DAILY SCIENCE LOG BOOK

MISSION NUMBER 2015-02

DATE: From: AUG 18/15 To: SEPT 14/15

VESSEL: PICTOR

PROJECT(S): HAKE

Water Properties Group
Fisheries and Oceans Canada
Institute of Ocean Sciences
Ocean Sciences Division
North Saanich, BC, Canada

WaterProperties.ca

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month AUG **Year** 2015 **Vessel** PICKER **Cruise ID** 2015-02

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
01	ZOOP60	21	15:12	BE	CTD	/	48 ° 47.188	125 ° 46.996	54	45	-	/	CR	☐☐	
			15:13	BO			48 ° 47.201	125 ° 47.005			-			☐☐	
			15:14	EN			48 ° 47.218	125 ° 47.020			-			☐☐	
02	ZOOP60	21	15:22	BE	NET	—	48 ° 47.170	125 ° 47.00	55	45	-		CR	☐☐	x lag / lon for bongo - not recorded
			15:24	BO			° .	° .			-			☐☐	
			15:25	EN			° .	° .			-			☐☐	
03	ZOOP150	21	17:41	BE	CTD	/	48 ° 47.150	126 ° 13.290	145	135	-	/	CR	☐☐	no longer too rough
			17:44	BO			48 ° 47.154	126 ° 13.276			-			☐☐	
			17:46	EN			48 ° 47.154	126 ° 13.205			-			☐☐	
04	ZOOP300	21	19:21	BE	CTD	/	48 ° 47.023	126 ° 30.382	292	282	-	/	CR	☐☐	
			19:27	BO			48 ° 46.955	126 ° 30.400			-			☐☐	
			19:33	EN			48 ° 46.903	126 ° 30.468			-			☐☐	
05	ZOOP300	21	19:36	BE	NET	—	48 ° 46.882	126 ° 30.550	292	100	-	/	CR	☐☐	
			19:40	BO			° .	° .			-			☐☐	
			19:42	EN			° .	° .			-			☐☐	
06	ZOOP500	21	20:15	BE	CTD	/	48 ° 47.120	126 ° 34.378	429	419	-	/	CR	☐☐	
			20:23	BO			48 ° 47.120	126 ° 34.396			-			☐☐	
			20:31	EN			48 ° 47.078	126 ° 34.447			-			☐☐	
07	ZOOP500	21	20:34	BE			48 ° 47.05	126 ° 34.4x	429	100	-	/	CR	☐☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set
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DRF = Drifter
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US = Up / Stop (default)
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CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month August **Year** 2015 **Vessel** W.E. RICKER **Cruise ID** 2015-02

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
07	ZOOP1500	21	20:37	BO	NET	/	° .	° .			-			☐☐	
			20:40	EN			° .	° .			-			☐☐	
08	ZOOP1000	21	21:44	BE	CTD	/	48 ° 47 . 058	126 ° 42 . 096	1042	1080	-	/	CR	☐☐	
			22:01	BO			48 ° 47 . 045	126 ° 42 . 143			-			☐☐	
			22:14	EN			48 ° 47 . 057	126 ° 42 . 246			-			☐☐	
09	ZOOP1000	21	22:27	BE	NET	/	48 ° 47 . 060	126 ° 42 . 220	1092	1000	-	/	CR	☐☐	
			22:30	BO			° .	° .			-			☐☐	
			22:32	EN			° .	° .			-			☐☐	
10	ZOOP1500	22	00:14	BE	CTD	/	48 ° 47 . 045	126 ° 56 . 363	1582	1000	-	/	CR	☐☐	
			00:34	BO			48 ° 46 . 987	126 ° 56 . 148			-		CR	☐☐	
			00:54	EN			48 ° 47 . 010	126 ° 56 . 096			-		CR	☐☐	
11	ZOOP1500	22	01:56	BE	NET	/	48 ° 47 . 050	126 ° 56 . 098			-	/	CR	☐☐	
			02:00	BO			° .	° .			-			☐☐	
			02:03	EN			° .	° .			-			☐☐	
12	LB12	23	07:35	BE	CTD	/	48 ° 12 . 988	125 ° 51 . 793	495	485	-	/	CR	☐☐	
			07:44	BO			48 ° 13 . 009	125 ° 51 . 827			-			☐☐	
			07:53	EN			48 ° 12 . 996	125 ° 51 . 850			-			☐☐	
13	LB12	23	08:06	BE	NET	/	48 ° 13 . 020	125 ° 51 . 890			-	/	CR	☐☐	
			08:16	BO			° .	° .			-			☐☐	

