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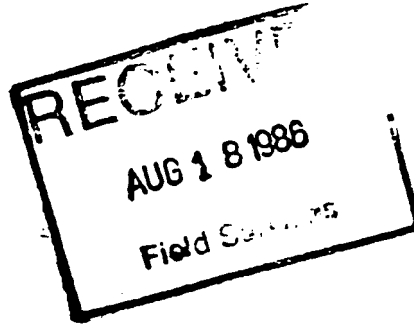
***Report On Commercial Cariboo Harvest
Project At Inuvik, Northwest Territories
Type of Study: Analysis/review Wildlife
Products, Caribou And Reindeer
Date of Report: 1986
Author: Renewable Resource Economic
Development Project
Catalogue Number: 5-4-18***

**ECONOMIC
DEVELOPMENT
PROJECT**

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July 25, 1986

Mr. Len Colosimo
Supervisor, Resource Department
Department of Renewable Resources
Government of Northwest Territories
Yellowknife, N.W. T.
XIA 2L9



Dear Mr. Colosimo:

Re: EDA - Caribou Harvesting Project

Please accept this as a final accounting for the above noted project approved under the Intersetlement Trade Program of the Natural Resource Development Subsidiary Agreement. The actual shortfall (for which we are seeking financial assistance) is \$28,344.95 which is \$6,719.95 more than the \$21,625.00 originally forecast. The final cost for preparing a report on the caribou harvest, as specified in the agreement, however is the same as that (\$3,375 .00) which was forecast.

The major reasons for the excess shortfall are due to greater than anticipated equipment and supplies costs and lower than estimated revenues from the sale of the meat. In the case of the latter, the revenue forecast was based upon an average carcass weight of 125 pounds and an average selling price of \$5.00 per pound. The actual average selling price is based upon the current prices at Ulu Foods. Furthermore, the original revenue estimate failed to take into consideration the weight loss due to dehydration, contamination etc. between the raw and finished merchantable product. Historically, about 25 per cent of the meat is lost however we now anticipate a loss of only 15 per cent as a result of the improvements at slaughtering and handling the carcasses which were implemented through this project. The revenue therefore is based upon the following formula: 100 caribou @ (132 lbs/carcass less 15%) @ \$4 .63/lb = \$51,948.60.

On the other hand, the equipment and supply costs were greater than forecast because of the uncertainties regarding a federal meat inspection. We had planned for and prepared ourselves as best we could for a meat inspection by manufacturing certain pieces of equipment such as a skinning/ gutting rack, spreaders etc. and by purchasing a large heater for the dressing tent but were unable to reach an agreement with officials from Agriculture Canada on other matters in time for the harvest. It should be noted that since a caribou harvest of this nature had never been attempted before, it was necessary to devise alternative plans and techniques for each

phase of the slaughter process. For example, the Meat Inspection regulations had **been** amended at the time of the harvest which supposedly removed the requirement for a slaughter facility **in** the field however in the end not only was a slaughter facility required but it had to be heated which necessitated a large forced air heater. The attached report addresses this issue in greater detail.

If you have any questions or require further information please contact me at your convenience.

Sincerely

A handwritten signature in cursive script, appearing to read "Tom Beaudoin". The signature is written in black ink and is positioned above the printed name.

Tom Beaudoin

cc. **Bernie Perlman**, Head Economic Development, **DIAND**
Ron O'Brien, Manager, - EDA Secretariat

ACTUAL vs FORECAST
REVENUE AND EXPENDITURES

	Forecast	Actual
REVENUE	62,500	51,948.60
(LESS) EXPENDITURES		
PURCHASE OF MEAT	18,750	15,200.00
A. PROJECT MANAGER	12,000	11,293.50
FIELD SUPERVISOR	2,400	1,650.00
DRESSING FOREMAN	<u>6,500</u>	<u>6,068.65</u>
	\$20,900	\$19,012.15
B. EQUIPMENT & SUPPLIES	18,000	27,712.94
FREIGHT		<u>3,548.96</u>
		31,261.90
C. AERIAL SURVEY	5,000	744.50
D. TRANSPORTATION	10,000	3,100.00
E. ADMINISTRATION	<u>11,475</u>	<u>10,975.00</u>
	\$84,125	\$80,293.55
SHORTFALL	<u>\$21,625</u>	<u>\$28,344.95</u>
REPORT ON CARIBOU HARVEST	<u>3,375</u>	<u>3,375.00</u>
GRAND TOTAL	\$25,000	\$31,719.95

