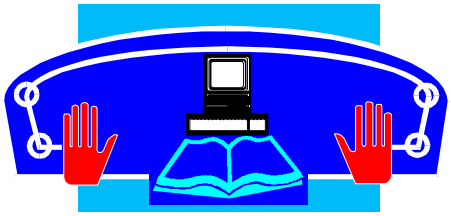

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RANKIN INLET FOOD PROCESSING PLANT
PROPOSAL SUBMISSION

JPH RENTALS

VOLUME II BUSINESS PLAN

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BUSINESS PLAN

A) PROJECT DESCRIPTION

Introduction

The project will entail two major components: construction of a food processing plant, and a marketing effort to promote smoked arctic char products beyond the Northwest Territories. The processing facility will accommodate arctic char for local (inte-Territorial) and export sale, and caribou and marine mammal products for sale within the Territories, specifically within the Keewatin.

Currently, a plant in Rankin Inlet provides a market for the summer commercial fishery in the Keewatin region. This plant is over twenty years old and is too large for the volume of char which it receives. The facility is in poor condition and must be significantly upgraded or replaced. Additionally, lack of insulation in the building precludes winter operation at reasonable operating costs.

The facility is owned by the Government of the Northwest Territories and operated by the Territorial Department of Economic Development and Tourism. The Territorial government is in the process of privatizing businesses which it owns; in Rankin Inlet, this effort has extended to closing the government craft, shop.

The Rankin fish plant is also scheduled for privatization, however, the current state of the facility makes it a poor proposition for private acquisition. A viable processing operation will require the construction of a new processing facility which can accommodate both summer and winter products of resource harvest.

JPH approached the Department of Economic Development in November, 1986, concerning the establishment of a country foods retail operation. At that time, the department informed us of their intention of divesting their interest in the old fish plant, they were in the process of identifying proponents interested in entering the resource marketing business. Suitable candidates would be supported in applications for funding for a new facility and in developing a marketing strategy for smoked arctic char.

Since initial discussions with the department, JPH has been involved in a butcher training course and made contacts with both suppliers and purchasers of country foods in other communities. JPH has also entered in the retail trade in Rankin Inlet, dealing in char and caribou products which are sold directly to the public.

Concurrently, JPH has also contacted the territorial Department of Renewable Resources concerning regulations and licencing requirements within the Territories regarding marketing fish and wild meat. JPH is following the licencing requirements necessary to deal in these products.

The Fishing Industry in the Keewatin

The fishing industry in the Keewatin region of the NWT has three elements: a commercial charfishery, a sports fishing, and a domestic fishery. In broad economic terms, the domestic fishery is probably the most important, although data on volume are scarce. The sports fishery is presently small in terms of biological impact although it is gaining rapidly in economic importance.

The commercial char fishery in the Keewatin has increased output in 1985 and 1986 two to three-fold over the previous five years. In 1985, the Rankin Inlet plant processed 50,000 pounds of char; in 1986, the Rankin plant processed 30,000 pounds while the Chesterfield Inlet plant processed 13,000 pounds. In the summer of 1986, four communities participated in the commercial char fishery; Eskimo Point, Whale Cove, Rankin Inlet and Chesterfield Inlet. The first three communities sold their catch to the plant in Rankin, while the latter sold char to their local plant.

The plant in Rankin and the plant in Chesterfield are the only registered processing plants in the region; as such they can market fish Territorial border. However, when marketing beyond the Territories border. However, when selling outside the Territories they must by law sell to the Freshwater Fish Marketing Corporation, a crown corporation established to market the product of freshwater fishermen. Accordingly, most of the char received by these plants was sold to FFMC in Winnipeg.

While char production has increased in the last five years, it is still far short of the potential allowable quota in the region. The summer commercial fishery is hampered by a short season and bad weather. The fishery concentrates on anadromous char populations which run down to the sea in spring and upstream toi freshwater in the fall. The federal Department of Fisheries and Oceans has assigned quotas to each river system in the region which support char populations. The open-water season runs for a maximum! of six weeks from mid-July to the first week of September. Poor weather, especially high winds, can significantly reduce the fishing effort in this period.

The large majority of fishermen operate 18- to 22- foot canvas boats with low power motors (50 hp or under). These 'canoes' cannot operate in extreme weather conditions; additionally, outlying quotas between communities cannot be taken using such equipment.

A small number of fishermen operate longliner vessels from 35 to 45 feet in length. These boats can withstand much more severe weather conditions than the smaller freighter canoes. Presently, one longliner in the region is outfitted as a freezer-packer vessel. The owner regularly fishes the Ferguson River quota, which is the largest single quota in the Keewatin. In the summer of 1987, an aluminum freezer/packer vessel will be in operation out of Coral Harbour to harvest quotas from the Thomsen and the Cleveland Rivers on the north shore of Southampton Island. The char harvest from these two rivers will effectively "bring Coral Harbour onto the commercial fishing scene.

The ~'reposed Facility

JPH proposes **to construct a new processing facility in Rankin** Inlet to handle **fish, caribou and marine mammal products. The** new facility will be approximately one third the size of the old Rankin Inlet. The new plant will be designed to operate in the winter season and thereby provide a reliable market to fishermen and hunters through the winter.

With 3000 square feet of floor space, the plant will include a holding freezer, a blast freezer, a cooler, an ice shed, dry storage area, compressor and furnace room, an office and a small retail outlet. The processing area will include the smoker, filleting area and meat cutting area.

As the government plant will cease operation after the summer of 1987, JPH will bid on the equipment which can be salvaged. Compressors, stainless steel tables, a new bandsaw, vaccuum packing equipment, and assorted equipment will be available when tile plant closes.

The Marketing Plan - Smoked Char Production

The Department of Economic Development and Tourism has proposed to initiate a marketing plan for smoked char, with the intention of smoking most of the arctic char which is exported beyond the Territories. With this policy in mind, JPH proposes to enl er into smoked char production on an expanded basis; therefore, this proposal includes a training component wherein a competent smoker will be hired to assist in the production of high quality smoked char products. Both cold smoked and hot smoked products will be included in the product line.

Local Markets

A limited local market exists within the Keewatin for country food products. While the potential market is obvious in settlements with large non-Native segments of the population, there is a strong demand for such products on a seasonal basis among the native population. In Repulse Bay, a predominately Inuit community of about 300 people, the loca co-op sold five thousand pounds of char in three months during the winter of 1985/86.

B) **IN'ESTMENT REQUESTED FROM NEDP**

The funds requested from NEDP will be used to construct a food precessing plant which will handle caribou meat, fish, and muktaaq (whale skin and blubber) .

The funds will also be applied in a training component in which the owner/operator will be instructed in techniques for smoking arctic char. The production process will vary with product. With caribou, the meat will be butchered according standard primal and retail cuts for sale to hotels, restaurants and the general public. Smoked and dried meat (jerky) will also be produced.