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Month August **Year** 2015 **Vessel** W.E. RICKER **Cruise ID** 2015-02

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13	LB12	23	08:25	EN	NET	/	° .	° .	495	250	-	/	CR	☐☐	
14	LB08	23	10:39	BE	CTD	/	48° 25.306	125° 28.733	149	139	-	/	CR	☐☐	
			10:42	BO			48° 25.310	125° 28.745			-			☐☐	
			10:44	EN			48° 25.315	125° 28.744			-			☐☐	
15	LB08	23	10:51	BE	NET	/	48° 25.330	125° 28.860	140	130	-	/	CR	☐☐	
			10:56	BO			° .	° .			-			☐☐	
			11:01	EN			° .	° .			-			☐☐	
16	LC06	23	15:00	BE	CTD	/	48° 36.509	125° 54.343	87	77	-	/	CR	☐☐	
			15:01	BO			48° 36.512	125° 54.340			-			☐☐	
			15:03	EN			48° 36.512	125° 54.330			-			☐☐	
17	LC06	23	15:09	BE	NET	/	48° 36.550	125° 54.370	87	77	-	/	CR	☐☐	
			15:12	BO			° .	° .			-			☐☐	
			15:16	EN			° .	° .			-			☐☐	
18	LD08	24	07:47	BE	CTD		48° 39.130	126° 23.246	767	757	-	/	CR	☐☐	angled on the way down
			08:06	BO			48° 39.050	126° 23.314			-			☐☐	
			08:19	EN			48° 39.974	126° 23.392			-			☐☐	
19	LD08	24	08:20	BE	NET		48° 38.973	126° 23.408			-	/	CR	☐☐	Angle at bottom on way up.
			08:35	BO			° .	° .			-			☐☐	My watch is off by a few minutes (1 min diff. but CTD
			08:40	EN			° .	° .			-			☐☐	Bongo.

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Month Aug **Year** 2015 **Vessel** W.E. Ricker **Cruise ID** 2015-02

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
20	LD02	24	18:28	BE	NET	/	48°58.168	125°17.017	44	34	-		CR	☐ ☐	
			18:29	BO			° .	° .			-			☐ ☐	
			18:30	EN			° .	° .			-			☐ ☐	
21	LD02	24	18:41	BE	CTD	/	48°58.103	125°17.034	44	34	-		CR	☐ ☐	
			18:43	BO			48°58.096	125°17.056			-			☐ ☐	
			18:44	EN			48°58.096	125°17.056			-			☐ ☐	
22	LG06	25	07:23	BE	CTD	/	49°03.437	127°01.126	950	940	-	/	CR	☐ ☐	Varied depth; reading jumped b/w
			07:40	BO			49°03.241	127°01.055			-			☐ ☐	10-20m b/t soundings 940
			07:57	EN			49°03.102	127°01.054			-			☐ ☐	to be safe.
23	LG06	25	08:04	BE	NET	/	49°02.936	127°00.941	950	250	-	/	CR	☐ ☐	bongo hung-up on doors on
			08:14	BO			° .	° .			-			☐ ☐	the way up Should affect [illegible]
			08:19	EN			° .	° .			-			☐ ☐	
24	LG02	25	10:49	BE	CTD	/	49°18.731	126°38.072	93	83	-	/	CR	☐ ☐	
			10:51	BO			49°18.745	126°38.063			-			☐ ☐	
			10:52	EN			49°18.761	126°38.071			-			☐ ☐	
25	LG02	25	10:59	BE	NET	/	49°18.840	126°38.046	94	84	-	/	CR	☐ ☐	
			11:03	BO			° .	° .			-			☐ ☐	
			11:05	EN			° .	° .			-			☐ ☐	
26	LBP7	26	07:35	BE		/	49°52.460	128°11.178	2195	1000	-	/	CR	☐ ☐	

