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SUMMARY
DEMPSTER CHECK STATION
1994

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Progress Report
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ABSTRACT

The Dempster Check Station was operated from October 8 to December 4, 1994. There was a total of 305 caribou reported, 296 of these being hunter harvests. Harvest was very concentrated with 71 % of the caribou taken in GMS 2-27. Success rate was calculated at 67.9 %. Resident and non-resident hunters harvested slightly more bulls than cows in October (58.6 %) whereas native hunters showed no preference. After November 1, the average number vehicles with skidoos increased from 14% to 92%. Trucks were the most common southbound vehicle passing the station, however it is not possible to extrapolate this traffic to caribou because a high level of local traffic masked traffic which passed the caribou.

ACKNOWLEDGMENTS

Many thanks go to S. Nagano who competently manned the check station this year, the Dawson First Nation, who administered the contract, and the Conservation Officers in Dawson City for advice, assistance and review comments. T. Rudniski did all the data entry. Lastly, thank you to the hunters who stopped and contributed to our project.

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INTRODUCTION

The Dempster Highway Check Station has been operating each year since 1985. At the request of the Porcupine Caribou Management Board, the station is run to record the caribou harvest during the peak of hunting activity on the Dempster Highway. The station also plays an important role as a deterrent to illegal activity in a heavily hunted area.

This year, in addition to recording harvest data from Dempster Highway hunters information for three other issues was gathered. Objectives were:

- 1) to document caribou harvest on the Dempster Highway during peak hunting activity,
- 2) to estimate the success rate of Dempster Highway hunters,
- 3) to estimate the preponderance of skidoo use, and
- 4) to estimate the levels of vehicular traffic the caribou are exposed to during peak hunting activity.

METHODS

Station Operation

This year the Check Station was manned by a Dawson First Nation member, Simon Nagano. He was contracted through the Dawson First Nation to work 44 days, 5 or 6 days a week, 8 hours a day for \$125 per day. To cut travel costs, we moved the station from the Tombstone campground to the rest stop at the beginning of the Dempster Highway at kilometer 0.5. The station was open from 8 October to 4 December 1994.

The Check Station was open a total of 43 days from 8 October to 4 December, 1994. During the month of October, Simon's day off was Wednesday. For the remainder of the season, days off were Tuesday and Wednesday, since no hunters were checked through

on Tuesdays in October. On some days, Simon would drive up the highway and talk to hunters. Other times, there was difficulty with equipment (eg: propane frozen). The station was actually manned for 306 hours over a 58 day period from 8 October to 4 December.

Hours of operation were noon to 8 pm on Mondays, Tuesdays, Thursdays and Fridays. On Saturdays and Sundays, the station was open from 1 to 9 pm. We changed the hours from previous years to account for the change in location. If a hunter quit hunting at dark, the station would still be open after he drove to the beginning of the highway.

Caribou Harvests

Successful hunters were interviewed and a Check Station form was filled out for each hunter. There is room to record details for a maximum of 6 caribou on one form.

Additional forms were used if a hunters harvest exceeded 6 caribou. In most cases, hunters were personally interviewed however there were some reports where no personal interview was done. An example form is shown in Appendix 1.

Harvest During Rut

Rut is defined as running from October 8 to 31. The proportion of bulls in the harvest during the rut was calculated to determine if hunters were avoiding rutting bulls.

Hunter Success and Presence of Skidoos

Since only successful hunters are interviewed, success rate of Dempster Highway hunters is unknown. Another unknown is the number of hunters who use skidoos. For each vehicle which stopped at the station, the operator recorded number of hunters (successful or not), the number of caribou harvested and the number of skidoos or ATV's present in each hunters' vehicle. Success rate was calculated as the number of

successful hunters divided by the total number of hunters, expressed as a percent. An example form is shown in Appendix 1.

Traffic Patterns

To try get an idea of traffic patterns along the highway during peak hunting activity to relate to disturbance and/or roadkills, southbound traffic during the hours that the station was manned was recorded by hour and vehicle type. Vehicles were classified as cars, pickups, semi-trucks and service vehicles such as YTG or Northwestel trucks. An example form is shown in Appendix 1.