Smoked char production will involve processing two products; a premium cold smoked product (lox style), and a hot smoked product. The cold product requires three to four times longer to produces; in this process, salt application cures the flesh and no heat is applied. The cold smoking process smoked product, red flesh must selected which is firm (not soft), unmarked by net or knife or damaged in any other way. Off-colour, bruised or cut flesh will reduce the price received for the product.

The hot smoking process can utilize slightly soft char, off colour or slightly bruised. The process requires six to seven hours; while tile flesh is brined, heat is applied to cook the flesh, as opposed to the cold smoke method in which salt cures the meat. While the hot smoked product cannot command as high a price, the capacity of the process to use less than top quality char makes it a valuable production method.

The government plant in Rankin produced a good quality hot-smoked product in 1985 and 1986. In the winter of 1986, the former manager of the plant assisted JPH in processing hot-smoked char. This product was sold within the territories during the summer, fall and winter of 1986-87. A 'menu' for hot smoked production is included in the appendix.

An innovative ice harvesting system will be applied in this project. A modified rotavator will be used to till ice from a frozen lake surface. The ice aggregate will be loaded into an insulated grain bin. Technical details and a copy of the report on initial trials can be found in the section on required infrastructure.

Investment Objectives

1. **Construction and upgrading of infrastructure for caribou and char processing.**
2. Implementation . of an alternative technology for ice harvesting.
3. Development of smoked char products of sufficient quality for an export (southern) market
4. Training Inuit in food handling and processing.
5. Upgrading the management skills of the current owners of the company.
6. Penetration of the southern smoked fish market.
7. Provision of a cash market for hunters and fishermen in the region.

C) MARKET AND CLIENTELE

Clientele

The plant will serve a domestic market and an export market. The domestic market is composed to two groups: residents capable of harvesting their own country foods, but willing to buy selected products, and residents who are restricted from harvesting by law or lack of access.

The first group of the domestic market is composed primarily of Inuit who supply their needs for fish and meat through their own efforts but are restricted by time or seasonal or geographical scarcity. For those who regularly hunt, specially items such as smoked char and dried caribou will be items which they cannot produce themselves throughout most of the year.

The Inuit (Native) market is surprisingly large; estimated demand for caribou in this group is three per person per year (Population Models for the Beverly and Kaminuriak Caribou Herds Results of the November 1985 Workshop). However, actual harvest in 1985 was estimated at 1.1 caribou per person (1985/86 Annual Report - Beverly/Kaminuriak Caribou Management Board). This leaves an unsatisfied demand of over 9,000 animals for 1987 (see Table 2).

Residents restricted from harvesting by law are non-Native residents who have lived in the Territories less than two years. For such residents, southern tastes will dictate cuts of caribou similar to these in which beef and pork are sold. For this non-Inuit market, presentation will be a very important factor. The meat will have to be free of hair and blood and packaged

prohibit the export of caribou meat from the commercial quota beyond the Territories. The Freshwater Fish Marketing Corporation has monopoly rights of purchase for all fish exported out of the Territories while this is a guaranteed market, better revenue may be received by smoking char and marketing the product without going through FFMC.

The export market for smoked char is targeted for Edmonton, Winnipeg and Toronto. Smoked char has never been marketed in these cities on a concerted basis; however, in the summer of 1987 the Department of Economic Development and Tourism plans to conduct a test market in these cities. With two direct flights a week, Winnipeg is a market very close to Rankin Inlet. Smoked tullibee and goldeye are steady sellers in Winnipeg, next to both cold and hot smoked salmon on supermarket shelves.

Goods and Services

The company will provide the following goods and services:

1) smoked char products to a Territorial and export (southern Canadian) market
2) fresh whole char to Freshwater Fish Marketing Corporation
3) fresh and frozen char products to the Territorial market
4) marine mammal products to the regional and Territorial markets
5) retail cuts of caribou and processed caribou Products to the regional and Territorial markets
6) char collection service to fishermen working outlying quotas
7) broker service for intersettlement trade products
8) supplies to fishermen selling char to the plant operation

These goods and services are discussed below.

1) Smoked char products

The plant will produce hot and cold smoked char products for regional, Territorial and southern markets. Cold smoked, lox style char products will be developed from the best grade char which the plant can purchase. This product will probably account for twenty to fifty per cent of the total smoked char production. Production of cold smoked char will drop in winter when the landed char tend to be in poorer condition, and rise in summer when fresh production yields a high grade landed product. Whole sides and fillet pieces will be the form in which tile cold smoked char are marketed.

The cold smoked product requires three to four times longer to produce; in this process, salt application cures the flesh and no heat is applied. The cold smoking process is more difficult than the hot smoking process. To produce a competitive cold smoked product, red flesh must selected which is firm (not soft), unmarked by net or knife or damaged in any other way. Off-colour, bruised or cut flesh will reduce the price received for the product.

The hot smoking process can utilize slightly soft char, off color or slightly bruised. The process requires six to seven hours; while the flesh is brined, heat is applied to cook the flesh, as opposed to the cold smoke method in which salt cures the meat. While the hot smoked product cannot command as high a price, the capacity of the process to use less than top quality char makes it a valuable production method.

Hot smoked char will be produced from lower grade char, slightly soft or bruised and discolored. Hot smoking is less time consuming than cold smoking, and the products will command a lower price but at a lower production cost. Hot smoked products will be marketed in whole sides, trimmed fillets, chunks.

The government plant in Rankin produced a good quality hot-smoked product in 1985 and 1986. In the winter of 1986, the former manager of the plant has been assisting JPH in processing hot-smoked char. This product was sold within the Territories during the summer, fall and winter of 1986-87. A "menu" for hot smoked production is included in the appendix.

Smoked char products will constitute the most important product line in the plant operation.

2) Fresh whole char exported to Winnipeg

Territorial fish producers are legally bound to sell fresh whole char to the Freshwater Fish Marketing Corporation in Winnipeg. In the summers of 1985 and 1986, fresh whole char were sold on a trial basis to the corporation from the plants in Rankin Inlet, Chesterfield Inlet, and Cambridge Bay. At $4.00/lb and a freight subsidy, fresh char production is far more lucrative than frozen char production. The plant operation will concentrate on fresh shipment to Winnipeg, and smoke any fish which must be frozen.

The biggest hurdle with fresh char production is the distance from the rivers to the plant, and weather problems which delay

delivery. Char shipped to Winnipeg fresh must be in very good condition for delivery to the up-scale restaurant trade.

3) Fresh and frozen char products for the Territorial market

Fresh and frozen char products can only be sold legally within the Territories. Because of seasonal availability, fresh char may not sell in Yellowknife because supply cannot be guaranteed. However, the tourist demand in Yellowknife during August may be leverage to work with in promoting fresh char.

Frozen char products can be marketed in Yellowknife for a higher return than that shipped to FFMC in Winnipeg. However, only a limited supply will be available due to the concentration on smoked char production. The price for frozen char received in the region and Territories will have to equal the price offered by FFMC (minus freight) before the frozen char market in the Territories will be pursued.

