

DIVERSIFIED ENVIRONMENTAL SERVICES

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SCIENCE AND COMMUNITY ENVIRONMENTAL KNOWLEDGE FUND BOREAL CARIBOU TELEMETRY PROGRAM

FIXED-WING TELEMETRY MONITORING FLIGHT – February 25-26, 2014

Date: February 28, 2014

Attention: Megan Watters
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Background

During the winter of 2012-2013, 164 adult female boreal caribou were radio-collared in British Columbia's boreal caribou ranges as part of the *British Columbia Boreal Caribou Implementation Plan* (BCIP). On February 25-26, 2014, Diversified Environmental Services (DES) conducted a fixed-wing monitoring flight under contract to the Science and Community Environmental Knowledge Fund (SCEK), on behalf of the Research and Effectiveness Monitoring Board (REMB). Fixed-wing monitoring flights are conducted at monthly intervals throughout the year in order to identify mortality events to be followed up by ground-based mortality investigations/collar recoveries and to track potential long distance seasonal movements of VHF-collared caribou.

Objectives

The objective of the February 2014 monitoring flight was to determine the approximate location and VHF beacon status of all boreal caribou and wolf collars believed to be active in the survey area at the time of the flight. These included caribou collars deployed on behalf of SCEK, caribou and wolf collars deployed on behalf of MFLNRO, and pre-existing collars known to have entered BC's boreal caribou ranges from adjacent jurisdictions.

Methods

The monitoring flight was conducted using a Cessna 180 fixed-wing aircraft equipped with 1 outward-facing directional antenna affixed to each wing strut. Collar frequencies were scanned using a Lotek™ STR 1000 telemetry receiver. The flight was conducted at 700-1,000 m above ground level at an average speed of 160 km/hr. The VHF beacon status of all detected collars was recorded on hard copy forms. In the case of VHF collars (Lotek LMRT4), status was recorded as either normal (60 pulses per minute (ppm)) or mortality (120 ppm) and a location (+/- 1 km) was recorded using a hand-held GPS unit. In the case of GPS/satellite collars (ATS Iridium and Vectronic Vertex), additional diagnostic VHF beacon patterns were recorded where applicable. As GPS/satellite collars are programmed to log multiple daily locations with high precision, efforts to obtain collar locations during fixed-wing flights are not necessary. Therefore, waypoints for GPS/satellite collars were typically recorded at the location from which the collar was heard, unless the VHF beacon status indicated a collar malfunction or mortality, in which case, more precise locations were obtained.

Results

One hundred thirty-nine (139) caribou collar frequencies were scanned during the February 25-26, 2014 monitoring flight, including 129 SCEK collars (27 ATS Iridium, 14 Vectronic Vertex, and 88 VHF), 2 Alberta SRM collars, and 8 previously-deployed MFLNRO collars (1 ATS Iridium and 7 VHF). In addition, the frequencies of 13 Lotek Iridium and 6 Lotek VHF wolf collars were scanned.

Results of the February 25-26, 2014 monitoring flight are presented in Table 1. Flight paths searched within and adjacent to each core habitat area are shown in Figure 1. Total flight line distance was 2,465 km. Of 139 caribou collar frequencies scanned, 130 normal VHF signals and 1 temporary false mortality signal (SCEK085, Fortune Core) were detected. The remaining 8 animals were not detected during the monitoring flight. These included 3 SCEK GPS collars whose satellite data indicated normal movement but whose VHF beacons had turned off as per their daily schedule (SCEK119, SCEK135, SCEK146), 3 SCEK GPS collars whose satellite and VHF functions have prematurely failed (SCEK017, SCEK042, SCEK050), 1 MFLNRO VHF collar suspected to have exceeded its battery life (BC1000; Parker), and 1 SCEK GPS collar whose recent satellite data suggests a potential mortality event (SCEK139).

At the time of the February monitoring flight, 7 SCEK caribou from the Calendar Range had moved into the Northwest Territories (NT). SCEK125 was 60 km north of the border and appears to be steadily moving further north.

Two collared caribou mortalities (SCEK067, BC1015) were investigated and recovered from the Capot-Blanc Core one week prior to the February fixed-wing monitoring flight. Both were detected and reported by a seismic project monitoring program unrelated to this project. The potential mortality of SCEK139, as suggested by recent satellite data, will be investigated during collar deployment activities to be conducted immediately following the February 25-26, 2014 monitoring flight.

