		173.7	203	216	14	Cindy Wright					
83	HECS1	ROS	US	EN	31-07-2023 18:24:46	31-07-2023 18:26:09	53 23.596 N	130 45.619 W		173.7	203	216	14	Cindy Wright					
84	HECS3	ROS	N/A	BE	31-07-2023 20:27:11	31-07-2023 20:28:37	53 41.886 N	130 43.022 W	140					Cindy Wright	yes	no	yes	DP=0.2 db	
84	HECS3	ROS	N/A	BO	31-07-2023 20:29:30	31-07-2023 20:30:56	53 41.885 N	130 43.022 W		136.7				Cindy Wright					
84	HECS3	ROS	N/A	EN	31-07-2023 20:32:06	31-07-2023 20:33:32	53 41.882 N	130 43.023 W		136.7				Cindy Wright					
																		latitude seems to be missing from NMEA feed on seasave.	
85	HECS5	ROS	US	BE	31-07-2023 22:36:03	31-07-2023 22:37:29	53 56.228 N	131 0.33 W	89			217	227	11	Cindy Wright	yes	no	yes	Please see latitude on daily log
85	HECS5	ROS	US	BO	31-07-2023 22:38:25	31-07-2023 22:39:51	53 56.231 N	131 0.324 W		86	217	227	11	Cindy Wright					
85	HECS5	ROS	US	EN	31-07-2023 22:49:56	31-07-2023 22:51:22	53 56.242 N	131 0.312 W		86	217	227	11	Cindy Wright					
86	HECS7	ROS	N/A	BE	01-08-2023 01:09:01	01-08-2023 01:10:26	54 13.828 N	131 2.182 W	123					Chris Clarke	yes	yes	yes		
86	HECS7	ROS	N/A	BO	01-08-2023 01:13:23	01-08-2023 01:14:46	54 13.834 N	131 2.191 W	123	119				Chris Clarke					
86	HECS7	ROS	N/A	EN	01-08-2023 01:15:33	01-08-2023 01:16:56	54 13.837 N	131 2.188 W	123	119				Chris Clarke					
87	HECS7	DRF		DE	01-08-2023 01:27:09	01-08-2023 01:26:56	54 14.459 N	131 2.329 W	121					Charles Hannah				sct 1533	
88	HECS8	NET		BE	01-08-2023 03:06:02	01-08-2023 03:05:49	54 23.158 N	131 5.318 W	115	105				Stephen Page	NA	NA			
88	HECS8	NET		BO	01-08-2023 03:08:47	01-08-2023 03:08:34	54 23.167 N	131 5.31 W		105				Stephen Page					
88	HECS8	NET		EN	01-08-2023 03:10:33	01-08-2023 03:10:21	54 23.169 N	131 5.308 W		105				Stephen Page					
																		had to bring back onboard to check that bottles were ready.	
89	HECS8	ROS	US	BE	01-08-2023 03:29:14	01-08-2023 03:30:37	54 23.157 N	131 5.273 W	114			228	240	13	Charles Hannah	yes	no	yes	
89	HECS8	ROS		BO	01-08-2023 03:32:23	01-08-2023 03:33:50	54 23.167 N	131 5.249 W	114	111				Charles Hannah					
89	HECS8	ROS		EN	01-08-2023 03:54:00	01-08-2023 03:54	54 23.167 N	131 5.249 W	114	111				Charles Hannah				lost it. Did the EN log by hand	
90		DRF		DE	01-08-2023 04:26:47	01-08-2023 04:26:34	54 23.88 N	131 12.971 W						Stephen Page				SCT 1534	
91	DIX1	NET		BE	01-08-2023 05:42:52	01-08-2023 05:42:41	54 25.732 N	131 30.903 W	269	259				Stephen Page	NA	NA			
91	DIX1	NET		BO	01-08-2023 05:48:07	01-08-2023 05:47:56	54 25.736 N	131 30.912 W		259				Stephen Page					
91	DIX1	NET		EN	01-08-2023 05:52:27	01-08-2023 05:52:15	54 25.732 N	131 30.907 W		259				Stephen Page					
92	DIX1	ROS	US	BE	01-08-2023 06:05:11	01-08-2023 06:06:37	54 25.719 N	131 30.9 W	268					Charles Hannah	yes	no	yes		
92	DIX1	ROS	US	BO	01-08-2023 06:13:35	01-08-2023 06:14:58	54 25.739 N	131 30.864 W	269	268	241	255	15	Charles Hannah					
92	DIX1	ROS	US	EN	01-08-2023 06:34:57	01-08-2023 06:36:20	54 25.744 N	131 30.808 W	270					Charles Hannah					
93	DIX1	DRF		DE	01-08-2023 06:45:19	01-08-2023 06:45:07	54 25.732 N	131 30.924 W	270					Stephen Page				SCT 1521	
94	DIX2	ROS	US	BE	01-08-2023 08:26:28	01-08-2023 08:27:53	54 25.442 N	131 56.612 W	279			256	271	16	Stephen Page	yes	no	yes	
94	DIX2	ROS	US	BO	01-08-2023 08:31:15	01-08-2023 08:32:41	54 25.447 N	131 56.6 W		276	256	271	16	Stephen Page					