Simon also accepted two types of biological submissions at the station: 1) muscle, liver, and kidney samples and incisor bar for the territory-wide moose and caribou contaminants study by Gamberg Consulting, and 2) with the hunter's consent, he also cut incisor bars from caribou. Most hunters requested they be informed of the age of the animal when the teeth are sectioned.

RESULTS AND DISCUSSION

Station Operation

We kept the station open from 8 October to 4 December 1994. The extended season should not happen next year for 3 reasons:

- 1) only 2 caribou were reported through the station after 21 November,
- 2) cold weather around late November and early December caused some problems with general operation (propane freezing etc), and
- 3) the project was slightly over budget. By reducing the length of the season, these savings could be applied to operational costs.

Caribou Harvests

There was a total of 305 caribou reported in 123 reports through the Check Station, the highest harvest ever recorded at the station. Of these, 296 were hunter harvests. There were 2 "organized hunts" this year, one by the Council for Yukon Indians (CYI) in October, and by the Canadian Rangers in November. Subtracting these caribou, "usual" hunter harvest equals 203 caribou.

Found in field	1
Confiscated	8
Hunter Harvests	
- CYI	15
- Rangers	78
- all others	203
	<hr/>
	305

Of the 296 hunter harvests, 6 caribou (2 %) were taken by non-residents (Table 1). Over 40 % (n = 120) caribou were taken by Whitehorse hunters, followed by Dawson hunters with 20.3 % (n = 60) (Table 2). Pelly and Carmacks harvests are inflated by the Rangers' hunt. The Whitehorse harvest is slightly exaggerated by the harvest of 15 caribou during the hunt by CYI.

The Rangers came through when the station was closed so they were not personally interviewed. The numbers reported are hearsay. Twenty eight Rangers were reported to have harvested 78 caribou (Pelly Rangers 41 caribou and Carmacks Rangers 37 caribou). Further inquiries reveal that in actuality, 31 Rangers harvested 55 caribou. (J. Russell, pers comm).

Harvest was very concentrated with 71 % of the total harvest reported in Game Management Subzone (GMS) 2-27 (Table 3, Figure 1). No caribou were reported in GMS's off the road this year. In a 7-year average of past years, 9.4 caribou were reported in "off-road" subzones.

As in other years, weekends were the busiest times for hunting activity (Figure 2). There were reports of hunting activity started as early as August however, the bulk of the hunting started in late September and early October.

Harvest During Rut

The station opened at the approximate beginning of rut (rut occurs from about 8 to 31 of October). Of the 149 caribou where sex is known, 49.3 % (n=72) were bulls harvested during the rut. Resident and non-resident hunters in October harvested slightly more bulls than cows (58.6 %) (Table 4). The cow season closed on 31 October, therefore November harvest for residents and non-residents is 100 % bulls. Native hunters showed no selection in October or November.

There were sample submissions (of either incisor bars only, or for the contaminants study) for 21 bull caribou, 18 harvested in October, and 3 in November. From these we may be able to tell if hunters are selecting for younger bulls.

Hunter Success

The sample unit was a vehicle with hunters. If at least one caribou was harvested, all hunters in that vehicle were said to be successful. If no caribou were harvested, all hunters in that vehicle were said to be unsuccessful. This sample unit may inflate success rate. For example, if a party of four went hunting but only one hunter got a caribou, all four hunters rather than just the one would be considered successful.

The resultant success rate of 67.9 % (169 successful hunters / 249 total hunters) is higher than the 33 % believed to be the Yukon average (Table 5). However, it must be remembered that the calculation of the Yukon-wide success rate from the Yukon Resident Questionnaire uses the hunter as the sample unit rather than a vehicle with hunters. There was no apparent change over time for hunter success rate or for the mean number of caribou per successful hunter.

The total number of caribou harvested as reported through the harvest interview forms (Table 3) differs from the total reported on the hunter success forms (Table 5). I believe that not all hunter vehicles were recorded as opposed to the interview forms being incorrect. First, there are 19 more caribou reported through interviews than the hunter success forms. Second, the last two harvests do not show up on the hunter success forms. If everything about those 19 caribou was average, then less than 9 vehicles (7.1 %) were missed. Using the existing information on Table 5:

$$19 \text{ Ca} \times \frac{\text{hunter}}{1.07 \text{ Ca}} \times \frac{122 \text{ vehicles}}{249 \text{ hunters}} = 8.7 \text{ vehicles}$$

$$8.7 / 122 \text{ vehicles reported} = 7.1 \%$$

Presence of Skidoos

For resident hunters, no motorized vehicles are allowed in the Dempster Corridor until after November 1 when skidoos only are permitted to aid in the transport of hunter and meat. There are no such restrictions on native hunters.

