Monitoring of Chinese White Dolphins in Southwest Lantau Waters

22nd Monthly Progress Report (January 2017)
submitted to Environmental Project Office for the HZMB HKLR, HZMB HKBCF and TM-CLKL – Investigation

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1. Introduction

1.1. In March 2015, Hong Kong Cetacean Research Project (HKCRP) was appointed by the Environmental Project Office for the HZMB Hong Kong Projects to undertake a monitoring study of Chinese White Dolphins in Southwest Lantau (SWL) waters.

1.2. The objectives of the monitoring study are to quantify the abundance and density of Chinese White Dolphins in SWL waters, to identify individuals during the monitoring surveys, and to analyze their range use and movement patterns in Hong Kong and the wider Pearl River Estuary waters.

1.3. The monitoring study will supplement the on-going EM&A monitoring results of the HZMB Hong Kong Projects in North and West Lantau waters, and provide a more complete picture of dolphin usage and movements between different survey areas in western Hong Kong waters.

1.4. The present report is the 22nd monthly progress report under this dolphin monitoring study submitted to the Environmental Project Office, summarizing the survey findings during the month of January 2017.

2. Monitoring Methodology

2.1. Vessel-based Line-transect Survey

2.1.1. According to the requirement of the technical proposal submitted to the Environmental

Project Office, dolphin monitoring programme should cover all transect lines in SWL survey area (see Figure 1) once per month upon instruction. The co-ordinates of all transect lines conducted during the dolphin monitoring survey are shown in Table 1.

Table 1. Co-ordinates of transect lines in SWL survey area (corresponding to transect line layout as shown in Figure 1)

Line #		Northing	Easting		Line #		Northing	Easting
SWL001	1	806180	802510		SWL007	13	807380	808520
	2	804250	802510			14	805600	808520
SWL002	3	806710	803480			15	804400	808520
	4	803450	803480			16	803000	808520
SWL003	5	807270	804500			17	802100	808520
	6	802690	804500			18	800470	808520
SWL004	7	807590	805450		SWL008	19	807380	809550
	8	802295	805450			20	805050	809550
SWL005	9	808490	806500			21	804400	809550
	10	801410	806500			22	800470	809550
SWL006	11	808500	807430		SWL009	23	807380	810550
	12	801250	807430			24	800470	810550
					SWL010	25	809410	811510
						26	801470	811510

2.1.2. The HKCRP survey team used standard line-transect methods (Buckland et al. 2001) to conduct the systematic vessel surveys, and followed the same technique of data collection that has been adopted over the last 18 years of marine mammal monitoring surveys in Hong Kong developed by HKCRP (see Hung 2014). For each monitoring vessel survey, a 15-m inboard vessel with an open upper deck (about 4.5 m above water surface) was used to make observations from the flying bridge area.

2.1.3. Two experienced observers from HKCRP (a data recorder and a primary observer) made up the on-effort survey team, and the survey vessel transited different transect lines at a

constant speed of 13-15 km per hour. The data recorder searched with unaided eyes and filled out the datasheets, while the primary observer searched for dolphins and porpoises continuously through 7 x 50 *Fujinon* marine binoculars. Both observers searched the sea ahead of the vessel, between 270° and 90° (in relation to the bow, which is defined as 0°). One to two additional experienced observer was available on the boat to work in shift (i.e. rotate every 30 minutes) in order to minimize fatigue of the survey team members. All observers were experienced in small cetacean survey techniques and identifying local cetacean species.

2.1.4. During on-effort survey periods, the survey team recorded effort data including time, position (latitude and longitude), weather conditions (Beaufort sea state and visibility), and distance traveled in each series (a continuous period of search effort) with the assistance of a handheld GPS (*Garmin eTrex Legend*).

2.1.5. Data including time, position and vessel speed were also automatically and continuously logged by handheld GPS throughout the entire survey for subsequent review.

2.1.6. When dolphins were sighted, the survey team would end the survey effort, and immediately record the initial sighting distance and angle of the dolphin group from the survey vessel, as well as the sighting time and position. Then the research vessel was diverted from its course to approach the animals for species identification, group size estimation, assessment of group composition, and behavioural observations. The perpendicular distance (PSD) of the dolphin group to the transect line was later calculated from the initial sighting distance and angle.

2.1.7. Survey effort being conducted along the parallel transect lines that were perpendicular to the coastlines (as indicated in Figure 1) was labeled as “primary” survey effort, while the survey effort conducted along the connecting lines between parallel lines as well as the section around the Soko Islands was labeled as “secondary” survey effort. Both primary and secondary survey effort were presented as on-effort survey effort in this report.

2.1.8. Encounter rates of Chinese White Dolphins (number of on-effort sightings per 100 km of survey effort and number of dolphins from all on-effort sightings per 100 km of survey effort) were calculated in SWL survey area in relation to the amount of survey effort conducted during each month of monitoring survey. Only data collected under Beaufort 3 or below condition would be used for encounter rate analysis. Dolphin encounter rates were calculated using the combined survey effort from both primary and secondary lines for comparison to the historical data collected by HKCRP in this survey area. For the historical data, the encounter rates were calculated by pooling all relevant survey effort

and dolphin sightings to calculate a single index.

2.2. Photo-identification Work

2.2.1. When a group of Chinese White Dolphins were sighted during the line-transect survey, the survey team would end effort and approach the group slowly from the side and behind to take photographs of them. Every attempt was made to photograph every dolphin in the group, and even photograph both sides of the dolphins, since the colouration and markings on both sides may not be symmetrical.

2.2.2. A professional digital camera (*Canon* EOS 7D model), equipped with long telephoto lenses (100-400 mm zoom), were available on board for researchers to take sharp, close-up photographs of dolphins as they surfaced. The images were shot at the highest available resolution and stored on Compact Flash memory cards for downloading onto a computer.

2.2.3. All digital images taken in the field were first examined, and those containing potentially identifiable individuals were sorted out. These photographs would then be examined in greater detail, and were carefully compared to the existing Chinese White Dolphin photo-identification catalogue maintained by HKCRP since 1995. For individual dolphins that are not readily identifiable from the catalogue but have distinct features on their bodies, they will be placed in a pool of "potential new individuals", with decision being made at the end of each year on whether any of them should be incorporated into the photo-ID catalogue.

2.2.4. Chinese White Dolphins can be identified by their natural markings, such as nicks, cuts, scars and deformities on their dorsal fin and body, and their unique spotting patterns were also used as secondary identifying features (Jefferson 2000).

2.2.5. All photographs of each individual were then compiled and arranged in chronological order, with data including the date and location first identified (initial sighting), re-sightings, associated dolphins, distinctive features, and age classes entered into a computer database.

3. Monitoring Results

3.1. Vessel-based Line-transect Survey

3.1.1. One set of systematic line-transect vessel survey was conducted under the present

monitoring study on January 6th to cover all transect lines in SWL survey area once. The route and track log of this survey are presented in Figure 2 and Appendix I respectively.

3.1.2. In addition, three line-transect surveys were also conducted under the AFCD long-term marine mammal monitoring programme in SWL survey area on January 5th (with lines no. SWL003, SWL005, SWL007 and SWL009 covered), January 9th (with lines no. SWL002, SWL004 and SWL006 covered) and January 17th (with lines no. SWL006, SWL008 and SWL010 covered). Such monitoring data were also incorporated into the present study for various analyses.

3.1.3. For the present study alone, a total of 70.52 km of survey effort was collected from 10:09 to 15:15 (i.e. 5 hours and 6 minutes of survey time) on January 6th, with 100% of the total survey effort being conducted under favourable weather conditions (i.e. Beaufort Sea State 3 or below with good visibility) (Appendix II). The total survey effort conducted on primary and secondary lines were 53.90 km and 16.62 km respectively.

3.1.4. For the combined monitoring dataset from both the present study and AFCD monitoring study, a total of 152.31 km of survey effort was collected in SWL waters in January 2017.

3.1.5. During this monitoring month, only two groups of five Chinese White Dolphins were sighted from the present study's survey and one of the three AFCD monitoring surveys (Appendix III). One of the two dolphin groups was sighted during on-effort search, and both groups were not associated with any operating fishing vessel.

3.1.6. Notably, three groups of nine finless porpoises were also sighted in SWL survey area during the survey from the present study on January 6th.

3.1.7. Distribution of the two dolphin sightings made in January 2017 is shown in Figure 3. Both were sighted near Fan Lau and to the west of the Soko Islands respectively (Figure 3). On the contrary, they were mostly absent from the eastern and southern portions of the survey area during this monitoring month (Figure 3).

3.1.8. Encounter rates of Chinese White Dolphins deduced from the survey effort and on-effort sighting data made under favourable conditions (Beaufort 3 or below) in January 2017 are shown in Table 2. Comparison of encounter rates was also made to the one deduced in winter months (December-February) in the past decade (2005-14), as well as in January 2016 under the present study (Table 2).

Table 2. Overall dolphin encounter rates (sightings per 100 km of survey effort) from the present monitoring survey and combined database with AFCD monitoring survey conducted in January 2017 (primary lines only, as well as both primary lines and secondary lines were used) in SWL survey area in comparison to the ones deduced during winter months (December-February 2005-14) in the past decade

	Encounter rate (STG) (no. of on-effort dolphin sightings per 100 km of survey effort)		**Encounter rate (ANI)** (no. of dolphins from all on-effort sightings per 100 km of survey effort)	
	Primary Lines Only	Both Primary and Secondary Lines	Primary Lines Only	Both Primary and Secondary Lines
HYD-HZMB data (January 2017)	0.0	0.0	0.0	0.0
Combined data (January 2017)	0.96	0.66	0.96	0.66
Combined data (January 2016)	4.42	4.72	24.29	22.01
Historical Data (Winter 2005-14)		3.32		10.88

3.1.9. From the combined data of HYD-HZMB and AFCD monitoring surveys, the overall encounter rates based on both the number of dolphin sightings (ER(STG)) and total number of dolphins (ER(ANI)) deduced in January 2017 in SWL waters was only a small fraction of the ones deduced in January 2016 as well as the ones during the winter months of 2005-14 (Table 2). As there was only one-effort dolphin sighting with a lone individual, the resulted encounter rates were very low for this monitoring month.

3.1.10. The average group size of Chinese White Dolphins sighted during SWL monitoring surveys in January 2017 was 2.5 animal per group. This was lower than the average group size in winter months of 2005-14 (3.3). One of the two groups was small with only one animal, while the size of the other group was moderate with four animals (see Appendix III).

3.2. Photo-identification Work

3.2.1. Attempts were made to photograph the dolphins sighted during all SWL surveys conducted in January 2017.

3.2.2. Among the five dolphins sighted during this month's surveys, four individual dolphins were identified and re-sighted four times in total (Appendices IV and V). None of them was accompanied by any young calves.

3.2.3. Notably, the locations where all four individuals were re-sighted were well within their

past home ranges in Southwest and West Lantau waters.

4. References

Buckland, S. T., Anderson, D. R., Burnham, K. P., Laake, J. L., Borchers, D. L., and Thomas, L. 2001. Introduction to distance sampling: estimating abundance of biological populations. Oxford University Press, London.

Hung, S. K. 2014. Monitoring of Marine Mammals in Hong Kong waters: final report (2013-14). An unpublished report submitted to the Agriculture, Fisheries and Conservation Department, 231 pp.

Jefferson, T. A. 2000. Population biology of the Indo-Pacific hump-backed dolphin in Hong Kong waters. Wildlife Monographs 144:1-65.

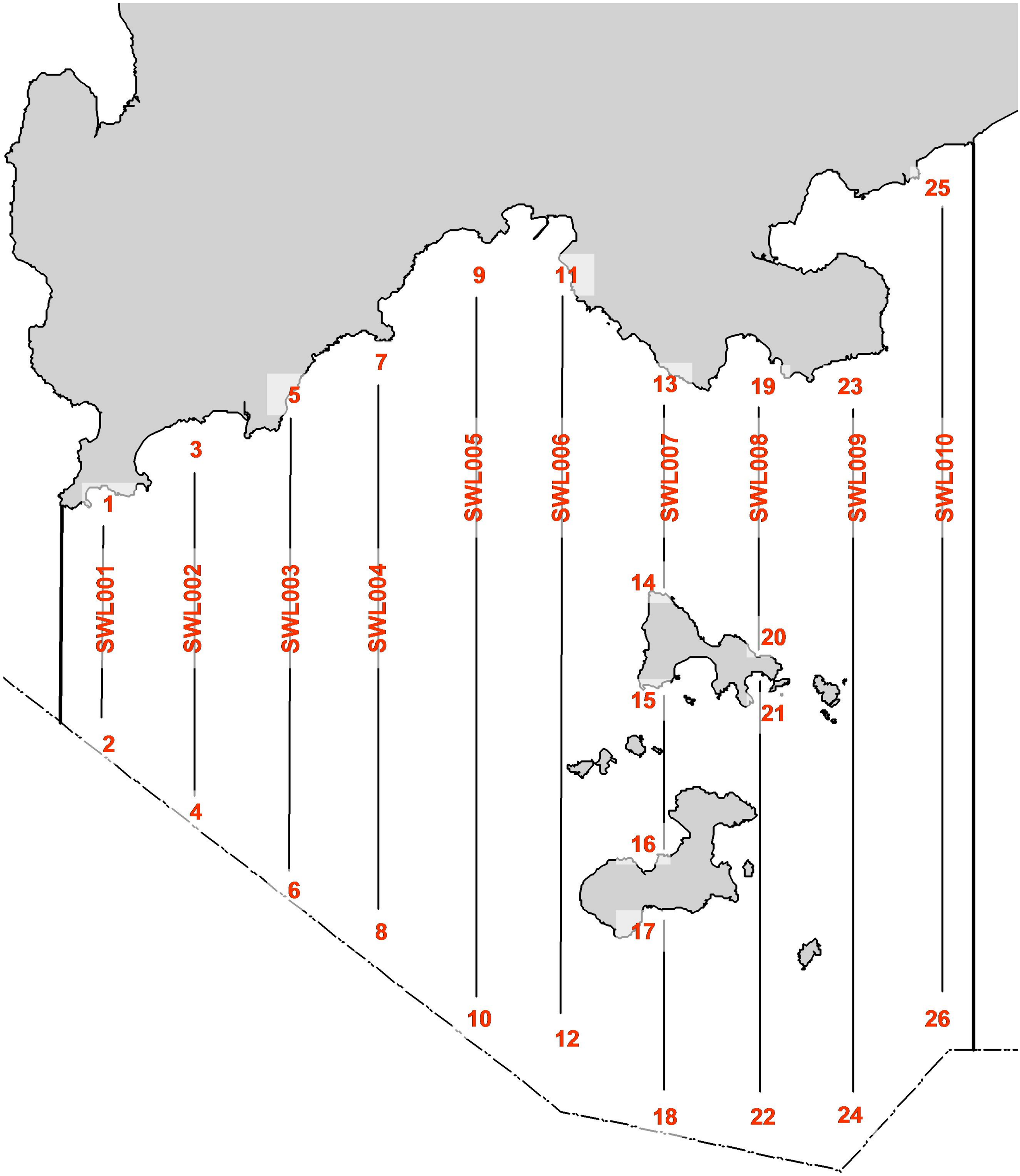

Figure 1. Survey Lines and associated coordinates in Southwest Lantau survey area

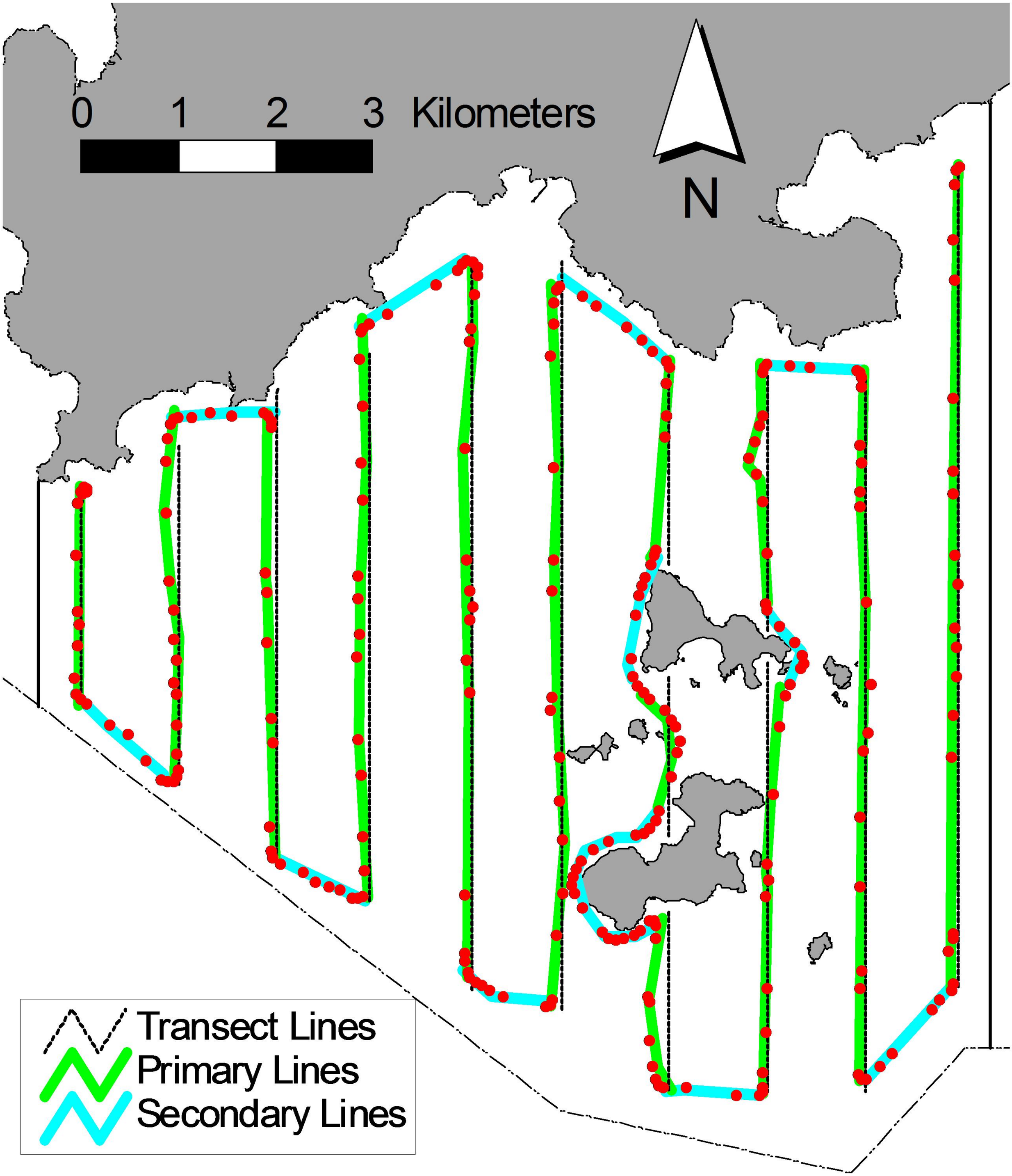

Figure 2. Survey Route on January 6th, 2017 (note: red dots represent the tracked positions of survey boat logged continuously by GPS throughout the course of the survey)

