

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2019-045

DATE:

VESSEL:

PROJECT(S):

From:

25 JUL 2019

To:

6 JUL 2019

NEOCALIGUS

SOG Zooplankton

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

WaterProperties.ca

**** The following 3 pages are VERY IMPORTANT as they document equipment and settings used on board ****

These pages are to be completed by the CTD Technician setting up the equipment, the Watch Leader on board, and the Chief Scientist MUST verify that all relevant sections are completed prior to leaving the vessel. *Any mid-cruise changes to be noted by watch leader in the notes.*

Data logging computer: Notebook #10

Data acquisition program: Seaterm

CTD deck unit make: N/A model: _____ serial number: _____

Primary CTD

Make: SBFE 25 model: 25 serial number: 0334

Primary temperature serial number: 4484

Primary conductivity serial number: 2128

Secondary temperature serial number: _____

Secondary conductivity serial number: _____

Transmissometer: _____ Model: _____ s/n: _____

Transmissometer: _____ Model: _____ s/n: _____

Fluorometer: Model Wetlabs ECO Cable gain: _____ s/n: 2215 P, S or NO pump?

Fluorometer: Model _____ Cable gain: 24X s/n: _____ P, S or NO pump?

Oxygen sensor: SBFE Model: 43 s/n: 1483 P, S or NO pump?

PAR sensor: _____ Model: _____ s/n: _____ Surface PAR? Y / N

Other sensors: Pressure SBFE 29 s/n: 0482 P, S or NO pump?

Other sensors: Turbidity s/n: ? P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

Secondary CTD

Make: _____ model: _____ serial number: _____

Primary temperature serial number: _____

Primary conductivity serial number: _____

Secondary temperature serial number: _____

Secondary conductivity serial number: _____

Transmissometer: _____ Model: _____ s/n: _____

Transmissometer: _____ Model: _____ s/n: _____

Fluorometer: Model _____ Cable gain: _____ s/n: _____ P, S or NO pump?

Fluorometer: Model _____ Cable gain: _____ s/n: _____ P, S or NO pump?

Oxygen sensor: _____ Model: _____ s/n: _____ P, S or NO pump?

PAR sensor: _____ Model: _____ s/n: _____ Surface PAR? Y / N

Other sensors: _____ s/n: _____ P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

CTD calibration bottle location (height above CTD in metres): _____

This also includes the bottle location above the CTD on non-rosette casts (e.g., W.E. Ricker)



Scientific Equipment Used During Cruise

This sheet allows you to enter all of the equipment used while on board. Please use the separate CTD sheet for entry for SBE 9/16/19/25.

Other CTD units:

RBR Serial Number: _____ Sensors: _____

Others: _____

Plankton Nets:

Bongo #1 Frame Size: 56 cm Mesh: 236 μ m Flowmeter: TSK 7129
Bongo #2 Frame Size: _____ cm Mesh: _____ μ m Flowmeter: _____
Frame Size: _____ cm Mesh: _____ μ m Flowmeter: _____
Frame Size: _____ cm Mesh: _____ μ m Flowmeter: _____

Multinet ☐ BIONESS ☐ Neuston ☐ Others: _____

Trawl Gear:

Midwater Trawls: SOG ☐ Highseas ☐ Pelagic ☐ Other: _____

Bottom Trawls: Atlantic Western IIA ☐ Yankee 36 Hard & Soft Bottom ☐ Other: _____

American Shrimp Trawl ☐

Notes: _____

Trawl Doors: USA Jet ☐ Tyburon ☐

Sounders : Wesmar 380 ☐ Others: _____

Acoustics:

Echosounder #1 _____ Frequencies (KHz): 12 ☐ 18 ☐ 38 ☐ 70 ☐ 120 ☐ 200 ☐

Others: _____

Echosounder #2 _____ Frequencies (KHz): 12 ☐ 18 ☐ 38 ☐ 70 ☐ 120 ☐ 200 ☐

Others: _____

Software & Notes: _____

Other Gear in Operation:

1. _____
2. _____
3. _____
4. _____
5. _____

DAILY SCIENCE LOG

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Month <u>JULY</u>			Year <u>2019</u>		Vessel <u>NEOCALIGUS</u>		Cruise ID <u>2019 - 045</u>								
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
1	GEO 1	2	22:07	BE	CTD	MSG	49° 14.991	123° 45.346	404		1 -	1	MB	☒	Bot 145 cm 2 above CTD FRAME
			22:17	BO			° 15.010	° 45.379		394	-			☐	
			22:25	EN			° 15.019	° 45.377			-			☐	
2	GEO 1	2	22:08	BE	BOT	MSG	49° 15.014	123° 45.350	404	Ø	2 -	1	MB	☐	SEE BOTTLE
3	GEO 1	2	22:30	BE	NET		49° 15.024	° 45.367	404		-		MB	☐	
			22:44	BO			° 15.031	° 45.385		394	-	-	MB	☐	
			22:51	EN			° 15.034	° 45.371			-			☐	
4	3	3	14:33	BE	CTD	-	49° 26.606	124° 20.281	325		-	-	MB	☒	
			14:38	BO			° 26.610	° 20.245		315	-			☐	
			14:43	EN			° 26.615	° 20.220			-			☐	
5	3	3	14:33	BE	BOT	MSG	49° 26.600	124° 20.281	325	Ø	3 -	1	MB	☐	
6	6	3	15:26	BE	CTD	-	49° 30.631	124° 27.817	192		-		MB	☒	
			15:30	BO			° 30.631	° 27.288		187	-			☐	
			15:34	EN			° 30.634	° 27.728			-			☐	
7	6	3	15:27	BE	BOT	MSG	49° 30.631	124° 27.817	192	Ø	4 -	1	MB	☐	
			:				° .	° .			-			☐	
			:				° .	° .			-			☐	
			:				° .	° .			-			☐	
			:				° .	° .			-			☐	

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

Notes:

Time Code:

BE = Beginning Time of Cast
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CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

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3, 6, CPF2, BS11

This page is for any notes or observations

START OF CRUISE, DEPART ~ 1400 TO GEO 1

END OF DAY 1, TIDE UP AT LESQUITE CON. DOCK

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Month <u>JULY</u>			Year <u>2019</u>			Vessel <u>NEOCALICUS</u>			Cruise ID <u>2019-045</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
8	CPF2	3	15:57	BE	CTD	-	49° 28.004	124° 29.988	327		-		MB	☒	
			16:03	BO			° 27.974	° 29.947		317	-			☐	
			16:09	EW			° 28.011	° 29.960			-			☐	
9	CPF2	3	16:12	BE	NET	-	49° 28.031	124° 29.976	326		-		MB	☐	
		3	16:23	BO			° 28.043	° 29.987		316	-			☐	
			16:28	EW			° 28.057	° 30.011			-			☐	
10	BS-11	3	17:52	BE	CTD	-	49° 29.011	124° 45.990	58		-			☒	
			17:53	BO			° 29.020	° 45.987		48	-			☐	
			17:54	EW			° 29.023	° 45.980			-			☐	
11	BS-11	3	17:52	BE	BOT	MSG	49° 29.011	124° 45.990	58	Ø	5-	1	MB	☐	
12	BS-11	3	17:56	BE	NET		49° 29.014	124° 45.959	58		-			☐	
			17:58	BO			° 29.008	° 45.960		48	-			☐	
			17:59	EW			° 29.008	° 45.961			-			☐	
13	9	3	19:38	BE	CTD	-	49° 35.497	124° 38.364	166		-		MB	☐	
			19:41	BO			° 35.492	° 38.279		156	-			☐	
			19:44	EW			° 35.493	° 38.261			-			☐	
14	9	3	19:38	BE	BOT	MSG	49° 35.497	124° 38.364	166	Ø	6-	1	MB	☐	
			:				° .	° .			-			☐	
			:				° .	° .			-			☐	