REPORT
ON COMMERCIAL CARIBOU HARVEST PROJECT
AT **INUVIK**, NORTHWEST TERRITORIES

Submitted by: RENEWABLE RESOURCCE ECONOMIC DEVELOPMENT PROJECT

May 22, 1986

1.0 INTRODUCTION

In February 1986, the Renewable Resource Economic Development Project applied for and received financial support from the Economic Development Agreement to conduct a pilot project with respect to developing an organized caribou harvest on the Bluenose Herd. The purpose of the project was to test various techniques and methods of slaughtering and dressing caribou that would be acceptable under the Meat Inspection Act. More specifically the objectives of the project were:

- ° to develop a cooperative approach of harvesting caribou
- ° to improve efficiency
- ° to reduce wastage
- ° to increase profitability to hunters

The report that follows addresses the approach and methodology employed at the harvest. This includes use of equipment, provision of facilities, and attention to procedures now considered essential should a federal meat inspection be carried out.

2.0 BACKGROUND

In the past, caribou were commercially hunted either by individuals or small family groups out of Inuvik or Tuktoyaktuk who had received an allocation of the commercial game tags distributed by their respective Hunters and Trappers Association. The tags are generally issued (10 to each hunter) on a first come first serve basis with those whose primary income is derived from hunting, fishing and trapping having priority over others. Except for this small group of subsistence hunters the majority of people supplying meat changes from year to year. As a result of this situation coupled with the limited personal quota, it is virtually impossible to implement improved handling and dressing techniques that will reduce spoilage and wastage of the meat. It was not uncommon, for example, to receive a caribou carcass at Ulu Foods of which only a portion would be acceptable.

The single largest reason for the spoilage was contamination from spillage of the gut contents. It was found that meat contaminated in this way was not edible and had to be discarded. Hair and other debris were also a problem however they could be removed and did not affect the quality of the meat. Blood shot meat as well as some meat that was improperly butchered was also rejected because it was not merchantable. In the case of the latter, if a loin was split to one side rather than in the middle only the side with the bone-in would be accepted. The loin is the most valuable cut of meat on the carcass from a retailers point of view however when it is incorrectly cut it is only usable for hamburger.

The Ulu Foods store purchases between two hundred and two-hundred and fifty carcasses each year which is about one-quarter of the annual allowable commercial quota on the Bluenose caribou herd. Some meat is sold locally by the hunters - usually meat which Ulu Foods has rejected - but the store represents the largest consumer. The majority of the meat sold by Ulu Foods is on a wholesale basis to hotels, dining areas and institutions in Inuvik and Yellowknife. The retail market in Inuvik is marginal with visitors to the area probably accounting for one-half the sales depending upon the season. The summer season is the most active on both the retail and wholesale level. Some meat is sold to non-residents. However because the meat is not federally inspected, only small quantities for personal consumption may be exported. In some cases, the meat is served at special events in other jurisdictions which requires a permit or other form of dispensation.

The combination of a limited market place and lack of expertise in harvesting caribou are the major impediments to achieving full utilization of the resource and consequently enhancing the benefits of people living in the region. In an effort to overcome these problems, we approached Agriculture Canada with the concept of a meat inspection on caribou. The result of these discussions was this pilot project which tested the feasibility of some of the methods and procedures Agriculture Canada deemed essential that had never been tried and tested on caribou. We had hoped however that Agriculture Canada would consent to having a meat inspector present during the harvest and that we would be successful at getting the meat inspected and approved. Unfortunately, we were not able to persuade

them to attend but as a result of this project and our discussions with their officials we are now confident that we can achieve a meat inspection.