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Month AUG | **Year** 2015 | **Vessel** W.E. RICKER | **Cruise ID** 2015-02

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
26	LBP7	26	07:53	BO	CTD	/	49 °52.339	128 °11.020	2195	1000	-	/	CR	☐☐	
			08:09	EN			49 °52.327	128 °10.844			-			☐☐	
27	LBP7	26	08:21	BE	NET	/	49 °52.336	128 °10.684	2195	250	-	/	CR	☐☐	
			08:31	BO			° .	° .			-			☐☐	
			08:36	EN			49 °52.403	128 °10.571			-			☐☐	
28	LBP3	26	10:29	BE	CTD	/	50 °03.161	127 °55.264	162	152	-	/	CR	☐☐	
			10:32	BO			50 °03.166	127 °55.290			-			☐☐	
			10:35	EN			50 °03.169	127 °55.301			-			☐☐	
29	LBP3	26	10:41	BE	NET	/	50 °03.161	127 °55.265	162	152	-	/	CR	☐☐	
			10:47	BO			° .	° .			-			☐☐	
			10:50	EN			50 °03.154	127 °55.502			-			☐☐	
30	ZOOPSCC-69	26	20:21	BE	CTD		50 °27.068	128 °40.280	1524	1000	-	/	CR	☐☐	
			20:40	BO			50 °27.181	128 °40.182			-			☐☐	
			20:59	EN			50 °27.246	128 °40.123			-			☐☐	
31	ZOOPSCC-68	26	21:05	BE	NET		50 °27.430	128 °39.960	1524	250	-	/	CR	☐☐	
			21:14	BO			° .	° .			-			☐☐	
			21:20	EN			° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	

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Month August **Year** 2015 **Vessel** W.E. Ricker **Cruise ID** 2015-02

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
32	LOOP1000-69	26	21:39	BE	CTD	—	50 °27.064	128 °39.313	995	985	-	—		☐☐	
			21:59	BO			50 °27.094	128 °39.101			-			☐☐	
			22:17	EN			50 °27.084	128 °39.002			-			☐☐	
33	LOOP1000-69	26	22:23	BE	NET	—	50 °27.090	128 °39.000	995	100	-	—	CR	☐☐	
			22:26	BO			° .	° .			-			☐☐	
			22:29	EN			° .	° .			-			☐☐	
34	LOOP500-69	26	23:32	BE	CTD	—	50 °27.082	128 °32.168	386	375	-	—		☐☐	
			23:39	BO			50 °27.992	128 °32.069			-			☐☐	
			23:44	EN			50 °27.964	128 °32.048			-			☐☐	
35	LOOP500-69	26	23:50	BE	NET	—	50 °27.028	128 °32.069	386	100.	-	—	CR	☐☐	
			23:53	BO			° .	° .			-			☐☐	
			23:57	EN			° .	° .			-			☐☐	
36	LOOP300-69	27	00:16	BE	CTD	—	50 °27.070	128 °30.882	210	200	-	—	CR	☐☐	
			00:20	BO			50 °27.054	128 °30.860			-			☐☐	
			00:24	EN			50 °27.042	128 °30.846			-			☐☐	
37	LOOP200-69	27	00:28	BE	NET	—	50 °27.070	128 °30.860	210	100	-			☐☐	
			00:31	BO			° .	° .			-			☐☐	
			00:34	EN			° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	