Ocean Sciences Division, Institute of Ocean Sciences



2023-069

**Launch Daily
Science Log**

***Print Daily Science
Log WorkBook***

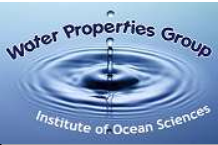
Vessel: JP Tully

CTD/Rosette Status

Event Number	Station Name	Cast Type	Firing Method	Time Code	Date Time (UTC) Computer ("dd-mm-yyyy hh:mm:ss")	Date Time (UTC) GPS ("dd-mm-yyyy hh:mm:ss")	Positional Information (DDD MM.MMM)		Sounder Depth (m)	Max Sampling Pressure	Sample Number		# of Bottles	Watch Keepers	Trans. Cleaned	Fluoromet er Cleaned	PAR Status	Comments
							Latitude	Longitude			Start	End						
94 DIX2	ROS	US		EN	01-08-2023 08:49:24	01-08-2023 08:50:50	54 25.42 N	131 56.616 W		276	256	271	16	Stephen Page				
95 DIX2	DRF			DE	01-08-2023 08:57:57	01-08-2023 08:57:44	54 25.495 N	131 57.015 W						Stephen Page				SCT 1536
96 DIX3	NET			BE	01-08-2023 10:16:22	01-08-2023 10:16:11	54 28.682 N	132 18.137 W	365	355				Stephen Page	NA	NA		
96 DIX3	NET			BO	01-08-2023 10:24:11	01-08-2023 10:23:56	54 28.692 N	132 18.112 W		355				Stephen Page				
96 DIX3	NET			EN	01-08-2023 10:30:44	01-08-2023 10:30:33	54 28.7 N	132 18.111 W		355				Stephen Page				
97 DIX3	ROS	US		BE	01-08-2023 10:45:08	01-08-2023 10:46:31	54 28.712 N	132 18.047 W	364		272	288	17	Charles Hannah	yes	no	yes	
97 DIX3	ROS	US		BO	01-08-2023 10:52:10	01-08-2023 10:53:36	54 28.694 N	132 18.111 W	364		272	288	17	Charles Hannah				
97 DIX3	ROS	US		EN	01-08-2023 11:18:41	01-08-2023 11:20:05	54 28.69 N	132 18.253 W	363		272	288	17	Charles Hannah				
98	DRF			DE	01-08-2023 11:43:43	01-08-2023 11:43:31	54 25.712 N	132 17.35 W						Charles Hannah				SCT 1531
99 DIX7	ROS	N/A		BE	01-08-2023 12:22:48	01-08-2023 12:24:11	54 19.873 N	132 16.12 W	225					Stephen Page	yes	no	yes	
																		strong current. drifted shallower during downcast by ~5m
99 DIX7	ROS	N/A		BO	01-08-2023 12:26:53	01-08-2023 12:28:18	54 19.863 N	132 16.166 W		216				Stephen Page				
99 DIX7	ROS	N/A		EN	01-08-2023 12:30:29	01-08-2023 12:31:52	54 19.867 N	132 16.199 W		216				Stephen Page				
																		NE of original deployment position
100 Dixon2-1	MOR			RE	01-08-2023 14:27:12	01-08-2023 14:26:57	54 16.803 N	131 58.325 W	204					David Spear				
101 Dixon2-1	ROS	N/A		BE	01-08-2023 14:53:51	01-08-2023 14:55:15	54 16.9 N	131 58.098 W	213					Cindy Wright	yes	no	yes	
101 Dixon2-1	ROS	N/A		BO	01-08-2023 14:59:06	01-08-2023 15:00:31	54 16.91 N	131 58.051 W		210				Cindy Wright				
101 Dixon2-1	ROS	N/A		EN	01-08-2023 15:03:05	01-08-2023 15:04:29	54 16.913 N	131 58.025 W						Cindy Wright				
102 Dixon3-1	MOR			DE	01-08-2023 17:51:39	01-08-2023 17:51:26	54 26.3 N	131 23.012 W	260					David Spear				
103 Dixon3-1	ROS	N/A		BE	01-08-2023 18:03:28	01-08-2023 18:04:52	54 26.31 N	131 23.273 W	267					Cindy Wright	yes	no	yes	
103 Dixon3-1	ROS	N/A		BO	01-08-2023 18:08:40	01-08-2023 18:10:04	54 26.308 N	131 23.222 W		262.5				Cindy Wright				
103 Dixon3-1	ROS	N/A		EN	01-08-2023 18:13:30	01-08-2023 18:14:52	54 26.317 N	131 23.134 W						Cindy Wright				
104 Dixon4-1	MOR			DE	01-08-2023 18:30:45	01-08-2023 18:30:31	54 26.993 N	131 21.909 W	233					David Spear				
105 CH14	ROS	N/A		BE	01-08-2023 20:46:29	01-08-2023 20:47:54	54 20.448 N	130 49.651 W	136					Cindy Wright	yes	no	yes	db=0.1db
105 CH14	ROS	N/A		BO	01-08-2023 20:50:43	01-08-2023 20:52:09	54 20.436 N	130 49.644 W		133				Cindy Wright				
105 CH14	ROS	N/A		EN	01-08-2023 20:53:27	01-08-2023 20:54:52	54 20.435 N	130 49.641 W		133				Cindy Wright				
106 Chat2-4	MOR			DE	01-08-2023 22:04:32	01-08-2023 22:04:21	54 15.82 N	130 46.881 W						David Spear				
107 Chat2-4	ROS	N/A		BE	01-08-2023 22:11:04	01-08-2023 22:12:28	54 15.817 N	130 46.884 W	198					Cindy Wright	yes	no	yes	
																		looking at historical chatham sound data, it does seem like noisy fluor signal is common.
107 Chat2-4	ROS	N/A		BO	01-08-2023 22:15:09	01-08-2023 22:16:35	54 15.826 N	130 46.895 W		195				Cindy Wright				
107 Chat2-4	ROS	N/A		EN	01-08-2023 22:18:21	01-08-2023 22:19:44	54 15.829 N	130 46.905 W						Cindy Wright				
108 Chat4-1	MOR			DE	01-08-2023 22:42:51	01-08-2023 22:42:38	54 15.28 N	130 46.006 W	188					David Spear				
109 Chat2-4	MOR			RE	02-08-2023 00:48:27	02-08-2023 00:48:14	54 31.62 N	130 32.167 W	153					David Spear				
110 Chat3	ROS	US		BE	02-08-2023 01:24:30	02-08-2023 01:26:03	54 31.593 N	130 32.517 W	162		289	291	3	Lucius Perreault	yes	no	yes	altimeter not working (1st report of this?)
110 Chat3	ROS	US		BO	02-08-2023 01:31:02	02-08-2023 01:32:36	54 31.577 N	130 32.531 W	161	157	289	291	3	Lucius Perreault				
110 Chat3	ROS	US		EN	02-08-2023 01:40:04	02-08-2023 01:41:36	54 31.555 N	130 32.559 W	161	157	289	291	3	Lucius Perreault				
111 CH03	ROS	US		BE	02-08-2023 03:28:20	02-08-2023 03:29:53	54 41.351 N	130 55.57 W	562		292	304	13	Stephen Page	yes	no	yes	
111 CH03	ROS	US		BO	02-08-2023 03:43:24	02-08-2023 03:44:56	54 41.372 N	130 55.603 W		556	292	304	13	Stephen Page				altimeter didn't kick in at all
111 CH03	ROS	US		EN	02-08-2023 04:10:10	02-08-2023 04:11:43	54 41.401 N	130 55.632 W		556	292	304	13	Stephen Page				
112 CH03	LOOP			BE	02-08-2023 04:13:10	02-08-2023 04:14:44	54 41.402 N	130 55.635 W			305	305	1	Tamara Fraser	NA	NA		
113 CH02	ROS	N/A		BE	02-08-2023 05:32:32	02-08-2023 05:34:03	54 39.771 N	130 38.256 W	320					Charles Hannah	yes	no	yes	
																		altimeter has stopped working. Showed 99.9 all the way down. Stopped at 10-15 m above bottom.
113 CH02	ROS	N/A		BO	02-08-2023 05:36:18	02-08-2023 05:37:52	54 39.773 N	130 38.24 W	315	305				Charles Hannah				
113 CH02	ROS	N/A		EN	02-08-2023 05:42:27	02-08-2023 05:44:01	54 39.778 N	130 38.213 W	319	305				Charles Hannah				
114 P11	ROS	N/A		BE	02-08-2023 06:37:55	02-08-2023 06:39:28	54 40.579 N	130 28.255 W	546					Charles Hannah	yes	no	yes	
114 P11	ROS	N/A		BO	02-08-2023 06:49:52	02-08-2023 06:51:25	54 40.599 N	130 28.27 W	549	540				Charles Hannah				