4) Marine mammal products

Seal and walrus meat, as well as muqtuq, will be marketed primarily to the regional Inuit market. All products will be processed to family meal size portions and vacuum packed. Muqtuq is a big seller in Baker Lake which has no access to marine mammal resources and in coastal communities during the winter.

5) Caribou products

Commercial quota caribou will be purchased and processed

into retail cuts for the hotel and restaurant trade. The standard product line will include chops and steaks (shoulder blade, rib chops, loin chops,' sirloin steak, whole round steak), roasts (shoulder blade, round, rib, short loin, sirloin tip), and sides (trimmed hinds, trimmed fronts, trimmed sides) . processed products will be produced: ground meat, stew meat, sausage and salami. Jerky and dry meat will also be sold.

The plant will also offer a custom butcher service to cut up caribou harvested by local hunters in Rankin Inlet. In the Keewatin there is presently no private facility in which the harvest from the commercial caribou quota can be processed. Effective use of the quota will require an adequate facility.

6) Collection service to fishermen

The collection service will be part of a larger fishing operation performed to harvest outlying quotas using the company's 48 foot longliner. The vessel will be used to harvest outlying quotas inaccessable to skiff fishermen, and to collect char from fishermen harvesting remote locations.

The company's longliner will be outfitted as a freezer/packer vessel to hold and transport fish to the plant. The investment in equipment will be recovered through the increase in revenue generated by exploiting previously unharvested stocks of char.

7) Broker service for intersettlement trade

The development of intersettlement trade in the Keewatin region has been hampered by lack of both infrastructure and

organization. Inter settlement trade quotas allotted for Rankin Inlet, Whale Cove and Eskimo Point prohibit direct sale of the meat; rather, the harvest from these quotas (as opposed to commercial caribou quotas) must be bartered for other items. Other commodities such as soapstone and ivory are variously in surplus in some communities while lacking in others.

JPH proposes to offer broker services to hold and trade such commodities on a commission basis for organizations and individuals. Goods would be held on consignment until the desired trade items become available. The transaction including freight and delivery will be handled by JPH. Commission charges will be cash or an actual portion of the trade goods.

The plant facility offers ideal infrastructure to hold both food and non-edible commodities. Its location in Rankin Inlet offers a central point of storage and excellent access by air to other communities. As well, the JPH transportation service can deliver directly to other communities.

8) Fishermen's Supplies middleman?

As the major buyer of fish in the region, the company will carry a line of fishing supplies including nets, anchors, tubs, etc. which will be supplied directly to the fishermen. Presently there is no regional supplier which carries all the items required by fishermen. JPH will approach the major net supplier, Lakefish Net and Twine (Leckies), for an exclusive dealership or nets in the region.

Production Volume - Arctic Char

G **Historical Production**

In 1986, the present plant in Rankin Inlet processed approximately 27 thousand pounds of arctic char. Fresh (unfrozen) production was 11,000 pounds, frozen shipment totalled almost 14,000 pounds and 2,000 pounds of char was smoked.

The Rankin Inlet received char from three communities in the following amounts:

Rankin Inlet:	6,000 lbs
Whale Cove:	14,000 lbs
Eskimo Point:	7,000 lbs

Historical production from the plant is shown in table. Territorial production from 1975 to 1986 exported to the south ranged from a low of 72,00,0 lbs in 1975 to a high of 283,000 in 1977. Since 1983, production has varied from 114,000 to **150,000** pounds. The Rankin Inlet plant increased export production from 8,867 pounds in 1983 to 34,529 pounds in 1985. This production declined in 1986 to 22,799 pounds. This decline is attributed to competition from the new fish plant in Chesterfield Inlet, and the failure of fishermen to exploit the Corbett Inlet and Ferguson River quotas.

Potential Production

The potential char production in the Keewatin far exceeds the actual catch The available quota in the region is 180,000 pounds (dressed weight) ; this figure does not include systems currently under test fishing evaluation. This potential production

is not acheived due to conditions noted above in the description of the Keewatin commercial fishery: under-capitalization, inefficient gear, and severe weather conditions.

Several developments are under way to alleviate these problems:

1) operation of a new freezer/packer vessel in the region in 1987
2) increased catch efficiency through an expansion of weir fishing
3) use of collector boats to bring catch from outlying areas to central locations

In the next three years, a minimum target of 55,000 pounds production can be achieved by fully utilizing the quotas between Rankin Inlet and Eskimo Point. The most easily accesible quotas can produce amounts in excess of 55,000 pounds: Baker Foreland, Corbett Inlet, Wilson Bay, Pistol Bay, Mistake Bay, Ferguson River, Copperneedle River, Sandy Point, and Eskimo Point (see table 6). This 55,000 target is the minimum required in the break-even analysis for the plant operation (see the Break-even analysis in the financial analysis section).

Production - Caribou

There are four major caribou herds in the Keewatin region; the Kaminuriak, Beverly, Wager Bay, and Melville. A commercial quota has been assigned to the last two herds; this quota is divided among three communities: Repulse Bay (200), Chesterfield

Inlet (100) and Baker Lake (50).

Rankin Inlet, Whale Cove and Eskimo Point have access only to the Kaminuriak and Beverly herds which have no commercial quota. The herds are managed under the auspcies of the Caribou Management Board, which is composed of Native representatives from the NWT, Saskatchewan and Manitoba, as well as government representatives . The Natives from Saskatchewan and Manitoba oppose commercial quotas for the herds; NWT representatives are still pressing for such quotas.

Before 1986, only Repulse Bay has exploited their commercial tags for caribou. Sales were limited however because of poor presentation and lack of marketing. The **local** coop purchased meat directly from the hunters; the coop then supplied government supported institutes such as the transient center for out-patient in Churchill and Winnipeg.

In the winter of 1986-87, JPH purchased caribou from the commercial harvest in Baker Lake, Chesterfield Inlet, and Repulse Bay. The meat was processed into retail cuts and dried meat. Sales were very good in Rankin Inlet, with limited sales to hotels and retail outlets in the region.

Production from the commercial quotas is limited by the difficulty of harvest for Baker Lake and Chesterfield Inlet hunters. Access to the Wager Bay herd from these two communities can be difficult due to the distance of the herd. However, both communities succeeded in harvesting half their quota allottment in December 1986 and January 1987, with organized hunts, the full quotas for both these communities can be taken.

Repulse Bay has no problem harvesting its quota due to the proximity of the herd to the community. However, for the plant operation, timing of purchase of the harvest is important. Fish and caribou cannot be processed at the same time in the plant. During July, August and the first two weeks of September, char production will prohibit processing caribou. However, caribou can be purchased, frozen and stored for processing after the char production has finished.

Fall is ideal for quality of meat, but Chesterfield and Baker Lake hunters require snow cover to travel to the Wager Bay herd. The earliest access for these hunters coincides with mating; at this time, only the females and yearlings can be harvested as the males have acquired a bad taste with onset of rutting. Unless the Chesterfield and Baker Lake hunters can access the herd earlier, only females will be purchased from these two communities.

