

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2016-56

DATE:

From:

19 July 2016

To:

31 July 2016

VESSEL:

Ricker

PROJECT(S):

Strait of Georgia Pelagic Ecosystem Survey

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

WaterProperties.ca

Captain: Steve Decker First Officer: Tony

Second Officer: Dave Woodard Third Officer: _____

Fishing Master: — Chief Engineer: Rick Hoesli

Mission Participants / Agencies:

**** Chief Scientist to complete section below OR cut and tape from cruise plan ****

1st Leg Scientific Personnel: _____
Chief Scientist: Stephen G. Hutter

Name	Watch	Cabin	Name	Watch	Cabin
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Janifer Bul 57

JACKIE DICKSON

CRESSA STANLEY

Lucretia

Haissa Tennekes

Jessica Nedetz

2nd Leg Scientific Personnel: _____ **Chief Scientist:** _____

Name	Watch	Cabin	Name	Watch	Cabin
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— 1 —

**** 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: W.E. Ricker CTD (rack mount)
Data acquisition program: Seasave
CTD deck unit make: SBE model: 33 serial number: 0083

Primary CTD (Mini Rosette)

Make: SBE model: 25+ serial number: 1091
Primary temperature serial number: 4700
Primary conductivity serial number: 3321
Secondary temperature serial number: N/A
Secondary conductivity serial number: N/A
Transmissometer: Wetlabs Model: C-STAR s/n: 983DR
Transmissometer: _____ Model: _____ s/n: _____
Fluorometer: Model Wetlabs Cable gain: 13 s/n: 2216 P, S or NO pump?
Fluorometer: Model _____ Cable gain: _____ s/n: _____ P, S or NO pump?
Oxygen sensor: SBE Model: 43 s/n: 1483 (P) S or NO pump?
PAR sensor: _____ Model: _____ s/n: _____ Surface PAR? Y/N
Other sensors: Altimeter s/n: 43281 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?

Secondary CTD (9+)

Make: SBE model: 9+ serial number: 585
Primary temperature serial number: 5725
Primary conductivity serial number: 4448
Secondary temperature serial number: 5724
Secondary conductivity serial number: 4434
Transmissometer: _____ Model: _____ s/n: _____
Transmissometer: _____ Model: _____ s/n: _____
Fluorometer: Model Wetlabs ECO Cable gain: 13 s/n: 2214 P, S or NO pump?
Fluorometer: Model _____ Cable gain: _____ s/n: _____ P, S or NO pump?
Oxygen sensor: SBE Model: 43 s/n: 3038 (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)

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month JULY				Year 2016		Vessel W.E. PICKER			Cruise ID 2016-56						
Event Number	Station Name	Day UTC	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
1	46	21	15:39	BE	ROS		48° 51.390	123° 10.920			-			☐ ☐	
			15:44	BO			48° 51.388	123° 10.952	179	170	-			☐ ☐	
			15:56	EN			48° 51.276	123° 11.015			1 - 4	4	MA	☒ ☒	
2	46	21	16:35	BE	BoN50		48° 51.262	123° 10.809	180		-			☐ ☐	BoN501
			16:39	BO			48° 51.299	123° 10.843	166	166	-		MA	☐ ☐	
			16:43	EN			48° 51.222	123° 10.864	0		-			☐ ☐	
3	44	21	19:11	BE	CTD		48° 56.762	123° 5.978			-	0	MA	☒ ☒	
			19:14	BO			48° 56.741	123° 5.974	112		-			☐ ☐	
			19:17	END			48° 56.689	123° 5.973			-			☐ ☐	
4	SL/CAM 1	21	20:25	BE	SL/CAM		48° 58.551	123° 9.789			-			☐ ☐	No 10m dip, soaked
			:	BO	CTD		.	.			-			☐ ☐	12mirs
			20:46	END			48° 58.608	123° 9.864	106	100	-			☐ ☐	
5	TCAM 1	21	20:54	BE	TCAM		48° 58.664	123° 9.960	107		-			☐ ☐	
			21:16	END	CTD		48° 58.693	123° 10.083			-			☐ ☐	
6	MPS 1	21	23:00	BE	MPS		48° 54.006	123° 14.974			-			☐ ☐	
			23:28	END			48° 53.047	123° 15.597			-			☐ ☐	
7	SL/CAM 2	22	01:09	BE	SL/CAM		48° 59.430	123° 18.885	185		-			☐ ☐	oops forgot cap on
			01:44	END	CTD		48° 59.594	123° 19.543			-			☐ ☐	fluorometer again
			:				.	.			-			☐ ☐	