DAILY SCIENCE LOG

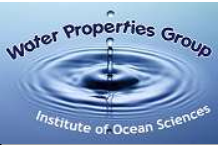
Ocean Sciences Division, Institute of Ocean Sciences



Cruise Number:			2023-069		Launch Daily Science Log		Print Daily Science Log Workbook												CTD/Rosette Status			
Vessel:			JP Tully																			
Event Number	Station Name	Cast Type	Firing Method	Time Code	Date Time (UTC) Computer ("dd-mm-yyyy hh:mm:ss")	Date Time (UTC) GPS ("dd-mm-yyyy hh:mm:ss")	Positional Information (DDD MM.MMM)		Sounder Depth (m)	Max Sampling Pressure	Sample Number		# of Bottles	Watch Keepers	Trans. Cleaned	Fluoromet er Cleaned	PAR Status	Comments				
							Latitude	Longitude			Start	End										
114	PI1	ROS	N/A	EN	02-08-2023 06:59:22	02-08-2023 07:00:52	54 40.618 N	130 28.282 W	556	540				Charles Hannah								
115	PI2	ROS	N/A	BE	02-08-2023 08:07:54	02-08-2023 08:09:26	54 43.814 N	130 24.399 W	551					Charles Hannah	no	no	yes	altimeter still not working				
115	PI2	ROS	N/A	BO	02-08-2023 08:18:24	02-08-2023 08:19:56	54 43.808 N	130 24.408 W	551	540				Charles Hannah								
115	PI2	ROS	N/A	EN	02-08-2023 08:28:20	02-08-2023 08:29:54	54 43.798 N	130 24.42 W	550	540				Charles Hannah								
116	PI3	ROS	US	BE	02-08-2023 09:05:22	02-08-2023 09:06:54	54 46.653 N	130 19.845 W	495		306	323	18	Stephen Page	yes	no	yes	no altimeter				
116	PI3	ROS	US	BO	02-08-2023 09:13:39	02-08-2023 09:15:11	54 46.649 N	130 19.856 W		475	306	323	18	Stephen Page								
116	PI3	ROS	US	EN	02-08-2023 09:37:28	02-08-2023 09:39:01	54 46.644 N	130 19.862 W		475	306	323	18	Stephen Page								
117	PI5	ROS	N/A	BE	02-08-2023 10:41:16	02-08-2023 10:42:50	54 52.832 N	130 11.06 W	428					Charles Hannah	yes	no	yes	no altimeter				
117	PI5	ROS	N/A	BO	02-08-2023 10:49:24	02-08-2023 10:50:58	54 52.831 N	130 11.065 W	427	415				Charles Hannah								
117	PI5	ROS	N/A	EN	02-08-2023 10:56:53	02-08-2023 10:58:26	54 52.823 N	130 11.084 W	426	415				Charles Hannah								
118	PI6	ROS	N/A	BE	02-08-2023 11:35:18	02-08-2023 11:36:52	54 56.042 N	130 6.984 W	342					Stephen Page	yes	no	yes	no altimeter				
118	PI6	ROS	N/A	BO	02-08-2023 11:41:05	02-08-2023 11:42:36	54 56.02 N	130 7.01 W		330				Stephen Page								
118	PI6	ROS	N/A	EN	02-08-2023 11:47:08	02-08-2023 11:48:39	54 56.025 N	130 7.021 W						Stephen Page								
119	Chat3-4	MOR		RE		02-08-2023 00:47:00	54 31.625 N	130 32.517	160					David Spear				event missed being logged at time of recovery				
121	PO5	ROS	US	BE	02-08-2023 12:27:24	02-08-2023 12:28:58	55 0.164 N	130 8.478 W	300		324	336	13	Stephen Page	yes	no	yes					
121	PO5	ROS	US	BO	02-08-2023 12:32:25	02-08-2023 12:33:56	55 0.155 N	130 8.481 W		290	324	336	13	Stephen Page								
121	PO5	ROS	US	EN	02-08-2023 12:48:50	02-08-2023 12:50:22	55 0.111 N	130 8.466 W		290	324	336	13	Stephen Page								
122	PC06	ROS	N/A	BE	02-08-2023 13:50:01	02-08-2023 13:51:34	55 6.706 N	130 9.582 W	207					Cindy Wright	yes	no	yes	Swapped out altimeter to SN79487				
122	PC06	ROS	N/A	BO	02-08-2023 13:55:12	02-08-2023 13:56:44	55 6.658 N	130 9.615 W		202				Cindy Wright								
122	PC06	ROS	N/A	EN	02-08-2023 13:59:02	02-08-2023 14:00:35	55 6.637 N	130 9.636 W						Cindy Wright								