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Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
15	11	3	20:49	BE	CTD	-	49° 42.402	124° 43.429	298		-	-	MB	☐ ☒	
			20:55	BO			° 42.410	° 43.406		288	-			☐ ☐	
			20:59	EN			° 42.415	° 43.369			-			☐ ☐	
16	11	3	21:04	BE	NET	-	49° 42.391	124° 43.414	299		-	-	MB	☐ ☐	
			21:15	BO			° 42.395	° 43.356		289	-			☐ ☐	
			21:20	EN			° 42.427	° 43.319			-			☐ ☐	
17	12	3	21:41	BE	CTD	MSG	49° 43.629	124° 40.851	355		7 -	1	MB	☐ ☒	
			21:49	BO			° 43.645	° 40.811		345	-			☐ ☐	
			21:55	EN			° 43.667	° 40.762			-			☐ ☐	
18	12	3	21:41	BE	BOT	MSG	49° 43.629	124° 40.851	355	Ø	8 -	1	MB	☐ ☐	
19	20	3	23:03	BE	CTD	-	49° 47.199	124° 32.363	313		-	-	MB	☐ ☐	
			23:09	BO			° 47.211	° 32.357		303	-			☐ ☐	
			23:14	EN			° 47.245	° 32.328			-			☐ ☐	
20	22	4	14:51	BE	CTD	MSG	49° 40.212	124° 16.344	355		9 -	1	MB	☐ ☒	
			14:57	BO			° 40.231	° 16.310		345	-			☐ ☐	
			15:05	EN			° 40.242	° 16.220			-			☐ ☐	
21	22	4	14:52	BE	BOT	MSG	49° 40.223	124° 16.343	355	Ø	10 -	1	MB	☐ ☐	
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

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Notes:

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END OF DAY 2 ANCHORED DOWN MALASPENA STRAIT OF SALTIER BAY

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Month <u>JULY</u>			Year <u>2019</u>			Vessel <u>NEOCALIGUS</u>			Cruise ID <u>2019-045</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
							Latitude	Longitude							
22	22	4	15:10	BE	NET	-	49° 40.194	124° 16.340	355	-	-	-	MB	☐ ☐	
			15:21	BO			° 40.203	° 16.246		345	-			☐ ☐	
			15:27	EW			° 40.193	° 16.193			-			☐ ☐	
23	IS-2	4	16:29	BE	CTD		49° 38.179	124° 05.002	28		-	-	MB	☐ ☒	
			16:29	BO			° 38.179	° 05.003		18	-			☐ ☐	
			16:30	EW			° 38.178	° 05.004			-			☐ ☐	
24	IS-2	4	16:32	BE	NET		49° 38.195	124° 04.996	28		-	-	MB	☐ ☐	
			16:33	BO			° 38.190	° 04.997		18	-			☐ ☐	
			16:33	EW			° 38.190	° 04.997			-			☐ ☐	
25	24	4	17:34	BE	CTD		49° 30.317	124° 05.892	426		-	-	MB	☐ ☒	
			17:41	BO			° 30.331	° 05.905		416	-			☐ ☐	
			17:48	EW			° 30.336	° 05.912			-			☐ ☐	
26	24	4	17:54	BE	NET		49° 30.317	124° 06.005	426		-	-	MB	☐ ☐	
			18:09	BO			° 30.333	° 06.040		416	-			☐ ☐	
			18:15	EW			° 30.328	° 06.059			-			☐ ☐	
27	2	4	19:22	BE	CTD		49° 24.103	124° 9.329	275		-	-	MB	☐ ☒	
			19:27	BO			° 24.139	° 9.273		265	-			☐ ☐	
			19:32	EW			° 24.168	° 9.301			-			☐ ☐	
28	2	4	19:24	BE	BOT	MSG	49° 24.105	124° 9.325	275	Ø	11	1	MB	☐ ☐	