Eighteen wolf collar frequencies were scanned during the February 25-26, 2014 monitoring flight, including 11 Iridium collars and 7 VHF collars. Wolf BW016 was re-captured prior to the February monitoring flight and its failing Iridium collar (low battery mode) was replaced with a VHF collar. Of the 11 Iridium wolf collars scanned, 6 had normal VHF beacon function. Of the 5 remaining Iridium wolf collars, 2 were previously suspected to have failed (BW03 (West Clarke Pack) and BW12 (Big Arrow Pack)), 2 could not be located, and 1 has dispersed from the monitoring area into the Northwest Territories.

Of the 7 VHF wolf collars scanned, 5 had normal VHF signals, 1 could not be located (BW002; Big Arrow Pack), and 1 has not been located since soon after deployment in February 2013 and is assumed to have failed or the animal dispersed (BW007; Snake Pack).

There were no opportunities for First Nations field assistance on this monitoring flight.

Cordially,



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Table 1. VHF signal status and location of boreal caribou and wolf collars detected during the February 25-26, 2014 SCEK fixed-wing telemetry monitoring flight.

ID	Species	Range	Core	Collar Type	Status	Date	UTM Zone	East	North	Comments
SCEK114	Caribou	Calendar	Calendar	ATS-Irid	50 ppm; double 6th	25-Feb-14	10	630865	6645686	normal
SCEK136	Caribou	Calendar	Calendar	ATS-Irid	50 ppm; double 6th	25-Feb-14	10	625497	6631077	normal
SCEK135	Caribou	Calendar	Calendar	Vectr-Vertex	VHF off; after 1600 hrs	25-Feb-14	10	634475	6677056	Iridium data normal
SCEK119	Caribou	Calendar	Calendar	Vectr-Vertex	VHF off; after 1600 hrs	25-Feb-14	10	605151	6655476	Iridium data normal
SCEK113	Caribou	Calendar	Calendar	Lotek-VHF	60 ppm	25-Feb-14	11	333815	6654966	normal
SCEK123	Caribou	Calendar	Calendar	Lotek-VHF	60 ppm	25-Feb-14	10	609266	6632180	normal
SCEK122	Caribou	Calendar	Calendar	Lotek-VHF	60 ppm	25-Feb-14	10	642187	6648108	normal
SCEK138	Caribou	Calendar	Calendar	Lotek-VHF	60 ppm	25-Feb-14	10	636684	6622712	normal
SCEK137	Caribou	Calendar	Calendar	Lotek-VHF	60 ppm	25-Feb-14	10	632942	6656008	normal
SCEK120	Caribou	Calendar	Calendar	Lotek-VHF	60 ppm	25-Feb-14	10	634812	6675675	normal
SCEK134	Caribou	Calendar	Calendar	Lotek-VHF	60 ppm	25-Feb-14	10	610100	6632316	normal
SCEK112	Caribou	Calendar	Calendar	Lotek-VHF	60 ppm	25-Feb-14	10	632825	6646044	normal
SCEK125	Caribou	Calendar	Calendar	Lotek-VHF	60 ppm	25-Feb-14	10	639505	6712249	normal
SCEK126	Caribou	Calendar	RRA-C	ATS-Irid	50 ppm; no double 6th	25-Feb-14	10	606153	6630733	normal
SCEK146	Caribou	Calendar	RRA-D	ATS-Irid	VHF off; after 1600 hrs	25-Feb-14				Failed Iridium function
SCEK147	Caribou	Calendar	RRA-D	Vectr-Vertex	50 ppm	25-Feb-14	10	627204	6676391	normal
SCEK108	Caribou	Calendar	RRA-D	Lotek-VHF	60 ppm	25-Feb-14	10	626560	6632791	normal
SCEK107	Caribou	Calendar	RRA-D	Lotek-VHF	60 ppm	25-Feb-14	10	631776	6677958	normal
SCEK036	Caribou	Chinchaga	Milligan	ATS-Irid	50 ppm; double 6th	26-Feb-14	10	627266	6336202	normal