123	PC06	NET		BE	02-08-2023 14:17:19	02-08-2023 14:17:06	55 6.743 N	130 9.542 W	206					Cindy Wright	NA	NA						
123	PC06	NET		BO	02-08-2023 14:25:23	02-08-2023 14:25:10	55 6.726 N	130 9.575 W						Cindy Wright								
123	PC06	NET		EN	02-08-2023 14:28:58	02-08-2023 14:28:45	55 6.728 N	130 9.576 W		195				Cindy Wright								
124	WC5	ROS	US	BE	02-08-2023 20:34:13	02-08-2023 20:35:46	54 18.466 N	129 59.82 W	122		348	360	13	Cindy Wright	yes	no	yes	vent on bottle 8 leaking - replaced				
124	WC5	ROS	US	BO	02-08-2023 20:37:51	02-08-2023 20:39:21	54 18.483 N	129 59.812 W		118	348	360	13	Cindy Wright								
124	WC5	ROS	US	EN	02-08-2023 20:50:24	02-08-2023 20:51:57	54 18.525 N	129 59.809 W		118	348	360	13	Cindy Wright								
125	WC4	ROS	N/A	BE	02-08-2023 21:46:57	02-08-2023 21:48:27	54 24.436 N	130 7.091 W	259					Cindy Wright	yes	no	yes					
125	WC4	ROS	N/A	BO	02-08-2023 21:53:19	02-08-2023 21:54:49	54 24.425 N	130 7.063 W		258				Cindy Wright								
125	WC4	ROS	N/A	EN	02-08-2023 21:58:15	02-08-2023 21:59:48	54 24.422 N	130 7.059 W						Cindy Wright								
126	QU1	ROS	N/A	BE	02-08-2023 22:26:20	02-08-2023 22:27:53	54 26.457 N	130 4.459 W	125					Cindy Wright	yes	no	yes					
126	QU1	ROS	N/A	BO	02-08-2023 22:29:46	02-08-2023 22:31:16	54 26.456 N	130 4.472 W		121.5				Cindy Wright								
126	QU1	ROS	N/A	EN	02-08-2023 22:31:58	02-08-2023 22:33:29	54 26.435 N	130 4.471 W						Cindy Wright								
127	In transit	LOOP		BE	02-08-2023 22:54:37	02-08-2023 22:54:25	54 24.545 N	130 6.92 W	162		361	361		Cindy Wright	NA	NA						
128	WC3	ROS	N/A	BE	02-08-2023 23:24:45	02-08-2023 23:26:18	54 27.498 N	130 11.461 W	313						yes	no	yes					
128	WC3	ROS	N/A	BO	02-08-2023 23:31:03	02-08-2023 23:32:36	54 27.503 N	130 11.454 W		309												
128	WC3	ROS	N/A	EN	02-08-2023 23:36:31	02-08-2023 23:38:01	54 27.502 N	130 11.444 W														
129	WC2	ROS	N/A	BE	03-08-2023 00:37:18	03-08-2023 00:38:50	54 32.893 N	130 18.018 W	342					Cindy Wright	yes	no	yes	dp=0.2/0.3db				
129	WC2	ROS	N/A	BO	03-08-2023 00:44:37	03-08-2023 00:46:08	54 32.874 N	130 18.015 W		338				Cindy Wright								
129	WC2	ROS	N/A	EN	03-08-2023 00:50:08	03-08-2023 00:51:41	54 32.862 N	130 18.023 W						Cindy Wright								
130	WC1	ROS	US	BE	03-08-2023 01:53:26	03-08-2023 01:54:57	54 37.453 N	130 23.482 W	66		337	347	11	David Spear	yes	no	yes					
130	WC1	ROS	US	BO	03-08-2023 01:55:16	03-08-2023 01:56:49	54 37.462 N	130 23.499 W		61	337	347	11	David Spear								
131	CH05	ROS	N/A	BE	03-08-2023 03:22:04	03-08-2023 03:23:37	54 33.722 N	130 37.559 W	142					Charles Hannah	yes	no	yes					
131	CH05	ROS	N/A	BO	03-08-2023 03:24:47	03-08-2023 03:26:19	54 33.718 N	130 37.543 W		138				Charles Hannah								
131	CH05	ROS	N/A	EN	03-08-2023 03:28:01	03-08-2023 03:29:34	54 33.714 N	130 37.538 W		138				Charles Hannah								
132	CH10	ROS	N/A	BE	03-08-2023 04:26:37	03-08-2023 04:28:08	54 26.809 N	130 39.236 W	82					Charles Hannah	yes	no	yes					
132	CH10	ROS	N/A	BO	03-08-2023 04:28:25	03-08-2023 04:29:58	54 26.814 N	130 39.234 W		79				Charles Hannah								
132	CH10	ROS	N/A	EN	03-08-2023 04:30:21	03-08-2023 04:31:53	54 26.815 N	130 39.234 W		79				Charles Hannah								