Hunters appear to make the most of this allowance. Before November 1, the average number hunter vehicles with skidoos was 14%, all of which would be native hunters. After November 1, the average number of hunter vehicles with skidoos was 92% (Table 5).

Traffic Patterns

Trucks were by far the most common southbound vehicle recorded passing the station (80.9 %), followed by service vehicles, cars and then semi's. Although not correlated, like the hunting activity, the busiest traffic days were on weekends (Figure 6).

It is not possible to extrapolate the traffic passing the station to the exposure of caribou to vehicles because it was our impression that there was a large amount of local traffic from people who live short distances up the highway or woodcutters etc, all of whom were recorded. The station was quite far away from the caribou (at least 70 kilometers) and we have no way of knowing how far the vehicles had travelled on the highway.

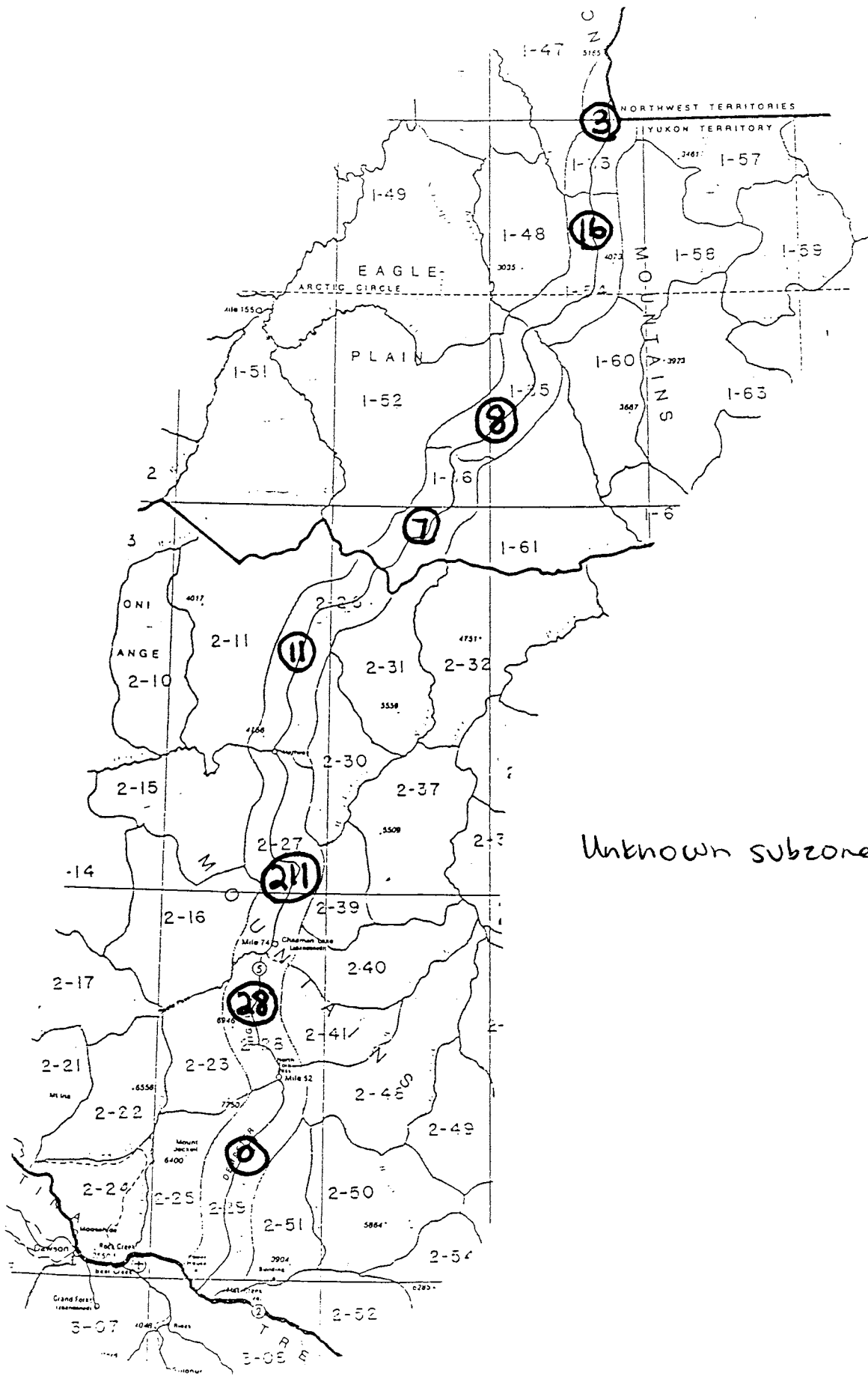
RECOMMENDATIONS

- 1) The operation of the station should be coordinated with the local Conservation Officers so that patrols could be made when the station is closed.

- 2) The station's open season should be shortened and scheduling should be based on the reported dates of harvest from the mandatory questionnaires.

- 3) Data collection for hunter success rate and skidoo use should have a sample unit of the hunter, as opposed to the vehicle with hunters. Thus success rate could be more readily compared with past Yukon-wide data which uses the hunter as the sample unit. Skidoo usage could then be broken down by hunter status.

Figure 1 Harvest location by Game Management Subzone.



Unknown subzone = 12 caribou

Figure 2 Date of caribou harvest, October 8 to December 4.