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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 EN = End Time of Cast

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

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Produced by the Water Properties Group, IOS

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→ Cast 4 → maybe bubble in fluorometer - oops cap was on

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Month <u>JULY</u>			Year <u>2016</u>			Vessel <u>W.E. RICKER</u>			Cruise ID <u>2016-56</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
8	41	22	14:15	BE	ROS		49° 3.302	123° 22.327	238	233	5 - 8	4	ML	☒ ☒	
			14:20	BO			49° 3.257	123° 22.350			-			☐ ☐	
			14:32	END			49° 3.166	123° 22.466			-			☐ ☐	
9	41	22	14:58	BE	BONGO		49° 3.266	123° 22.298	236		-			☐ ☐	Bongo 2
			15:10	BO			49° 3.193	123° 22.266	234	228	-			☐ ☐	
			15:16	EN			49° 3.106	123° 22.273	233		-			☐ ☐	
10	MOL	22	16:40	BE	MOL		49° 0.457	123° 28.399			-			☐ ☐	
			17:23	BO			°	°			-			☐ ☐	
11	SL/CAMB	22	17:52	BE	SL/CAMB		49° 0.462	123° 28.421	215	175	-			☐ ☐	
			18:14	END			49° 0.400	123° 28.385			-			☐ ☐	
12	TCAM12	22	19:47	BE	TCAM		49° 6.379	123° 29.524	332	330	-			☐ ☐	
			:	END			49° 6.250	123° 29.200			-			☐ ☐	
13	38	22	21:37	BE	CTD		49° 11.851	123° 26.314	287	282	-			☒ ☒	
			21:42	BO			49° 11.833	123° 26.273			-			☐ ☐	
			21:47	END			49° 11.807	123° 26.245			-			☐ ☐	GEOT
14	38	22	22:10	BE	BONGO		49° 11.755	123° 26.164	298	281	-			☐ ☐	approx ↑ time station
			:	BO			49° 11.807	123° 26.164			-			☐ ☐	
			22:35	EN			49° 11.550	123° 25.918			-			☐ ☐	
			:				°	°			-			☐ ☐	

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Cast 11 & fluorometers worked on the way down (cap was removed), maybe bubble on the way up

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Month <u>JULY</u>			Year <u>2016</u>			Vessel <u>W.E. RICKER</u>			Cruise ID <u>2016-56</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
15	40	23	02:21	BE	CTD		49° 8.599	123° 36.728			-			☐ ☐	
			02:23	BO			49° 8.626	123° 36.691	140	135	-		MEL	☐ ☐	
			02:26	END			49° 8.638	123° 36.660			-			☐ ☐	
16	40	23	02:46	BE	BONGO		49° 08.694	123° 36.463			-			☐ ☐	
			:	BO			° .638	° .660			-			☐ ☐	
			02:56	END			49° 08.836	123° 36.172			-			☐ ☐	
17	GE01	23	14:35	BE	ROS		49° 15.137	123° 44.582	400	380	9-12	4		☒ ☒	
			14:46	BO			49° 15.251	123° 44.266			-			☐ ☐	
			14:58	END			49° 15.314	123° 44.101			-			☐ ☐	
18	GE01	23	15:25	BE	BONGO	-	49° 15.171	123° 44.170	405		-	-	MEL	☐ ☐	BONGO
			15:44	BO			49° 15.429	123° 43.597	398		-			☐ ☐	→
			15:52	END			49° 15.522	123° 43.383			-			☐ ☐	
19	MOL2	23	16:20	BE	MOC	-	49° 14.761	123° 43.703	390		-			☐ ☐	MOLNESS
			16:40	BO			49° 14.547	123° 42.693			-			☐ ☐	
			17:11	END			49° 14.187	123° 40.734			-			☐ ☐	
20	SLY/CAM4	23	17:36	BE	SLYCAM		49° 14.210	123° 40.116	379		-			☐ ☐	Another bubble
			18:10	END			49° 14.235	123° 39.770			-			☐ ☐	in fluorometers? w/5m
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