DAILY SCIENCE LOG

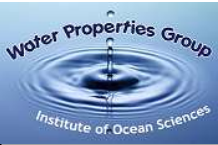
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Cruise Number:			2023-069		Launch Daily Science Log		Print Daily Science Log Workbook												CTD/Rosette Status			
Vessel:			JP Tully																Trans. Cleaned	Fluoromet er Cleaned	PAR Status	
Event Number	Station Name	Cast Type	Firing Method	Time Code	Date Time (UTC) Computer ("dd-mm-yyyy hh:mm:ss")	Date Time (UTC) GPS ("dd-mm-yyyy hh:mm:ss")	Positional Information (DDD MM.MMM)		Sounder Depth (m)	Max Sampling Pressure	Sample Number		# of Bottles	Watch Keepers								
							Latitude	Longitude			Start	End										
133	CH16	ROS	US	BE	03-08-2023 05:28:48	03-08-2023 05:30:21	54 19.833 N	130 37.384 W	213		362	370	9	Stephen Page	yes	no	yes					
133	CH16	ROS	US	BO	03-08-2023 05:32:30	03-08-2023 05:34:03	54 19.835 N	130 37.379 W		214	362	370	9	Stephen Page								
133	CH16	ROS	US	EN	03-08-2023 05:48:19	03-08-2023 05:49:51	54 19.853 N	130 37.373 W		214	362	370	9	Stephen Page								
134	CH21	ROS	N/A	BE	03-08-2023 07:02:16	03-08-2023 07:03:48	54 11.815 N	130 39.184 W	123					Charles Hannah	yes	no	yes					
134	CH21	ROS	N/A	BO	03-08-2023 07:04:50	03-08-2023 07:06:21	54 11.812 N	130 39.177 W	123	120				Charles Hannah								
134	CH21	ROS	N/A	EN	03-08-2023 07:07:37	03-08-2023 07:09:10	54 11.798 N	130 39.164 W		120				Charles Hannah								
135	UC2-1	MOR		DE	03-08-2023 16:24:21	03-08-2023 16:24:07	53 24.257 N	128 54.003 W	401					David Spear								
136	UC2	ROS	N/A	BE	03-08-2023 16:30:31	03-08-2023 16:32:03	53 24.324 N	128 53.999 W	401					Cindy Wright	yes	no	yes	DP=0.2db				
136	UC2	ROS	N/A	BO	03-08-2023 16:38:47	03-08-2023 16:40:17	53 24.325 N	128 54.014 W		399				Cindy Wright								
136	UC2	ROS	N/A	EN	03-08-2023 16:45:44	03-08-2023 16:47:17	53 24.326 N	128 54.022 W						Cindy Wright								
137	UC1-1	MOR		DE	03-08-2023 17:42:51	03-08-2023 17:42:37	53 29.198 N	128 58.684 W	106					David Spear								
138	UC1	ROS	N/A	BE	03-08-2023 17:51:00	03-08-2023 17:52:33	53 29.162 N	128 58.475 W	108					Cindy Wright	yes	no	yes					
138	UC1	ROS	N/A	BO	03-08-2023 17:54:06	03-08-2023 17:55:36	53 29.188 N	128 58.48 W		104				Cindy Wright								
138	UC1	ROS	N/A	EN	03-08-2023 17:56:21	03-08-2023 17:57:52	53 29.202 N	128 58.479 W						Cindy Wright								
139	GA04	ROS	N/A	BE	04-08-2023 05:12:57	04-08-2023 05:14:26	53 32.741 N	128 53.15 W	203					Stephen Page	yes	no	yes					
139	GA04	ROS	US	BO	04-08-2023 05:17:25	04-08-2023 05:18:55	53 32.74 N	128 53.158 W		200.8	371	371	1	Stephen Page								
139	GA04	ROS	US	EN	04-08-2023 05:22:12	04-08-2023 05:23:42	53 32.743 N	128 53.157 W						Stephen Page				dp= 0.3 very low surface salinity (2). very high Fluor at 7 m (18) I may have called it CH44 in the hex file surface salinity = 1 max fluor about 2. very murky water.				
140	GC44	ROS	N/A	BE	04-08-2023 08:51:38	04-08-2023 08:53:08	53 25.947 N	128 27.018 W	408					Charles Hannah	yes	no	yes					
140	GC44	ROS	N/A	BO	04-08-2023 09:00:52	04-08-2023 09:02:23	53 25.958 N	128 26.983 W	408	406				Charles Hannah								
140	GC44	ROS	N/A	EN	04-08-2023 09:08:32	04-08-2023 09:10:01	53 25.96 N	128 26.987 W		406				Charles Hannah								
141	GC60	ROS	N/A	BE	04-08-2023 11:02:48	04-08-2023 11:04:17	53 25.71 N	128 5.408 W	268					Charles Hannah	yes	no	yes					
141	GC60	ROS	N/A	BO	04-08-2023 11:08:45	04-08-2023 11:10:14	53 25.7 N	128 5.421 W	267	264				Charles Hannah								
141	GC60	ROS	N/A	EN	04-08-2023 11:13:53	04-08-2023 11:15:25	53 25.691 N	128 5.425 W		264				Charles Hannah								
142	GC68	ROS	US	BE	04-08-2023 12:05:26	04-08-2023 12:06:58	53 20.655 N	127 59.618 W	22		372	373	2	Stephen Page	yes	no	yes	TSG file needs to note the impact of the Tully thrusters on the TSG samples when on station.				
142	GC68	ROS	US	BO	04-08-2023 12:09:30	04-08-2023 12:11:03	53 20.655 N	127 59.606 W		224				Stephen Page				In Gardner Canal with a very shallow surface layer things get mied and the TSG sainity goes up (a lot) and the temperature goes down. When there is a strong chl-a max at 7 m even that ges mixed into surface.				
142	GC68	ROS	US	EN	04-08-2023 12:15:56	04-08-2023 12:17:27	53 20.67 N	127 59.599 W						Stephen Page				Use of TSG data will have to exclude when on station. Please this info to meta data for TSG				
143	GC74	ROS	N/A	BE	04-08-2023 13:57:05	04-08-2023 13:58:34	53 15.791 N	127 55.415 W	134					Charles Hannah	yes	no	yes					
143	GC74	ROS	N/A	BO	04-08-2023 14:00:35	04-08-2023 14:02:04	53 15.79 N	127 55.407 W	133	132				Charles Hannah								
143	GC74	ROS	N/A	EN	04-08-2023 14:03:26	04-08-2023 14:04:56	53 15.791 N	127 55.4 W		132				Charles Hannah								
144	GC51	ROS	US	BE	04-08-2023 16:21:02	04-08-2023 16:22:34	53 28.291 N	128 18.838 W	491.5		374	388	15	Cindy Wright	yes	no	yes	DP=0.2/0.3db				
144	GC51	ROS	US	BO	04-08-2023 16:30:59	04-08-2023 16:32:28	53 28.266 N	128 18.864 W		490	374	388	15	Cindy Wright								
144	GC51	ROS	US	EN	04-08-2023 16:57:00	04-08-2023 16:58:31	53 28.365 N	128 18.995 W		490	374	388	15	Cindy Wright								