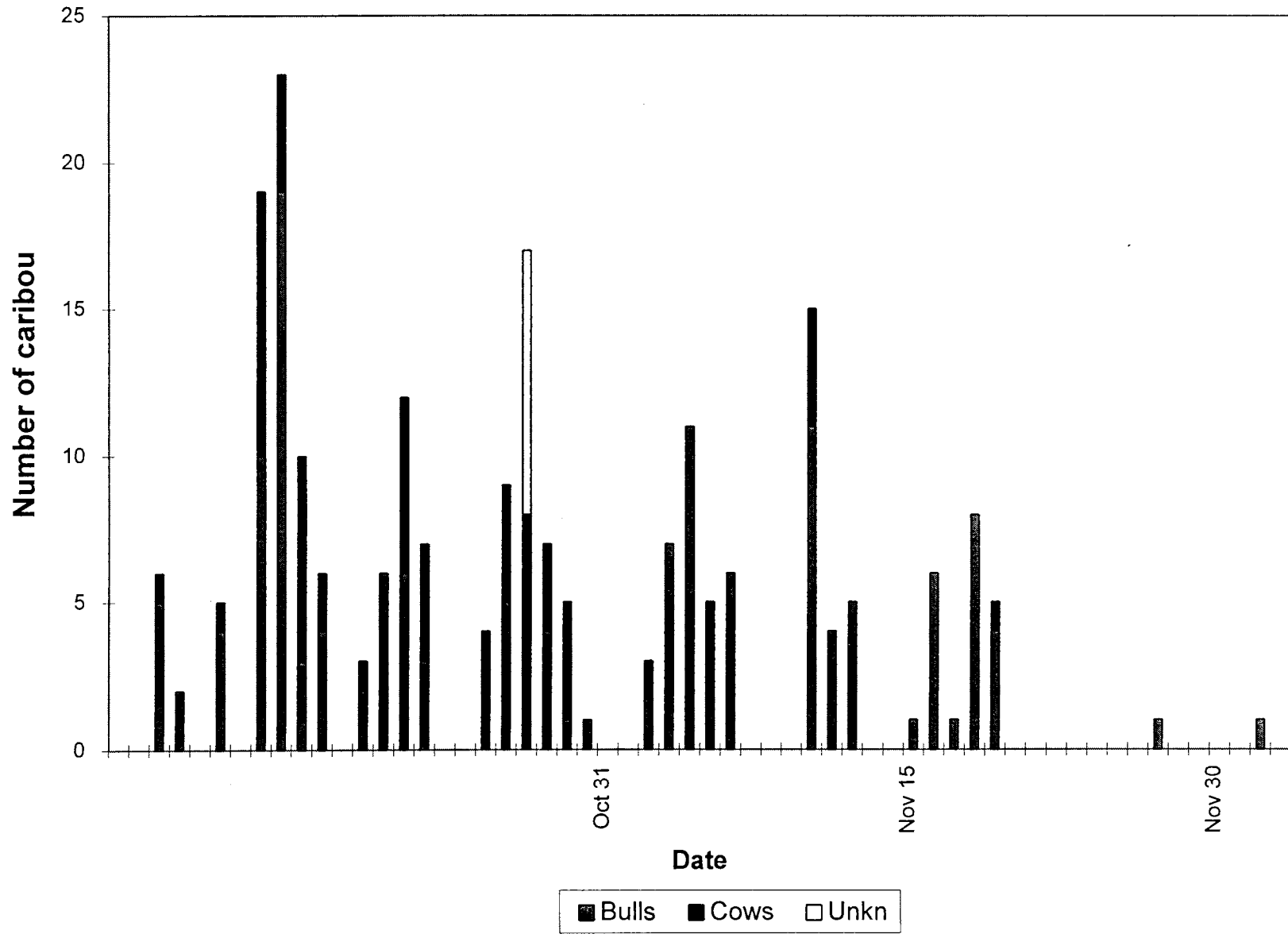