SCEK038	Caribou	Chinchaga	Milligan	ATS-Irid	50 ppm; double 6th	26-Feb-14	10	667988	6293049	normal
SCEK026	Caribou	Chinchaga	Milligan	ATS-Irid	50 ppm; double 6th	26-Feb-14	10	667808	6293095	normal
SCEK033	Caribou	Chinchaga	Milligan	ATS-Irid	50 ppm; double 6th	26-Feb-14	10	629386	6348040	normal
SCEK042	Caribou	Chinchaga	Milligan	ATS-Irid	not heard					Failed Iridium and VHF functions
AB149.391	Caribou	Chinchaga	Milligan	unknown	60 ppm	26-Feb-14	10	673472	6342634	normal
SCEK040	Caribou	Chinchaga	Milligan	Vectr-Vertex	50 ppm	26-Feb-14	10	644565	6410229	normal
SCEK034	Caribou	Chinchaga	Milligan	Vectr-Vertex	50 ppm	26-Feb-14	10	636425	6361104	normal
SCEK055	Caribou	Chinchaga	Milligan	Vectr-Vertex	50 ppm	26-Feb-14	10	633037	6359646	normal
SCEK037	Caribou	Chinchaga	Milligan	Lotek-VHF	60 ppm	26-Feb-14	10	667667	6291424	normal
AB150.470	Caribou	Chinchaga	Milligan	unknown	60 ppm	26-Feb-14	11	328182	6348321	normal
SCEK035	Caribou	Chinchaga	Milligan	Lotek-VHF	60 ppm	26-Feb-14	10	628806	6359568	normal
SCEK041	Caribou	Chinchaga	Milligan	Lotek-VHF	60 ppm	26-Feb-14	10	627550	6367122	normal
SCEK027	Caribou	Chinchaga	Milligan	Lotek-VHF	60 ppm	26-Feb-14	10	668876	6290049	normal
SCEK032	Caribou	Chinchaga	Milligan	Lotek-VHF	60 ppm	26-Feb-14	10	626176	6341439	normal
SCEK029	Caribou	Chinchaga	Milligan	Lotek-VHF	60 ppm	26-Feb-14	11	329620	6353120	normal
SCEK052	Caribou	Chinchaga	Milligan	Lotek-VHF	60 ppm	26-Feb-14	10	649596	6312268	normal
SCEK053	Caribou	Chinchaga	Milligan	Lotek-VHF	60 ppm	26-Feb-14	10	627549	6349199	normal
SCEK030	Caribou	Chinchaga	Milligan	Lotek-VHF	60 ppm	26-Feb-14	10	625852	6354630	normal
SCEK056	Caribou	Chinchaga	Milligan	Lotek-VHF	60 ppm	26-Feb-14	10	662113	6336046	normal
SCEK058	Caribou	Chinchaga	Milligan	Lotek-VHF	60 ppm	26-Feb-14	10	638967	6439194	normal
SCEK054	Caribou	Chinchaga	Milligan	Lotek-VHF	60 ppm	26-Feb-14	10	626176	6341439	normal
SCEK057	Caribou	Chinchaga	Milligan	Lotek-VHF	60 ppm	26-Feb-14	10	639343	6353896	normal
SCEK059	Caribou	Chinchaga	Milligan	Lotek-VHF	60 ppm	26-Feb-14	10	637769	6356859	normal
SCEK061	Caribou	Chinchaga	Milligan	Lotek-VHF	60 ppm	26-Feb-14	10	656440	6337798	normal
SCEK060	Caribou	Chinchaga	Milligan	Lotek-VHF	60 ppm	25-Feb-14	10	609656	6350259	normal
SCEK142	Caribou	Chinchaga	RRA-A	Vectr-Vertex	50 ppm	26-Feb-14	10	599815	6445956	normal
SCEK139	Caribou	Chinchaga	RRA-A	Vectr-Vertex	not heard	26-Feb-14	10	644672	6454766	Iridium data suggests potential mort
SCEK046	Caribou	Chinchaga	RRA-A	ATS-Irid	50 ppm; double 6th	26-Feb-14	10	606619	6441543	normal
SCEK047	Caribou	Chinchaga	RRA-A	ATS-Irid	50 ppm; double 6th	26-Feb-14	10	594093	6449176	normal
SCEK048	Caribou	Chinchaga	RRA-A	Lotek-VHF	60 ppm	26-Feb-14	10	594528	6448315	normal
SCEK141	Caribou	Chinchaga	RRA-A	Lotek-VHF	60 ppm	26-Feb-14	10	615303	6460378	normal

Table 1. VHF signal status and location of boreal caribou and wolf collars detected during the February 25-26, 2014 SCEK fixed-wing telemetry monitoring flight cont.