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences



Cruise Number:			2023-069		Launch Daily Science Log		Print Daily Science Log Workbook												CTD/Rosette Status			
Vessel:			JP Tully																			
Event Number	Station Name	Cast Type	Firing Method	Time Code	Date Time (UTC) Computer ("dd-mm-yyyy hh:mm:ss")	Date Time (UTC) GPS ("dd-mm-yyyy hh:mm:ss")	Positional Information (DDD MM.MMM)		Sounder Depth (m)	Max Sampling Pressure	Sample Number		# of Bottles	Watch Keepers	Trans. Cleaned	Fluoromet er Cleaned	PAR Status	Comments				
							Latitude	Longitude			Start	End										
145	GC38	ROS	N/A	BE	04-08-2023 18:28:22	04-08-2023 18:29:54	53 26.994 N	128 35.936 W	236					Cindy Wright	yes	no	yes	Put original altimeter back onto the rosette. Not sure if con file updated the altimeter did not work. small blip on the fluorometer and decided to stop cast a 226m Sounder would indicate a good 10m from bottom				
145	GC38	ROS	N/A	BO	04-08-2023 18:33:42	04-08-2023 18:35:12	53 26.998 N	128 35.957 W		226				Cindy Wright								
145	GC38	ROS	N/A	EN	04-08-2023 18:37:56	04-08-2023 18:39:27	53 27.007 N	128 35.944 W		226				Cindy Wright				Put back on the spare altimeter inserted rosette sheet/sample ID to sample 8m chlorophyll max with Lugols				
146	GC31	ROS	N/A	BE	04-08-2023 19:30:54	04-08-2023 19:32:25	53 31.464 N	128 43.504 W	207					Cindy Wright	yes	no	yes					
146	GC31	ROS	N/A	BO	04-08-2023 19:36:32	04-08-2023 19:38:04	53 31.47 N	128 43.5 W		203.5				Cindy Wright				DP=0.2db NOTE: as soaking, gained about 10m of water depth to 150m				
146	GC31	ROS	N/A	EN	04-08-2023 19:42:18	04-08-2023 19:43:49	53 31.464 N	128 43.468 W						Cindy Wright								
147	GC28	ROS	N/A	BE	04-08-2023 20:14:20	04-08-2023 20:15:51	53 32.156 N	128 46.198 W	197					Cindy Wright	yes	no	yes	had him slow down between 10m-surf to see if could pin point that fluor max depth Station seems shallower than historical. Historically around 445m, now around 415m				
147	GC28	ROS	N/A	BO	04-08-2023 20:18:59	04-08-2023 20:20:30	53 32.148 N	128 46.189 W		194				Cindy Wright								
147	GC28	ROS	N/A	EN	04-08-2023 20:22:54	04-08-2023 20:24:22	53 32.146 N	128 46.186 W						Cindy Wright								
148	VP39	ROS	N/A	BE	04-08-2023 21:58:57	04-08-2023 22:00:29	53 30.415 N	129 3.826 W	146					Cindy Wright	yes	no	yes	dp = 0.3				
148	VP39	ROS	N/A	BO	04-08-2023 22:03:46	04-08-2023 22:05:15	53 30.396 N	129 3.827 W		151				Cindy Wright								
148	VP39	ROS	N/A	EN	04-08-2023 22:06:13	04-08-2023 22:07:41	53 30.396 N	129 3.82 W						Cindy Wright								
149	VP43	ROS	N/A	BE	04-08-2023 22:57:26	04-08-2023 22:58:58	53 24.904 N	129 6.914 W	318					Cindy Wright	yes	no	yes					
149	VP43	ROS	N/A	BO	04-08-2023 23:02:55	04-08-2023 23:04:26	53 24.896 N	129 6.9 W		320				Cindy Wright								
149	VP43	ROS	N/A	EN	04-08-2023 23:08:55	04-08-2023 23:10:26	53 24.894 N	129 6.879 W						Cindy Wright								
150	DO1	ROS	US	BE	04-08-2023 23:50:41	04-08-2023 23:52:12	53 22.263 N	129 11.5 W	415		407	424	18	Cindy Wright	yes	no	yes					
150	DO1	ROS	US	BO	04-08-2023 23:58:34	05-08-2023 00:00:05	53 22.262 N	129 11.491 W		416	407	424	18	Cindy Wright								
150	DO1	ROS	US	EN	05-08-2023 00:22:22	05-08-2023 00:23:51	53 22.251 N	129 11.554 W		416	407	424	18	Cindy Wright								
151	WC43	ROS	N/A	BE	05-08-2023 01:07:54	05-08-2023 01:09:25	53 21.053 N	129 16.499 W	513					Charles Hannah	yes	no	yes	dp = 0.3				
151	WC43	ROS	N/A	BO	05-08-2023 01:18:00	05-08-2023 01:19:31	53 21.047 N	129 16.561 W	515	514				Charles Hannah								
151	WC43	ROS	N/A	EN	05-08-2023 01:27:34	05-08-2023 01:29:06	53 21.083 N	129 16.656 W		514				Charles Hannah								
152	SC61	ROS	N/A	BE	05-08-2023 02:53:55	05-08-2023 02:55:26	53 11.928 N	129 25.086 W	504					Stephen Page	yes	no	yes					
152	SC61	ROS	N/A	BO	05-08-2023 03:03:03	05-08-2023 03:04:34	53 11.926 N	129 25.082 W		504				Stephen Page								
152	SC61	ROS	N/A	EN	05-08-2023 03:10:45	05-08-2023 03:12:17	53 11.925 N	129 25.084 W		504				Stephen Page								
153	SC69	NET		BE	05-08-2023 04:13:43	05-08-2023 04:13:31	53 4.785 N	129 19.534 W	683	672				Stephen Page	NA	NA						
153	SC69	NET		BO	05-08-2023 04:27:05	05-08-2023 04:26:52	53 4.796 N	129 19.576 W		672				Stephen Page								
153	SC69	NET		EN	05-08-2023 04:37:24	05-08-2023 04:37:10	53 4.804 N	129 19.632 W	683	672				Stephen Page								
154	SC69	ROS	N/A	BE	05-08-2023 04:50:10	05-08-2023 04:51:41	53 4.808 N	129 19.667 W	683					Charles Hannah	yes	no	yes					
154	SC69	ROS	US	BO	05-08-2023 05:03:52	05-08-2023 05:05:24	53 4.802 N	129 19.618 W	683	684	390	406	17	Charles Hannah								
154	SC69	ROS	US	EN	05-08-2023 05:38:01	05-08-2023 05:39:31	53 4.806 N	129 19.564 W		684	390	406	17	Charles Hannah								
155	SC74	ROS	N/A	BE	05-08-2023 06:27:06	05-08-2023 06:28:35	53 0.734 N	129 15.721 W	375					Stephen Page	no	no	yes					
155	SC74	ROS	N/A	BO	05-08-2023 06:33:42	05-08-2023 06:35:11	53 0.754 N	129 15.702 W		373.7				Stephen Page								
155	SC74	ROS	N/A	EN	05-08-2023 06:39:41	05-08-2023 06:41:11	53 0.764 N	129 15.702 W						Stephen Page								
156	SC80	ROS	N/A	BE	05-08-2023 07:36:54	05-08-2023 07:38:25	52 54.781 N	129 15.988 W	238					Charles Hannah	yes	no	yes					
156	SC80	ROS	N/A	BO	05-08-2023 07:42:49	05-08-2023 07:44:18	52 54.761 N	129 15.974 W	240	237				Charles Hannah								
156	SC80	ROS	N/A	EN	05-08-2023 07:47:29	05-08-2023 07:48:56	52 54.739 N	129 15.969 W		237				Charles Hannah								