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38	200PSO-69	27	01:54	BE	CTD	—	50 °27.040	128°17.401	145	135	-		CR	☐☐	
			01:56	BO			50 °27.032	128°17.384			-			☐☐	
			01:59	EN			50 °27.023	128°17.384			-			☐☐	
39	200PSO-65	27	02:05	BE	NET	—	50 °27.040	128°17.401	145	100	-		CR	☐☐	
			02:09	BO			° .	° .			-			☐☐	
			02:11	EN			° .	° .			-			☐☐	
40	200PSO-69	27	02:55	BE	CTD	—	50 °27.062	128°09.490	67	55	-			☐☐	
			02:57	BO			50 °27.072	128°09.490			-			☐☐	
			02:58	EN			50 °27.082	128°09.492			-			☐☐	
41	200PSO-69	27	03:07	BE	NET	—	50 °27.072	128°09.490	67	55	-			☐☐	
			03:11	BO			° .	° .			-			☐☐	
			03:15	EN			° .	° .			-			☐☐	
42	CS06	28	02:09	BE	CTD	—	51 °00.011	128 °49.907	60	50	-	—	CR	☐☐	
			02:11	BO			51 °00.024	128 °49.867			-			☐☐	
			02:12	EN			51 °00.041	128 °49.837			-			☐☐	
43	CS06	28	02:19	BE	NET	—	51 °00.092	128 °49.784			-	—	CR	☐☐	
			02:21	BO			° .	° .			-			☐☐	
			02:22	EN			° .	° .			-			☐☐	
44	CS10	29	01:33	BE	CTD	—	51 °16.474	128 °19.960	73	63	-	—	CR	☐☐	

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Month AUG / SEPT	Year 2015	Vessel W.E. RICKER	Cruise ID 2015-02

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44	CS10	29	01:35	BO	CTD	/	51°16.474	128°19.940	73	63	-	/	CR	☐ ☐	
			01:36	EN			51°16.468	128°19.909			-			☐ ☐	
45	CS10	29	01:47	BE	NET	/	51°16.490	128°19.730	73	63	-	/	CR	☐ ☐	*143 Jellyfish excluded from
			01:49	BO			° .	° .			-			☐ ☐	formalin sample.
			01:50	EN			° .	° .			-			☐ ☐	
46	DT08	03	22:24	BE	CTD	/	54°28.576	132°18.996	360	350	-	/	CR	☐ ☐	*In seasave as 1019DT08 *
			22:30	BO			54°28.594	132°18.847			-			☐ ☐	
			22:37	EN			54°28.637	132°18.728			-			☐ ☐	
47	DT08	03	22:50	BE	NET	/	54°28.518	132°18.900			-	/	CR	☐ ☐	- fouled [illegible] [illegible]
			22:58	BO			° .	° .			-			☐ ☐	for ~ 2mins
			22:05	EN			54°28.631	132°18.283			-	/	CR	☐ ☐	
48	DE03	04	02:00	BE			54°09.346	132°12.580	360	250	-	/	CR	☐ ☐	
			02:01	BO			54°09.358	132°12.620			-			☐ ☐	
			02:02	EN			54°09.364	132°12.643			-			☐ ☐	
49	DE03	04	02:10	BE			54°09.353	132°12.643	60	50	-	/	CR	☐ ☐	
			02:12	BO			° .	° .			-			☐ ☐	
			02:14	EN			54°09.391	132°12.667			-			☐ ☐	
50	DE04	04	08:16	BE	CTD		54°07.939	132°27.726	50	45	-	/	AN	☐ ☐	- point discrepancy on station ~800m
			08:17	BO			°07.939	°27.726			-			☐ ☐	

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DRF = Drifter
____ = ____________

Bottle Firing Method:
US = Up / Stop (default)
UN = Up / No stop
DN = Down / No stop