ID	Species	Range	Core	Collar Type	Status	Date	UTM Zone	East	North	Comments
SCEK009	Caribou	Fort Nelson	Fort Nelson	ATS-Irid	50 ppm; double 6th	25-Feb-14	10	499554	6556372	normal
BC1014	Caribou	Maxhamish	Capot-Blanc	Lotek-VHF	60 ppm	25-Feb-14	10	480093	6584465	normal
SCEK002	Caribou	Maxhamish	Capot-Blanc	ATS-Irid	50 ppm; double 6th	25-Feb-14	10	480093	6585465	normal
SCEK007	Caribou	Maxhamish	Capot-Blanc	ATS-Irid	50 ppm; double 6th	25-Feb-14	10	453814	6601504	normal
SCEK001	Caribou	Maxhamish	Capot-Blanc	Lotek-VHF	60 ppm	25-Feb-14	10	479152	6582125	normal
SCEK076	Caribou	Maxhamish	Capot-Blanc	Lotek-VHF	60 ppm	25-Feb-14	10	460265	6585826	normal
SCEK066	Caribou	Maxhamish	Capot-Blanc	Lotek-VHF	60 ppm	25-Feb-14	10	479741	6584097	normal
BC1031	Caribou	Maxhamish	Fortune	Lotek-VHF	60 ppm	25-Feb-14	10	526239	6630587	normal
BC1033	Caribou	Maxhamish	Fortune	Lotek-VHF	60 ppm	25-Feb-14	10	537503	6625235	normal
SCEK085	Caribou	Maxhamish	Fortune	Vectr-Vertex	100 ppm	25-Feb-14	10	539839	6623771	False mortality signal; data normal
SCEK163	Caribou	Maxhamish	Fortune	Vectr-Vertex	50 ppm	25-Feb-14	10	466435	6620858	normal
SCEK130	Caribou	Maxhamish	Fortune	Lotek-VHF	60 ppm	25-Feb-14	10	537235	6626623	normal
SCEK164	Caribou	Maxhamish	Fortune	Lotek-VHF	60 ppm	25-Feb-14	10	535478	6625664	normal
SCEK078	Caribou	Maxhamish	Fortune	Lotek-VHF	60 ppm	25-Feb-14	10	466017	6622917	normal
SCEK128	Caribou	Maxhamish	Fortune	Lotek-VHF	60 ppm	25-Feb-14	10	542439	6629496	normal
SCEK086	Caribou	Maxhamish	Fortune	Lotek-VHF	60 ppm	25-Feb-14	10	534236	6626673	normal
SCEK129	Caribou	Maxhamish	Fortune	Lotek-VHF	60 ppm	25-Feb-14	10	540612	6625669	normal
SCEK087	Caribou	Maxhamish	Fortune	Lotek-VHF	60 ppm	25-Feb-14	10	539672	6626053	normal
SCEK003	Caribou	Maxhamish	Kiwigana	ATS-Irid	50 ppm; double 6th	25-Feb-14	10	520654	6570312	normal
BC1066	Caribou	Maxhamish	Kiwigana	ATS-Irid	50 ppm; double 6th	25-Feb-14	10	523152	6570347	MFLNRO 2012; failed Iridium function
SCEK063	Caribou	Maxhamish	Kiwigana	Lotek-VHF	60 ppm	25-Feb-14	10	526003	6569307	normal
SCEK064	Caribou	Maxhamish	Kiwigana	Lotek-VHF	60 ppm	25-Feb-14	10	525510	6569607	normal
SCEK004	Caribou	Maxhamish	Kiwigana	Lotek-VHF	60 ppm	25-Feb-14	10	488418	6622824	normal
BC1009	Caribou	Maxhamish	Kiwigana	Lotek-VHF	60 ppm	25-Feb-14	10	523387	6573274	normal; old wolf collar