Ocean Sciences Division, Institute of Ocean Sciences



2023-069

Launch Daily Science Log

***Print Daily Science
Log WorkBook***

Vessel:			JP Tully		Science Log		Log Workbook								CTD/Rosette Status			Institute of Ocean Sciences
Event Number	Station Name	Cast Type	Firing Method	Time Code	Date Time (UTC) Computer ("dd-mm-yyyy hh:mm:ss")	Date Time (UTC) GPS ("dd-mm-yyyy hh:mm:ss")	Positional Information (DDD MM.MMM)		Sounder Depth (m)	Max Sampling Pressure	Sample Number		# of Bottles	Watch Keepers	Trans. Cleaned	Fluoromet er Cleaned	PAR Status	Comments
							Latitude	Longitude			Start	End						
157	CS84	ROS	N/A	BE	05-08-2023 08:32:36	05-08-2023 08:34:07	52 54.022 N	129 24.076 W	254					Charles Hannah	yes	no	yes	ALL STOP at 47 m to deal with inboard lead. then continued down
157	CS84	ROS	N/A	BO	05-08-2023 08:39:58	05-08-2023 08:41:29	52 54.031 N	129 24.074 W	255	253				Charles Hannah				a second all stop at 25 m on the upcast. Serious inboard lead.
157	CS84	ROS	N/A	EN	05-08-2023 08:46:34	05-08-2023 08:48:05	52 54.025 N	129 24.079 W		253				Charles Hannah				
158	CAM1	ROS	N/A	BE	05-08-2023 09:55:17	05-08-2023 09:56:49	52 46.889 N	129 30.012 W	430					Stephen Page	yes	no	yes	
158	CAM1	ROS	N/A	BO	05-08-2023 10:02:43	05-08-2023 10:04:12	52 46.884 N	129 30 W		428.8				Stephen Page				
158	CAM1	ROS	N/A	EN	05-08-2023 10:10:17	05-08-2023 10:11:46	52 46.876 N	129 29.991 W						Stephen Page				
159	HEC2-1	MOR		DE	05-08-2023 14:20:38	05-08-2023 14:20:24	52 44.607 N	129 46.007 W	148					David Spear				
160	HEC2	ROS	N/A	BE	05-08-2023 14:39:41	05-08-2023 14:41:11	52 44.514 N	129 46.229 W	161					Cindy Wright	yes	no	yes	
160	HEC2	ROS	N/A	BO	05-08-2023 14:43:38	05-08-2023 14:45:07	52 44.5 N	129 46.208 W		159				Cindy Wright				
160	HEC2	ROS	N/A	EN	05-08-2023 14:46:36	05-08-2023 14:48:06	52 44.503 N	129 46.228 W		159				Cindy Wright				
161	In transit	DRF		DE	05-08-2023 15:47:44	05-08-2023 15:47:32	52 35.909 N	129 44.395 W	154					David Spear				SN1542
162	In transit	DRF		DE	05-08-2023 16:46:50	05-08-2023 16:46:35	52 27.396 N	129 43.333 W	195					David Spear				SN1527
163	SRC1	MOR		DE	05-08-2023 18:26:14	05-08-2023 18:26:01	52 14.993 N	129 41.006 W	210	210				Lindsay Mazzei				
164	SRC1	NET		BE	05-08-2023 18:40:02	05-08-2023 18:39:48	52 14.838 N	129 41.001 W						Cindy Wright	NA	NA		
164	SRC1	NET		BO	05-08-2023 18:46:48	05-08-2023 18:46:33	52 14.84 N	129 41.016 W						Cindy Wright				
164	SRC1	NET		BO	05-08-2023 18:46:53	05-08-2023 18:46:41	52 14.84 N	129 41.017 W		201				Cindy Wright				
164	SRC1	NET		EN	05-08-2023 18:50:15	05-08-2023 18:50:02	52 14.841 N	129 41.036 W		201				Cindy Wright				
165	SRC1	ROS	N/A	BE	05-08-2023 19:01:05	05-08-2023 19:02:36	52 14.848 N	129 41.079 W	211					David Spear	yes	no	yes	
165	SRC1	ROS	US	BO	05-08-2023 19:05:10	05-08-2023 19:06:41	52 14.843 N	129 41.053 W		208	425	438	14	David Spear				
165	SRC1	ROS	US	EN	05-08-2023 19:22:55	05-08-2023 19:24:26	52 14.852 N	129 41.036 W		208	425	438	14	David Spear				SN1541
166	SRC1	DRF		DE	05-08-2023 19:28:49	05-08-2023 19:28:36	52 14.844 N	129 41.05 W	211					David Spear				SN????
167	In transit	DRF		DE	05-08-2023 20:49:23	05-08-2023 20:49:11	52 5.361 N	129 46.239 W	112					David Spear				SN1541
168	MS03	ROS	N/A	BE	05-08-2023 22:49:40	05-08-2023 22:51:10	51 48.828 N	129 41.253 W	301.5					Cindy Wright	yes	no	yes	