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Cast 200: lost ctd connection $\rightarrow$ some water in searchable connection

* RBR max depth = 275m

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Month <u>JULY</u>			Year <u>2016</u>			Vessel <u>W.E. RICKER</u>			Cruise ID <u>2016-56</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
21	28	23	20:37	BE	ROS		49° 24.126	123° 45.520	125	119	13-16	4	W61	☒ ☒	
			20:39	BO			49° 24.130	123° 45.526			-			☐ ☐	
			20:45	END			49° 24.136	123° 45.535			-			☐ ☐	
22	28	23	21:08	BE	BONGO		49° 24.151	123° 45.543	124	114	-			☐ ☐	
			21:13	BO			49° 24.164	123° 45.550			-			☐ ☐	
			21:17	END			49° 24.184	123° 45.553			-			☐ ☐	
23	MPS2	23	23:18	BE	MPS		49° 17.253	123° 49.494	400	390	-			☐ ☐	Multinet
			23:56	BO			49° 17.254	123° 49.533			-			☐ ☐	
			:	EN			49° 16.806	123° 46.434			-			☐ ☐	
24	SLYCAM5	24	1:05	BO	SLYCAM		49° 15.532	123° 51.670	257	150	-			☐ ☐	
			1:24	EN			49° 15.557	123° 51.512			-			☐ ☐	
25	MOC3	24	18:00	BE	MOC		49° 23.216	124° 0.224			-			☐ ☐	
			18:31	BO			49° 23.291	124° 1.328			-			☐ ☐	
			18:55	EN			49° 24.171	124° 2.150			-			☐ ☐	
26	ROS	24	21:33	BE	ROS		49° 22.000	124° 5.278	238	234	-			☐ ☐	
			21:37	BO			49° 21.988	124° 5.302			-			☐ ☐	
			21:45	END			49° 21.964	124° 5.378			-			☐ ☐	
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	

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This page is for any notes or observations

Morning 2016-07-24 CTD computer was synced to the EK60 computer time. Previous
to 07-24 CTD time was 10:27 behind the EK60/Satellite time.

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Month <u>JULY</u>			Year <u>2016</u>			Vessel <u>W. E. RICKER</u>			Cruise ID <u>2016-56</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
27	CPE1	24	21:58	BE	BONGO		49° 21.934	124° 05.483	270		-		MEL	☐ ☐	
			22:08	BO			49° 21.923	124° 05.680		258	-			☐ ☐	
			22:15	EN			49° 21.895	124° 05.829			-			☐ ☐	
28	MOC4	25	01:02	BE	MOC		49° 24.119	124° 12.673	315	305	-			☐ ☐	
			01:51	EN			49° 23.248	124° 11.095			-			☐ ☐	
29	MPS3	25	14:44	BE	MPS		49° 24.741	124° 21.239	342		-			☐ ☐	
			15:11	BO			49° 25.109	124° 22.757		340	-			☐ ☐	
			15:29	END			49° 25.330	124° 23.728			-			☐ ☐	
30	SL/CAM6	25	16:57	BE	SL/CAM		49° 23.762	124° 22.422	260	180	-			☐ ☐	
			17:18	END			49° 23.785	124° 22.726			-			☐ ☐	
31	CPE2	25	19:36	BE	ROS		49° 28.084	124° 30.119	317	316	21-24			☐ ☐	oops forgot to clean
			19:43	BO			49° 28.100	124° 30.176			-			☐ ☐	trans/FI
			19:52	END			49° 28.177	124° 30.229			-			☐ ☐	
32	CPE2	25	20:01	BE	BONGO		49° 28.157	124° 30.323	316		-			☐ ☐	
			20:14	BO			49° 28.262	124° 30.524		307	-			☐ ☐	
			20:21	EN			49° 28.212	124° 30.646			-			☐ ☐	
33	SL/CAM7	25	21:23	BE	SL/CAM		49° 27.066	124° 36.094	143	110	-			☐ ☐	
			21:37	END			49° 27.180	124° 36.088			-			☐ ☐	
			:				.	.			-			☐ ☐	