SCEK005	Caribou	Maxhamish	Kiwigana-OS	ATS-Irid	50 ppm; no double 6th	25-Feb-14	10	534877	6626146	VHF normal; Iridium failed
SCEK062	Caribou	Maxhamish	Kiwigana-OS	Lotek-VHF	60 ppm	25-Feb-14	10	521203	6572140	normal
SCEK006	Caribou	Maxhamish	Kiwigana-OS	Lotek-VHF	60 ppm	25-Feb-14	10	523203	6568140	normal
SCEK016	Caribou	Parker	Parker	ATS-Irid	50 ppm; no double 6th	26-Feb-14	10	494325	6521458	normal
SCEK014	Caribou	Parker	Parker	ATS-Irid	50 ppm; no double 6th	26-Feb-14	10	510714	6518047	normal
SCEK013	Caribou	Parker	Parker	Lotek-VHF	60 ppm	26-Feb-14	10	485228	6522698	normal
SCEK010	Caribou	Parker	Parker	Lotek-VHF	60 ppm	26-Feb-14	10	510944	6517911	normal
SCEK012	Caribou	Parker	Parker	Lotek-VHF	60 ppm	26-Feb-14	10	508505	6516322	normal
SCEK015	Caribou	Parker	Parker	Lotek-VHF	60 ppm	26-Feb-14	10	485623	6522570	normal
BC1000	Caribou	Parker	Parker	Lotek-VHF	not heard					old VHF; not detected
BC1001	Caribou	Parker	Parker	Lotek-VHF	60 ppm	26-Feb-14	10	508296	6518536	normal
SCEK161	Caribou	Prophet	Prophet-OS	ATS-Irid	50 ppm; double 6th	25-Feb-14	10	544469	6456943	normal
SCEK050	Caribou	Prophet	Prophet-OS	ATS-Irid	not heard					Failed Iridium and VHF functions
SCEK051	Caribou	Prophet	Prophet-OS	Lotek-VHF	60 ppm	25-Feb-14	10	541487	6458544	normal
SCEK049	Caribou	Prophet	Prophet-OS	Lotek-VHF	60 ppm	25-Feb-14	10	546012	6457831	normal
SCEK045	Caribou	Prophet	Prophet-OS	Lotek-VHF	60 ppm	25-Feb-14	10	539794	6459289	normal
SCEK044	Caribou	Prophet	RRA-B	ATS-Irid	50 ppm; double 6th	25-Feb-14	10	540272	6459067	normal
SCEK143	Caribou	Prophet	RRA-B	Vectr-Vertex	50 ppm	25-Feb-14	10	560530	6423825	normal
SCEK144	Caribou	Prophet	RRA-B	Lotek-VHF	60 ppm	25-Feb-14	10	558060	6423733	normal
SCEK043	Caribou	Prophet	RRA-B	Lotek-VHF	60 ppm	25-Feb-14	10	545138	6455918	normal
SCEK020	Caribou	Snake-Sahtaneh	Clarke	ATS-Irid	50 ppm; double 6th	26-Feb-14	10	581321	6485823	normal
SCEK017	Caribou	Snake-Sahtaneh	Clarke	ATS-Irid	not heard					Failed Iridium and VHF functions
SCEK068	Caribou	Snake-Sahtaneh	Clarke	Lotek-VHF	60 ppm	25-Feb-14	10	533300	6501540	normal
SCEK150	Caribou	Snake-Sahtaneh	Clarke	Lotek-VHF	60 ppm	26-Feb-14	10	579474	6485496	normal
SCEK148	Caribou	Snake-Sahtaneh	Clarke	Lotek-VHF	60 ppm	26-Feb-14	10	589992	6471268	normal
SCEK153	Caribou	Snake-Sahtaneh	Clarke	Lotek-VHF	60 ppm	25-Feb-14	10	532393	6500977	normal