Markets – Arctic Char

Limitations

The Northwest Territories is legally bound to sell its fresh and frozen dressed and filleted char to the Freshwater Fish Marketing Corporation; this monopoly applies to all such product which crosses the NWT border. Within this border, the plant can sell directly to any buyer.

As a product of secondary processing, smoked char may be exempt

to this monopoly outside the NWT border. Currently, no smoked char produced within the Territories has been marketed beyond the border. The government plant in Rnakin has produced small volumes of smoked char for the local, regional and Yellowknife markets.

The Freshwater Fish Marketing Act provides an option for Territorial negotiation with the Board of Directors of the Corporation to enter into a special arrangement whereby small or specialized fisheries can be excluded from the monopoly. If the Territorial government concluded such an agreement for arctic char, producers could expand directly into southern markets; however, to date the Territorial government has shown no inclination to negotiate such an agreement.

Assumptions

The market analysis and projections as reflected in cash flows are hased on the proportion of sales of the Issatik Food Plant in the summer and fall of 1986. We believe this to be a minumum estimate because the plant:

1) put very little effort into marketing within the Territories
2) produced only a limited amount of smoked char
3) concentrated on export of fresh and frozen product to FFMC in Winnipeg

In fact, we consider the marketing performance of the plant in 1896 to be a "worst case" scenario; if JPH can profitably run an operation based on this performance, the implementation

of the proposed marketing plan will further increase the profitability and viability of the business.

Analysis

Freshwater **Fish Marketing** Corporation

While the corporation is a monopoly buyer, it is also legally bound to buy whatever producers can supply. In this sense, FFMC provides a guaranteed market to the producer. However, a price decline from about $3.50/lb to $2.50/lb in 1985 caused the Territorial government ot introduce a freight subsidy for char. Since 1975, the price has ranged from $1.58 to $3.41 (see table 3). FFMC provides a guaranteed 'market for char, but price may decline as supply "increases.

The corporation bought frozen whole char for $2.50/lb and fresh whole char for $4.00/lb in the summer of 1986. Last summer was the second season for fresh char shipment to Winnipeg. The demand is strong, but supply seasonal. The corporation can sell all the fresh char is receives.

Territorial Market

Within the Territories, the market is strong for smoked char throughout the year. The regional market is strong seasonally when access to stocks is limited; winter, spring and fall 'break-up see strong demand for retailed char. The Repulse Bay coop sold 2300 kilograms locally in the winter of 1985/86 when access to char stocks was limited by ice and weather conditions.

In August and September of 1986, the Issatik Focal Plant had sales of almost $8,000 for smoked char within the region

and in Yellowknife. Very little promotion was invested for these sales, which certainly could have been larger if the product had been promoted.

During this same period 1600 pounds of frozen whole and filleted char were sold out of the region, mostly to the restaurant and hotel trade in Yellowknife. Outside of Rankin, there was no demand for fresh char. Again, for both fresh and frozen products, no sustained effort was made to promote sales within the Territories after an initial marketing trip to Yellowknife.

Smoked Char – Export Market

Included in the proposal appendix is a copy of a study of the market potential for smoked arctic char in southern Canada. We summarize here the important points from that study.

Arctic char has a reputation as a gourmet item in the same class as Pacific salmon, rainbow trout, lobster and crab. It has historically been hot-smoked by specialized fish smokers; cold smoked char is a relatively new item which has gained more exposure since the marketing study was completed. In the late 1970's poor quality arctic char from Labrador entered teh southern market and consequently reduced the demand for all char. Since that time, the market has been rebuilt through careful grading, quality control and marketing efforts by Freshwater Fish Marketing Corporation.

Canadian per capita consumption of smoked and cured fish products is 0.66 pounds per year*. Eighty per cent of smoked fish production comes from the Atlantic provinces while twenty per cent originates in the West coast. With restrictions on

traditional smoking salmon species in 1975, BC salmon smokers expanded into producti on using alternate species. Kingfisher Foods is looking seriously into cold smoked char; the company smoked char from the Issatik Food Plant for the Territorial exhibition at Expo '86.

Market location and species preference are determined by a number of factors; two of the strongest determinants are proximity to a fishery and ethnic or cultural preferences. Winnipeg is close the large Lake Winnipeg fishery which produces lullibee and goldeye which appear in whole smoked form on local supermarket shelves. Smoked salmon in both cold and hot smoked form are also retailed in large supermarket chains in the city. As well, Winnipeg is home to a large Jewish population and people of German descent who prove a strong market for lox style cold smoked fish.*

Arctic char is a unique species that has market appeal as a product distinct from salmon. Smoked char must be consistent in quality; packaging, presentation and color are very important in the southern market. With proper preparation and presentation, Northern smokers can carve out a market share sufficient to absorb our relatively small production:

*'Canadian Market Potential for Smoked Arctic Char' report prepared for the Department of Economic Development and Tourism, NWT. DPA consulting Ltd. June 1980.

Markets - Caribou

Limitations

The NWT Wildlife Act prohibits export of meat from the **commercial quotas for game.** While the private sector is putting pressure **on the Territorial** government to repeal this prohibition, the present regulatory environment confines sales to Territorial markets. The market analysis is therefore confined to an examination of markets within the Territories.

Assumptions

The regional market is structured according to residence and ethinicity: resident non-Natives, non-resident non-Natives, Native?, and visitors (see tables 1 & 2). Resident non-Natives **are** those who have been in the Territories for two years or longer and have the legal right to hunt caribou. In the Keewatin, we assume eighty per cent of the non-Native population is resident (estimate taken from statistics for a five-year period 1981 to 1985). Non-resident non-Natives are those who have lived in the Territories for less than two years and are not able to hunt; from the same statistics we assume that at any point in time twenty per cent of the regional non-Native population is non-resident. The Native population is exclusively Inuit with access to caribou limited only be seasonal abundance and distribution. The visitors are those who have entered the region for a snort time for business or recreation.

The entire non-Native population in the Keewatin for the

base year 1985/86 is 554. The resident demand for caribou was determined on the following basis: we assumed fifty per cent would eat caribou meat regularly; of those consumers, fifty per cent would purchase meat as opposed to hunting. Demand over a five-year period was determined to increase as a function of population increasing at a rate of nine per cent per year.

The non-resident non-Native demand was determined by assuming fifty per cent of that population would choose to eat caribou meat; of these consumers, one hundred per cent would purchase as they cannot legally hunt nor would possess the land skills to hunt. For both non-Native groups, we assumed that they would consume the national **average** volume of red meat: 38.25 kg/year.

The Native demand was determined as previously mentioned, comparing harvest statistics of 1.9 caribou per person per year against estimated need of 3 caribou per person per year. This leaves an outstanding demand of 1.8 caribou per Native person per year. We assumed 35 kilograms as usable meat from one caribou.