168	MS03	ROS	N/A	BO	05-08-2023 22:56:06	05-08-2023 22:57:36	51 48.838 N	129 41.215 W		299.8				Cindy Wright				
168	MS03	ROS	N/A	EN	05-08-2023 23:01:27	05-08-2023 23:02:56	51 48.828 N	129 41.207 W						Cindy Wright				
169	In transit	LOOP		BE	05-08-2023 23:11:29	05-08-2023 23:11:16	51 48.813 N	129 41.2 W	300					Cindy Wright	NA	NA		
170	MS03	DRF		DE	05-08-2023 23:14:07	05-08-2023 23:13:53	51 48.674 N	129 40.803 W	299					David Spear				SN1525
171	In transit	DRF		DE	06-08-2023 00:53:34	06-08-2023 00:53:22	51 37.5 N	129 17.563 W	60									SN1538
172	CI03b	ROS	N/A	BE	06-08-2023 03:23:54	06-08-2023 03:25:22	51 23.008 N	128 45.07 W	225					Stephen Page	yes	no	yes	
172	CI03b	ROS	N/A	BO	06-08-2023 03:28:20	06-08-2023 03:29:48	51 23.004 N	128 45.063 W		227				Stephen Page				
172	CI03b	ROS	N/A	EN	06-08-2023 03:32:30	06-08-2023 03:34:01	51 23.012 N	128 45.101 W		227				Stephen Page				rosette touched the mud :(
173	CI03b	DRF		DE	06-08-2023 03:41:55	06-08-2023 03:41:41	51 22.99 N	128 45.054 W	225					Charles Hannah				SCT 1549
174	In transit	DRF		DE	06-08-2023 04:26:02	06-08-2023 04:25:50	51 18.303 N	128 37.294 W	178					Charles Hannah				SCT 1519
175	CS09	ROS	N/A	BE	06-08-2023 05:30:11	06-08-2023 05:31:39	51 12.505 N	128 28.1 W	194					Charles Hannah	yes	no	yes	
175	CS09	ROS	N/A	BO	06-08-2023 05:35:31	06-08-2023 05:37:02	51 12.505 N	128 28.121 W	193	190				Charles Hannah				
175	CS09	ROS	N/A	EN	06-08-2023 05:39:44	06-08-2023 05:41:14	51 12.505 N	128 28.124 W		190				Charles Hannah				
176	In transit	DRF		DE	06-08-2023 05:52:19	06-08-2023 05:52:04	51 12.301 N	128 27.382 W						Charles Hannah				
177	CPEI	NET		BE	06-08-2023 09:00:42	06-08-2023 09:00:27	50 59.964 N	127 49.972 W	147	137				Charles Hannah	NA	NA		
177	CPEI	NET		BO	06-08-2023 09:04:00	06-08-2023 09:03:47	50 59.987 N	127 49.968 W	147	137				Charles Hannah				
177	CPEI	NET		EN	06-08-2023 09:06:40	06-08-2023 09:06:26	50 59.988 N	127 49.982 W	146	137				Charles Hannah				
178	CPEI	ROS	N/A	BE	06-08-2023 09:23:35	06-08-2023 09:25:04	50 59.998 N	127 49.997 W	143					Charles Hannah	yes	no	yes	surface DO was 4 ml/l seems very low. But everything else seems fine. All stop at 124 m on upcast
178	CPEI	ROS	N/A	BO	06-08-2023 09:27:43	06-08-2023 09:29:12	51 0.015 N	127 49.987 W	142	141				Charles Hannah				

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Cruise Number:

Vessel:

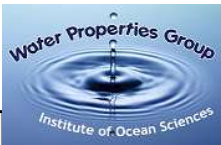
2023-069

JP Tully

Launch Daily Science Log

Print Daily Science Log WorkBook

CTD/Rosette Status



Event Number	Station Name	Cast Type	Firing Method	Time Code	Date Time (UTC) Computer ("dd-mm-yyyy hh:mm:ss")	Date Time (UTC) GPS ("dd-mm-yyyy hh:mm:ss")	Positional Information (DDD MM.MMM)		Sounder Depth (m)	Max Sampling Pressure	Sample Number		# of Bottles	Watch Keepers	Trans. Cleaned	Fluorometer Cleaned	PAR Status	Comments
							Latitude	Longitude			Start	End						
178	CPEI	ROS	N/A	EN	06-08-2023 09:32:32	06-08-2023 09:34:02	51 0.011 N	127 49.982 W		141				Charles Hannah				DO reproduced on upcast. Maybe 4 is normal here.
179	CPEI	DRF		DE	06-08-2023 09:41:40	06-08-2023 09:41:26	51 0.01 N	127 49.908 W	143					Charles Hannah				SCT 1532, 1535, 1548
180	In Transit	LOOP		BE	06-08-2023 21:29:41	06-08-2023 21:29:29	50 44.399 N	127 13.654 W	208		440	440	1	Cindy Wright	NA	NA		