Table 1. VHF signal status and location of boreal caribou and wolf collars detected during the February 25-26, 2014 SCEK fixed-wing telemetry monitoring flight cont.

ID	Species	Range	Core	Collar Type	Status	Date	UTM Zone	East	North	Comments
SCEK151	Caribou	Snake-Sahtaneh	Clarke	Lotek-VHF	60 ppm	25-Feb-14	10	534075	6498139	normal
SCEK152	Caribou	Snake-Sahtaneh	Clarke	Lotek-VHF	60 ppm	26-Feb-14	10	580065	6486105	normal
SCEK019	Caribou	Snake-Sahtaneh	Clarke	Lotek-VHF	60 ppm	26-Feb-14	10	580517	6486130	normal
SCEK021	Caribou	Snake-Sahtaneh	Clarke	Lotek-VHF	60 ppm	26-Feb-14	10	581964	6486311	normal
SCEK025	Caribou	Snake-Sahtaneh	Clarke	Lotek-VHF	60 ppm	25-Feb-14	10	554939	6490557	normal
SCEK024	Caribou	Snake-Sahtaneh	Clarke	Lotek-VHF	60 ppm	26-Feb-14	10	578746	6487013	normal
SCEK018	Caribou	Snake-Sahtaneh	Clarke	Lotek-VHF	60 ppm	25-Feb-14	10	533768	6501283	normal
SCEK154	Caribou	Snake-Sahtaneh	Clarke	Lotek-VHF	60 ppm	26-Feb-14	10	560321	6506742	normal
SCEK149	Caribou	Snake-Sahtaneh	Clarke	Lotek-VHF	60 ppm	26-Feb-14	10	580517	6484130	normal
SCEK156	Caribou	Snake-Sahtaneh	Clarke	Lotek-VHF	60 ppm	26-Feb-14	10	583758	6502994	normal
SCEK157	Caribou	Snake-Sahtaneh	Clarke	Lotek-VHF	60 ppm	25-Feb-14	10	540456	6498009	normal
SCEK070	Caribou	Snake-Sahtaneh	Clarke	Lotek-VHF	60 ppm	25-Feb-14	10	532690	6501871	normal
SCEK145	Caribou	Snake-Sahtaneh	Clarke-OS	Lotek-VHF	60 ppm	26-Feb-14	10	602426	6566639	normal
SCEK100	Caribou	Snake-Sahtaneh	East Kotcho	ATS-Irid	50 ppm; double 6th	26-Feb-14	10	606186	6554137	normal
SCEK104	Caribou	Snake-Sahtaneh	East Kotcho	Vectr-Vertex	50 ppm	25-Feb-14	10	591784	6580238	normal
SCEK103	Caribou	Snake-Sahtaneh	East Kotcho	Lotek-VHF	60 ppm	26-Feb-14	10	611652	6554288	normal
SCEK102	Caribou	Snake-Sahtaneh	East Kotcho	Lotek-VHF	60 ppm	26-Feb-14	10	607128	6552596	normal
SCEK105	Caribou	Snake-Sahtaneh	East Kotcho	Lotek-VHF	60 ppm	26-Feb-14	10	606643	6558238	normal
SCEK111	Caribou	Snake-Sahtaneh	North Kotcho	Vectr-Vertex	50 ppm	26-Feb-14	10	600380	6567841	normal
SCEK074	Caribou	Snake-Sahtaneh	North Kotcho	Lotek-VHF	60 ppm	26-Feb-14	10	607457	6558708	normal
SCEK089	Caribou	Snake-Sahtaneh	North Kotcho	Lotek-VHF	60 ppm	26-Feb-14	10	608480	6556663	normal
SCEK088	Caribou	Snake-Sahtaneh	North Kotcho	Lotek-VHF	60 ppm	26-Feb-14	10	613394	6568045	normal
SCEK090	Caribou	Snake-Sahtaneh	North Kotcho	Lotek-VHF	60 ppm	26-Feb-14	10	613394	6569045	normal