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Month <u>July</u>				Year <u>2016</u>		Vessel <u>W.B. RICKER</u>		Cruise ID <u>2016-56</u>							
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
							Latitude	Longitude							
34	BS11	25	22:41	BE	CTD		49° 28.948	124° 45.940	54	50	-			☒	
			22:43	BO			49° 28.942	124° 45.935			-			☐	
			22:44	END			49° 28.938	124° 45.936			-			☐	
35	BS11	25	22:50	BE	BONGO		49° 28.915	124° 45.884	(452)	55	-			☐	
			22:53	BO			49° 28.909	124° 45.832			-			☐	
			22:54	END			49° 28.909	124° 45.832			-			☐	
36	MPS4	26	01:43	BE	MRS		49° 35.703	124° 26.483			-			☐	
			02:05	BO			49° 35.250	124° 25.746			-			☐	
			02:32	END			49° 34.747	124° 25.001			-			☐	
37	MOC 5	27	22:32	BE	MOC		49° 38.523	124° 30.794	325		-			☐	
			22:52	BO			49° 38.912	124° 31.484			-			☐	
			23:16	END			49° 39.384	124° 32.485			-			☐	
38	SLICAM8	27	00:47	BE	SLICAM		49° 33.317	124° 37.049	136	120	-			☒	Start recovering 00:47 20
			01:09	BO			49° 33.294	124° 37.070			-			☐	
			01:22	END			49° 33.277	124° 37.087			-			☐	
39	11	27	17:08	BE	Rosette		49° 42.276	124° 43.552	285	276	25 - 28			☒	
			17:13	BO			49° 42.268	124° 43.574	276		-			☐	
			17:23	END			49° 42.238	124° 43.645			-			☐	
			:				.	.			-			☐	

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Month <u>JULY</u>			Year <u>2016</u>			Vessel <u>W. E. RICKER</u>		Cruise ID <u>2016-56</u>							
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
40	11	27	17:34	BE	BONGO		49°42.393	124°43.403	294	284	-			☐ ☐	
			17:48	BO			49°42.348	124°43.519			-			☐ ☐	
			17:56	END			49°42.249	124°43.520			-			☐ ☐	
41	SLYCAM 9	27	20:20	BE	SLYCAM		49°50.077	124°47.299	175		-			☐ ☐	20:21:30 Start
			20:24	BO			49°50.082	124°47.327			-			☐ ☐	recovery
			20:40	END			49°50.092	124°47.338			-			☐ ☐	
42	MOC 6	27	21:01	BE	MOC		49°48.651	124°47.958	262		-			☐ ☐	
			:	BO			.	.			-			☐ ☐	
			21:40	END			49°49.561	124°48.899			-			☐ ☐	
43	MPS 5	27	22:44	BE	MPS		49°48.655	124°47.995	250		-			☐ ☐	
			22:57	BO			49°48.910	124°48.271			-			☐ ☐	
			23:19	END			49°49.399	124°48.781			-			☐ ☐	
44	14	28	01:45	BE	CTD		49°52.998	124°59.621	310	300	-			☐ ☐	
			01:52	BO			49°52.990	124°59.638			-			☐ ☐	
			01:57	END			49°52.985	124°59.654			-			☐ ☐	
45	14	28	02:03	BE	BONGO		49°52.998	124°59.680	310	300	-			☐ ☐	
			02:18	BO			49°53.031	124°59.738			-			☐ ☐	
			02:25	END			49°53.045	124°59.760			-			☐ ☐	
			:				.	.			-			☐ ☐	