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29	CPF1	4	20:00	BE	CTD	-	49° 22.008	124° 04.991	242		-	-	MB	☐ ☒	
			20:04	BO			° 22.024	° 05.040		232	-			☐ ☐	
			20:08	EW			° 22.019	° 05.053			-			☐ ☐	
30	CPF1	4	20:13	BE	NET	-	49° 21.998	124° 04.972	242		-	-	MB	☐ ☐	
			20:22	BO			° 21.970	° 05.037		232	-			☐ ☐	
			20:26	EW			° 21.965	° 05.069			-			☐ ☐	
31	28	4	21:59	BE	CTD	-	49° 24.125	123° 45.458	132		-	-	MB	☐ ☒	
			22:02	BO			° 24.125	° 45.461		122	-			☐ ☐	
			22:03	EW			° 24.126	° 45.454			-			☐ ☐	
32	28	4	22:00	BE	BOT	MSG	49° 24.125	123° 45.464	132	Ø	12-	1	MB	☐ ☐	
33	28	4	22:08	BE	NET	-	49° 24.089	123° 45.332	132		-		MB	☐ ☐	
			22:12	BO			° 24.090	° 45.392		122	-			☐ ☐	
			22:14	EW			° 24.088	° 45.435			-			☐ ☐	
34	27	4	22:54	BE	CTD	-	49° 19.109	123° 48.089	347		-			☐ ☐	
			23:00	BO			° 19.148	° 48.176		357	-			☐ ☐	
			23:06	EW			° 19.195	° 48.287			-			☐ ☐	
35	27	4	22:57	BE	BOT	MSG	49° 19.131	123° 48.139	347	Ø	13-	1	MB	☐ ☐	
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

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Month <u>JULY</u>			Year <u>2019</u>			Vessel <u>NEOCALIGUS</u>			Cruise ID <u>2019-045</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
✓ 36	40	5	15:45	BE	CTD	-	49° 8' .657	123° 36' .847	135		-	-	MB	☐ ☒	
			15:47	BO			° .642	° 36' .868		125	-			☐ ☐	
			15:49	EN			° .641	° .879			-			☐ ☐	
37	40	5	15:55	BE	NET	-	49° 8' .608	123° 36' .801	135		-	-	MB	☐ ☐	
			15:59	BO			° 8' .616	° 36' .839		125	-			☐ ☐	
			16:01	EN			° 8' .614	° 36' .854			-			☐ ☐	
✓ 38	39	5	16:27	BE	CTD	MSG	49° 9' .832	123° 32' .990	317		14 -	1	MB	☐ ☒	
			16:35	BO			° 9' .838	° 33' .059		367	-			☐ ☐	
			16:44	EN			° 9' .846	° 33' .113			-			☐ ☐	
✓ 39	39	5	16:27	BE	BOT	MSG	49° 9' .832	123° 33' .990		Ø	15 -	1	MB	☐ ☐	
18 40	38	5	17:21	BE	CTD	-	49° 11' .981	123° 26' .422	308		-	-	MB	☐ ☒	
			17:27	BO			° 11' .954	° 26' .476		298	-			☐ ☐	
			17:32	EN			° 11' .934	° 26' .510			-			☐ ☐	
41	38	5	17:36	BE	NET	-	49° 11' .990	123° 26' .351	308		-	-	MB	☐ ☐	
			17:47	BO			° 11' .933	° 26' .424		298	-			☐ ☐	
			17:52	EN			° 11' .905	° 26' .443			-			☐ ☐	
✓ 42	108	5	19:03	BE	CTD	-	49° 4' .394	123° 19' .078	82		-	-	MB	☐ ☒	
			19:05	BO			° 4' .382	° 19' .084		72	-			☐ ☐	
			19:06	EN			° 4' .368	° 19' .079			-			☐ ☐	

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✓ 20 43	41	5	19:27	BE	CTD	-	49° 3.217	123° 22.383	241		-	-	MB	☐ ☒	
			19:31	BO			° 3.120	° 22.372		231	-			☐ ☐	
			19:35	EN			° 3.051	° 22.374			-			☐ ☐	
44	41	5	19:41	BE	NET	-	49° 3.260	123° 22.322	241		-	-	MB	☐ ☐	
			19:49	BO			° 3.109	° 22.306		231	-			☐ ☐	
			19:53	EN			° 3.064	° 22.286			-			☐ ☐	
✓ 21 45	42	5	20:17	BE	CTD	MSG	49° 1.790	123° 26.309	318		16-	1	MB	☐ ☒	
			20:23	BO			° 1.777	° 26.377		308	-			☐ ☐	
			20:30	EN			° 1.681	° 26.417			-			☐ ☐	
✓ 46	42	5	20:17	BE	BOT	MSG	49° 1.790	123° 26.309	318	Ø	17-	1	MB	☐ ☐	
22 47	46	5	22:11	BE	CTD		48° 51.392	123° 10.768	175		-	-	MB	☐ ☒	
			22:13	BO			° 51.417	° 10.813		165	-			☐ ☐	
			22:16	EN			° 51.429	° 10.842			-			☐ ☐	
48	46	5	22:13	BE	BOT	MSG	48° 51.417	123° 10.813	175	Ø	18-	1	MB	☐ ☐	
49	46	5	22:20	BE	NET	-	48° 51.408	123° 10.810	175		-	-	MB	☐ ☐	
			22:23	BO			° 51.423	° 10.849		165	-			☐ ☐	
			22:27	EN			° 51.440	° 10.898			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