SCEK092	Caribou	Snake-Sahtaneh	North Kotcho	Lotek-VHF	60 ppm	25-Feb-14	10	594957	6582954	normal
BC1037	Caribou	Snake-Sahtaneh	North Kotcho-OS	Lotek-VHF	60 ppm	26-Feb-14	10	591980	6548279	normal
SCEK110	Caribou	Snake-Sahtaneh	North Kotcho-OS	ATS-Irid	50 ppm; double 6th	26-Feb-14	10	608274	6553721	normal
SCEK096	Caribou	Snake-Sahtaneh	Paradise	Lotek-VHF	60 ppm	25-Feb-14	10	531335	6502621	normal
SCEK079	Caribou	Snake-Sahtaneh	Tsea	ATS-Irid	50 ppm; double 6th	26-Feb-14	10	553228	6592405	normal
SCEK131	Caribou	Snake-Sahtaneh	Tsea	Lotek-VHF	60 ppm	26-Feb-14	10	555612	6593537	normal
SCEK081	Caribou	Snake-Sahtaneh	Tsea	Lotek-VHF	60 ppm	26-Feb-14	10	555852	6603779	normal
SCEK083	Caribou	Snake-Sahtaneh	Tsea	Lotek-VHF	60 ppm	26-Feb-14	10	555090	6603888	normal
SCEK132	Caribou	Snake-Sahtaneh	Tsea	Lotek-VHF	60 ppm	26-Feb-14	10	553584	6591890	normal
SCEK082	Caribou	Snake-Sahtaneh	Tsea	Lotek-VHF	60 ppm	26-Feb-14	10	557195	6591602	normal
SCEK127	Caribou	Snake-Sahtaneh	Tsea	Lotek-VHF	60 ppm	26-Feb-14	10	556592	6603910	normal
SCEK071	Caribou	Snake-Sahtaneh	West Kotcho	Vectr-Vertex	50 ppm	26-Feb-14	10	586830	6549742	normal
SCEK097	Caribou	Snake-Sahtaneh	West Kotcho	ATS-Irid	50 ppm; double 6th	26-Feb-14	10	607971	6553414	normal
SCEK091	Caribou	Snake-Sahtaneh	West Kotcho	Lotek-VHF	60 ppm	25-Feb-14	10	593720	6581866	normal
SCEK073	Caribou	Snake-Sahtaneh	West Kotcho	Lotek-VHF	60 ppm	26-Feb-14	10	602380	6565841	normal
SCEK094	Caribou	Snake-Sahtaneh	West Kotcho-OS	Lotek-VHF	60 ppm	26-Feb-14	10	608480	6556663	normal
BW002	Wolf	Chinchaga	Big Arrow	Lotek-VHF	not heard					pack not located
BW011	Wolf	Chinchaga	Big Arrow	Lotek-Irid	not heard					pack not located
BW012	Wolf	Chinchaga	Big Arrow	Lotek-Irid	not heard					pack not located
BW008	Wolf	Fort Nelson	Tsimeh	Lotek-Irid	50 ppm	25-Feb-14	10	526047	6552701	normal
BW001	Wolf	Fort Nelson	Tsimeh	Lotek-VHF	60 ppm	25-Feb-14	10	526047	6552701	normal
BW009	Wolf	Fort Nelson	Tsimeh	Lotek-Irid	50 ppm	25-Feb-14	10	526047	6552701	normal
BW014	Wolf	Fort Nelson	Tsimeh	Lotek-Irid	50 ppm	25-Feb-14	10	526047	6552701	normal
BW020	Wolf	Parker	Parker	Lotek-VHF	60 ppm	26-Feb-14	10	495679	6526678	normal
BW019	Wolf	Parker	Parker	Lotek-Irid	50 ppm	26-Feb-14	10	485278	6519673	normal
BW021	Wolf	Snake-Sahtaneh	Clarke	Lotek-Irid	50 ppm	25-Feb-14	10	556564	6486601	normal
BW022	Wolf	Snake-Sahtaneh	Clarke	Lotek-VHF	60 ppm	25-Feb-14	10	556564	6486601	normal