The visitor market was estimated on the basis of an average three day stay where .1 kilogram per day of caribou meat would be consumed. The visitor demand is a part of the hotel market but not the entire market provided by that industry: government workers within the region make up a signficant portion of the regional hotel clientele. The visitor rate was assumed to grow at a rate of three per cent per year.

Analysis

Native (Inuit) Market

The Native (Inuit) market demand is the largest of the

regional markets. The size of the market is a function of the perceived "need" of the Inuit for caribou meat, which is roughly three times the national average demand for red meat. However, harvest statistics indicate that actual harvest only meets one third of the demand and therefore there is considerable room for expansion. Over a five-year period from 1987 to 1991, projected unfilled demand increases from 310,000 kilograms to 437,719 kilograms. This is far more than the present commercial quota can satisfy.

The Inuit demand for retail caribou will be seasonal, highest when access is low and lowest when the caribou are within easy reach . The time of greatest demand will be January, February and early March, especially for the southern communities which rely on the Kaminuriak and Beverly herds. These herds migrate to the treeline for the winter and move north again in late March and early April to spend the summer in the Keewatin.

A strong market exists in the winter for dried caribou meat. Environmental conditions and limited caribou supply conspire to severely restrict the amount of dried caribou available. In the winter of 1986/87, dried caribou moved very quickly in the JPH country food operation.

Presentation and packaging for the Inuit market, is not critical. Cuts of meat which the non-Native market would find aesthetically displeasing will move more easily among the Inuit. However, to maintain a reputation as a producer of consistent quality, JPH must reduce or eliminate cuts or presentation which the non-Native market would find offensive, especially where no attempt is made to physically separate items intended for the

Inuit market and items aimed at the non-Native market.

Non-Native Market

This market is composed of two segments, the resident and non-resident demand. The resident market is largest in volume, but the non-resident provides a larger market per capita. This is because non-residents cannot hunt and therefore must purchase their meat, thus a larger proportion of non-residents who would eat caribou must buy it.

The non-Native demand increases from 6,928 kilograms in 1987 to 9,780 kilograms in 1991. (see table 2) We assume this market will follow the national trend away from beef and pork toward: food with less fat; caribou meat can do well here, since it is very low in fat and high in protein, iron and other nutrients. For this market, the nutritional value of caribou must be promoted.

Despite the nutritional value, the price of the meat to the consumer must be competitive with beef. This market is relatively more discriminating than the Inuit market in its concern for packaging and presentation. The meat must be presented in cuts equivalent to those in which beef can be purchased.

Sausage and salami should move well in the non-Native market, as these items are presently unavailable, just as dried meat is limited for the Native market. Processed products presented in familiar form will have a great deal of market appeal for the non-Native segment.

Hotel and Restaurant Market - Regional

The food service industry in the region catered to 5000

visitors from the region in 1985. As hotels have not previously served caribou or char to. their guests, we have estimated a relatively low demand, in fact the lowest of the regional markets, for this sector." However, with a major push in the Keewatin in the direction of tourism, we consider our estimates for this market to be conservative especially considering 'he moderate rate of growth, three per cent, which we have assigned this sector.

Given these assumptions we predict an annual demand of 1,545 kilograms of caribou meat in 1987 increasing to 1,739 kilograms in 1991 in this sector. The products for this market will have to be excellent in cut, appearance and packaging. We can assume seasonal demand, with a peak in summer (July and August) and a low in winter (December, January, February) months. If the demand remains 10W, , JPH should have no problem providing a steady supply of product to this sector.

Hotel and Restaurant Market - Yellowknife

This market has not yet been approached directly with caribou products. This will be the most demanding Territorial market; a number of "white table cloth" restaurants serve the Territorial capital catering to an up-scale clientele. In return for product excellence, JPH can expect better return for their product than they would find the Keewatin. However, only the best line of cuts can be marketed in this sector; the limited supply should match an expected limited demand.

Since JPH has not yet obtained any market share in Yellowknife,

no estimates of demand in the sector have been made. Further discussion of this market will be found in the marketing plan.

Marketing Plan

Arctic Char

JPH plans to focus its effort on developing smoked char products and export these products to Winnipeg and Edmonton. The company will move away from frozen whole char production into smoked fish production. The following synopsis outlines the marketing plan:

Phase 1 Product Development Spring and Summer 1987

Through the spring and summer of 1987, JPH will work with the Department of Economic Development and Tourism to develop a cold smoked, lox style char product. The hot smoked product will be refined for consistency in flavour and a package presentation developed. Records will be kept of each batch which is produced to compare and vary the process until a product is developed which satisfies both taste, texture and aesthetic appeal.

These products will be developed with aid of a competent smoker hired for the spring and summer to work with JPH, as well as occasional assistance of food consultant Harry Bairn of Edmonton, Alberta. The past experience of two former managers of the Issatik Food Plant will provide guidance in the operation of the smoker facility in the plant.

Phase 2 Test **Marketing Summer 1987**

With support from Economic Development and Tourism, JPH will test market smoked char products which result from the development stage in the Keewatin, Yellowknife and Winnipeg. With the development of consistent hot and cold smoked products, samples will be packaged in small cedar boxes for distribution to restaurants and specialty food stores during a marketing trip to Winnipeg. Buyer response will be evaluate and changes to the product made accordingly.

The marketing trip will be preceded by promotional material sent directly to the prospective buyers. Meetings will be pre-arranged,
and samples delivered in person to each potential' buyer. Reaction to the product will be solicited after delivery of the, samples.

The marketing campaign in Winnipeg will be preceded by trial marketing of the product in the Keewatin. Hotels and restaurants in the region will receive samples of the products and their reaction gauged. Based on the reaction of the local food service sector, changes to the product will be made prior to the campaign in Winnipeg.

A package will be developed for promotion of the products. This will include a colour brochure and list of products. Noon hour cooking shows in Winnipeg will be contacted for appearances, or product promotion.

Phase 3 Retail **Market Penetration e) all 1987 Winter 1987/1988**

Alternative 1 **Sale to Large Retail Chains**

A large retail chain store will be approached to retail

the product exclusively if a favorable contract can be arranged. Ideally, the contract would run from six months to a year during which the retailer would have exclusive rights to market the products. JPH would retain the right to sell directly to restaurants.

Alternative 2 Sale to the General Retail Food Market

If a favorable contract with a single distributor cannot be concluded, or proves unsatisfactory at the end of the contract period, the general market will be approached in Winnipeg for direct supply of smoked product out of Rankin Inlet. This alternative will be chosen over the first on the basis of offering price. Both strategies may be pursued where the Premium cold smoked product is marketed through an exclusive distributor, and the not-smoked char products will be marketed generally.

Phase 4 **Development of a Mail-Order Market Winter 1988**

A mail-order market for smoked char will be tested on a limited basis in Yellownife **during the winter of 1987/88. After a three month trial period, the program will be evaluated and** modifications **made for penetration into Winnipeg and Edmonton on a** limited **basis. The product will be promoted through** local magazines **directed specifically at** Winnipeg **and** Edmonton, **newspapers and periodicals. Food editors of local periodicals** will be contacted for promotion.