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)
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 DN = Down / No stop

Notes:

Time Code:

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

DE = Deployment Time
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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month <u>JULY</u>				Year <u>2019</u>			Vessel <u>NECALIGOS</u>			Cruise ID <u>2019-045</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
25 S0	S6	5	23:38	BE	CTD	.	48° 46.479	123° 1.524	208		-	-	MB	☐ ☒	
			23:42	BO			° 46.605	° 1.433		198	-			☐ ☐	
			23:410	EN			° 46.712	° 1.352			-			☐ ☐	
S1	S6	5	23:38	BE	BOT	MSG	48° 46.479	123° 1.524	208	Ø	-19	1	MB	☐ ☐	
S2	S9	6	15:24	BE	CTD	.	48° 36.931	123° 14.910	234		-	-	MB	☐ ☒	
			15:28	BO			° 36.885	° 14.865		224	-			☐ ☐	
			15:32	EN			° 36.886	° 14.842			-			☐ ☐	
S3	S9	6	15:24	BE	BOT	MSG	48° 36.931	123° 14.910	234	Ø	-20	1	MB	☐ ☐	
S4	S9	6	15:37	BE	NET	.	48° 36.851	123° 14.905	235		-	-	MB	☐ ☐	
			15:45	BO			° 36.836	° 14.872		225	-			☐ ☐	
			15:49	EN			° 36.821	° 14.822			-			☐ ☐	
S5	GI-01	6	17:13	BE	CTD	-	48° 45.804	123° 14.531	54		-	-	MB	☐ ☒	
			17:14	BO			° 45.791	° 20.528		604	-			☐ ☐	
			17:15	EN			° 45.784	° 20.527			-			☐ ☐	
S6	GI-01	6	17:19	BE	NET	.	48° 45.804	123° 20.520	54		-	-	MB	☐ ☐	
			17:21	BO			° 45.801	° 20.522		604	-			☐ ☐	
			17:21	EN			° 45.788	° 20.527			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month <u>JULY</u>			Year <u>2019</u>			Vessel <u>NEOCALIPPOS</u>			Cruise ID <u>2019-045</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
57	SC-04	6	17:57	BE	CTD	-	48° 43.509	123° 25.815	84		-	-	MB	☐ ☐	
			17:59	BO			° 43.520	° 25.777		741	-			☐ ☐	
			18:00	EW			° 43.526	° 25.764			-			☐ ☐	
58	SC-04	6	17:57	BE	BOT	MSC	48° 43.509	123° 25.815	84	Ø	21 -	1	MB	☐ ☐	
59	SC-04	6	18:05	BE	NET	-	48° 43.486	123° 25.861	84		-	-	MB	☐ ☐	
			18:08	BO			° 43.501	° 25.821		741	-			☐ ☐	
			18:09	EW			° 43.500	° 25.820			-			☐ ☐	
60	CBC2	6	18:58	BE	CTD	-	48° 44.243	123° 34.471	63		-	-	MB	☐ ☐	
			18:59	BO			° 44.248	° 34.466		53	-			☐ ☐	
			19:00	EW			° 44.255	° 34.460			-			☐ ☐	
61	CBC2	6	19:03	BE	NET	-	48° 44.241	123° 34.410	63		-	-	MB	☐ ☐	
			19:05	BO			° 44.247	° 34.411		53	-			☐ ☐	
			19:06	EW			° 44.265	° 34.417			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

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