3.0 OPERATIONS

In preparing for this project, like all feasibility studies, we found it necessary to make certain assumptions. Since several of the major issues regarding a meat inspection were still being discussed with officials from Agriculture Canada, we decided to proceed with the harvest on the assumption that there would not be a meat inspection. However, a Herman-Nelson heater was purchased as well the abattoir and meat railing used in the muskox harvest were flown into Inuvik from Sachs on the assumption that a workable solution to the issues might be forthcoming. The outstanding issues were:

- 1) Is an anti-mortem required?
- 2) Is a dressing facility (abattoir) necessary?
- 3) Can the caribou be gutted in the field away from the dressing facility?
- 4) What sanitation and hygiene measures are required?

We were notified on the same day that the harvest commenced that an anti-mortem was not required for caribou because of a recent amendment to the Meat Inspection Regulations. Consequently, it was not necessary to make an effort at holding the caribou prior to killing as had been planned for the pilot project. A solution to the other questions was not prompt however and an understanding was not reached between Agriculture Canada and ourselves until after the project was complete.

3.1 Participants

Initially, we had considered having both the Tuktoyaktuk and Inuvik HTA's participate jointly in the project since they both utilize the same herd although in distinct areas. The simple fact that they hunted in different areas however, proved to be the stumbling block as they both exercised a certain territorialism and neither party was willing to consent to allowing the other into their respective region. They preferred two separate harvests but this was not practical from an economic stand point. In the end, the harvest was done in conjunction with the Inuvik HTA at a site approximately fifty miles east of the town.

3.2 Harvesting Agreement

In addition to the Project Manager, a professional meat cutter, was hired under contract to demonstrate and supervise the dressing of the animals. A Field Supervisor (member of the HTA) was also contracted to organize and co-ordinate the field operations. The HTA selected eight people from their membership who were all paid an equal share of the revenue. In turn, some of the hunters would hire a friend or relative to assist them at their assigned job.

An agreement was drawn up whereby the HTA was paid \$1.50 per pound for each carcass FOB Inuvik. They were required to pay for their shipping costs (air charter) and for their snowmobile fuel and oil, while the capital costs (equipment & supplies) and other

associated expenses (administration/management) aerial survey's, ammunition, etc. were paid for through the project. It was also the HTA's responsibility to select the workers from their membership and assign them their tasks whether it be skinning, gutting, shooting, hauling and loading the meat.

3.3 Slaughtering

An aerial reconnaissance was carried out a couple of days in advance of the hunt to locate the caribou and to select a camp site with a good landing strip. The female caribou had started their northern migration to the calving grounds so only the males, which we were interested in, remained in the general area. The workers travelled to the site by snowmachine with their personal belongings such as tents, stoves and so forth. The snowmachines were later used for hunting and hauling the dead animals to the dressing site. Because of the amended regulations the hunters were able to shoot the caribou wherever and whenever they found them.

They were directed however to shoot the animals either in the head, neck or in the lungs and heart to avoid bloodshot and/or damaged meat. They also, as a part of our agreement with them, had to bleed the animals as soon as they were killed. This was done simply by cutting their throats directly behind the lower jaw where the large arteries to the head are readily accessible. A persistent problem we had in the past is that when a caribou is shot low in the neck and it is not properly bled, the blood has a tendency to migrate toward the shoulder forming large blood clots under the blade causing the meat

to rapidly deteriorate. This problem only becomes evident much later when the shoulder is butchered and prepared at the store.

Once the caribou had been bled they were loaded on sleighs and moved to the dressing area for skinning and gutting. The issue of whether or not the caribou could be gutted in the field was still undecided therefore we chose to bring the carcasses to the dressing area for gutting as this seemed to be Agriculture Canada preference. We, on the other hand, were concerned about the gut bag breaking open at the dressing site and contaminating the meat as a result of the bumping and banging the carcass receives when it was moved from the kill site to the dressing area. In many cases the distance between the two sites was up to ten miles and the dead animals had to arrive at the dressing site still warm to facilitate the gutting and in particular, skinning.