Phase 5 Product Promotion - Continued Program

Once the Winnipeg retail market and mail order markets (Winnipeg, Edmonton and Yellowknife) are established, a continued promotional program will be put in place to keep the products

moving. Customers will be regularly contacted and feedback solicited as to service and product quality.

Phase 6 New Markets - **Long Range Program**

As developing markets are established, JPH will expand **into new areas. Initially other large Canadian** "cities are **targeted, then the eastern seaboard of the United** States, and **ultimately the European market. These markets** will be developed over the next three to five years as cash flow improves with the reflection in debt and sales become steady in established markets.

Marketing Plan

Caribou

The marketing **plan for caribou will follow a** similiar scheme to that developed for smoked char products. Because of regulatory prohibitions, the program is limited to the Territories.

Phase 1 Product Development **Winter** 1986/87 Winter 1987

During the winter of 1986/87, JPH worked with food consultant Harry Baim to develop commercial retail cuts of caribou meat for sail: within the Territories. JPH workers received training in butcher techniques, and other products were investigated: jerky, smoked meat, and salami.

Work will continue in this period towards the development of processed products such as sausage and salami. Work will cease in the summer and fall of 1987 to allow for char production, then resume in the early winter of 1987/88.

Phase 2 Test Market in the Keewatin Winter 1986/87 Winter 1987

Products developed in 1986/87 were sold through the country food store in Rankin Inlet and to retail outlets and hotels in other Keewatin communities. Sales within Rankin Inlet were brisk, but more attention is required for the hotel and retail markets in other communities. These markets will pursued in the spring of 1987.

Phase 3 Market Penetration Keewatin Region - Winter 1987/1988

Alternative 1 Exclusive Rights

As with char, JPH will attempt to enter into a contract for exclusive supply to coops or Bay stores within the region. Separate contracts with private dealers in each community may be concluded if these dealers are established and provide favourable terms. Ideally, the contract will specify minimum amounts to be purchased per month.

Alternative 2 General Distribution

If a favorable contract for exclusive distribution cannot be made, JPH will market caribou products directly to all retailers within the region. The test market should indicate whether this alternative is viable, that is, if there is enough demand at the asking price.

Phase 4 Test Market: Yellowknife - Winter 1987/1988

Premium quality products will be test marketed to retail outlets, restaurants and hotels during this phase. The products

will be personally introduced following a mailed promotional campaign. Emphasis will be placed on processed products such as sausage and salami for the retail trade, and cuts of meat for the restaurant and hotel trade.

Phase 5 Market Penetration: Yellowknife - Winter/Spring 1988

Results of the test market will be evaluated and product presentation and pricing adjusted for penetration into the Yellowknife markets.

Phase 6 **Product Promotion - Continued** Program

Customers will be contacted on a regular basis for orders and feedback. We **assume that** buyers **of caribou products** will **also be purchasing char; the promotion program** will **therefore run in conjunction with the char promotion.**

Phase 7 New Markets

When the regulatory environment changes to allow export of commercial quota game meat, JPH will initiate a test market program in the south for high quality, high-prices caribou products. As our volume is low and production costs high relative to beef, JPH must concentrate on a very &-scale market if the south is opened for export.

Competition

Regional

Within **the region the** only other food processing plant **is the** fish **packing plant in** Chesterfield Inlet. 1986 was their first summer of operation; they exported 3184 kilograms of

frozen and 307 kilograms of fresh char to Winnipeg. This fish was purchased by the Rankin plant in previous years. However, new supplies of char have "compensated for the loss of the Chesterfield supply. Eskimo point fishermen shipped char to Rankin for the first time 1986; as well, Southampton Island will be producing fish for sale to the Rankin plant in 1987.

There is no other commercial smoker in the Keewatin. The Chesterfield plant deals only in fresh and frozen char and does not possess smoking equipment.

Caribou meat was previously purchased by the Repulse Bay coop from Repulse Bay hunters; however, lack of facilities and equipment forced the coop to market a poor product which moved very slowly. The coop acted only as' a supplier of carcasses; no retail cuts or processed items were produced.

Territorial Competition

Outside the region, Cambridge Bay and Igloolik export char **to** Freshwater Fish **Marketing Corporation.** Pangirtung may enter this market in the summer of 1987 Cambridge Bay is by far the largest exporter; in 1986 the plant exported 5542 kilograms of fresh and 36312 kilograms of frozen char to Winnipeg. Igloolik production is relatively insignificant.

Ulu Foods in Inuvik is the single competitor in the Territories for smoked char and retail cuts of caribou meat. However, they nave not entered the export trade for smoked char and have not yet expanded their operation to Yellowknife. Yellowknife is a relatively undeveloped market for these items and should absorb a sustained supply from both Inuvik and Rankin Inlet.

A char smoking operation may be starting up in Iqaluit, but the anticipated size of the operation is small. Their southern market would be Montreal and Ottawa, geographically separate from our planned southern market.

Southern Competition

Only the Northwest Territories and Labrador can supply arctic char. In the south, char inevitably winds up competing against West coast salmon; however, in Canada char is recognized as a product similiar to but distinct from salmon. Certainly, smoked char production in the south is very low and the product is very difficult to find. If we market smoked char as distinct from smoked salmon, we should be able to avoid direct competition. However, comparison will inevitably be drawn, therefore the marketing strategy will have to emphasize the unique qualities of our products.

D) . COMMERCIAL VIABILITY

Multi-year pro forma cash flows for a five year period are attached in this section. The first year represents cash flow by month, the second year by quarter, and annually for the last three years. Balance sheets and profit and loss statements are provided for the first two years. Assumptions and details supporting costs are discussed for each series of projections monthly, quarterly and annually.

Also attached are financial statements for the 1986 operating season of the Issatik Food Plant when it ran as a GNWT enterprise. A break-even analysis accompanies these statements; the analysis point out measures to reduce the costs and thereby reduce the amount of char volume required for a profitable business.

Year One - Monthly Projections

projections in **year one of** operations, 1987-1988, **are** based on actual production figures observed in the summer of 1986 for tile Issatik Food Plant, and for the operation of Kal's Country Foods, the retail outlet of the JPH country food operation.

Char production was estimated as 55,000 pounds annually; this estimate is based on a break-even analysis compiled for the government plant operation in the summer of 1986. The break even analysis (see attachments) indicates that this minimum production was required for the plant to cover its oPeratin9 costs; recommendations for these reductions are indicated in the break-even analysis. Briefly stated, these recommendations were to reduce the variable freight and labour costs and the

anagement salaries to yield a margin between the unit sales price and unit cost which would allow profit at a reasonable level of production.

Given the actual variable costs of production observed in 1986 as $3.23/lb, a margin difference of $.78 between cost and sales price would require production of 55,000 pounds to break-even if fixed costs were not reduced. Note that we did not consider increasing the sales price; rather we maintained a sales price based on a weighted average of observed returns for gross sales of different char products produced by the government plant.