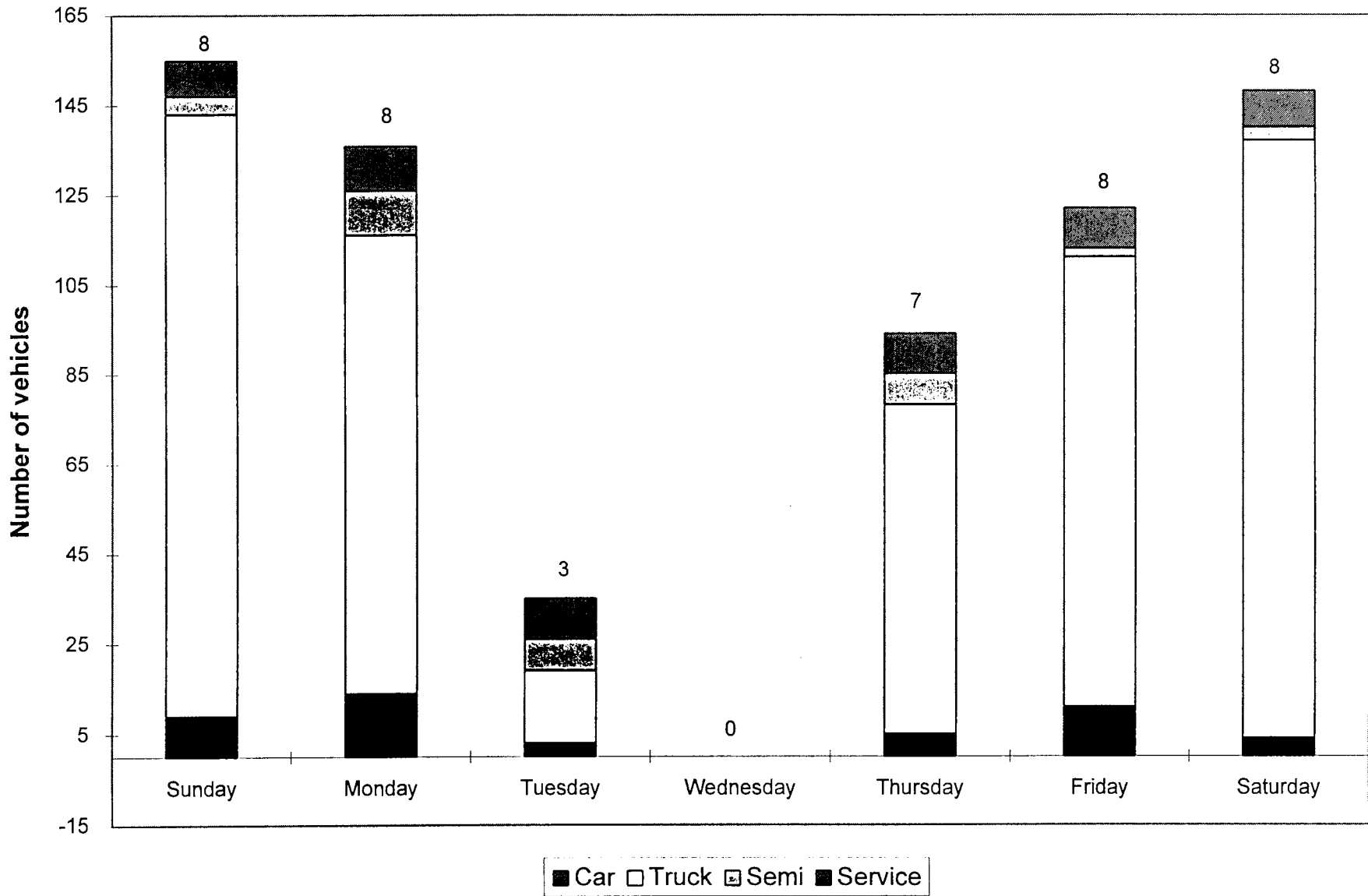