Time Code:
BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast
DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: ______________________________

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Ocean Sciences Division, Institute of Ocean Sciences

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Month AUG/SEPT **Year** 2015 **Vessel** W.E. RICKER **Cruise ID** 2015-02

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
50	DE04	04	08:18	EN	CTD		54 °07.940	132°27.697	50	46	-			☐☐	
51	DE04	04	08:27	BE	NET		54 °07.921	132°27.628	50	45	-			☐☐	Flowmeter 12468 d 2
			08:29	BO			° .	° .			-			☐☐	
			08:30	EN			° .	° .			-			☐☐	
52	DE05	04	09:58	BE	CTD		54 °10.572	132°45.721	60	50	-			☐☐	
			09:59	BO			54 °10.573	132°45.734			-			☐☐	
			09:59	EN			54 °10.577	132°45.734			-			☐☐	
53	DE05	04	10:06	BE	NET		54 °10.448	132°45.821	60	50	-			☐☐	
			10:08	BO			° .	° .			-			☐☐	
			10:09	EN			° .	° .			-			☐☐	
54	DE06	04	11:08	BE	CTD		54°13.838	132°54.476	162	150	-			☐☐	
			11:10	BO			54°13.852	132°54.528			-			☐☐	
			11:14	EN			54°13.840	132°54.506			-			☐☐	
55	DE06	04	11:21	BE	NET		54°13.851	132°54.643	162	150	-			☐☐	
			11:27	BO			° .	° .			-			☐☐	
			11:30	EN			° .	° .			-			☐☐	
56	FI13	05	02:24	BE	CTD		54 °35.164	135 °10.133	2690	1000	-	—	CR	☐☐	
			02:45	BO			54 °35.218	135 °09.912			-			☐☐	
			03:04	EN			54 °35.239	135 °09.690			-			☐☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set
LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
____ = _____

Bottle Firing Method:
US = Up / Stop (default)
UN = Up / No stop
DN = Down / No stop

Time Code:
BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast
DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

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DAILY SCIENCE LOG

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Month | **Year** | **Vessel** | **Cruise ID** | Page _____ of _____

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
57	FI13	05	03:10	BE	NET	/	54°35.256	135°09.34	2690	250	-	/	CR	☐☐	
			03:20	BO			° .	° .			-			☐☐	
			03:26	EN			° .	° .			-			☐☐	
58	FI12	05	04:30	BE	NET	/	54°36.680	134°53.980	2628	250	-	/	CR	☐☐	* large wire angles
			04:39	BO			° .	° .			-			☐☐	
			04:46	EN			° .	° .			-			☐☐	
59	FI12	05	5:00	BE	CTD	/	54°36.636	134°53.894	2628	1000	-	/	CR	☐☐	
			5:21	BO			54°36.691	134°53.794			-			☐☐	
			05:39	EN			54°36.780	134°53.090			-			☐☐	
60	FI11	05	07:49	BE	CTD		54°38.362	134°38.178	2350	1000	-	/	AN	☐☐	
			08:07	BO			54°38.470	134°37.877			-			☐☐	
			08:25	EN			54°38.557	134°37.630			-			☐☐	
61	FI10	05	09:46	BE	CTD		54°40.032	134°21.474	2280	1000	-	/	AN	☐☐	
			10:05	BO			54°40.270	134°21.192			-			☐☐	
			10:24	EN			54°40.505	134°21.192			-			☐☐	
62	FI09	05	11:47	BE	CTD		54°41.578	134°05.260	220	210	-	/	AN	☐☐	
			11:51	BO			54°41.616	134°05.141			-			☐☐	
			11:55	EN			54°41.656	134°05.033			-			☐☐	
63	FI07	05	13:09	BE	CTD		54°43.141	133°49.882	220	210	-	/	AN	☐☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set
LOOP = Sea Water Loop
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DRF = Drifter
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Bottle Firing Method:
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Time Code:
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Notes: _____