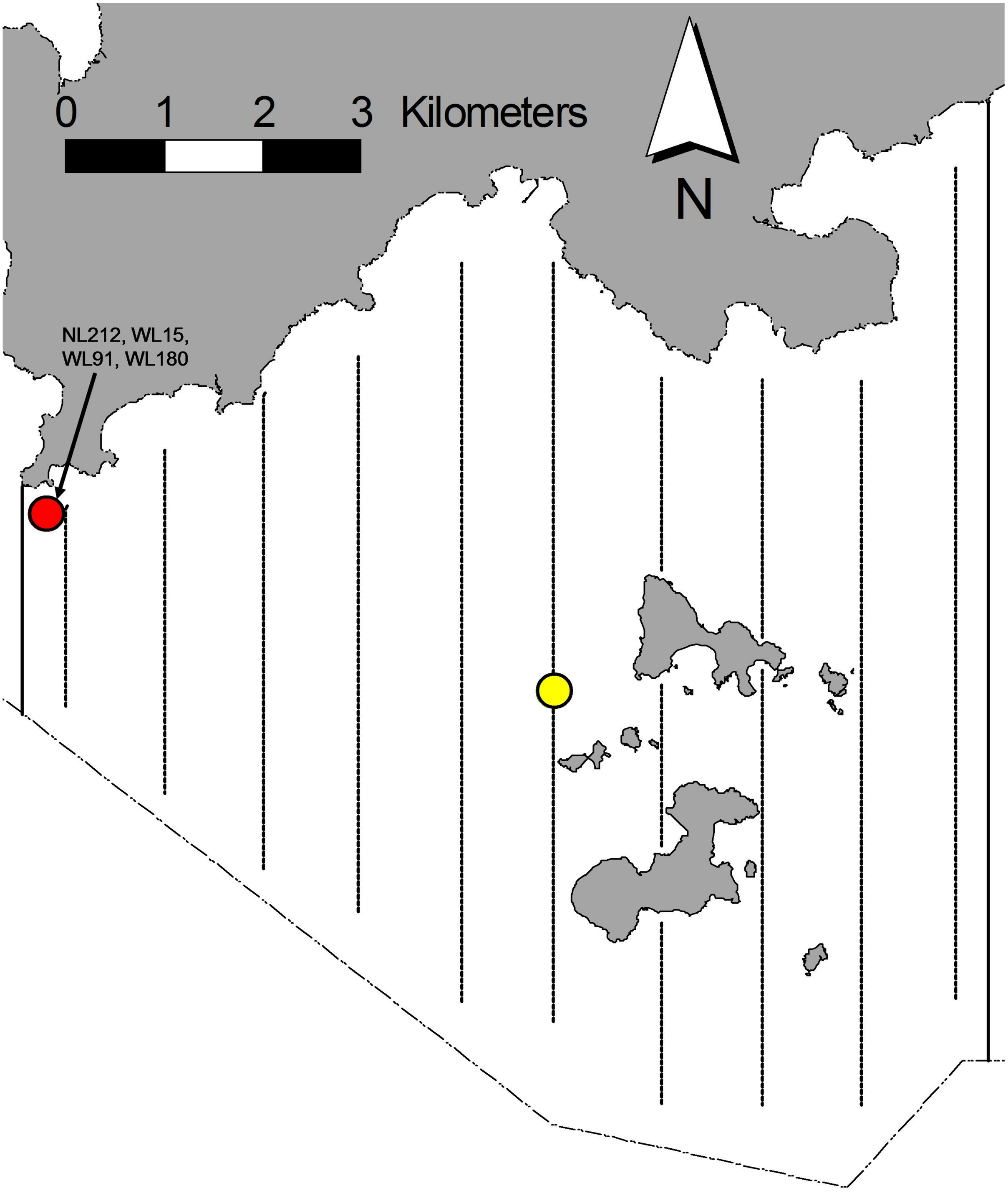

Figure 3. Distribution of Chinese White Dolphin sightings during January 2017 monitoring surveys in Southwest Lantau survey area, with identified individuals indicated for their corresponding sightings (red dot: HYD-HZMB sighting; yellow dot: AFCD sighting)

Appendix I. Track Log of SW Lantau Survey on January 6th, 2017

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
6/1/2017 10:09	ON	N22.22323 E113.93689			
6/1/2017 10:09	ON	N22.22290 E113.93657	49 m	0:00:15	12 kph
6/1/2017 10:10	ON	N22.22232 E113.93655	64 m	0:00:18	13 kph
6/1/2017 10:10	ON	N22.22165 E113.93647	75 m	0:00:20	14 kph
6/1/2017 10:10	ON	N22.22099 E113.93644	74 m	0:00:19	14 kph
6/1/2017 10:11	ON	N22.22022 E113.93634	87 m	0:00:22	14 kph
6/1/2017 10:11	ON	N22.21956 E113.93634	73 m	0:00:19	14 kph
6/1/2017 10:11	ON	N22.21883 E113.93629	82 m	0:00:21	14 kph
6/1/2017 10:12	ON	N22.21809 E113.93626	81 m	0:00:21	14 kph
6/1/2017 10:12	ON	N22.21743 E113.93627	73 m	0:00:19	14 kph
6/1/2017 10:12	ON	N22.21678 E113.93627	73 m	0:00:19	14 kph
6/1/2017 10:13	ON	N22.21609 E113.93632	77 m	0:00:20	14 kph
6/1/2017 10:13	ON	N22.21535 E113.93636	82 m	0:00:21	14 kph
6/1/2017 10:13	ON	N22.21467 E113.93640	75 m	0:00:19	14 kph
6/1/2017 10:14	ON	N22.21404 E113.93639	70 m	0:00:18	14 kph
6/1/2017 10:14	ON	N22.21334 E113.93644	78 m	0:00:20	14 kph
6/1/2017 10:14	ON	N22.21267 E113.93645	75 m	0:00:19	14 kph
6/1/2017 10:15	ON	N22.21211 E113.93641	63 m	0:00:16	14 kph
6/1/2017 10:15	ON	N22.21140 E113.93640	78 m	0:00:20	14 kph
6/1/2017 10:15	ON	N22.21077 E113.93636	70 m	0:00:18	14 kph
6/1/2017 10:15	ON	N22.21024 E113.93635	59 m	0:00:15	14 kph
6/1/2017 10:16	ON	N22.20961 E113.93636	71 m	0:00:18	14 kph
6/1/2017 10:16	ON	N22.20898 E113.93640	70 m	0:00:18	14 kph
6/1/2017 10:16	ON	N22.20838 E113.93646	66 m	0:00:17	14 kph
6/1/2017 10:17	ON	N22.20786 E113.93647	58 m	0:00:15	14 kph
6/1/2017 10:17	ON	N22.20724 E113.93646	69 m	0:00:18	14 kph
6/1/2017 10:17	ON	N22.20650 E113.93644	82 m	0:00:21	14 kph
6/1/2017 10:17	ON	N22.20594 E113.93643	62 m	0:00:16	14 kph
6/1/2017 10:18	ON	N22.20525 E113.93648	77 m	0:00:20	14 kph
6/1/2017 10:18	ON	N22.20466 E113.93648	65 m	0:00:17	14 kph
6/1/2017 10:18	ON	N22.20414 E113.93648	58 m	0:00:15	14 kph
6/1/2017 10:19	ON	N22.20359 E113.93648	62 m	0:00:16	14 kph
6/1/2017 10:19	ON	N22.20300 E113.93643	65 m	0:00:17	14 kph
6/1/2017 10:19	ON	N22.20230 E113.93642	78 m	0:00:20	14 kph
6/1/2017 10:19	ON	N22.20185 E113.93644	50 m	0:00:13	14 kph
6/1/2017 10:20	ON	N22.20136 E113.93642	54 m	0:00:14	14 kph
6/1/2017 10:20	ON	N22.20071 E113.93642	73 m	0:00:19	14 kph
6/1/2017 10:20	ON	N22.20019 E113.93641	58 m	0:00:15	14 kph
6/1/2017 10:21	ON	N22.19963 E113.93637	62 m	0:00:16	14 kph
6/1/2017 10:21	ON	N22.19900 E113.93635	70 m	0:00:18	14 kph
6/1/2017 10:21	ON	N22.19822 E113.93631	87 m	0:00:22	14 kph
6/1/2017 10:21	ON	N22.19765 E113.93633	63 m	0:00:16	14 kph
6/1/2017 10:22	ON	N22.19702 E113.93632	71 m	0:00:18	14 kph
6/1/2017 10:22	ON	N22.19645 E113.93628	63 m	0:00:16	14 kph
6/1/2017 10:22	ON	N22.19582 E113.93634	71 m	0:00:18	14 kph
6/1/2017 10:23	ON	N22.19523 E113.93644	67 m	0:00:17	14 kph
6/1/2017 10:23	ON	N22.19458 E113.93643	72 m	0:00:18	14 kph
6/1/2017 10:23	ON	N22.19398 E113.93643	68 m	0:00:17	14 kph
6/1/2017 10:23	ON	N22.19334 E113.93647	71 m	0:00:18	14 kph
6/1/2017 10:24	ON	N22.19273 E113.93652	68 m	0:00:17	14 kph
6/1/2017 10:24	ON	N22.19226 E113.93652	52 m	0:00:13	14 kph
6/1/2017 10:24	ON	N22.19166 E113.93651	67 m	0:00:17	14 kph
6/1/2017 10:25	ON	N22.19108 E113.93652	64 m	0:00:16	14 kph
6/1/2017 10:25	ON	N22.19037 E113.93647	80 m	0:00:20	14 kph
6/1/2017 10:25	ON	N22.18987 E113.93644	56 m	0:00:14	14 kph
6/1/2017 10:25	ON	N22.18922 E113.93647	72 m	0:00:18	14 kph
6/1/2017 10:26	ON	N22.18863 E113.93653	67 m	0:00:17	14 kph
6/1/2017 10:26	ON	N22.18814 E113.93661	55 m	0:00:14	14 kph
6/1/2017 10:26	ON	N22.18759 E113.93666	61 m	0:00:15	15 kph
6/1/2017 10:26	ON	N22.18710 E113.93671	55 m	0:00:14	14 kph
6/1/2017 10:27	ON	N22.18656 E113.93676	60 m	0:00:15	14 kph
6/1/2017 10:27	ON	N22.18588 E113.93676	76 m	0:00:19	14 kph
6/1/2017 10:27	ON	N22.18524 E113.93667	72 m	0:00:18	14 kph
6/1/2017 10:28	ON	N22.18467 E113.93658	64 m	0:00:16	14 kph

Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
6/1/2017 10:28	ON	N22.18410 E113.93656	64 m	0:00:16	14 kph
6/1/2017 10:28	ON	N22.18345 E113.93653	72 m	0:00:18	14 kph
6/1/2017 10:28	ON	N22.18284 E113.93646	68 m	0:00:17	14 kph
6/1/2017 10:29	ON	N22.18223 E113.93645	68 m	0:00:17	14 kph
6/1/2017 10:29	ON	N22.18167 E113.93659	63 m	0:00:16	14 kph
6/1/2017 10:29	ON	N22.18114 E113.93665	59 m	0:00:15	14 kph
6/1/2017 10:29	ON	N22.18060 E113.93664	60 m	0:00:15	14 kph
6/1/2017 10:30	ON	N22.18010 E113.93666	56 m	0:00:14	14 kph
6/1/2017 10:30	ON	N22.17960 E113.93668	56 m	0:00:14	14 kph
6/1/2017 10:30	ON	N22.17899 E113.93668	68 m	0:00:17	14 kph
6/1/2017 10:30	ON	N22.17848 E113.93669	56 m	0:00:14	14 kph
6/1/2017 10:31	ON	N22.17788 E113.93667	67 m	0:00:17	14 kph
6/1/2017 10:31	ON	N22.17735 E113.93665	59 m	0:00:15	14 kph
6/1/2017 10:31	ON	N22.17678 E113.93665	64 m	0:00:16	14 kph
6/1/2017 10:31	ON	N22.17621 E113.93657	63 m	0:00:16	14 kph
6/1/2017 10:32	ON	N22.17573 E113.93649	54 m	0:00:14	14 kph
6/1/2017 10:32	ON	N22.17542 E113.93645	35 m	0:00:13	10 kph
6/1/2017 10:32	ON	N22.17518 E113.93643	27 m	0:00:17	6 kph
6/1/2017 10:32	ON	N22.17514 E113.93642	4 m	0:00:03	5 kph
6/1/2017 10:32	OFF	N22.17510 E113.93642	5 m	0:00:05	4 kph
6/1/2017 10:33	OFF	N22.17498 E113.93640	13 m	0:00:15	3 kph
6/1/2017 10:33	OFF	N22.17489 E113.93639	10 m	0:00:16	2 kph
6/1/2017 10:33	OFF	N22.17483 E113.93638	7 m	0:00:14	2 kph
6/1/2017 10:33	OFF	N22.17479 E113.93637	5 m	0:00:12	1.4 kph
6/1/2017 10:33	OFF	N22.17476 E113.93636	3 m	0:00:11	1.1 kph
6/1/2017 10:34	OFF	N22.17473 E113.93635	4 m	0:00:14	1.1 kph
6/1/2017 10:34	OFF	N22.17471 E113.93635	2 m	0:00:13	0.6 kph
6/1/2017 10:34	OFF	N22.17469 E113.93634	2 m	0:00:19	0.4 kph
6/1/2017 10:35	OFF	N22.17466 E113.93634	3 m	0:00:17	0.6 kph
6/1/2017 10:35	OFF	N22.17465 E113.93634	2 m	0:00:17	0.4 kph
6/1/2017 10:35	OFF	N22.17463 E113.93634	2 m	0:00:14	0.4 kph
6/1/2017 10:35	OFF	N22.17462 E113.93634	1 m	0:00:17	0.2 kph
6/1/2017 10:36	OFF	N22.17461 E113.93634	1 m	0:00:16	0.3 kph
6/1/2017 10:36	OFF	N22.17459 E113.93634	2 m	0:00:13	0.6 kph
6/1/2017 10:36	OFF	N22.17453 E113.93636	7 m	0:00:16	2 kph
6/1/2017 10:36	OFF	N22.17449 E113.93638	5 m	0:00:04	4 kph
6/1/2017 10:36	OFF	N22.17447 E113.93638	2 m	0:00:02	4 kph
6/1/2017 10:36	OFF	N22.17423 E113.93642	27 m	0:00:16	6 kph
6/1/2017 10:37	OFF	N22.17382 E113.93637	46 m	0:00:14	12 kph
6/1/2017 10:37	ON	N22.17342 E113.93629	46 m	0:00:12	14 kph
6/1/2017 10:37	ON	N22.17296 E113.93625	51 m	0:00:13	14 kph
6/1/2017 10:37	ON	N22.17242 E113.93623	61 m	0:00:15	15 kph
6/1/2017 10:38	ON	N22.17198 E113.93621	48 m	0:00:12	15 kph
6/1/2017 10:38	ON	N22.17145 E113.93617	60 m	0:00:15	14 kph
6/1/2017 10:38	ON	N22.17101 E113.93616	49 m	0:00:12	15 kph
6/1/2017 10:38	ON	N22.17054 E113.93618	52 m	0:00:13	14 kph
6/1/2017 10:38	ON	N22.17001 E113.93616	60 m	0:00:15	14 kph
6/1/2017 10:39	ON	N22.16936 E113.93617	73 m	0:00:18	15 kph
6/1/2017 10:39	ON	N22.16881 E113.93620	61 m	0:00:15	15 kph
6/1/2017 10:39	ON	N22.16838 E113.93622	48 m	0:00:12	15 kph
6/1/2017 10:39	ON	N22.16782 E113.93622	62 m	0:00:15	15 kph
6/1/2017 10:40	ON	N22.16724 E113.93623	65 m	0:00:16	15 kph
6/1/2017 10:40	ON	N22.16670 E113.93624	60 m	0:00:15	14 kph
6/1/2017 10:40	ON	N22.16606 E113.93627	72 m	0:00:18	14 kph
6/1/2017 10:41	ON	N22.16531 E113.93627	84 m	0:00:21	14 kph
6/1/2017 10:41	ON	N22.16470 E113.93624	67 m	0:00:17	14 kph
6/1/2017 10:41	ON	N22.16421 E113.93626	55 m	0:00:14	14 kph
6/1/2017 10:41	ON	N22.16369 E113.93634	59 m	0:00:15	14 kph
6/1/2017 10:42	ON	N22.16305 E113.93634	71 m	0:00:18	14 kph
6/1/2017 10:42	ON	N22.16252 E113.93629	60 m	0:00:15	14 kph
6/1/2017 10:42	ON	N22.16197 E113.93634	62 m	0:00:16	14 kph
6/1/2017 10:42	ON	N22.16140 E113.93638	63 m	0:00:16	14 kph
6/1/2017 10:43	ON	N22.16101 E113.93640	44 m	0:00:11	14 kph
6/1/2017 10:43	ON	N22.16037 E113.93638	71 m	0:00:18	14 kph

Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
6/1/2017 10:43	ON	N22.15977 E113.93639	67 m	0:00:17	14 kph
6/1/2017 10:44	ON	N22.15921 E113.93641	63 m	0:00:16	14 kph
6/1/2017 10:44	ON	N22.15871 E113.93639	55 m	0:00:14	14 kph
6/1/2017 10:44	ON	N22.15825 E113.93636	51 m	0:00:13	14 kph
6/1/2017 10:44	ON	N22.15772 E113.93636	60 m	0:00:15	14 kph
6/1/2017 10:44	ON	N22.15723 E113.93636	54 m	0:00:14	14 kph
6/1/2017 10:45	ON	N22.15673 E113.93637	55 m	0:00:15	13 kph
6/1/2017 10:45	ON	N22.15643 E113.93636	34 m	0:00:15	8 kph
6/1/2017 10:45	OFF	N22.15622 E113.93637	24 m	0:00:16	5 kph
6/1/2017 10:45	OFF	N22.15621 E113.93637	1 m	0:00:01	5 kph
6/1/2017 10:46	OFF	N22.15606 E113.93638	17 m	0:00:17	4 kph
6/1/2017 10:46	OFF	N22.15597 E113.93638	9 m	0:00:14	2 kph
6/1/2017 10:46	OFF	N22.15591 E113.93639	7 m	0:00:12	2 kph
6/1/2017 10:46	OFF	N22.15587 E113.93640	5 m	0:00:13	1.3 kph
6/1/2017 10:46	OFF	N22.15586 E113.93640	1 m	0:00:15	0.4 kph
6/1/2017 10:47	OFF	N22.15584 E113.93640	2 m	0:00:12	0.5 kph
6/1/2017 10:47	OFF	N22.15583 E113.93640	2 m	0:00:14	0.5 kph
6/1/2017 10:47	OFF	N22.15581 E113.93640	1 m	0:00:14	0.4 kph
6/1/2017 10:47	OFF	N22.15579 E113.93639	2 m	0:00:17	0.5 kph
6/1/2017 10:47	OFF	N22.15576 E113.93641	4 m	0:00:08	2 kph
6/1/2017 10:48	OFF	N22.15570 E113.93643	8 m	0:00:05	6 kph
6/1/2017 10:48	OFF	N22.15557 E113.93643	14 m	0:00:07	7 kph
6/1/2017 10:48	OFF	N22.15524 E113.93627	41 m	0:00:15	10 kph
6/1/2017 10:48	OFF	N22.15493 E113.93610	38 m	0:00:11	13 kph
6/1/2017 10:48	ON	N22.15447 E113.93593	54 m	0:00:14	14 kph
6/1/2017 10:49	ON	N22.15389 E113.93597	65 m	0:00:17	14 kph
6/1/2017 10:49	ON	N22.15352 E113.93605	43 m	0:00:11	14 kph
6/1/2017 10:49	ON	N22.15301 E113.93615	58 m	0:00:15	14 kph
6/1/2017 10:49	ON	N22.15248 E113.93626	59 m	0:00:15	14 kph
6/1/2017 10:50	ON	N22.15199 E113.93631	55 m	0:00:14	14 kph
6/1/2017 10:50	ON	N22.15157 E113.93637	48 m	0:00:12	14 kph
6/1/2017 10:50	ON	N22.15111 E113.93634	51 m	0:00:14	13 kph
6/1/2017 10:50	ON	N22.15082 E113.93595	52 m	0:00:15	12 kph
6/1/2017 10:51	ON	N22.15057 E113.93542	61 m	0:00:16	14 kph
6/1/2017 10:51	ON	N22.15018 E113.93495	65 m	0:00:17	14 kph
6/1/2017 10:51	ON	N22.14984 E113.93470	46 m	0:00:12	14 kph
6/1/2017 10:51	ON	N22.14937 E113.93431	65 m	0:00:17	14 kph
6/1/2017 10:52	ON	N22.14898 E113.93383	66 m	0:00:17	14 kph
6/1/2017 10:52	ON	N22.14853 E113.93337	70 m	0:00:18	14 kph
6/1/2017 10:52	ON	N22.14815 E113.93298	58 m	0:00:15	14 kph
6/1/2017 10:52	ON	N22.14771 E113.93249	70 m	0:00:18	14 kph
6/1/2017 10:53	ON	N22.14725 E113.93202	70 m	0:00:18	14 kph
6/1/2017 10:53	ON	N22.14677 E113.93163	67 m	0:00:17	14 kph
6/1/2017 10:53	ON	N22.14636 E113.93121	63 m	0:00:16	14 kph
6/1/2017 10:54	ON	N22.14597 E113.93073	67 m	0:00:17	14 kph
6/1/2017 10:54	ON	N22.14563 E113.93039	51 m	0:00:13	14 kph
6/1/2017 10:54	ON	N22.14524 E113.93006	55 m	0:00:14	14 kph
6/1/2017 10:54	ON	N22.14480 E113.92966	64 m	0:00:16	14 kph
6/1/2017 10:55	ON	N22.14436 E113.92922	67 m	0:00:17	14 kph
6/1/2017 10:55	ON	N22.14398 E113.92871	67 m	0:00:17	14 kph
6/1/2017 10:55	ON	N22.14356 E113.92818	72 m	0:00:18	14 kph
6/1/2017 10:55	ON	N22.14327 E113.92773	57 m	0:00:15	14 kph
6/1/2017 10:56	ON	N22.14333 E113.92727	48 m	0:00:14	12 kph
6/1/2017 10:56	ON	N22.14371 E113.92696	53 m	0:00:15	13 kph
6/1/2017 10:56	ON	N22.14432 E113.92691	68 m	0:00:18	14 kph
6/1/2017 10:56	ON	N22.14473 E113.92691	46 m	0:00:12	14 kph
6/1/2017 10:57	ON	N22.14522 E113.92692	54 m	0:00:14	14 kph
6/1/2017 10:57	ON	N22.14574 E113.92696	58 m	0:00:15	14 kph
6/1/2017 10:57	ON	N22.14630 E113.92700	63 m	0:00:16	14 kph
6/1/2017 10:57	ON	N22.14683 E113.92701	58 m	0:00:15	14 kph
6/1/2017 10:58	ON	N22.14721 E113.92704	43 m	0:00:11	14 kph
6/1/2017 10:58	ON	N22.14768 E113.92704	52 m	0:00:13	14 kph
6/1/2017 10:58	ON	N22.14817 E113.92704	55 m	0:00:14	14 kph
6/1/2017 10:58	ON	N22.14876 E113.92706	66 m	0:00:17	14 kph

Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
6/1/2017 10:59	ON	N22.14930 E113.92708	59 m	0:00:15	14 kph
6/1/2017 10:59	ON	N22.14990 E113.92708	67 m	0:00:17	14 kph
6/1/2017 10:59	ON	N22.15032 E113.92709	47 m	0:00:12	14 kph
6/1/2017 10:59	ON	N22.15074 E113.92710	47 m	0:00:12	14 kph
6/1/2017 10:59	ON	N22.15119 E113.92714	51 m	0:00:13	14 kph
6/1/2017 11:00	ON	N22.15165 E113.92718	51 m	0:00:13	14 kph
6/1/2017 11:00	ON	N22.15218 E113.92724	59 m	0:00:15	14 kph
6/1/2017 11:00	ON	N22.15268 E113.92726	56 m	0:00:14	14 kph
6/1/2017 11:00	ON	N22.15322 E113.92723	60 m	0:00:15	14 kph
6/1/2017 11:01	ON	N22.15371 E113.92724	55 m	0:00:14	14 kph
6/1/2017 11:01	ON	N22.15422 E113.92727	56 m	0:00:14	14 kph
6/1/2017 11:01	ON	N22.15475 E113.92727	60 m	0:00:15	14 kph
6/1/2017 11:01	ON	N22.15537 E113.92725	69 m	0:00:17	15 kph
6/1/2017 11:02	ON	N22.15595 E113.92726	65 m	0:00:16	15 kph
6/1/2017 11:02	ON	N22.15631 E113.92726	40 m	0:00:10	14 kph
6/1/2017 11:02	ON	N22.15675 E113.92727	48 m	0:00:12	15 kph
6/1/2017 11:02	ON	N22.15732 E113.92724	64 m	0:00:16	14 kph
6/1/2017 11:02	ON	N22.15779 E113.92722	53 m	0:00:13	15 kph
6/1/2017 11:03	ON	N22.15841 E113.92718	69 m	0:00:17	15 kph
6/1/2017 11:03	ON	N22.15895 E113.92717	60 m	0:00:15	14 kph
6/1/2017 11:03	ON	N22.15953 E113.92717	64 m	0:00:16	14 kph
6/1/2017 11:04	ON	N22.16007 E113.92717	60 m	0:00:15	14 kph
6/1/2017 11:04	ON	N22.16065 E113.92713	65 m	0:00:16	15 kph
6/1/2017 11:04	ON	N22.16140 E113.92713	84 m	0:00:21	14 kph
6/1/2017 11:04	ON	N22.16191 E113.92712	56 m	0:00:14	14 kph
6/1/2017 11:05	ON	N22.16244 E113.92711	60 m	0:00:15	14 kph
6/1/2017 11:05	ON	N22.16301 E113.92709	64 m	0:00:16	14 kph
6/1/2017 11:05	ON	N22.16355 E113.92711	59 m	0:00:15	14 kph
6/1/2017 11:05	ON	N22.16401 E113.92715	52 m	0:00:13	14 kph
6/1/2017 11:06	ON	N22.16451 E113.92720	55 m	0:00:14	14 kph
6/1/2017 11:06	ON	N22.16515 E113.92720	71 m	0:00:18	14 kph
6/1/2017 11:06	ON	N22.16570 E113.92716	61 m	0:00:15	15 kph
6/1/2017 11:06	ON	N22.16616 E113.92711	52 m	0:00:13	14 kph
6/1/2017 11:07	ON	N22.16672 E113.92713	63 m	0:00:16	14 kph
6/1/2017 11:07	ON	N22.16714 E113.92718	48 m	0:00:12	14 kph
6/1/2017 11:07	ON	N22.16768 E113.92719	59 m	0:00:15	14 kph
6/1/2017 11:07	ON	N22.16835 E113.92720	75 m	0:00:19	14 kph
6/1/2017 11:08	ON	N22.16896 E113.92724	68 m	0:00:17	14 kph
6/1/2017 11:08	ON	N22.16945 E113.92730	55 m	0:00:14	14 kph
6/1/2017 11:08	ON	N22.17005 E113.92735	67 m	0:00:17	14 kph
6/1/2017 11:09	ON	N22.17068 E113.92739	71 m	0:00:18	14 kph
6/1/2017 11:09	ON	N22.17128 E113.92743	67 m	0:00:17	14 kph
6/1/2017 11:09	ON	N22.17203 E113.92748	83 m	0:00:21	14 kph
6/1/2017 11:09	ON	N22.17262 E113.92755	67 m	0:00:17	14 kph
6/1/2017 11:10	ON	N22.17314 E113.92766	59 m	0:00:15	14 kph
6/1/2017 11:10	ON	N22.17362 E113.92777	54 m	0:00:14	14 kph
6/1/2017 11:10	ON	N22.17418 E113.92782	63 m	0:00:16	14 kph
6/1/2017 11:10	ON	N22.17467 E113.92786	54 m	0:00:14	14 kph
6/1/2017 11:11	ON	N22.17529 E113.92793	70 m	0:00:18	14 kph
6/1/2017 11:11	ON	N22.17571 E113.92797	47 m	0:00:12	14 kph
6/1/2017 11:11	ON	N22.17623 E113.92803	59 m	0:00:15	14 kph
6/1/2017 11:11	ON	N22.17676 E113.92803	59 m	0:00:15	14 kph
6/1/2017 11:12	ON	N22.17732 E113.92807	63 m	0:00:16	14 kph
6/1/2017 11:12	ON	N22.17786 E113.92808	60 m	0:00:15	14 kph
6/1/2017 11:12	ON	N22.17837 E113.92808	56 m	0:00:14	14 kph
6/1/2017 11:12	ON	N22.17895 E113.92806	65 m	0:00:16	15 kph
6/1/2017 11:13	ON	N22.17953 E113.92797	66 m	0:00:16	15 kph
6/1/2017 11:13	ON	N22.18009 E113.92792	62 m	0:00:15	15 kph
6/1/2017 11:13	ON	N22.18057 E113.92785	54 m	0:00:13	15 kph
6/1/2017 11:13	ON	N22.18108 E113.92782	57 m	0:00:14	15 kph
6/1/2017 11:14	ON	N22.18163 E113.92785	61 m	0:00:15	15 kph
6/1/2017 11:14	ON	N22.18214 E113.92787	57 m	0:00:14	15 kph
6/1/2017 11:14	ON	N22.18262 E113.92787	53 m	0:00:13	15 kph
6/1/2017 11:14	ON	N22.18312 E113.92783	56 m	0:00:14	14 kph

Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
6/1/2017 11:15	ON	N22.18377 E113.92775	72 m	0:00:18	14 kph
6/1/2017 11:15	ON	N22.18442 E113.92772	72 m	0:00:18	14 kph
6/1/2017 11:15	ON	N22.18509 E113.92767	75 m	0:00:19	14 kph
6/1/2017 11:16	ON	N22.18581 E113.92766	80 m	0:00:20	14 kph
6/1/2017 11:16	ON	N22.18627 E113.92763	51 m	0:00:13	14 kph
6/1/2017 11:16	ON	N22.18688 E113.92758	68 m	0:00:17	14 kph
6/1/2017 11:16	ON	N22.18756 E113.92755	76 m	0:00:19	14 kph
6/1/2017 11:17	ON	N22.18803 E113.92756	52 m	0:00:13	14 kph
6/1/2017 11:17	ON	N22.18878 E113.92751	84 m	0:00:21	14 kph
6/1/2017 11:17	ON	N22.18939 E113.92747	68 m	0:00:17	14 kph
6/1/2017 11:17	ON	N22.18993 E113.92743	60 m	0:00:15	14 kph
6/1/2017 11:18	ON	N22.19055 E113.92732	69 m	0:00:17	15 kph
6/1/2017 11:18	ON	N22.19138 E113.92725	93 m	0:00:23	15 kph
6/1/2017 11:18	ON	N22.19202 E113.92721	72 m	0:00:18	14 kph
6/1/2017 11:19	ON	N22.19274 E113.92718	80 m	0:00:20	14 kph
6/1/2017 11:19	ON	N22.19338 E113.92712	72 m	0:00:18	14 kph
6/1/2017 11:19	ON	N22.19396 E113.92706	64 m	0:00:16	14 kph
6/1/2017 11:20	ON	N22.19467 E113.92701	80 m	0:00:20	14 kph
6/1/2017 11:20	ON	N22.19524 E113.92705	64 m	0:00:16	14 kph
6/1/2017 11:20	ON	N22.19588 E113.92714	72 m	0:00:18	14 kph
6/1/2017 11:21	ON	N22.19642 E113.92721	60 m	0:00:15	14 kph
6/1/2017 11:21	ON	N22.19717 E113.92719	85 m	0:00:21	14 kph
6/1/2017 11:21	ON	N22.19796 E113.92711	88 m	0:00:22	14 kph
6/1/2017 11:22	ON	N22.19876 E113.92710	89 m	0:00:22	15 kph
6/1/2017 11:22	ON	N22.19948 E113.92710	80 m	0:00:20	14 kph
6/1/2017 11:22	ON	N22.20031 E113.92712	92 m	0:00:23	14 kph
6/1/2017 11:23	ON	N22.20113 E113.92713	91 m	0:00:23	14 kph
6/1/2017 11:23	ON	N22.20181 E113.92715	76 m	0:00:19	14 kph
6/1/2017 11:23	ON	N22.20256 E113.92713	84 m	0:00:21	14 kph
6/1/2017 11:24	ON	N22.20335 E113.92712	88 m	0:00:22	14 kph
6/1/2017 11:24	ON	N22.20394 E113.92720	66 m	0:00:17	14 kph
6/1/2017 11:24	ON	N22.20465 E113.92724	79 m	0:00:20	14 kph
6/1/2017 11:25	ON	N22.20521 E113.92713	64 m	0:00:17	14 kph
6/1/2017 11:25	ON	N22.20542 E113.92671	49 m	0:00:13	13 kph
6/1/2017 11:25	ON	N22.20539 E113.92594	79 m	0:00:19	15 kph
6/1/2017 11:25	ON	N22.20545 E113.92519	78 m	0:00:18	16 kph
6/1/2017 11:26	ON	N22.20550 E113.92435	87 m	0:00:20	16 kph
6/1/2017 11:26	ON	N22.20554 E113.92351	86 m	0:00:21	15 kph
6/1/2017 11:26	ON	N22.20555 E113.92279	74 m	0:00:18	15 kph
6/1/2017 11:27	ON	N22.20556 E113.92209	72 m	0:00:18	14 kph
6/1/2017 11:27	ON	N22.20561 E113.92144	67 m	0:00:17	14 kph
6/1/2017 11:27	ON	N22.20573 E113.92069	79 m	0:00:20	14 kph
6/1/2017 11:28	ON	N22.20583 E113.92004	68 m	0:00:17	14 kph
6/1/2017 11:28	ON	N22.20588 E113.91927	80 m	0:00:20	14 kph
6/1/2017 11:28	ON	N22.20594 E113.91844	85 m	0:00:21	15 kph
6/1/2017 11:29	ON	N22.20589 E113.91777	69 m	0:00:18	14 kph
6/1/2017 11:29	ON	N22.20562 E113.91740	48 m	0:00:14	12 kph
6/1/2017 11:29	ON	N22.20516 E113.91729	53 m	0:00:16	12 kph
6/1/2017 11:29	ON	N22.20465 E113.91735	57 m	0:00:17	12 kph
6/1/2017 11:30	ON	N22.20425 E113.91733	45 m	0:00:13	12 kph
6/1/2017 11:30	ON	N22.20365 E113.91728	67 m	0:00:18	13 kph
6/1/2017 11:30	ON	N22.20308 E113.91734	63 m	0:00:17	13 kph
6/1/2017 11:30	ON	N22.20258 E113.91736	56 m	0:00:15	13 kph
6/1/2017 11:31	ON	N22.20201 E113.91734	64 m	0:00:17	13 kph
6/1/2017 11:31	ON	N22.20144 E113.91730	64 m	0:00:17	13 kph
6/1/2017 11:31	ON	N22.20086 E113.91719	66 m	0:00:18	13 kph
6/1/2017 11:32	ON	N22.20047 E113.91710	44 m	0:00:13	12 kph
6/1/2017 11:32	ON	N22.20003 E113.91696	51 m	0:00:15	12 kph
6/1/2017 11:32	ON	N22.19957 E113.91680	54 m	0:00:16	12 kph
6/1/2017 11:32	ON	N22.19912 E113.91657	55 m	0:00:16	12 kph
6/1/2017 11:33	ON	N22.19865 E113.91634	58 m	0:00:17	12 kph
6/1/2017 11:33	ON	N22.19810 E113.91615	64 m	0:00:19	12 kph
6/1/2017 11:33	ON	N22.19758 E113.91604	59 m	0:00:18	12 kph
6/1/2017 11:33	ON	N22.19728 E113.91618	36 m	0:00:12	11 kph

Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
6/1/2017 11:34	ON	N22.19684 E113.91640	54 m	0:00:15	13 kph
6/1/2017 11:34	ON	N22.19622 E113.91668	75 m	0:00:19	14 kph
6/1/2017 11:34	ON	N22.19552 E113.91689	80 m	0:00:20	14 kph
6/1/2017 11:35	ON	N22.19493 E113.91705	68 m	0:00:17	14 kph
6/1/2017 11:35	ON	N22.19444 E113.91720	56 m	0:00:14	15 kph
6/1/2017 11:35	ON	N22.19393 E113.91733	58 m	0:00:14	15 kph
6/1/2017 11:35	ON	N22.19340 E113.91742	60 m	0:00:15	14 kph
6/1/2017 11:36	ON	N22.19263 E113.91749	86 m	0:00:21	15 kph
6/1/2017 11:36	ON	N22.19202 E113.91758	69 m	0:00:17	15 kph
6/1/2017 11:36	ON	N22.19151 E113.91763	57 m	0:00:14	15 kph
6/1/2017 11:36	ON	N22.19100 E113.91767	57 m	0:00:14	15 kph
6/1/2017 11:37	ON	N22.19056 E113.91769	49 m	0:00:12	15 kph
6/1/2017 11:37	ON	N22.18998 E113.91773	65 m	0:00:16	15 kph
6/1/2017 11:37	ON	N22.18931 E113.91775	74 m	0:00:18	15 kph
6/1/2017 11:37	ON	N22.18865 E113.91774	74 m	0:00:18	15 kph
6/1/2017 11:38	ON	N22.18795 E113.91772	78 m	0:00:19	15 kph
6/1/2017 11:38	ON	N22.18729 E113.91770	74 m	0:00:18	15 kph
6/1/2017 11:38	ON	N22.18655 E113.91770	82 m	0:00:20	15 kph
6/1/2017 11:39	ON	N22.18596 E113.91768	66 m	0:00:16	15 kph
6/1/2017 11:39	ON	N22.18540 E113.91767	62 m	0:00:15	15 kph
6/1/2017 11:39	ON	N22.18486 E113.91766	61 m	0:00:15	15 kph
6/1/2017 11:39	ON	N22.18431 E113.91779	63 m	0:00:16	14 kph
6/1/2017 11:40	ON	N22.18390 E113.91811	56 m	0:00:15	13 kph
6/1/2017 11:40	ON	N22.18352 E113.91849	58 m	0:00:15	14 kph
6/1/2017 11:40	ON	N22.18299 E113.91897	77 m	0:00:20	14 kph
6/1/2017 11:41	ON	N22.18251 E113.91951	77 m	0:00:20	14 kph
6/1/2017 11:41	ON	N22.18209 E113.91999	68 m	0:00:18	14 kph
6/1/2017 11:41	ON	N22.18154 E113.92049	80 m	0:00:21	14 kph
6/1/2017 11:42	ON	N22.18098 E113.92089	75 m	0:00:19	14 kph
6/1/2017 11:42	ON	N22.18036 E113.92126	79 m	0:00:19	15 kph
6/1/2017 11:42	ON	N22.17966 E113.92144	79 m	0:00:19	15 kph
6/1/2017 11:42	ON	N22.17915 E113.92119	63 m	0:00:15	15 kph
6/1/2017 11:43	ON	N22.17870 E113.92073	68 m	0:00:16	15 kph
6/1/2017 11:43	ON	N22.17829 E113.92037	59 m	0:00:15	14 kph
6/1/2017 11:43	ON	N22.17788 E113.92007	55 m	0:00:14	14 kph
6/1/2017 11:44	ON	N22.17737 E113.91978	64 m	0:00:16	14 kph
6/1/2017 11:44	ON	N22.17682 E113.91959	64 m	0:00:16	14 kph
6/1/2017 11:44	ON	N22.17625 E113.91946	65 m	0:00:16	15 kph
6/1/2017 11:44	ON	N22.17568 E113.91931	65 m	0:00:16	15 kph
6/1/2017 11:45	ON	N22.17525 E113.91922	48 m	0:00:12	15 kph
6/1/2017 11:45	ON	N22.17475 E113.91913	56 m	0:00:14	15 kph
6/1/2017 11:45	ON	N22.17418 E113.91904	64 m	0:00:16	14 kph
6/1/2017 11:45	ON	N22.17369 E113.91899	55 m	0:00:14	14 kph
6/1/2017 11:45	ON	N22.17321 E113.91894	54 m	0:00:14	14 kph
6/1/2017 11:46	ON	N22.17273 E113.91892	53 m	0:00:14	14 kph
6/1/2017 11:46	ON	N22.17225 E113.91887	54 m	0:00:14	14 kph
6/1/2017 11:46	ON	N22.17180 E113.91879	50 m	0:00:13	14 kph
6/1/2017 11:46	ON	N22.17135 E113.91870	51 m	0:00:13	14 kph
6/1/2017 11:47	ON	N22.17086 E113.91861	55 m	0:00:14	14 kph
6/1/2017 11:47	ON	N22.17041 E113.91855	51 m	0:00:13	14 kph
6/1/2017 11:47	ON	N22.16983 E113.91848	65 m	0:00:17	14 kph
6/1/2017 11:47	ON	N22.16935 E113.91843	54 m	0:00:14	14 kph
6/1/2017 11:48	ON	N22.16877 E113.91837	65 m	0:00:17	14 kph
6/1/2017 11:48	ON	N22.16824 E113.91837	59 m	0:00:16	13 kph
6/1/2017 11:48	ON	N22.16785 E113.91839	44 m	0:00:12	13 kph
6/1/2017 11:48	ON	N22.16739 E113.91837	50 m	0:00:14	13 kph
6/1/2017 11:49	ON	N22.16681 E113.91830	66 m	0:00:18	13 kph
6/1/2017 11:49	ON	N22.16638 E113.91825	48 m	0:00:13	13 kph
6/1/2017 11:49	ON	N22.16595 E113.91822	49 m	0:00:13	13 kph
6/1/2017 11:49	ON	N22.16551 E113.91817	49 m	0:00:13	14 kph
6/1/2017 11:50	ON	N22.16500 E113.91810	57 m	0:00:15	14 kph
6/1/2017 11:50	ON	N22.16452 E113.91809	53 m	0:00:14	14 kph
6/1/2017 11:50	ON	N22.16411 E113.91810	46 m	0:00:12	14 kph
6/1/2017 11:50	ON	N22.16370 E113.91809	46 m	0:00:12	14 kph

Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
6/1/2017 11:50	ON	N22.16314 E113.91803	62 m	0:00:16	14 kph
6/1/2017 11:51	ON	N22.16273 E113.91798	47 m	0:00:12	14 kph
6/1/2017 11:51	ON	N22.16213 E113.91794	66 m	0:00:17	14 kph
6/1/2017 11:51	ON	N22.16174 E113.91793	44 m	0:00:11	14 kph
6/1/2017 11:51	ON	N22.16124 E113.91798	56 m	0:00:14	14 kph
6/1/2017 11:52	ON	N22.16074 E113.91799	56 m	0:00:14	14 kph
6/1/2017 11:52	ON	N22.16023 E113.91794	57 m	0:00:14	15 kph
6/1/2017 11:52	ON	N22.15966 E113.91781	65 m	0:00:16	15 kph
6/1/2017 11:52	ON	N22.15920 E113.91774	52 m	0:00:13	14 kph
6/1/2017 11:52	ON	N22.15872 E113.91775	53 m	0:00:13	15 kph
6/1/2017 11:53	ON	N22.15816 E113.91774	62 m	0:00:15	15 kph
6/1/2017 11:53	ON	N22.15757 E113.91771	66 m	0:00:16	15 kph
6/1/2017 11:53	ON	N22.15691 E113.91771	74 m	0:00:18	15 kph
6/1/2017 11:54	ON	N22.15632 E113.91772	65 m	0:00:16	15 kph
6/1/2017 11:54	ON	N22.15560 E113.91767	81 m	0:00:20	14 kph
6/1/2017 11:54	ON	N22.15496 E113.91769	72 m	0:00:18	14 kph
6/1/2017 11:54	ON	N22.15439 E113.91769	63 m	0:00:16	14 kph
6/1/2017 11:55	ON	N22.15372 E113.91773	75 m	0:00:19	14 kph
6/1/2017 11:55	ON	N22.15322 E113.91778	55 m	0:00:14	14 kph
6/1/2017 11:55	ON	N22.15269 E113.91781	60 m	0:00:15	14 kph
6/1/2017 11:56	ON	N22.15212 E113.91783	63 m	0:00:16	14 kph
6/1/2017 11:56	ON	N22.15159 E113.91779	59 m	0:00:15	14 kph
6/1/2017 11:56	ON	N22.15117 E113.91775	47 m	0:00:12	14 kph
6/1/2017 11:56	ON	N22.15054 E113.91774	71 m	0:00:18	14 kph
6/1/2017 11:57	ON	N22.15008 E113.91777	51 m	0:00:13	14 kph
6/1/2017 11:57	ON	N22.14958 E113.91778	55 m	0:00:14	14 kph
6/1/2017 11:57	ON	N22.14902 E113.91776	63 m	0:00:16	14 kph
6/1/2017 11:57	ON	N22.14844 E113.91773	64 m	0:00:16	14 kph
6/1/2017 11:58	ON	N22.14794 E113.91775	55 m	0:00:14	14 kph
6/1/2017 11:58	ON	N22.14727 E113.91773	75 m	0:00:19	14 kph
6/1/2017 11:58	ON	N22.14680 E113.91767	52 m	0:00:13	14 kph
6/1/2017 11:58	ON	N22.14631 E113.91763	55 m	0:00:14	14 kph
6/1/2017 11:59	ON	N22.14581 E113.91761	55 m	0:00:14	14 kph
6/1/2017 11:59	ON	N22.14524 E113.91754	63 m	0:00:16	14 kph
6/1/2017 11:59	ON	N22.14472 E113.91747	58 m	0:00:15	14 kph
6/1/2017 11:59	ON	N22.14424 E113.91741	54 m	0:00:14	14 kph
6/1/2017 11:59	ON	N22.14379 E113.91738	50 m	0:00:13	14 kph
6/1/2017 12:00	ON	N22.14338 E113.91739	46 m	0:00:12	14 kph
6/1/2017 12:00	ON	N22.14303 E113.91740	38 m	0:00:10	14 kph
6/1/2017 12:00	ON	N22.14255 E113.91742	54 m	0:00:14	14 kph
6/1/2017 12:00	ON	N22.14211 E113.91739	49 m	0:00:13	14 kph
6/1/2017 12:01	ON	N22.14180 E113.91708	48 m	0:00:14	12 kph
6/1/2017 12:01	ON	N22.14175 E113.91649	61 m	0:00:16	14 kph
6/1/2017 12:01	ON	N22.14181 E113.91565	86 m	0:00:21	15 kph
6/1/2017 12:01	ON	N22.14180 E113.91491	76 m	0:00:18	15 kph
6/1/2017 12:02	ON	N22.14187 E113.91431	63 m	0:00:15	15 kph
6/1/2017 12:02	ON	N22.14196 E113.91370	63 m	0:00:15	15 kph
6/1/2017 12:02	ON	N22.14205 E113.91285	88 m	0:00:21	15 kph
6/1/2017 12:03	ON	N22.14219 E113.91196	93 m	0:00:22	15 kph
6/1/2017 12:03	ON	N22.14226 E113.91134	64 m	0:00:15	15 kph
6/1/2017 12:03	ON	N22.14237 E113.91060	77 m	0:00:18	15 kph
6/1/2017 12:04	ON	N22.14251 E113.90975	89 m	0:00:21	15 kph
6/1/2017 12:04	ON	N22.14253 E113.90902	75 m	0:00:18	15 kph
6/1/2017 12:04	ON	N22.14248 E113.90831	73 m	0:00:17	16 kph
6/1/2017 12:04	ON	N22.14249 E113.90758	75 m	0:00:18	15 kph
6/1/2017 12:05	ON	N22.14272 E113.90710	56 m	0:00:15	13 kph
6/1/2017 12:05	ON	N22.14324 E113.90679	65 m	0:00:17	14 kph
6/1/2017 12:05	ON	N22.14377 E113.90660	63 m	0:00:16	14 kph
6/1/2017 12:06	ON	N22.14443 E113.90651	73 m	0:00:18	15 kph
6/1/2017 12:06	ON	N22.14488 E113.90648	51 m	0:00:13	14 kph
6/1/2017 12:06	ON	N22.14532 E113.90641	49 m	0:00:14	13 kph
6/1/2017 12:06	ON	N22.14557 E113.90634	28 m	0:00:10	10 kph
6/1/2017 12:06	ON	N22.14583 E113.90626	31 m	0:00:12	9 kph
6/1/2017 12:07	ON	N22.14607 E113.90621	27 m	0:00:11	9 kph

Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
6/1/2017 12:07	ON	N22.14628 E113.90617	24 m	0:00:10	9 kph
6/1/2017 12:07	ON	N22.14665 E113.90615	41 m	0:00:16	9 kph
6/1/2017 12:07	ON	N22.14704 E113.90620	43 m	0:00:13	12 kph
6/1/2017 12:07	ON	N22.14749 E113.90625	51 m	0:00:13	14 kph
6/1/2017 12:08	ON	N22.14799 E113.90621	56 m	0:00:14	14 kph
6/1/2017 12:08	ON	N22.14852 E113.90622	59 m	0:00:15	14 kph
6/1/2017 12:08	ON	N22.14910 E113.90625	64 m	0:00:16	14 kph
6/1/2017 12:08	ON	N22.14959 E113.90627	54 m	0:00:16	12 kph
6/1/2017 12:09	ON	N22.14974 E113.90628	17 m	0:00:09	7 kph
6/1/2017 12:09	ON	N22.14984 E113.90626	11 m	0:00:07	5 kph
6/1/2017 12:09	OFF	N22.15001 E113.90623	19 m	0:00:16	4 kph
6/1/2017 12:09	OFF	N22.15010 E113.90620	10 m	0:00:11	3 kph
6/1/2017 12:09	OFF	N22.15018 E113.90618	10 m	0:00:14	2 kph
6/1/2017 12:10	OFF	N22.15024 E113.90614	8 m	0:00:15	2 kph
6/1/2017 12:10	OFF	N22.15029 E113.90611	6 m	0:00:15	2 kph
6/1/2017 12:10	OFF	N22.15032 E113.90608	5 m	0:00:14	1.2 kph
6/1/2017 12:10	OFF	N22.15035 E113.90605	4 m	0:00:14	1.1 kph
6/1/2017 12:11	OFF	N22.15037 E113.90603	4 m	0:00:12	1.1 kph
6/1/2017 12:11	OFF	N22.15040 E113.90600	4 m	0:00:10	2 kph
6/1/2017 12:11	OFF	N22.15043 E113.90600	3 m	0:00:03	3 kph
6/1/2017 12:11	OFF	N22.15076 E113.90604	37 m	0:00:16	8 kph
6/1/2017 12:11	OFF	N22.15125 E113.90613	55 m	0:00:16	12 kph
6/1/2017 12:11	OFF	N22.15155 E113.90618	33 m	0:00:09	13 kph
6/1/2017 12:12	ON	N22.15207 E113.90623	59 m	0:00:15	14 kph
6/1/2017 12:12	ON	N22.15259 E113.90629	58 m	0:00:15	14 kph
6/1/2017 12:12	ON	N22.15312 E113.90632	58 m	0:00:15	14 kph
6/1/2017 12:13	ON	N22.15378 E113.90638	74 m	0:00:19	14 kph
6/1/2017 12:13	ON	N22.15435 E113.90648	64 m	0:00:16	14 kph
6/1/2017 12:13	ON	N22.15491 E113.90656	63 m	0:00:16	14 kph
6/1/2017 12:13	ON	N22.15548 E113.90666	64 m	0:00:16	15 kph
6/1/2017 12:14	ON	N22.15607 E113.90668	65 m	0:00:16	15 kph
6/1/2017 12:14	ON	N22.15670 E113.90674	71 m	0:00:18	14 kph
6/1/2017 12:14	ON	N22.15707 E113.90659	43 m	0:00:14	11 kph
6/1/2017 12:14	ON	N22.15710 E113.90618	43 m	0:00:14	11 kph
6/1/2017 12:15	ON	N22.15670 E113.90578	61 m	0:00:16	14 kph
6/1/2017 12:15	ON	N22.15628 E113.90534	65 m	0:00:15	15 kph
6/1/2017 12:15	ON	N22.15585 E113.90464	86 m	0:00:19	16 kph
6/1/2017 12:15	ON	N22.15575 E113.90445	23 m	0:00:05	16 kph
6/1/2017 12:16	ON	N22.15550 E113.90360	91 m	0:00:20	16 kph
6/1/2017 12:16	ON	N22.15543 E113.90283	80 m	0:00:17	17 kph
6/1/2017 12:16	ON	N22.15564 E113.90205	83 m	0:00:18	17 kph
6/1/2017 12:16	ON	N22.15608 E113.90147	78 m	0:00:18	16 kph
6/1/2017 12:17	ON	N22.15661 E113.90098	78 m	0:00:19	15 kph
6/1/2017 12:17	ON	N22.15720 E113.90045	86 m	0:00:21	15 kph
6/1/2017 12:17	ON	N22.15769 E113.89997	73 m	0:00:18	15 kph
6/1/2017 12:18	ON	N22.15821 E113.89946	78 m	0:00:19	15 kph
6/1/2017 12:18	ON	N22.15874 E113.89905	73 m	0:00:18	15 kph
6/1/2017 12:18	ON	N22.15950 E113.89866	93 m	0:00:23	15 kph
6/1/2017 12:19	ON	N22.16021 E113.89844	82 m	0:00:20	15 kph
6/1/2017 12:19	ON	N22.16094 E113.89851	83 m	0:00:20	15 kph
6/1/2017 12:19	ON	N22.16168 E113.89881	88 m	0:00:21	15 kph
6/1/2017 12:20	ON	N22.16236 E113.89932	92 m	0:00:22	15 kph
6/1/2017 12:20	ON	N22.16282 E113.89983	73 m	0:00:18	15 kph
6/1/2017 12:20	ON	N22.16329 E113.90052	89 m	0:00:22	15 kph
6/1/2017 12:21	ON	N22.16369 E113.90128	90 m	0:00:22	15 kph
6/1/2017 12:21	ON	N22.16403 E113.90206	89 m	0:00:22	15 kph
6/1/2017 12:22	ON	N22.16426 E113.90286	86 m	0:00:21	15 kph
6/1/2017 12:22	ON	N22.16444 E113.90371	90 m	0:00:22	15 kph
6/1/2017 12:22	ON	N22.16458 E113.90477	110 m	0:00:26	15 kph
6/1/2017 12:23	ON	N22.16474 E113.90550	77 m	0:00:19	15 kph
6/1/2017 12:23	ON	N22.16519 E113.90613	83 m	0:00:20	15 kph
6/1/2017 12:23	ON	N22.16593 E113.90671	102 m	0:00:24	15 kph
6/1/2017 12:24	ON	N22.16673 E113.90710	98 m	0:00:23	15 kph
6/1/2017 12:24	ON	N22.16760 E113.90745	103 m	0:00:24	15 kph

Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
6/1/2017 12:25	ON	N22.16826 E113.90773	79 m	0:00:18	16 kph
6/1/2017 12:25	ON	N22.16901 E113.90802	89 m	0:00:20	16 kph
6/1/2017 12:25	ON	N22.16984 E113.90831	97 m	0:00:22	16 kph
6/1/2017 12:26	ON	N22.17055 E113.90853	82 m	0:00:20	15 kph
6/1/2017 12:26	ON	N22.17124 E113.90873	80 m	0:00:20	14 kph
6/1/2017 12:26	ON	N22.17183 E113.90891	67 m	0:00:17	14 kph
6/1/2017 12:26	ON	N22.17232 E113.90903	56 m	0:00:14	14 kph
6/1/2017 12:27	ON	N22.17293 E113.90910	68 m	0:00:17	14 kph
6/1/2017 12:27	ON	N22.17343 E113.90899	57 m	0:00:14	15 kph
6/1/2017 12:27	ON	N22.17389 E113.90878	56 m	0:00:13	16 kph
6/1/2017 12:27	ON	N22.17412 E113.90868	27 m	0:00:06	16 kph
6/1/2017 12:28	ON	N22.17471 E113.90832	76 m	0:00:17	16 kph
6/1/2017 12:28	ON	N22.17545 E113.90758	112 m	0:00:24	17 kph
6/1/2017 12:28	ON	N22.17599 E113.90679	101 m	0:00:21	17 kph
6/1/2017 12:29	ON	N22.17646 E113.90613	86 m	0:00:18	17 kph
6/1/2017 12:29	ON	N22.17706 E113.90549	94 m	0:00:20	17 kph
6/1/2017 12:29	ON	N22.17772 E113.90492	93 m	0:00:20	17 kph
6/1/2017 12:30	ON	N22.17847 E113.90451	94 m	0:00:21	16 kph
6/1/2017 12:30	ON	N22.17912 E113.90438	73 m	0:00:17	16 kph
6/1/2017 12:30	ON	N22.17995 E113.90434	93 m	0:00:22	15 kph
6/1/2017 12:31	ON	N22.18073 E113.90446	87 m	0:00:21	15 kph
6/1/2017 12:31	ON	N22.18145 E113.90457	82 m	0:00:20	15 kph
6/1/2017 12:31	ON	N22.18223 E113.90466	87 m	0:00:21	15 kph
6/1/2017 12:32	ON	N22.18314 E113.90475	101 m	0:00:24	15 kph
6/1/2017 12:32	ON	N22.18387 E113.90482	81 m	0:00:19	15 kph
6/1/2017 12:32	ON	N22.18475 E113.90494	99 m	0:00:22	16 kph
6/1/2017 12:33	ON	N22.18557 E113.90502	92 m	0:00:21	16 kph
6/1/2017 12:33	ON	N22.18639 E113.90528	95 m	0:00:22	16 kph
6/1/2017 12:33	ON	N22.18709 E113.90555	83 m	0:00:21	14 kph
6/1/2017 12:34	ON	N22.18786 E113.90597	96 m	0:00:25	14 kph
6/1/2017 12:34	ON	N22.18833 E113.90634	65 m	0:00:17	14 kph
6/1/2017 12:34	ON	N22.18883 E113.90654	59 m	0:00:16	13 kph
6/1/2017 12:35	ON	N22.18922 E113.90664	44 m	0:00:12	13 kph
6/1/2017 12:35	ON	N22.18962 E113.90672	46 m	0:00:12	14 kph
6/1/2017 12:35	ON	N22.19018 E113.90682	62 m	0:00:16	14 kph
6/1/2017 12:35	ON	N22.19065 E113.90689	54 m	0:00:14	14 kph
6/1/2017 12:36	ON	N22.19124 E113.90696	66 m	0:00:17	14 kph
6/1/2017 12:36	ON	N22.19179 E113.90701	62 m	0:00:16	14 kph
6/1/2017 12:36	ON	N22.19232 E113.90703	59 m	0:00:15	14 kph
6/1/2017 12:36	ON	N22.19290 E113.90709	65 m	0:00:17	14 kph
6/1/2017 12:37	ON	N22.19349 E113.90714	65 m	0:00:17	14 kph
6/1/2017 12:37	ON	N22.19407 E113.90719	65 m	0:00:17	14 kph
6/1/2017 12:37	ON	N22.19459 E113.90721	58 m	0:00:15	14 kph
6/1/2017 12:37	ON	N22.19518 E113.90724	66 m	0:00:17	14 kph
6/1/2017 12:38	ON	N22.19560 E113.90725	46 m	0:00:12	14 kph
6/1/2017 12:38	ON	N22.19622 E113.90729	70 m	0:00:18	14 kph
6/1/2017 12:38	ON	N22.19684 E113.90736	70 m	0:00:18	14 kph
6/1/2017 12:39	ON	N22.19740 E113.90741	63 m	0:00:16	14 kph
6/1/2017 12:39	ON	N22.19811 E113.90746	79 m	0:00:20	14 kph
6/1/2017 12:39	ON	N22.19877 E113.90754	74 m	0:00:19	14 kph
6/1/2017 12:40	ON	N22.19947 E113.90763	79 m	0:00:20	14 kph
6/1/2017 12:40	ON	N22.20014 E113.90770	75 m	0:00:19	14 kph
6/1/2017 12:40	ON	N22.20079 E113.90775	72 m	0:00:18	14 kph
6/1/2017 12:40	ON	N22.20131 E113.90782	58 m	0:00:15	14 kph
6/1/2017 12:41	ON	N22.20209 E113.90784	87 m	0:00:22	14 kph
6/1/2017 12:41	ON	N22.20281 E113.90783	79 m	0:00:20	14 kph
6/1/2017 12:41	ON	N22.20339 E113.90783	65 m	0:00:16	15 kph
6/1/2017 12:42	ON	N22.20422 E113.90784	92 m	0:00:23	14 kph
6/1/2017 12:42	ON	N22.20492 E113.90799	79 m	0:00:20	14 kph
6/1/2017 12:42	ON	N22.20564 E113.90805	81 m	0:00:20	15 kph
6/1/2017 12:43	ON	N22.20619 E113.90773	69 m	0:00:17	15 kph
6/1/2017 12:43	ON	N22.20660 E113.90708	82 m	0:00:19	15 kph
6/1/2017 12:43	ON	N22.20704 E113.90644	82 m	0:00:19	16 kph
6/1/2017 12:44	ON	N22.20758 E113.90588	83 m	0:00:19	16 kph

Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
6/1/2017 12:44	ON	N22.20803 E113.90532	77 m	0:00:18	15 kph
6/1/2017 12:44	ON	N22.20855 E113.90457	97 m	0:00:23	15 kph
6/1/2017 12:45	ON	N22.20914 E113.90383	100 m	0:00:24	15 kph
6/1/2017 12:45	ON	N22.20951 E113.90321	76 m	0:00:18	15 kph
6/1/2017 12:45	ON	N22.21002 E113.90231	109 m	0:00:26	15 kph
6/1/2017 12:46	ON	N22.21050 E113.90164	87 m	0:00:21	15 kph
6/1/2017 12:46	ON	N22.21102 E113.90082	103 m	0:00:24	15 kph
6/1/2017 12:47	ON	N22.21141 E113.90011	85 m	0:00:20	15 kph
6/1/2017 12:47	ON	N22.21183 E113.89928	97 m	0:00:23	15 kph
6/1/2017 12:47	ON	N22.21212 E113.89854	83 m	0:00:20	15 kph
6/1/2017 12:48	ON	N22.21245 E113.89779	85 m	0:00:20	15 kph
6/1/2017 12:48	ON	N22.21261 E113.89714	70 m	0:00:18	14 kph
6/1/2017 12:48	ON	N22.21231 E113.89679	49 m	0:00:15	12 kph
6/1/2017 12:48	ON	N22.21175 E113.89659	66 m	0:00:18	13 kph
6/1/2017 12:49	ON	N22.21121 E113.89653	61 m	0:00:16	14 kph
6/1/2017 12:49	ON	N22.21063 E113.89655	64 m	0:00:17	14 kph
6/1/2017 12:49	ON	N22.21005 E113.89648	65 m	0:00:17	14 kph
6/1/2017 12:50	ON	N22.20940 E113.89648	73 m	0:00:19	14 kph
6/1/2017 12:50	ON	N22.20884 E113.89642	62 m	0:00:16	14 kph
6/1/2017 12:50	ON	N22.20822 E113.89632	70 m	0:00:18	14 kph
6/1/2017 12:50	ON	N22.20770 E113.89623	59 m	0:00:15	14 kph
6/1/2017 12:51	ON	N22.20714 E113.89618	62 m	0:00:16	14 kph
6/1/2017 12:51	ON	N22.20658 E113.89612	63 m	0:00:16	14 kph
6/1/2017 12:51	ON	N22.20609 E113.89613	55 m	0:00:14	14 kph
6/1/2017 12:51	ON	N22.20550 E113.89618	67 m	0:00:17	14 kph
6/1/2017 12:52	ON	N22.20486 E113.89615	70 m	0:00:18	14 kph
6/1/2017 12:52	ON	N22.20440 E113.89617	51 m	0:00:13	14 kph
6/1/2017 12:52	ON	N22.20389 E113.89624	57 m	0:00:15	14 kph
6/1/2017 12:52	ON	N22.20341 E113.89627	54 m	0:00:14	14 kph
6/1/2017 12:53	ON	N22.20278 E113.89623	70 m	0:00:18	14 kph
6/1/2017 12:53	ON	N22.20229 E113.89622	55 m	0:00:14	14 kph
6/1/2017 12:53	ON	N22.20169 E113.89628	66 m	0:00:17	14 kph
6/1/2017 12:53	ON	N22.20120 E113.89631	55 m	0:00:14	14 kph
6/1/2017 12:54	ON	N22.20067 E113.89631	60 m	0:00:15	14 kph
6/1/2017 12:54	ON	N22.20010 E113.89633	64 m	0:00:16	14 kph
6/1/2017 12:54	ON	N22.19960 E113.89633	55 m	0:00:14	14 kph
6/1/2017 12:54	ON	N22.19911 E113.89634	54 m	0:00:14	14 kph
6/1/2017 12:55	ON	N22.19848 E113.89635	71 m	0:00:18	14 kph
6/1/2017 12:55	ON	N22.19787 E113.89636	67 m	0:00:17	14 kph
6/1/2017 12:55	ON	N22.19734 E113.89639	59 m	0:00:15	14 kph
6/1/2017 12:56	ON	N22.19675 E113.89648	66 m	0:00:17	14 kph
6/1/2017 12:56	ON	N22.19629 E113.89649	51 m	0:00:13	14 kph
6/1/2017 12:56	ON	N22.19579 E113.89648	56 m	0:00:14	14 kph
6/1/2017 12:56	ON	N22.19501 E113.89645	87 m	0:00:21	15 kph
6/1/2017 12:57	ON	N22.19450 E113.89645	57 m	0:00:14	15 kph
6/1/2017 12:57	ON	N22.19392 E113.89648	64 m	0:00:16	14 kph
6/1/2017 12:57	ON	N22.19319 E113.89646	81 m	0:00:20	15 kph
6/1/2017 12:57	ON	N22.19261 E113.89647	65 m	0:00:16	15 kph
6/1/2017 12:58	ON	N22.19203 E113.89646	65 m	0:00:16	15 kph
6/1/2017 12:58	ON	N22.19144 E113.89643	65 m	0:00:16	15 kph
6/1/2017 12:58	ON	N22.19083 E113.89646	68 m	0:00:17	14 kph
6/1/2017 12:59	ON	N22.19035 E113.89645	54 m	0:00:13	15 kph
6/1/2017 12:59	ON	N22.18975 E113.89648	67 m	0:00:16	15 kph
6/1/2017 12:59	ON	N22.18920 E113.89652	61 m	0:00:15	15 kph
6/1/2017 12:59	ON	N22.18873 E113.89652	52 m	0:00:13	15 kph
6/1/2017 13:00	ON	N22.18802 E113.89647	79 m	0:00:19	15 kph
6/1/2017 13:00	ON	N22.18724 E113.89642	87 m	0:00:21	15 kph
6/1/2017 13:00	ON	N22.18657 E113.89639	75 m	0:00:18	15 kph
6/1/2017 13:00	ON	N22.18601 E113.89637	62 m	0:00:15	15 kph
6/1/2017 13:01	ON	N22.18545 E113.89636	62 m	0:00:15	15 kph
6/1/2017 13:01	ON	N22.18467 E113.89640	87 m	0:00:21	15 kph
6/1/2017 13:01	ON	N22.18396 E113.89644	79 m	0:00:19	15 kph
6/1/2017 13:02	ON	N22.18336 E113.89642	66 m	0:00:16	15 kph
6/1/2017 13:02	ON	N22.18266 E113.89637	78 m	0:00:19	15 kph

Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
6/1/2017 13:02	ON	N22.18175 E113.89635	102 m	0:00:25	15 kph
6/1/2017 13:03	ON	N22.18112 E113.89639	71 m	0:00:18	14 kph
6/1/2017 13:03	ON	N22.18050 E113.89645	69 m	0:00:17	15 kph
6/1/2017 13:03	ON	N22.17989 E113.89646	68 m	0:00:17	14 kph
6/1/2017 13:04	ON	N22.17921 E113.89641	76 m	0:00:19	14 kph
6/1/2017 13:04	ON	N22.17858 E113.89639	71 m	0:00:18	14 kph
6/1/2017 13:04	ON	N22.17798 E113.89639	67 m	0:00:17	14 kph
6/1/2017 13:04	ON	N22.17734 E113.89638	71 m	0:00:18	14 kph
6/1/2017 13:05	ON	N22.17671 E113.89638	71 m	0:00:18	14 kph
6/1/2017 13:05	ON	N22.17613 E113.89632	64 m	0:00:16	14 kph
6/1/2017 13:05	ON	N22.17548 E113.89628	73 m	0:00:18	15 kph
6/1/2017 13:06	ON	N22.17488 E113.89640	68 m	0:00:17	14 kph
6/1/2017 13:06	ON	N22.17419 E113.89657	80 m	0:00:20	14 kph
6/1/2017 13:06	ON	N22.17360 E113.89673	68 m	0:00:17	14 kph
6/1/2017 13:07	ON	N22.17281 E113.89687	89 m	0:00:22	15 kph
6/1/2017 13:07	ON	N22.17212 E113.89698	78 m	0:00:19	15 kph
6/1/2017 13:07	ON	N22.17137 E113.89713	85 m	0:00:21	15 kph
6/1/2017 13:08	ON	N22.17057 E113.89713	89 m	0:00:22	14 kph
6/1/2017 13:08	ON	N22.17000 E113.89711	64 m	0:00:16	14 kph
6/1/2017 13:08	ON	N22.16943 E113.89709	64 m	0:00:16	14 kph
6/1/2017 13:08	ON	N22.16881 E113.89709	68 m	0:00:17	14 kph
6/1/2017 13:09	ON	N22.16812 E113.89708	77 m	0:00:19	15 kph
6/1/2017 13:09	ON	N22.16758 E113.89710	61 m	0:00:15	15 kph
6/1/2017 13:09	ON	N22.16699 E113.89714	66 m	0:00:16	15 kph
6/1/2017 13:10	ON	N22.16630 E113.89723	77 m	0:00:19	15 kph
6/1/2017 13:10	ON	N22.16572 E113.89730	65 m	0:00:16	15 kph
6/1/2017 13:10	ON	N22.16499 E113.89739	82 m	0:00:20	15 kph
6/1/2017 13:11	ON	N22.16418 E113.89752	91 m	0:00:22	15 kph
6/1/2017 13:11	ON	N22.16364 E113.89760	61 m	0:00:15	15 kph
6/1/2017 13:11	ON	N22.16308 E113.89760	62 m	0:00:15	15 kph
6/1/2017 13:11	ON	N22.16231 E113.89757	85 m	0:00:21	15 kph
6/1/2017 13:12	ON	N22.16174 E113.89754	64 m	0:00:16	14 kph
6/1/2017 13:12	ON	N22.16079 E113.89748	105 m	0:00:25	15 kph
6/1/2017 13:12	ON	N22.16014 E113.89751	73 m	0:00:17	15 kph
6/1/2017 13:13	ON	N22.15949 E113.89752	72 m	0:00:17	15 kph
6/1/2017 13:13	ON	N22.15885 E113.89743	72 m	0:00:17	15 kph
6/1/2017 13:13	ON	N22.15821 E113.89727	73 m	0:00:17	15 kph
6/1/2017 13:14	ON	N22.15752 E113.89708	80 m	0:00:19	15 kph
6/1/2017 13:14	ON	N22.15690 E113.89701	69 m	0:00:17	15 kph
6/1/2017 13:14	ON	N22.15641 E113.89695	55 m	0:00:14	14 kph
6/1/2017 13:14	ON	N22.15578 E113.89687	71 m	0:00:18	14 kph
6/1/2017 13:15	ON	N22.15522 E113.89683	62 m	0:00:16	14 kph
6/1/2017 13:15	ON	N22.15456 E113.89678	75 m	0:00:19	14 kph
6/1/2017 13:15	ON	N22.15402 E113.89677	59 m	0:00:15	14 kph
6/1/2017 13:15	ON	N22.15354 E113.89674	54 m	0:00:14	14 kph
6/1/2017 13:16	ON	N22.15316 E113.89670	43 m	0:00:11	14 kph
6/1/2017 13:16	ON	N22.15281 E113.89665	39 m	0:00:10	14 kph
6/1/2017 13:16	ON	N22.15242 E113.89660	44 m	0:00:11	14 kph
6/1/2017 13:16	ON	N22.15189 E113.89656	59 m	0:00:15	14 kph
6/1/2017 13:16	ON	N22.15129 E113.89654	66 m	0:00:17	14 kph
6/1/2017 13:17	ON	N22.15076 E113.89652	59 m	0:00:15	14 kph
6/1/2017 13:17	ON	N22.15006 E113.89649	78 m	0:00:20	14 kph
6/1/2017 13:17	ON	N22.14966 E113.89625	51 m	0:00:14	13 kph
6/1/2017 13:18	ON	N22.14962 E113.89575	52 m	0:00:14	13 kph
6/1/2017 13:18	ON	N22.14984 E113.89505	76 m	0:00:18	15 kph
6/1/2017 13:18	ON	N22.14993 E113.89435	73 m	0:00:17	16 kph
6/1/2017 13:18	ON	N22.15001 E113.89369	69 m	0:00:16	16 kph
6/1/2017 13:19	ON	N22.15015 E113.89286	86 m	0:00:20	16 kph
6/1/2017 13:19	ON	N22.15029 E113.89220	70 m	0:00:16	16 kph
6/1/2017 13:19	ON	N22.15046 E113.89154	71 m	0:00:16	16 kph
6/1/2017 13:20	ON	N22.15067 E113.89085	75 m	0:00:17	16 kph
6/1/2017 13:20	ON	N22.15097 E113.89016	78 m	0:00:18	16 kph
6/1/2017 13:20	ON	N22.15135 E113.88950	81 m	0:00:19	15 kph
6/1/2017 13:20	ON	N22.15170 E113.88878	83 m	0:00:19	16 kph

Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
6/1/2017 13:21	ON	N22.15209 E113.88819	75 m	0:00:18	15 kph
6/1/2017 13:21	ON	N22.15264 E113.88795	65 m	0:00:16	15 kph
6/1/2017 13:21	ON	N22.15309 E113.88789	51 m	0:00:12	15 kph
6/1/2017 13:21	ON	N22.15357 E113.88784	54 m	0:00:13	15 kph
6/1/2017 13:22	ON	N22.15418 E113.88777	68 m	0:00:16	15 kph
6/1/2017 13:22	ON	N22.15490 E113.88777	80 m	0:00:19	15 kph
6/1/2017 13:22	ON	N22.15555 E113.88773	72 m	0:00:17	15 kph
6/1/2017 13:23	ON	N22.15623 E113.88773	75 m	0:00:18	15 kph
6/1/2017 13:23	ON	N22.15683 E113.88772	67 m	0:00:16	15 kph
6/1/2017 13:23	ON	N22.15758 E113.88772	84 m	0:00:20	15 kph
6/1/2017 13:23	ON	N22.15815 E113.88774	63 m	0:00:15	15 kph
6/1/2017 13:24	ON	N22.15867 E113.88776	59 m	0:00:14	15 kph
6/1/2017 13:24	ON	N22.15925 E113.88773	64 m	0:00:15	15 kph
6/1/2017 13:24	ON	N22.15986 E113.88769	68 m	0:00:16	15 kph
6/1/2017 13:24	ON	N22.16039 E113.88770	59 m	0:00:14	15 kph
6/1/2017 13:25	ON	N22.16093 E113.88770	59 m	0:00:14	15 kph
6/1/2017 13:25	ON	N22.16162 E113.88769	76 m	0:00:18	15 kph
6/1/2017 13:25	ON	N22.16234 E113.88770	80 m	0:00:19	15 kph
6/1/2017 13:26	ON	N22.16299 E113.88773	73 m	0:00:17	15 kph
6/1/2017 13:26	ON	N22.16369 E113.88779	78 m	0:00:19	15 kph
6/1/2017 13:26	ON	N22.16442 E113.88782	81 m	0:00:20	15 kph
6/1/2017 13:27	ON	N22.16503 E113.88785	69 m	0:00:17	15 kph
6/1/2017 13:27	ON	N22.16565 E113.88788	69 m	0:00:17	15 kph
6/1/2017 13:27	ON	N22.16631 E113.88791	73 m	0:00:18	15 kph
6/1/2017 13:27	ON	N22.16690 E113.88792	66 m	0:00:16	15 kph
6/1/2017 13:28	ON	N22.16752 E113.88794	69 m	0:00:17	15 kph
6/1/2017 13:28	ON	N22.16821 E113.88796	77 m	0:00:19	15 kph
6/1/2017 13:28	ON	N22.16887 E113.88797	74 m	0:00:18	15 kph
6/1/2017 13:29	ON	N22.16957 E113.88796	78 m	0:00:19	15 kph
6/1/2017 13:29	ON	N22.17031 E113.88794	83 m	0:00:20	15 kph
6/1/2017 13:29	ON	N22.17115 E113.88796	93 m	0:00:23	15 kph
6/1/2017 13:30	ON	N22.17200 E113.88796	94 m	0:00:23	15 kph
6/1/2017 13:30	ON	N22.17278 E113.88798	87 m	0:00:21	15 kph
6/1/2017 13:30	ON	N22.17355 E113.88800	86 m	0:00:21	15 kph
6/1/2017 13:31	ON	N22.17443 E113.88803	98 m	0:00:24	15 kph
6/1/2017 13:31	ON	N22.17524 E113.88800	89 m	0:00:22	15 kph
6/1/2017 13:32	ON	N22.17600 E113.88798	85 m	0:00:21	15 kph
6/1/2017 13:32	ON	N22.17660 E113.88804	67 m	0:00:17	14 kph
6/1/2017 13:32	ON	N22.17714 E113.88809	60 m	0:00:15	14 kph
6/1/2017 13:32	ON	N22.17779 E113.88800	73 m	0:00:18	15 kph
6/1/2017 13:33	ON	N22.17856 E113.88790	86 m	0:00:21	15 kph
6/1/2017 13:33	ON	N22.17929 E113.88787	82 m	0:00:20	15 kph
6/1/2017 13:33	ON	N22.17994 E113.88786	73 m	0:00:18	15 kph
6/1/2017 13:34	ON	N22.18058 E113.88793	71 m	0:00:18	14 kph
6/1/2017 13:34	ON	N22.18119 E113.88797	68 m	0:00:17	14 kph
6/1/2017 13:34	ON	N22.18193 E113.88805	83 m	0:00:21	14 kph
6/1/2017 13:35	ON	N22.18268 E113.88803	83 m	0:00:21	14 kph
6/1/2017 13:35	ON	N22.18335 E113.88811	75 m	0:00:19	14 kph
6/1/2017 13:35	ON	N22.18401 E113.88836	79 m	0:00:20	14 kph
6/1/2017 13:36	ON	N22.18455 E113.88853	62 m	0:00:17	13 kph
6/1/2017 13:36	ON	N22.18509 E113.88840	62 m	0:00:16	14 kph
6/1/2017 13:36	ON	N22.18554 E113.88829	51 m	0:00:13	14 kph
6/1/2017 13:36	ON	N22.18598 E113.88818	50 m	0:00:13	14 kph
6/1/2017 13:37	ON	N22.18681 E113.88810	92 m	0:00:23	14 kph
6/1/2017 13:37	ON	N22.18744 E113.88804	71 m	0:00:18	14 kph
6/1/2017 13:37	ON	N22.18804 E113.88799	68 m	0:00:17	14 kph
6/1/2017 13:38	ON	N22.18868 E113.88793	71 m	0:00:18	14 kph
6/1/2017 13:38	ON	N22.18928 E113.88794	67 m	0:00:17	14 kph
6/1/2017 13:38	ON	N22.18977 E113.88793	55 m	0:00:14	14 kph
6/1/2017 13:38	ON	N22.19051 E113.88787	83 m	0:00:21	14 kph
6/1/2017 13:39	ON	N22.19108 E113.88780	63 m	0:00:16	14 kph
6/1/2017 13:39	ON	N22.19171 E113.88778	70 m	0:00:18	14 kph
6/1/2017 13:39	ON	N22.19245 E113.88782	83 m	0:00:21	14 kph
6/1/2017 13:39	ON	N22.19284 E113.88781	43 m	0:00:11	14 kph

Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
6/1/2017 13:40	ON	N22.19344 E113.88778	67 m	0:00:17	14 kph
6/1/2017 13:40	ON	N22.19415 E113.88777	80 m	0:00:20	14 kph
6/1/2017 13:40	ON	N22.19476 E113.88779	67 m	0:00:17	14 kph
6/1/2017 13:41	ON	N22.19529 E113.88777	59 m	0:00:15	14 kph
6/1/2017 13:41	ON	N22.19603 E113.88776	82 m	0:00:21	14 kph
6/1/2017 13:41	ON	N22.19668 E113.88775	72 m	0:00:18	14 kph
6/1/2017 13:41	ON	N22.19714 E113.88773	51 m	0:00:13	14 kph
6/1/2017 13:42	ON	N22.19782 E113.88771	75 m	0:00:19	14 kph
6/1/2017 13:42	ON	N22.19850 E113.88771	77 m	0:00:19	15 kph
6/1/2017 13:42	ON	N22.19926 E113.88771	84 m	0:00:21	14 kph
6/1/2017 13:43	ON	N22.19997 E113.88777	79 m	0:00:20	14 kph
6/1/2017 13:43	ON	N22.20069 E113.88782	80 m	0:00:20	14 kph
6/1/2017 13:43	ON	N22.20138 E113.88782	77 m	0:00:19	15 kph
6/1/2017 13:44	ON	N22.20214 E113.88782	85 m	0:00:21	15 kph
6/1/2017 13:44	ON	N22.20295 E113.88788	90 m	0:00:22	15 kph
6/1/2017 13:44	ON	N22.20350 E113.88792	61 m	0:00:15	15 kph
6/1/2017 13:45	ON	N22.20434 E113.88795	94 m	0:00:23	15 kph
6/1/2017 13:45	ON	N22.20515 E113.88797	89 m	0:00:22	15 kph
6/1/2017 13:46	ON	N22.20591 E113.88800	85 m	0:00:21	15 kph
6/1/2017 13:46	ON	N22.20657 E113.88803	73 m	0:00:18	15 kph
6/1/2017 13:46	ON	N22.20719 E113.88804	69 m	0:00:17	15 kph
6/1/2017 13:46	ON	N22.20781 E113.88806	69 m	0:00:17	15 kph
6/1/2017 13:47	ON	N22.20846 E113.88815	73 m	0:00:18	15 kph
6/1/2017 13:47	ON	N22.20896 E113.88822	56 m	0:00:14	14 kph
6/1/2017 13:47	ON	N22.20965 E113.88829	77 m	0:00:19	15 kph
6/1/2017 13:48	ON	N22.21034 E113.88835	78 m	0:00:19	15 kph
6/1/2017 13:48	ON	N22.21115 E113.88839	89 m	0:00:22	15 kph
6/1/2017 13:48	ON	N22.21191 E113.88848	85 m	0:00:21	15 kph
6/1/2017 13:49	ON	N22.21278 E113.88863	98 m	0:00:24	15 kph
6/1/2017 13:49	ON	N22.21357 E113.88878	90 m	0:00:22	15 kph
6/1/2017 13:49	ON	N22.21437 E113.88879	89 m	0:00:22	14 kph
6/1/2017 13:50	ON	N22.21483 E113.88839	66 m	0:00:17	14 kph
6/1/2017 13:50	ON	N22.21489 E113.88784	58 m	0:00:15	14 kph
6/1/2017 13:50	ON	N22.21460 E113.88730	65 m	0:00:17	14 kph
6/1/2017 13:51	ON	N22.21402 E113.88677	84 m	0:00:21	14 kph
6/1/2017 13:51	ON	N22.21357 E113.88613	82 m	0:00:20	15 kph
6/1/2017 13:51	ON	N22.21304 E113.88529	105 m	0:00:25	15 kph
6/1/2017 13:52	ON	N22.21269 E113.88472	71 m	0:00:17	15 kph
6/1/2017 13:52	ON	N22.21231 E113.88392	92 m	0:00:22	15 kph
6/1/2017 13:52	ON	N22.21199 E113.88332	71 m	0:00:17	15 kph
6/1/2017 13:53	ON	N22.21164 E113.88264	80 m	0:00:19	15 kph
6/1/2017 13:53	ON	N22.21130 E113.88191	84 m	0:00:20	15 kph
6/1/2017 13:53	ON	N22.21098 E113.88126	76 m	0:00:18	15 kph
6/1/2017 13:54	ON	N22.21054 E113.88049	93 m	0:00:22	15 kph
6/1/2017 13:54	ON	N22.21022 E113.87993	68 m	0:00:16	15 kph
6/1/2017 13:54	ON	N22.20993 E113.87930	72 m	0:00:17	15 kph
6/1/2017 13:54	ON	N22.20968 E113.87864	74 m	0:00:17	16 kph
6/1/2017 13:55	ON	N22.20941 E113.87800	72 m	0:00:17	15 kph
6/1/2017 13:55	ON	N22.20904 E113.87743	72 m	0:00:18	14 kph
6/1/2017 13:55	ON	N22.20855 E113.87728	57 m	0:00:15	14 kph
6/1/2017 13:55	ON	N22.20804 E113.87731	56 m	0:00:14	14 kph
6/1/2017 13:56	ON	N22.20751 E113.87729	59 m	0:00:14	15 kph
6/1/2017 13:56	ON	N22.20691 E113.87718	68 m	0:00:16	15 kph
6/1/2017 13:56	ON	N22.20629 E113.87714	69 m	0:00:17	15 kph
6/1/2017 13:57	ON	N22.20561 E113.87719	76 m	0:00:19	14 kph
6/1/2017 13:57	ON	N22.20508 E113.87720	59 m	0:00:15	14 kph
6/1/2017 13:57	ON	N22.20440 E113.87722	75 m	0:00:19	14 kph
6/1/2017 13:57	ON	N22.20384 E113.87725	63 m	0:00:16	14 kph
6/1/2017 13:58	ON	N22.20331 E113.87728	59 m	0:00:15	14 kph
6/1/2017 13:58	ON	N22.20274 E113.87732	63 m	0:00:16	14 kph
6/1/2017 13:58	ON	N22.20210 E113.87738	71 m	0:00:18	14 kph
6/1/2017 13:59	ON	N22.20150 E113.87736	67 m	0:00:17	14 kph
6/1/2017 13:59	ON	N22.20094 E113.87729	64 m	0:00:16	14 kph
6/1/2017 13:59	ON	N22.20044 E113.87728	55 m	0:00:14	14 kph

Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
6/1/2017 13:59	ON	N22.19970 E113.87738	82 m	0:00:21	14 kph
6/1/2017 14:00	ON	N22.19903 E113.87741	75 m	0:00:19	14 kph
6/1/2017 14:00	ON	N22.19835 E113.87737	76 m	0:00:19	14 kph
6/1/2017 14:00	ON	N22.19767 E113.87733	76 m	0:00:19	14 kph
6/1/2017 14:01	ON	N22.19714 E113.87733	59 m	0:00:15	14 kph
6/1/2017 14:01	ON	N22.19665 E113.87735	54 m	0:00:14	14 kph
6/1/2017 14:01	ON	N22.19591 E113.87738	83 m	0:00:21	14 kph
6/1/2017 14:01	ON	N22.19534 E113.87738	63 m	0:00:16	14 kph
6/1/2017 14:02	ON	N22.19467 E113.87746	75 m	0:00:19	14 kph
6/1/2017 14:02	ON	N22.19393 E113.87751	83 m	0:00:21	14 kph
6/1/2017 14:02	ON	N22.19335 E113.87750	64 m	0:00:16	14 kph
6/1/2017 14:03	ON	N22.19268 E113.87745	76 m	0:00:19	14 kph
6/1/2017 14:03	ON	N22.19196 E113.87741	80 m	0:00:20	14 kph
6/1/2017 14:03	ON	N22.19114 E113.87741	91 m	0:00:23	14 kph
6/1/2017 14:04	ON	N22.19037 E113.87737	85 m	0:00:21	15 kph
6/1/2017 14:04	ON	N22.18965 E113.87732	81 m	0:00:20	15 kph
6/1/2017 14:04	ON	N22.18897 E113.87727	76 m	0:00:19	14 kph
6/1/2017 14:05	ON	N22.18844 E113.87728	59 m	0:00:15	14 kph
6/1/2017 14:05	ON	N22.18792 E113.87725	58 m	0:00:15	14 kph
6/1/2017 14:05	ON	N22.18722 E113.87713	80 m	0:00:20	14 kph
6/1/2017 14:06	ON	N22.18643 E113.87711	88 m	0:00:22	14 kph
6/1/2017 14:06	ON	N22.18576 E113.87706	75 m	0:00:19	14 kph
6/1/2017 14:06	ON	N22.18515 E113.87701	68 m	0:00:17	14 kph
6/1/2017 14:07	ON	N22.18421 E113.87707	105 m	0:00:27	14 kph
6/1/2017 14:07	ON	N22.18343 E113.87708	86 m	0:00:22	14 kph
6/1/2017 14:07	ON	N22.18277 E113.87713	74 m	0:00:19	14 kph
6/1/2017 14:08	ON	N22.18210 E113.87715	75 m	0:00:19	14 kph
6/1/2017 14:08	ON	N22.18140 E113.87705	79 m	0:00:20	14 kph
6/1/2017 14:08	ON	N22.18077 E113.87696	70 m	0:00:18	14 kph
6/1/2017 14:09	ON	N22.18007 E113.87694	78 m	0:00:20	14 kph
6/1/2017 14:09	ON	N22.17939 E113.87697	76 m	0:00:20	14 kph
6/1/2017 14:09	ON	N22.17870 E113.87695	76 m	0:00:20	14 kph
6/1/2017 14:10	ON	N22.17799 E113.87702	80 m	0:00:21	14 kph
6/1/2017 14:10	ON	N22.17744 E113.87702	60 m	0:00:16	14 kph
6/1/2017 14:10	ON	N22.17690 E113.87706	61 m	0:00:16	14 kph
6/1/2017 14:10	ON	N22.17625 E113.87710	72 m	0:00:19	14 kph
6/1/2017 14:11	ON	N22.17556 E113.87708	77 m	0:00:20	14 kph
6/1/2017 14:11	ON	N22.17500 E113.87706	62 m	0:00:16	14 kph
6/1/2017 14:11	ON	N22.17430 E113.87711	77 m	0:00:20	14 kph
6/1/2017 14:12	ON	N22.17365 E113.87714	73 m	0:00:19	14 kph
6/1/2017 14:12	ON	N22.17289 E113.87712	85 m	0:00:22	14 kph
6/1/2017 14:12	ON	N22.17223 E113.87717	73 m	0:00:19	14 kph
6/1/2017 14:13	ON	N22.17159 E113.87720	72 m	0:00:19	14 kph
6/1/2017 14:13	ON	N22.17099 E113.87723	67 m	0:00:18	13 kph
6/1/2017 14:13	ON	N22.17042 E113.87730	64 m	0:00:17	14 kph
6/1/2017 14:14	ON	N22.16982 E113.87734	67 m	0:00:18	13 kph
6/1/2017 14:14	ON	N22.16929 E113.87734	59 m	0:00:16	13 kph
6/1/2017 14:14	ON	N22.16877 E113.87732	57 m	0:00:15	14 kph
6/1/2017 14:14	ON	N22.16816 E113.87735	68 m	0:00:18	14 kph
6/1/2017 14:15	ON	N22.16759 E113.87737	64 m	0:00:17	14 kph
6/1/2017 14:15	ON	N22.16707 E113.87736	57 m	0:00:15	14 kph
6/1/2017 14:15	ON	N22.16645 E113.87735	69 m	0:00:18	14 kph
6/1/2017 14:16	ON	N22.16570 E113.87744	84 m	0:00:23	13 kph
6/1/2017 14:16	ON	N22.16511 E113.87744	66 m	0:00:18	13 kph
6/1/2017 14:16	ON	N22.16444 E113.87746	75 m	0:00:20	13 kph
6/1/2017 14:17	ON	N22.16380 E113.87760	73 m	0:00:20	13 kph
6/1/2017 14:17	ON	N22.16320 E113.87761	67 m	0:00:18	13 kph
6/1/2017 14:17	ON	N22.16260 E113.87758	66 m	0:00:18	13 kph
6/1/2017 14:17	ON	N22.16201 E113.87764	66 m	0:00:18	13 kph
6/1/2017 14:18	ON	N22.16148 E113.87767	59 m	0:00:16	13 kph
6/1/2017 14:18	ON	N22.16088 E113.87760	67 m	0:00:18	13 kph
6/1/2017 14:18	ON	N22.16035 E113.87754	60 m	0:00:16	13 kph
6/1/2017 14:19	ON	N22.15973 E113.87762	70 m	0:00:19	13 kph
6/1/2017 14:19	ON	N22.15916 E113.87752	64 m	0:00:18	13 kph

Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
6/1/2017 14:19	ON	N22.15895 E113.87712	48 m	0:00:13	13 kph
6/1/2017 14:19	ON	N22.15906 E113.87650	64 m	0:00:16	14 kph
6/1/2017 14:20	ON	N22.15941 E113.87585	78 m	0:00:18	16 kph
6/1/2017 14:20	ON	N22.15974 E113.87517	79 m	0:00:18	16 kph
6/1/2017 14:20	ON	N22.15985 E113.87485	34 m	0:00:08	15 kph
6/1/2017 14:20	ON	N22.16005 E113.87416	75 m	0:00:17	16 kph
6/1/2017 14:21	ON	N22.16023 E113.87355	66 m	0:00:15	16 kph
6/1/2017 14:21	ON	N22.16050 E113.87293	71 m	0:00:16	16 kph
6/1/2017 14:21	ON	N22.16100 E113.87216	97 m	0:00:22	16 kph
6/1/2017 14:22	ON	N22.16132 E113.87162	66 m	0:00:15	16 kph
6/1/2017 14:22	ON	N22.16153 E113.87093	74 m	0:00:17	16 kph
6/1/2017 14:22	ON	N22.16175 E113.87012	88 m	0:00:20	16 kph
6/1/2017 14:23	ON	N22.16204 E113.86936	84 m	0:00:19	16 kph
6/1/2017 14:23	ON	N22.16215 E113.86914	26 m	0:00:06	16 kph
6/1/2017 14:23	ON	N22.16257 E113.86858	73 m	0:00:17	16 kph
6/1/2017 14:23	ON	N22.16313 E113.86841	65 m	0:00:16	15 kph
6/1/2017 14:23	ON	N22.16385 E113.86839	81 m	0:00:19	15 kph
6/1/2017 14:24	ON	N22.16442 E113.86835	64 m	0:00:15	15 kph
6/1/2017 14:24	ON	N22.16532 E113.86825	100 m	0:00:23	16 kph
6/1/2017 14:24	ON	N22.16608 E113.86833	85 m	0:00:20	15 kph
6/1/2017 14:25	ON	N22.16670 E113.86832	69 m	0:00:16	16 kph
6/1/2017 14:25	ON	N22.16732 E113.86830	70 m	0:00:16	16 kph
6/1/2017 14:25	ON	N22.16822 E113.86833	100 m	0:00:23	16 kph
6/1/2017 14:26	ON	N22.16893 E113.86838	79 m	0:00:19	15 kph
6/1/2017 14:26	ON	N22.16970 E113.86841	86 m	0:00:21	15 kph
6/1/2017 14:26	ON	N22.17036 E113.86845	73 m	0:00:18	15 kph
6/1/2017 14:27	ON	N22.17095 E113.86842	66 m	0:00:16	15 kph
6/1/2017 14:27	ON	N22.17156 E113.86846	69 m	0:00:17	15 kph
6/1/2017 14:27	ON	N22.17210 E113.86849	60 m	0:00:15	14 kph
6/1/2017 14:27	ON	N22.17272 E113.86858	69 m	0:00:17	15 kph
6/1/2017 14:28	ON	N22.17344 E113.86846	82 m	0:00:20	15 kph
6/1/2017 14:28	ON	N22.17407 E113.86842	70 m	0:00:17	15 kph
6/1/2017 14:28	ON	N22.17470 E113.86837	70 m	0:00:17	15 kph
6/1/2017 14:29	ON	N22.17534 E113.86832	71 m	0:00:17	15 kph
6/1/2017 14:29	ON	N22.17612 E113.86826	87 m	0:00:21	15 kph
6/1/2017 14:29	ON	N22.17681 E113.86823	78 m	0:00:19	15 kph
6/1/2017 14:30	ON	N22.17766 E113.86817	94 m	0:00:23	15 kph
6/1/2017 14:30	ON	N22.17839 E113.86812	82 m	0:00:20	15 kph
6/1/2017 14:30	ON	N22.17912 E113.86816	81 m	0:00:20	15 kph
6/1/2017 14:31	ON	N22.17985 E113.86808	82 m	0:00:20	15 kph
6/1/2017 14:31	ON	N22.18062 E113.86804	86 m	0:00:21	15 kph
6/1/2017 14:31	ON	N22.18144 E113.86792	91 m	0:00:22	15 kph
6/1/2017 14:32	ON	N22.18206 E113.86791	69 m	0:00:17	15 kph
6/1/2017 14:32	ON	N22.18279 E113.86791	82 m	0:00:20	15 kph
6/1/2017 14:32	ON	N22.18352 E113.86787	81 m	0:00:20	15 kph
6/1/2017 14:33	ON	N22.18427 E113.86796	84 m	0:00:21	14 kph
6/1/2017 14:33	ON	N22.18499 E113.86798	80 m	0:00:20	14 kph
6/1/2017 14:33	ON	N22.18583 E113.86794	94 m	0:00:23	15 kph
6/1/2017 14:34	ON	N22.18662 E113.86786	89 m	0:00:22	15 kph
6/1/2017 14:34	ON	N22.18745 E113.86780	93 m	0:00:23	15 kph
6/1/2017 14:34	ON	N22.18813 E113.86780	75 m	0:00:19	14 kph
6/1/2017 14:35	ON	N22.18861 E113.86786	54 m	0:00:14	14 kph
6/1/2017 14:35	ON	N22.18918 E113.86797	64 m	0:00:17	14 kph
6/1/2017 14:35	ON	N22.18977 E113.86796	66 m	0:00:17	14 kph
6/1/2017 14:36	ON	N22.19046 E113.86791	76 m	0:00:19	14 kph
6/1/2017 14:36	ON	N22.19119 E113.86797	82 m	0:00:21	14 kph
6/1/2017 14:36	ON	N22.19194 E113.86804	84 m	0:00:22	14 kph
6/1/2017 14:37	ON	N22.19254 E113.86805	66 m	0:00:17	14 kph
6/1/2017 14:37	ON	N22.19313 E113.86803	66 m	0:00:17	14 kph
6/1/2017 14:37	ON	N22.19393 E113.86806	89 m	0:00:23	14 kph
6/1/2017 14:38	ON	N22.19451 E113.86814	66 m	0:00:17	14 kph
6/1/2017 14:38	ON	N22.19530 E113.86821	88 m	0:00:23	14 kph
6/1/2017 14:38	ON	N22.19599 E113.86817	77 m	0:00:20	14 kph
6/1/2017 14:39	ON	N22.19666 E113.86813	74 m	0:00:19	14 kph

Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
6/1/2017 14:39	ON	N22.19734 E113.86818	77 m	0:00:20	14 kph
6/1/2017 14:39	ON	N22.19804 E113.86823	77 m	0:00:20	14 kph
6/1/2017 14:40	ON	N22.19880 E113.86826	85 m	0:00:22	14 kph
6/1/2017 14:40	ON	N22.19949 E113.86828	77 m	0:00:20	14 kph
6/1/2017 14:40	ON	N22.20018 E113.86833	77 m	0:00:20	14 kph
6/1/2017 14:41	ON	N22.20083 E113.86834	72 m	0:00:19	14 kph
6/1/2017 14:41	ON	N22.20131 E113.86808	60 m	0:00:16	14 kph
6/1/2017 14:41	ON	N22.20152 E113.86747	67 m	0:00:17	14 kph
6/1/2017 14:41	ON	N22.20146 E113.86686	63 m	0:00:15	15 kph
6/1/2017 14:42	ON	N22.20141 E113.86632	55 m	0:00:13	15 kph
6/1/2017 14:42	ON	N22.20135 E113.86556	79 m	0:00:19	15 kph
6/1/2017 14:42	ON	N22.20131 E113.86490	69 m	0:00:17	15 kph
6/1/2017 14:42	ON	N22.20128 E113.86436	56 m	0:00:14	14 kph
6/1/2017 14:43	ON	N22.20130 E113.86375	63 m	0:00:16	14 kph
6/1/2017 14:43	ON	N22.20140 E113.86308	70 m	0:00:18	14 kph
6/1/2017 14:43	ON	N22.20147 E113.86233	78 m	0:00:20	14 kph
6/1/2017 14:44	ON	N22.20136 E113.86172	64 m	0:00:17	14 kph
6/1/2017 14:44	ON	N22.20122 E113.86099	77 m	0:00:20	14 kph
6/1/2017 14:44	ON	N22.20114 E113.86039	62 m	0:00:16	14 kph
6/1/2017 14:44	ON	N22.20109 E113.85976	65 m	0:00:17	14 kph
6/1/2017 14:45	ON	N22.20108 E113.85901	77 m	0:00:20	14 kph
6/1/2017 14:45	ON	N22.20091 E113.85855	51 m	0:00:14	13 kph
6/1/2017 14:45	ON	N22.20045 E113.85828	59 m	0:00:16	13 kph
6/1/2017 14:46	ON	N22.19987 E113.85811	66 m	0:00:17	14 kph
6/1/2017 14:46	ON	N22.19930 E113.85804	64 m	0:00:16	14 kph
6/1/2017 14:46	ON	N22.19870 E113.85796	68 m	0:00:17	14 kph
6/1/2017 14:46	ON	N22.19796 E113.85792	82 m	0:00:20	15 kph
6/1/2017 14:47	ON	N22.19726 E113.85788	78 m	0:00:19	15 kph
6/1/2017 14:47	ON	N22.19645 E113.85785	91 m	0:00:22	15 kph
6/1/2017 14:47	ON	N22.19586 E113.85795	67 m	0:00:17	14 kph
6/1/2017 14:48	ON	N22.19522 E113.85797	71 m	0:00:18	14 kph
6/1/2017 14:48	ON	N22.19472 E113.85799	56 m	0:00:14	14 kph
6/1/2017 14:48	ON	N22.19403 E113.85798	76 m	0:00:19	14 kph
6/1/2017 14:49	ON	N22.19339 E113.85792	72 m	0:00:18	14 kph
6/1/2017 14:49	ON	N22.19279 E113.85792	67 m	0:00:17	14 kph
6/1/2017 14:49	ON	N22.19212 E113.85799	74 m	0:00:19	14 kph
6/1/2017 14:50	ON	N22.19139 E113.85804	82 m	0:00:21	14 kph
6/1/2017 14:50	ON	N22.19067 E113.85804	80 m	0:00:20	14 kph
6/1/2017 14:50	ON	N22.19000 E113.85805	75 m	0:00:19	14 kph
6/1/2017 14:50	ON	N22.18941 E113.85810	66 m	0:00:17	14 kph
6/1/2017 14:51	ON	N22.18874 E113.85809	75 m	0:00:19	14 kph
6/1/2017 14:51	ON	N22.18809 E113.85812	73 m	0:00:19	14 kph
6/1/2017 14:51	ON	N22.18745 E113.85819	72 m	0:00:19	14 kph
6/1/2017 14:52	ON	N22.18682 E113.85816	69 m	0:00:18	14 kph
6/1/2017 14:52	ON	N22.18626 E113.85824	63 m	0:00:17	13 kph
6/1/2017 14:52	ON	N22.18557 E113.85834	78 m	0:00:21	13 kph
6/1/2017 14:53	ON	N22.18492 E113.85853	75 m	0:00:20	13 kph
6/1/2017 14:53	ON	N22.18425 E113.85868	76 m	0:00:20	14 kph
6/1/2017 14:53	ON	N22.18358 E113.85875	75 m	0:00:20	13 kph
6/1/2017 14:54	ON	N22.18294 E113.85871	71 m	0:00:19	14 kph
6/1/2017 14:54	ON	N22.18233 E113.85864	68 m	0:00:18	14 kph
6/1/2017 14:54	ON	N22.18166 E113.85858	75 m	0:00:20	14 kph
6/1/2017 14:55	ON	N22.18101 E113.85871	73 m	0:00:20	13 kph
6/1/2017 14:55	ON	N22.18046 E113.85890	64 m	0:00:18	13 kph
6/1/2017 14:55	ON	N22.17991 E113.85897	62 m	0:00:17	13 kph
6/1/2017 14:56	ON	N22.17928 E113.85891	71 m	0:00:19	13 kph
6/1/2017 14:56	ON	N22.17863 E113.85877	73 m	0:00:19	14 kph
6/1/2017 14:56	ON	N22.17790 E113.85866	83 m	0:00:22	14 kph
6/1/2017 14:57	ON	N22.17737 E113.85883	61 m	0:00:17	13 kph
6/1/2017 14:57	ON	N22.17680 E113.85894	64 m	0:00:17	14 kph
6/1/2017 14:57	ON	N22.17621 E113.85891	67 m	0:00:17	14 kph
6/1/2017 14:57	ON	N22.17554 E113.85889	75 m	0:00:19	14 kph
6/1/2017 14:58	ON	N22.17491 E113.85897	70 m	0:00:18	14 kph
6/1/2017 14:58	ON	N22.17423 E113.85902	76 m	0:00:20	14 kph

Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
6/1/2017 14:58	ON	N22.17355 E113.85897	76 m	0:00:20	14 kph
6/1/2017 14:59	ON	N22.17293 E113.85901	68 m	0:00:18	14 kph
6/1/2017 14:59	ON	N22.17222 E113.85900	79 m	0:00:21	14 kph
6/1/2017 14:59	ON	N22.17164 E113.85890	65 m	0:00:17	14 kph
6/1/2017 15:00	ON	N22.17094 E113.85892	78 m	0:00:21	13 kph
6/1/2017 15:00	ON	N22.17019 E113.85905	85 m	0:00:23	13 kph
6/1/2017 15:00	ON	N22.16959 E113.85896	68 m	0:00:18	14 kph
6/1/2017 15:01	ON	N22.16924 E113.85861	54 m	0:00:15	13 kph
6/1/2017 15:01	ON	N22.16916 E113.85806	57 m	0:00:14	15 kph
6/1/2017 15:01	ON	N22.16941 E113.85742	72 m	0:00:18	14 kph
6/1/2017 15:01	ON	N22.17001 E113.85697	81 m	0:00:20	15 kph
6/1/2017 15:02	ON	N22.17054 E113.85641	83 m	0:00:20	15 kph
6/1/2017 15:02	ON	N22.17109 E113.85590	80 m	0:00:20	14 kph
6/1/2017 15:02	ON	N22.17163 E113.85547	75 m	0:00:19	14 kph
6/1/2017 15:03	ON	N22.17221 E113.85496	83 m	0:00:21	14 kph
6/1/2017 15:03	ON	N22.17269 E113.85461	65 m	0:00:16	15 kph
6/1/2017 15:03	ON	N22.17325 E113.85406	85 m	0:00:21	14 kph
6/1/2017 15:04	ON	N22.17357 E113.85361	58 m	0:00:15	14 kph
6/1/2017 15:04	ON	N22.17374 E113.85324	43 m	0:00:11	14 kph
6/1/2017 15:04	ON	N22.17389 E113.85289	39 m	0:00:10	14 kph
6/1/2017 15:04	ON	N22.17419 E113.85231	69 m	0:00:18	14 kph
6/1/2017 15:05	ON	N22.17455 E113.85178	67 m	0:00:17	14 kph
6/1/2017 15:05	ON	N22.17485 E113.85141	51 m	0:00:13	14 kph
6/1/2017 15:05	ON	N22.17517 E113.85104	52 m	0:00:13	14 kph
6/1/2017 15:05	ON	N22.17546 E113.85067	51 m	0:00:13	14 kph
6/1/2017 15:05	ON	N22.17572 E113.85032	46 m	0:00:12	14 kph
6/1/2017 15:06	ON	N22.17596 E113.84996	46 m	0:00:12	14 kph
6/1/2017 15:06	ON	N22.17620 E113.84960	45 m	0:00:12	14 kph
6/1/2017 15:06	ON	N22.17642 E113.84928	41 m	0:00:11	14 kph
6/1/2017 15:06	ON	N22.17684 E113.84892	60 m	0:00:17	13 kph
6/1/2017 15:07	ON	N22.17744 E113.84884	67 m	0:00:18	13 kph
6/1/2017 15:07	ON	N22.17823 E113.84876	89 m	0:00:23	14 kph
6/1/2017 15:07	ON	N22.17894 E113.84883	79 m	0:00:20	14 kph
6/1/2017 15:08	ON	N22.17966 E113.84889	80 m	0:00:20	14 kph
6/1/2017 15:08	ON	N22.18042 E113.84890	85 m	0:00:21	14 kph
6/1/2017 15:08	ON	N22.18111 E113.84896	77 m	0:00:19	15 kph
6/1/2017 15:09	ON	N22.18180 E113.84898	77 m	0:00:19	15 kph
6/1/2017 15:09	ON	N22.18240 E113.84915	69 m	0:00:18	14 kph
6/1/2017 15:09	ON	N22.18290 E113.84919	55 m	0:00:14	14 kph
6/1/2017 15:09	ON	N22.18344 E113.84910	61 m	0:00:15	15 kph
6/1/2017 15:10	ON	N22.18407 E113.84901	70 m	0:00:17	15 kph
6/1/2017 15:10	ON	N22.18461 E113.84899	60 m	0:00:15	14 kph
6/1/2017 15:10	ON	N22.18514 E113.84901	59 m	0:00:15	14 kph
6/1/2017 15:11	ON	N22.18582 E113.84902	77 m	0:00:19	15 kph
6/1/2017 15:11	ON	N22.18641 E113.84901	66 m	0:00:16	15 kph
6/1/2017 15:11	ON	N22.18715 E113.84896	82 m	0:00:20	15 kph
6/1/2017 15:11	ON	N22.18771 E113.84893	62 m	0:00:15	15 kph
6/1/2017 15:12	ON	N22.18841 E113.84891	78 m	0:00:19	15 kph
6/1/2017 15:12	ON	N22.18902 E113.84888	68 m	0:00:17	14 kph
6/1/2017 15:12	ON	N22.18957 E113.84891	62 m	0:00:16	14 kph
6/1/2017 15:12	ON	N22.19009 E113.84893	58 m	0:00:15	14 kph
6/1/2017 15:13	ON	N22.19069 E113.84895	67 m	0:00:17	14 kph
6/1/2017 15:13	ON	N22.19125 E113.84894	62 m	0:00:16	14 kph
6/1/2017 15:13	ON	N22.19173 E113.84895	53 m	0:00:14	14 kph
6/1/2017 15:14	ON	N22.19241 E113.84899	76 m	0:00:20	14 kph
6/1/2017 15:14	ON	N22.19302 E113.84903	69 m	0:00:18	14 kph
6/1/2017 15:14	ON	N22.19361 E113.84902	66 m	0:00:17	14 kph
6/1/2017 15:14	ON	N22.19419 E113.84915	65 m	0:00:18	13 kph
6/1/2017 15:15	ON	N22.19464 E113.84933	54 m	0:00:15	13 kph
6/1/2017 15:15	ON	N22.19495 E113.84966	48 m	0:00:16	11 kph
6/1/2017 15:15	OFF	N22.19490 E113.84985	20 m	0:00:09	8 kph
6/1/2017 15:15	OFF	N22.19463 E113.84989	30 m	0:00:13	8 kph
6/1/2017 15:16	OFF	N22.19439 E113.84953	45 m	0:00:14	12 kph
6/1/2017 15:16	OFF	N22.19434 E113.84892	63 m	0:00:16	14 kph

Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
6/1/2017 15:16	OFF	N22.19419 E113.84830	66 m	0:00:17	14 kph
6/1/2017 15:16	OFF	N22.19384 E113.84786	60 m	0:00:16	13 kph
6/1/2017 15:17	OFF	N22.19343 E113.84755	56 m	0:00:17	12 kph
6/1/2017 15:17	OFF	N22.19311 E113.84738	39 m	0:00:18	8 kph
6/1/2017 15:17	OFF	N22.19292 E113.84732	22 m	0:00:18	4 kph
6/1/2017 15:18	OFF	N22.19280 E113.84726	15 m	0:00:19	3 kph
6/1/2017 15:18	OFF	N22.19272 E113.84721	10 m	0:00:17	2 kph
6/1/2017 15:18	OFF	N22.19269 E113.84718	5 m	0:00:20	0.9 kph
6/1/2017 15:19	OFF	N22.19267 E113.84716	4 m	0:00:20	0.7 kph
6/1/2017 15:19	OFF	N22.19264 E113.84713	4 m	0:00:18	0.9 kph
6/1/2017 15:19	OFF	N22.19249 E113.84738	30 m	0:00:17	6 kph
6/1/2017 15:19	OFF	N22.19235 E113.84772	38 m	0:00:16	9 kph
6/1/2017 15:20	OFF	N22.19222 E113.84807	39 m	0:00:19	7 kph
6/1/2017 15:20	OFF	N22.19213 E113.84829	25 m	0:00:16	6 kph
6/1/2017 15:20	OFF	N22.19209 E113.84843	15 m	0:00:18	3 kph
6/1/2017 15:21	OFF	N22.19208 E113.84850	8 m	0:00:17	2 kph
6/1/2017 15:21	OFF	N22.19208 E113.84852	2 m	0:00:20	0.4 kph
6/1/2017 15:21	OFF	N22.19207 E113.84853	1 m	0:00:16	0.2 kph
6/1/2017 15:22	OFF	N22.19208 E113.84853	1 m	0:00:21	0.1 kph
6/1/2017 15:22	OFF	N22.19209 E113.84852	2 m	0:00:18	0.3 kph
6/1/2017 15:22	OFF	N22.19209 E113.84850	2 m	0:00:15	0.5 kph
6/1/2017 15:22	OFF	N22.19210 E113.84848	3 m	0:00:17	0.6 kph
6/1/2017 15:23	OFF	N22.19210 E113.84847	0 m	0:00:13	0.1 kph
6/1/2017 15:23	OFF	N22.19207 E113.84853	7 m	0:00:11	2 kph
6/1/2017 15:23	OFF	N22.19209 E113.84863	11 m	0:00:11	3 kph
6/1/2017 15:23	OFF	N22.19210 E113.84870	7 m	0:00:06	4 kph
6/1/2017 15:23	OFF	N22.19213 E113.84879	11 m	0:00:12	3 kph
6/1/2017 15:23	OFF	N22.19214 E113.84881	2 m	0:00:10	0.7 kph
6/1/2017 15:24	OFF	N22.19216 E113.84883	3 m	0:00:16	0.7 kph
6/1/2017 15:24	OFF	N22.19221 E113.84885	6 m	0:00:18	1.1 kph
6/1/2017 15:24	OFF	N22.19225 E113.84888	5 m	0:00:22	0.8 kph
6/1/2017 15:25	OFF	N22.19227 E113.84888	2 m	0:00:18	0.5 kph
6/1/2017 15:25	OFF	N22.19228 E113.84890	3 m	0:00:18	0.5 kph
6/1/2017 15:25	OFF	N22.19230 E113.84895	5 m	0:00:12	2 kph
6/1/2017 15:25	OFF	N22.19233 E113.84905	10 m	0:00:09	4 kph
6/1/2017 15:26	OFF	N22.19235 E113.84931	27 m	0:00:20	5 kph
6/1/2017 15:26	OFF	N22.19236 E113.84944	13 m	0:00:17	3 kph
6/1/2017 15:26	OFF	N22.19239 E113.84951	8 m	0:00:10	3 kph
6/1/2017 15:26	OFF	N22.19264 E113.84970	34 m	0:00:19	6 kph
6/1/2017 15:27	OFF	N22.19309 E113.84995	56 m	0:00:18	11 kph
6/1/2017 15:27	OFF	N22.19353 E113.85044	71 m	0:00:20	13 kph
6/1/2017 15:27	OFF	N22.19391 E113.85109	79 m	0:00:21	14 kph

Appendix II. Survey Effort Database in SWL (January 2017)

(Abbreviations: BEAU = Beaufort Sea State; P = Primary Line Effort; S = Secondary Line Effort)

DATE	AREA	BEAU	EFFORT	SEASON	VESSEL	TYPE	P/S
5-Jan-17	SW LANTAU	2	12.94	WINTER	STANDARD36826	HKCRP	P
5-Jan-17	SW LANTAU	3	8.40	WINTER	STANDARD36826	HKCRP	P
5-Jan-17	SW LANTAU	2	9.96	WINTER	STANDARD36826	HKCRP	S
5-Jan-17	SW LANTAU	3	1.80	WINTER	STANDARD36826	HKCRP	S
6-Jan-17	SW LANTAU	1	20.87	WINTER	STANDARD36826	HYD-HZMB	P
6-Jan-17	SW LANTAU	2	33.03	WINTER	STANDARD36826	HYD-HZMB	P
6-Jan-17	SW LANTAU	1	4.63	WINTER	STANDARD36826	HYD-HZMB	S
6-Jan-17	SW LANTAU	2	11.99	WINTER	STANDARD36826	HYD-HZMB	S
9-Jan-17	SW LANTAU	2	2.66	WINTER	STANDARD36826	HKCRP	P
9-Jan-17	SW LANTAU	3	8.58	WINTER	STANDARD36826	HKCRP	P
9-Jan-17	SW LANTAU	3	7.56	WINTER	STANDARD36826	HKCRP	S
17-Jan-17	SW LANTAU	2	7.86	WINTER	STANDARD36826	HKCRP	P
17-Jan-17	SW LANTAU	3	10.35	WINTER	STANDARD36826	HKCRP	P
17-Jan-17	SW LANTAU	2	3.04	WINTER	STANDARD36826	HKCRP	S
17-Jan-17	SW LANTAU	3	8.64	WINTER	STANDARD36826	HKCRP	S

Appendix III. Chinese White Dolphin Sighting Database in SWL (January 2017)

(Abberviations: STG# = Sighting Number; HRD SZ = Dolphin Herd Size; BEAU = Beaufort Sea State; PSD = Perpendicular Distance; ND = Not Determined; BOAT ASSOC. = Fishing Boat Association; P/S: Sighting Made on Primary/Secondary Lines)

DATE	STG #	TIME	HRD SZ	AREA	BEAU	PSD	EFFORT	TYPE	NORTHING	EASTING	SEASON	BOAT ASSOC.	P/S
06-Jan-17	4	1516	4	SW LANTAU	2	ND	OFF	HYD-HZMB	806095	802280	WINTER	NONE	
17-Jan-17	6	1352	1	SW LANTAU	2	323	ON	HKCRP	804401	807423	WINTER	NONE	P

Appendix IV. Individual dolphins identified during HYD-HZMB and AFCD monitoring surveys in SWL waters in January 2017

ID#	DATE	STG#	TYPE	AREA
NL212	06/01/17	4	HYD-HZMB	SW LANTAU
WL15	06/01/17	4	HYD-HZMB	SW LANTAU
WL91	06/01/17	4	HYD-HZMB	SW LANTAU
WL180	06/01/17	4	HYD-HZMB	SW LANTAU

Appendix V. Photographs of Identified Individual Dolphins in January 2017 in SWL waters