Figure 3 Mean number of vehicles per day open, by vehicle type.



Number refers to the number of days open

Table 1 Caribou harvest by hunter status, caribou sex, and month harvested (Includes harvests of “organized hunts”).

Month	Resident		Non-resid		Native		Unknown		Total		
	Bull	Cow	Bull	Cow	Bull	Cow	Bull	Unk	Bull	Cow	Unk
Unkn	0	0	0	0	0	0	0	3	0	0	3
Oct	44	28	1	2	26	26	1	9	72	56	9
Nov	65	0	3	0	4	4	1	78	73	4	78
Dec	1	0	0	0	0	0	0	0	1	0	0
Total	110	28	4	2	30	30	2	90	146	60	90

Table 2 Caribou harvest by community of origin of the hunter (Includes harvests of “organized hunts”).

Community	# of Reports	# of Caribou	% of Total Caribou
Non-resident	4	6	2.0
Carcross	2	3	1.0
Carmacks	5	51	17.2
Dawson	38	60	20.3
Haines Junction	1	1	0.3
Mayo	6	8	2.7
Pelly Crossing	2	43	14.5
Watson Lake	2	4	1.4
Whitehorse	63	120	40.5
Total	123	296	

Table 3 Caribou harvest by Game Management Subzone, by week. (Includes harvests of "organized hunts").

Week	153	154	155	156	226	227	228	Unkn	Total
Oct 8 - 14	0	0	5	1	5	0	0	0	11
Oct 15 - 21	0	6	0	4	3	53	0	0	66
Oct 22 - 28	0	0	0	0	3	47	0	9	59
Oct 29-Nov 4	0	3	0	0	0	4	4	0	11
Nov 5 - 11	0	7	0	2	0	13	15	0	37
Nov 12 - 18	0	0	3	0	0	5	9	0	17
Nov 19 - 25	3	0	0	0	0	87	0	0	90
Nov 26-Dec 2	0	0	0	0	0	2	0	0	2
Dec 3 - 4	0	0	0	0	0	0	0	0	0
Unknown date	0	0	0	0	0	0	0	3	3
Total	3	16	8	7	11	211	28	12	296

Table 4 Harvest of bulls by season and user group. (Does not include caribou taken in the 'organized hunts'.

		Resident and Non-resident	Native
Rut^a	# bulls	45	26
	total caribou	75	52
	% bulls	58.6	50
Closed^b	# bulls	69	4
	total caribou	69	8
	% bulls	100	50

a) Rut = October 8 - 31.

b) Closed = closed cow season for resident hunters after 31 October.

Table 5 Hunter success and presence of skidoos by week.

Week of ^b	# vehicles with hunters	# unsuccessful hunter	# successful hunters	success rate ^c	# of caribou ^d	# caribou per successful hunter	# skidoos per hunter vehicle ^e
Oct 8 - 14	13	18	7	28	5	0.71	0.08
Oct 15 - 21	29	12	46	79	63	1.37	0.14
Oct 22 - 28	17	8	24	75	21	0.88	0.18
Oct 29 - Nov 4	16	6	30	83	23	0.77	0.38
Nov 5 - 11	22	15	26	63	36	1.38	0.91
Nov 12 - 18	12	12	17	59	16	0.94	0.83
Nov 19 - 25	13	9	19	68	17	0.89	1.00
Nov 26 - Dec 2	0	-	-	-	-	-	-
Dec 3 - 4	0	-	-	-	-	-	-
Total or mean	122	80	169		181	x=181/169= 1.07	x=57/122= 0.47

a) Does not include the 2 organized hunt (30 hunters, 93 caribou).

b) Note that Table 3 uses killdate. This table uses report date therefore total kills by week differ.

c) Success rate = (# successful hunters / total # of hunters) X 100. See text for definition of successful.

d) Totals for the caribou harvest forms and these forms do not match. This table is "missing" 19 caribou. See text.

e) Average before Nov 1 = 14%. Average after Nov 1 = 92%.