Table 1. VHF signal status and location of boreal caribou and wolf collars detected during the February 25-26, 2014 SCEK fixed-wing telemetry monitoring flight cont.

ID	Species	Range	Core	Collar Type	Status	Date	UTM Zone	East	North	Comments
BW018	Wolf	Snake-Sahtaneh	Elleh	Lotek-Irid	50 ppm	25-Feb-14	10	556564	6486601	normal
BW017	Wolf	Snake-Sahtaneh	Elleh	Lotek-Irid						VHF not detected
BW023	Wolf	Snake-Sahtaneh	Snake	Lotek-VHF	60 ppm	26-Feb-14	10	566671	6535087	normal
BW007	Wolf	Snake-Sahtaneh	Snake	Lotek-VHF						not detected; missing
BW016	Wolf	Snake-Sahtaneh	Snake	Lotek-VHF	60 ppm	26-Feb-14	10	541381	6524832	normal; formerly Iridium 148.590
BW010	Wolf	Snake-Sahtaneh	Snake	Lotek-Irid						dispersal to NWT; Irid data current
BW003	Wolf	Snake-Sahtaneh	West Clarke	Lotek-Irid	not heard					failed collar

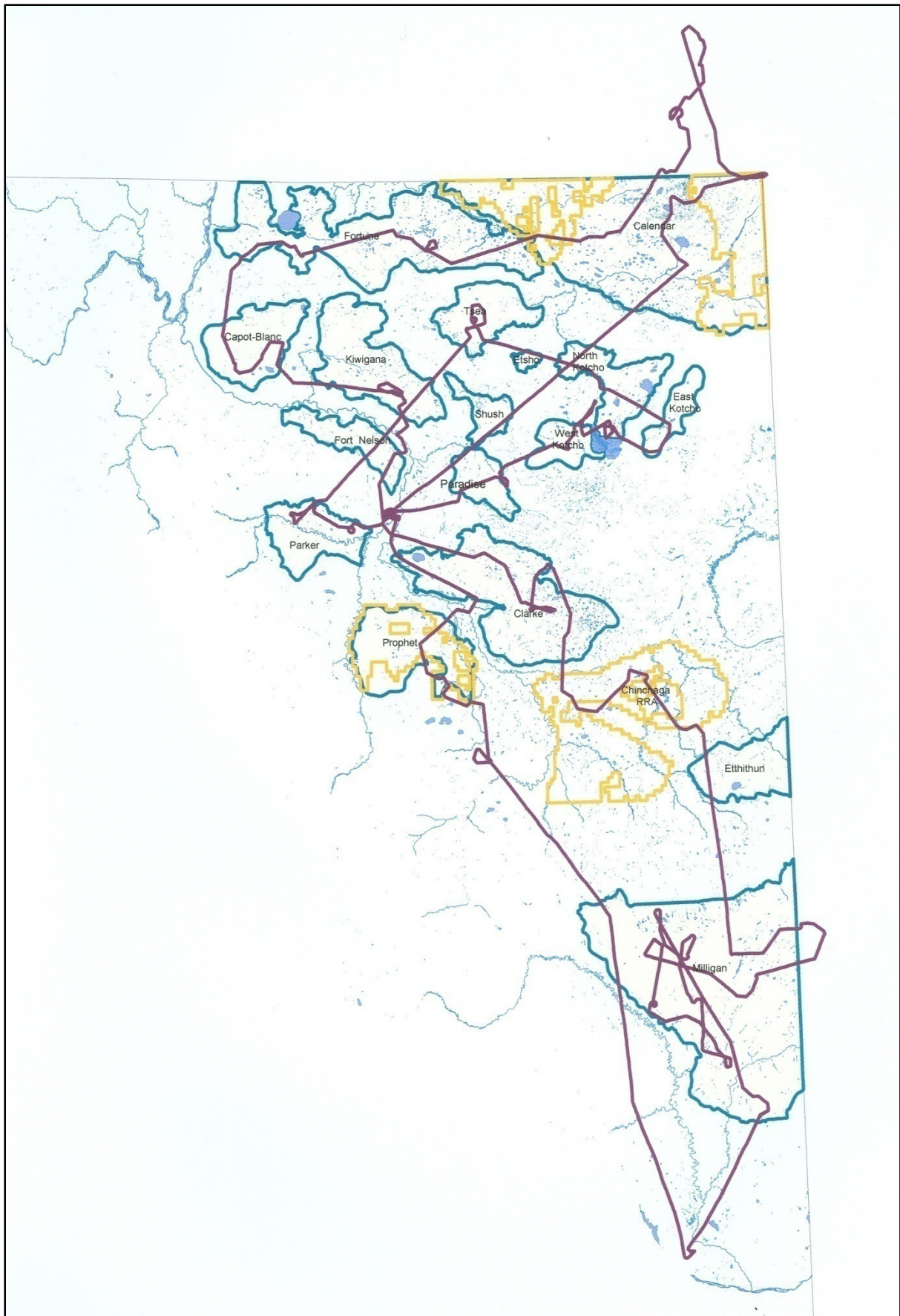


Figure 1. Flight paths flown during the February 25-26, 2014 SCEK fixed-wing boreal caribou and wolf telemetry monitoring flight.