In the financial analysis of first year operation, we assumed this minimum poundage could be obtained. The product proportion was based on 15,650 smoked, 5,000 pounds of whole frozen, 4250 pounds of filleted char, and 8500 pounds of fresh whole. We arrived at these figures on the basis of losses from the whole dressed state to final product for smoked and filleted char. A loss factor of forty per cent was applied to smoked char, thirty five per cent for filleted char, and five per cent for whole fresh. We also assumed winter production of three thousand pounds of char which would be smoked.

Cost of sales for char in the first year were determined on the basis of observed purchase price of $1.39 plus the regional freight rate of $.30. The freight rate was calculated as a point between the minimum freight rate as determined by commercial rates for inter-regional back-haul weighted for production between communities (see the break-even analysis, section a), and the

maximum taken as the observed weighted average rate for fish shipped to Rankin from other communities in summer 1986.

Fish exported to Winnipeg have an extra charge of $.36/lb which assumes in fifty percent susidy issued by the GNWT will be in place. This freight rate is applicable only to shipments to Freshwater Fish Marketing Corporation, which does not pick up freight charges. In the first year, JPH shipments begin in November, past the season for shipment to FFMC. Therefore, this freight rate is to Winnipeg is not applicable.

Values for caribou were determined by assuming an average purchase price of Q&35 per pound with carcasses weighing on average one hundred pounds. A wastage factor of twenty percent (20 lbs) was applied; the remaining eighty pounds were divided among the different product items in the following proportion: 6715 lbs steak, 7055 lbs roast, 2635 lbs ribs, 1435 lbs jerky, and 1575 lbs smoked.

Freight values for caribou transported from the communities with commercial quotas were determined on the basis of Keewatin Air rates given to JPH in" the winter of 1986/87. An average freight rate of $.28/lb **was** derived from the weighted average value of varying rates and potential reduction from each community (Baker Lake, Chesterfield Inlet, and Repulse Bay).

Overhead expenses were determined on the basis of actual plant operations in 1986. we assume the new plant operation will nave the same power requirements as the old; heating costs for tile new plant are estimated at two-thirds the actual costs, given the new building will be one third the size of the old

plant and will be far more heat efficient.

JPH operations will commence in October 1987 of the first year (when the new plant is ready for operation); previous to October, the operation will still be a government enterprise therefore no sales receipts or disbursements are calculated until that month. However, source funding is written into the cash flow before October because that is when the bulk of funding is required.

Second Year of Operation: Quarterly Cash Flow 1988-89

In **the second year of operation we assume product development will** be **complete and market penetration will have been achieved.**

We assume the bulk of fish purchase will come **in the second** quarter, July, August and September which is the summer fishing season. In that period, 55,000 pounds of fish will be purchased at 1.39 lb. with the same freight breakdown as in the first year. In the first quarter, 2000 pounds will be purchased, in the third quarter 6000 pounds, and in the fourth quarter 5000 pounds. Fish in the first, third and fourth quarters will **be** purchased for one dollar a pound (winter fish come in round, not dressed in the winter). The char sales in second quarter reflect the increase in smoked char production over the first year. In the first quarter, 340 pounds at $10/lb; second quarter, 10,000 pounds at $12.00/lb; in the third quarters 12,500 pounds at $14/lb; and the fourth quarter 8,000 pounds at $10/lb. Annual production of smoked char is therefore thirty thousand pounds. The wastage factor is calculated as **a** forty percent loss from the original poundage of whole gutted fish entering the plant.

The frozen char production sales volume is calculated at 5,000 pounds in the second quarter and 1000 pounds in the third at $3/lb and $2.50/lb respectively. Fresh char production will occur only in the seond quarter during August, with a sales volume of 10,000 pounds **at** $4.50/lb. **Fillets** have been dropped from production as it is not a profitable product.

Caribou production is assumed to be 300 out of a possible 350 head per year. We assume 75 animals will be purchased each quarter with an average of eighty pounds usable meat. We also assume that from this eighty pounds, 12lbs will be produced for each of five products: steaks, roasts, ribs, jerky, and smoked. The remaining twenty lbs/carcass will be made into hamburger. We assume the same values for sales prices, purchase and freight are applicable, with a five percent increase each year.

The only non-sales receipts in the second year are CEIC contributions. These will remain until the end of the second quarter.

Cost of sales will remain at the same per unit cost as the first year, pro rated at 5 percent. Plant wages and benefits assume two processors in the plant for the first quarter, four in the second quarter, two in the third and three workers in the fourth quarter. Other staff will be employed in the transportation operations and these wages are reflected in vehicle expense. We assume an **average salary** of $1500/month for each worker.

Management salaries are provided for two assistant managers

at $250 O/month each training under a manager earning $3000/month. The manage rs salary and the salary of one assistant manager as provided by the CEIC contribution.

Advertising is pro-rated to total annual sales receipts at eight percent. This is divided equally among the four quarters. Vehicle expenses on the second quarter include operation of the long-liner vessel, and in the third and fourth quarters includes bombardier operations

Third, Fourth, Fifth Year of Operation: Annual Cash Flow.

All **production figures, disbursements and receipts are assumed to** remain **the same throughout this period, with a 5 percent pro-rated increase in cost and sales price each year.**

The only exception are plant maintenance costs, which we assume will increase at 8 percent pro-rated, rather than 5 per cent.

Long **Term Viability.**

Tile financial information provided clearly demonstrates the long-term viability of the business. The cumulative cash flow at the end of the fifth year is over **$400,000.** This very healthy cash flow reflects the profitability of the business and the abililty of the company to replace major capitall expenses over tile long run.

Major Assumptions

The **major assumptions used in the analysis are summarized: .**

1) costs increasing at five percent per year
2) successful penetration of the smoked fish market by the end of the second year.

3) funding support from Canada Employment and Immigration Commission will be provided.

4) cost reductions as outlined in the break-even analysis for the Issatik Food Plant can be achieved.