Appendix 1 Examples of forms used.

EXAMPLE

DEMPSTER HIGHWAY CARIBOU CHECK STATION

ID # 123 Recorder: Cooley Date: 94 10 18 (yr/mon/day)
Kill Type Sport hunt [2] Native [3] Found in field [4] Road kill [5] Confiscated

Hunter Information

Resident non-native
12345 licence # 678 seal #

[2] Non-resident _____
outfitter name and area #

[3] Native

[4] Unknown

Hunter name: Joe Blow

Address: Box 000
Dawson City

Comments: _____

saw grizzly + cub oct 17 at
km. 300

Other species harvested: none

Sex and age: —

Kill Information

Total caribou reported: M 1 F 1 ?

Caribou # 1 Sex: Male Female ?
1 53 41
Zone Subzone Road km

3 miles south of border
specific location

Kill date: 94 11 16 12:30 2
yr mo day hour days hunted

Habitat:
 Tundra [2] Forest [3] Forest/tundra
[4] Road [5] River [6] Lake transition

Specimen none [2] jaw [3] other _____

Caribou # 2 Sex: Male Female ?
1 54 341
Zone Subzone Road km

Arctic Circle
specific location

Kill date: 94 11 17 18:42 2
yr mo day hour days hunted

Habitat:
 Tundra [2] Forest [3] Forest/tundra
[4] Road [5] River [6] Lake transition

Specimen none [2] jaw [3] other _____

DEMPSTER HIGHWAY CARIBOU CHECK STATION
Additional Animals

Caribou # _____ Sex: Male Female ?

Zone Subzone Road km

specific location

Kill date: :
yr mo day hour days hunted

Habitat:

[1] Tundra [2] Forest [3] Forest/tundra
[4] Road [5] River [6] Lake transition

Specimen [1] none [2] jaw [3] other _____

Caribou # _____ Sex: Male Female ?

Zone Subzone Road km

specific location

Kill date: :
yr mo day hour days hunted

Habitat:

[1] Tundra [2] Forest [3] Forest/tundra
[4] Road [5] River [6] Lake transition

Specimen [1] none [2] jaw [3] other _____

Caribou # _____ Sex: Male Female ?

Zone Subzone Road km

specific location

Kill date: :
yr mo day hour days hunted

Habitat:

[1] Tundra [2] Forest [3] Forest/tundra
[4] Road [5] River [6] Lake transition

Specimen [1] none [2] jaw [3] other _____

Caribou # _____ Sex: Male Female ?

Zone Subzone Road km

specific location

Kill date: :
yr mo day hour days hunted

Habitat:

[1] Tundra [2] Forest [3] Forest/tundra
[4] Road [5] River [6] Lake transition

Specimen [1] none [2] jaw [3] other _____

SOUTH-BOUND VEHICLES

DATE 5 Oct 94

Time	Cars	Trucks	Semi trucks	Service trucks
Noon to 1pm	### ### 1	### ## ###	###	1
1-2 pm		1	### 1	
2-3 pm				
3-4 pm				
4-5 pm				
5-6 pm				
6-7 pm				
7-8 pm				

SUMMARY OF COSTS

Dempster Caribou Harvest Reporting Station, 1994

Move trailer from Tombstone to Dempster corner (cost to move it back in next FY)	220.00
Operator (Contract with Dawson First Nation)	6380.00
Administration fee (15%) = 825	
WCB (1%) = 55	
Wages (Simon Nagano) 44 days @ 125 = 5500	
Propane 7 fillups 100 lb bottle @ 53	371.00
Gas / oil / service for generator	137.00
Supplies (coffee, water jug, tarps etc)	174.73

TOTAL 7,282.73 overbudget by \$282.73

Notes for next year:

To heat trailer (7 fillups for 51 days) = 100 lbs propane / 7.3 days

To run generator 44 days (8 hrs/day) = \$ 3.11 / day