3.4 Dressing

At the dressing area each carcass was hoisted up on a portable tripod. The winch cable was attached to a gam hook which was inserted between the tendon and femur of each back leg. As the carcass was slowly raised it was skinned. Once the skin, shanks and neck were cut away the viscera and organs were removed. The carcass was then cut in half between the second and third rib, keeping the loin intact. The hinds were allowed to freeze before packaging while the fronts were packaged in carcass bags and shipped to Inuvik before freezing. At Ulu Foods the fronts were boned out as they arrived at the store in Inuvik while the frozen

hinds were split on the meat saw and re-packaged to prevent freezer burn. The fronts were boned out for two reasons: First, there is a very limited market for frozen cuts (steaks & roasts) from the front shoulder because of the high proportion of bone to meat. The boned out meat is generally prepared as stew meat, ground, boneless rolled roasts and sausages. Secondly, the meat separates from the bone much easier if it has not been frozen and not as much meat remains on the bone.

3.5 Packaging & Shipping

As previously mentioned the carcasses were cut in-half between the second and third rib while it was still hanging. We chose to split the carcasses in this fashion rather than into sides to avoid damage to the loin which could easily happen with an inexperienced meat cutter. Additionally, an electric splitting saw with generator are required to split the carcass as opposed to a knife and hand saw.

Since the meat railing was not used the halves were placed on tarps where they were allowed to dry and harden. Once dry the fronts were packaged in poly bags in preparation for shipping. The bags must be left open to prevent the meat from sweating. The hinds on the other hand were allowed to freeze before packaging. The meat was flown daily via air charter to Inuvik. At the store the boned out meat was placed in freezer boxes with liners, while the hind quarters were wrapped in carcass covers and cheese cloth. This must be done

to prevent spoilage from dehydration. The meat was taken from the store and placed in a storage freezer on wooden pallets.

4.0 MEAT INSPECTION REQUIREMENTS

The following is based upon: discussions with officials from Agriculture Canada, findings from the caribou pilot project, and experience at slaughtering muskox to meat inspection standards. It is important to understand however that the approach to date has simply been one of trial and error and what is perceived to be acceptable now may not be acceptable the next time round. Furthermore, a caribou inspection has never been carried out so there is no guarantee that the method and procedure being considered will result in an approved product even though it may be inspected.

ANTI-MORTEM: An anti-mortem is not required therefore the caribou do not have to be corraled or held by some other means before being killed. However care should be taken such that diseased and/or sick animals are not taken to prevent cross-contamination.

KILLING: the animals should be shot in the head or neck to avoid damage and contamination to the meat.

BLEEDING: As soon as the animal is killed it should be bled by cutting its throat from ear to ear and moved to the dressing area.

ABATTOIR: An abattoir or shelter with meat railings is mandatory for the skinning, gutting, dressing and inspection. The facility must also be kept warm to prevent steam and icing. The meat railing should be of sufficient length and strength to hold at least one days kill.

RACK : To prevent gut spillage and contamination a rack must be used for gutting and partially skinning the carcass. Since the caribou will probably be killed at a considerable distance from the dressing area the gut bag may become damaged while in transit resulting in spillage of the carcass if gutted in a vertical position. The rack, on the other hand, facilitates the gutting and skinning of the animal in a horizontal position. It will not be necessary to have a gut table for inspection of the viscera as it can be inspected on the rack.

HEAD STAND: A head stand is required for inspection of the heads.

SANITATION & HYGIENE:

- ° a sanitation facility with chemical toilet and warm water for washing.
- ° an ample and continuous supply of water at 180°F must be available at the abattoir.
- ° equipment, tools and clothing must be kept clean.
- ° inedible and human waste must be disposed of away from any water bodies.

CLOTHING: meat cutters should be equipped with rubber pants and coats which are easy to clean.

PACKAGING: once the meat is dry and frozen it must be packaged either in stockinette or a carcass cover and stockinette.

HAIR CONTAMINATION : prior to inspection loose hair must be removed from the carcass by burning it with a propane torch.