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

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A 2015-02 HAIDA Sept 5, 2015

r observations

Event #	Station Name	Day	Time (UTC)	Time Code	Event Type	Latitude	Longitude	Bottom Depth	Max Pressure	Watch Keeper	Comments
63	F107	05	1313	BO	CTD	54°43.214	133°49.960	220	210	AN	
			1317	EN		54°43.228	133°49.915				
64	F102	05	1623	BE	CTD	54°46.600	133° 11.217	202	140	AN	
			1627	BO		54 46.628	133 11.224				
			1630	EN		54 46.640	133 11.202				
65	QCI03	06	2028	BE	CTD	53 27.056	133 00.020	215	205	CR	
			2032	BO		53 27.059	133 00.016				
			2035	EN		53 27.064	133 00.002				
66	QCI03	06	2041	BE	NET	53 27.166	133 00.083	215	265	CR	
			2050	BO							
			2055	EN							
67	QCI01	06	2221	BE	CTD	53 26.995	133 16.246	1550	1000	CR	
			2240	BO		53 26.876	133 16.105				
			2258	EN		53 26.792	133 15.993				
68	QCI01	06	2307	BE	NET	53 26.701	133 16.037	1550	250	CR	
			2316	BO							
			2321	EN		53 26.694	133 16.113				
69	QCI02	07	0417	BE	NET	53 07.02	133 02.06	1254	1000	CR	

Event #	Station Name	Day	Time (UTC)	Time Code	Event Type	Latitude	Longitude	Bottom Depth	Max Pressure	Watch Keeper	Comments
69	QQCI02		0427	BO	NET						
			0433	EN							
70	QQCI02	07	0446	BE	CTD	53 07.046	133 02.209	1253	1000		
			0505	BO		53 07.096	133 02.068				
			0523	EN		53 07.109	133 01.957				
71	QQCI03	07	0734	BE	CTD	53° 0.022	132° 56.693	1134	1000	AN	
			0753	BO		53° 0.058	132° 56.564				
			0809	EN		53° 0.136	132° 56.551				
72	QQCI03	07	0816	BE	NET	53° 0.178	132 56.504	1134	250	AN	
			0825	BO							
			0830	EN							
73	QCI07	07	1143	BE	CTD	52° 52.192	132° 21.488	710	640	AN	
			1155	BO		52° 52.219	132° 21.448				
			1205	EN		52° 52.214	132° 21.568				
74	QCI07	07	1211	BE	NET	52° 52.26	132° 21.515	710	250	AN	
			1221	BO							
			1226	EN							

Event #	Station Name	Day	Time (UTC)	Time Code	Event Type	Latitude	Longitude	Bottom Depth	Max Pressure	Watch Keeper	Comments
75	QC108	7	1357	BE	CTD	52° 47.080	132° 15.450	915	880	AN	
			1414	BO		52° 47.236	132° 15.548				
			1429	EN		52° 47.326	132° 15.492				
76	WTF03	7	2054	BE	CTD	52° 27.010	131° 42.818	198	188	CR	
			2058	BO		52° 27.986	131° 42.728				
			2101	EN		52° 26.984	131° 42 654				
77	WTF03	7	2110	BE	NET	52° 27.035	131° 42. 303	188	178	CR	
			2117	BO							
			2122	EN		52° 27.05	131° 42 26				
78	QQC104	8		BE	NET	52° 07. 09	131° 36. 21	1550	250	CR	
				BO							
				EN							
79	QQC104	8	0406	BE	CTD	52° 07.050	131° 36.414	1550	1000	CR	
			0426	BO		52° 06.858	131° 36. 317				
			0445	EN		52° 06. 554	31° 36. 205				
							/				

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	time	Lat	Long
BO	1313	54°43.214'	133°49.960
PE	1317	54°43.228	133°49.915