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month <u>JULY</u>				Year <u>2016</u>			Vessel <u>W.E. PICKER</u>			Cruise ID <u>2016-56</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
46	SLYCAM10	28	16:29	BE	SLYCAM		50° 0.466	124° 53.560	160	145	-			☒ ☒	
			16:39	BO			50° 0.457	124° 53.618			-			☐ ☐	
			16:51	END			50° 0.444	124° 53.710			-			☐ ☐	
47	SLYCAM11	28	23:43	BE	SLYCAM		49° 44.341	124° 23.022	335	120	-			☐ ☐	NO CTD
			23:51	BO			49° 34.340	124° 23.016			-			☐ ☐	
		29	00:10	END			49° 44.365	124° 23.021			-			☐ ☐	
48	MOLNESS 7	29	01:09	BE	MOLNESS		49° 43.182	124° 20.341	315	305	-			☐ ☐	
			01:32	BO			49° 43.461	124° 21.090			-			☐ ☐	
			01:40	END			49° 43.615	124° 21.530			-			☐ ☐	
49	MOLNESS 8	29	20:35	BE	MOLNESS		49° 46.075	124° 14.015	340	315	-			☐ ☐	
			21:06	BO			49° 46.021	124° 14.237			-			☐ ☐	
			21:24	END			49° 44.344	124° 14.418			-			☐ ☐	
50	22	29	22:05	BE	ROSETTE		49° 40.186	124° 16.318	350	340	-			☐ ☐	
			22:14	BO			49° 40.168	124° 16.348			-			☐ ☐	
			22:23	END			49° 40.150	124° 16.342			-			☐ ☐	
51	22	29	22:34	BE	BONGO		49° 40.144	124° 16.346	338	330	-			☐ ☐	
			22:44	BO			49° 40.150	124° 16.344			-			☐ ☐	
			22:52	END			49° 41.148	124° 16.360			-			☐ ☐	
			:				°	°			-			☐ ☐	

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Month <u>July</u>			Year <u>2016</u>			Vessel <u>U.E. Picker</u>				Cruise ID <u>2016-56</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
52	24	30	02:00	BE	ROSETTE		49° 30.282	124° 06.024	425	415	-			☒ ☒	
			02:09	BO			49° 30.257	124° 06.054			-			☐ ☐	
			02:19	END			49° 30.252	124° 06.031			-			☐ ☐	
53	24	30	02:25	BE	BONGIO		49° 30.258	124° 06.049	425		-			☐ ☐	
			02:41	BO			49° 30.254	124° 06.040		4	-			☐ ☐	
			02:54	END			49° 30.264	124° 06.039			-			☐ ☐	
54	MOCNESS 9	30	14:45	BE	MOCNESS		49° 30.023	124° 06.001	425	415	-			☐ ☐	
			15:15	BO			49° 30.887	124° 06.249			-			☐ ☐	
			15:46	END			49° 31.825	124° 06.461			-			☐ ☐	
55	MPS 6	30	16:37	BE	MPS		49° 29.705	124° 05.832	420	410	-			☐ ☐	
			17:09	BO			49° 30.723	124° 06.182			-			☐ ☐	
			17:35	END			49° 31.530	124° 06.398			-			☐ ☐	
56	TCAM 3	30	17:58	BE	TCAM		49° 31.439	124° 06.320	417	405	-			☐ ☐	
			18:07	BO			49° 31.429	124° 06.351			-			☐ ☐	
			18:27	END			49° 31.408	124° 06.410			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

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