ISSATIK FOOD PLANT

GOVERNMENT OPERATION:

Financial Statements for year ending March 31,1987

Break-even **analysis of summer operation, 1986**

ISSATIK FOOD PLANT
STATEMENT OF OPERATIONS
FOR THE YEAR ENDED 31 MARCH 1987

SALES (Schedule 1)	$ 96,204
COST OF SALES (Schedule 2)	94,991
GROSS PROFIT	1.213
GENERAL AND ADMINISTRATIVE EXPENSES	
Bank charges	55
Communications	955
Equipment repair and maintenance	20,827
Management salaries	20,603
Miscellaneous	540
Office supplies	482
Travel	322
	43,784
NET LOSS FOR THE YEAR	$ 42,571

SCHEDULE 1

''.ISSATIK FOOD PLANT
SCHEDULE OF SALES
31 MARCH 1987

FISH- Fresh	$ 43,976
- Frozen	40,516
- Smoked	10,823
MI SC EL LLANEOUS	889
	$ 96,204

SCHEDULE 2

ISSATIK FOOD PLANT
SCHEDULE OF COST OF SALES'
31 MARCH 1987

INVENTORY, OPENING	$ -
Freight"	23,290
Purchases-fish;	50,895
Salaries and benefits	15,967
Workers compensation	773
Shop supplies	8,840
	99,765
INVENTORY, CLOSING	4,774
	$ 94,991

ISSATIK FOOD PLANT

Breakeven Analysis

Summer season 1986

Unit sales price = average for four products:
Frozen char
Fresh char
Smoked
Fillets

= weighted total average
= $3. 34/lb

Unit cost (variable)) = Freight $. 96/lb
Labour $. 67/lb
Fish purchase $1. 39/lb
Supplies $. 21/lb

= $3. 23/lb

Unit contribution margin = unit sales price - unit variable cost
= $ .11/lb

Break even point

$43,628 & 0 / $ .11/lb = 396,618 lbs

Potential breakeven point and net profit

1) object: reduce variable costs to yield a margin of $.78/lb

Freight Cost Breakdown - 1986

to Rankin - Whale Cove $ .36/lb
to Rankin - Eskimo Point .42/lb
Rankin 0
weighted average = $. .25/lb
cartage-to NWT Air = $. 05/lb
Rankin-Wpg $ .36/lb
. 96/lb

Potential Breakdown

$ .25/lb
05/lb
$: 36/lb
. 66/lb

a)
Remedy - Reduce Freight costs
Implementation - NWT Air rates are relatively inflexible ($.36/lb) as are M & T cartage rates ($.05/lb). The most feasable option is to reduce freight costs to Rankin. Since the freight costs vary among communities, a greater portion of fish from places with cheaper rates will reduce the overall freight rate. For instance, at present freight rates, if Rankin had taken all of the Corbett Inlet quota, which it did not this summer, the overall intersettlement freight-to-Rankin rate would have been. $.34/lb.

Freight rates from Whale Cove and Eskimo Point were well above those predicted by the consultants hired to organize the fishery this past summer. Eskimo Point especially varied considerably from the estimate. These increases occured because of underutilization of the charter plane and excessive ice packed with the fish.

If these problems were corrected and Whale Cove shipped fish at the predicted $.25/lb, and Eskimo Point at $.56/lb, the following average inter-community freight rate would apply (given the Corbett Inlet quota is fully taken, and the quotas in Whale Cove and Eskimo Point are harvested at present levels): $.22/lb, below the recommended average inter-community freight rate.

Recommendations
1) Ecnourage production from Rankin Inlet fishermen to offset freight costs from other communities.
2) Discourage excessive use of ice during air transport of fish, possibly through a system of charge back penalties to the shipper. ,This is especially important where the flight is a charter.
3) Review the use of charter flights to haul fish, such transport is more costly than scheduled, flights (but may be more reliable).

b) Remedy - Reduce Labour Costs
Implementation - Labour costs at the plant exceeded predicted levels. While actual labour costs related to fish handling remained 10W, around $.366/lb, additional O & M costs were excessive. Given a three month fishing period with a minimum of 30,000 lbs of char flow through, a total labour cost of $.30/lb would allow $1,000/month for three workers each. Management costs are extra and are considered under fixed costs.

Recommendations

Labour costs should be reduced to $. 30/lb,. This can be achieved by providing three workers with a monthly salary of $1,000.00 for each of three months. This calculation is based on a flow-through of 30,000 lbs of char.

c) Remedy - Reduction in Fish Purchase Price
Implementation - This purchase price should remain at $1.39/lb as a variable cost averaged among comuunitles. This price provides an allowance for dealers in other communities from whom the Rankin plant will buy produce.

Recommendation - no decrease in the fish purchase price (average rate) is recommended.

d) Remedy - Reduction in Supply Cost (variable).
Implementation - Annual supplies as a variable cost may be reduced as many of the supplies purchased in the past summer were items of a fixed capital nature: dressing knives, Stoves, steels, and maintenance equipment. However, supplies for smoking may increase and offset any reduction in other supply areas.

Recommendation - The variable supply cost should only be reduced as a last resort if cuts in other areas cannot occur to reduce total variable costs to manageable (ie. healthy profit) levels. Any cuts which can made in supplies will then serve to futher increase the net profit margin.

e) Conclusions - Variable Cost Reduction
Cuts in freight and labour should be made to reduce the unit variable cost by $. 67/lb. The following breakeven point would then apply:

Break even analysis - reduction in variable costs
Unit sales price = $3.34/lb

Unit variable cost = Freight $ .66/lb
Labour 30/lb
fish purchase 1:39/lb
supplies .21/lb

= $2.56/lb

Unit contribution margin = $3.34/lb - $2.56/lb
= .78/lb

Break even point

$$\frac{\$43,628 + 0}{.78} = 55,933 \text{ lbs}$$

2) Object - Reduce or change fixed costs to yield a net profit.

a) Remedy - reduce equipment repairs and maintenance costs.
Implementation - Fixed costs for the summer operation are valued at $43,628. Of this amount, $20,827 is attributable to equipment repairs and maintenance. Two-thirds of the cost of repairs occrued through repair of refrigeration and ice-making equipment. These costs can be reduced by $10,000 for next year's operation. Further, the Rankin plant bore the cost of repairs for the Chesterfield Inlet Fish plant refrigeratiohn equipment. The Chesterfield plant shoul I bear the cost of their repairs through their own operation next season.

Recommendations . The ice machine in the Rankin plant should not be replaced; rather, an ice harvest should be conducted to fill the freezer and additional ice frozen in the blast freezer as needed throughout the operating season. This will reduce the need for a new ice machine and eliminate the need for a refrigeration mechanic to service the ice machine.
"Chesterfield Inlet Fishermen's Association must bear the cost of refrigeration repairs without reliance on the Rankin plant.

b) Remedy - Reduce Management Salary
Implementation - As a fixed cost for the operating season, management costs ran to $20,839. This salary should be reduced to $12,000 for a four month period. The remaining funds can be allocated to profit, or to labour costs, increasing the salaries of employees for a three month period.
Recommendations - If the plant is operated as a private concern next season, the extra $8,839 remaining after management salary reduction should enter as net profit. If the government operate the plant, the funds should be allocated to labour salary. split
c) Conclusions - Fixed Costs Reduction
In the next operating season, the plant must reduce its fixed costs by $18,839 through a reduction in equiPment repairs and maintenance, and reallocation of funds from management to labour (public operation) or net profit (Private operation).

Break even Analysis: "Reduction in fixed costs with a net profit greater then, zero ...

Unit sales price = $3.34/lb

Unit variable cost = $2.56/lb

'Unit contribution margin = .78/lb

	Cost	'. Profit
Fixed costs =		
Bank charges	$ 55	
Communications	$ 788	
Equipment repairs and Salaries	$10,827	
Management Salaries"	$12,000	
Misc.	$ 530	
Office supplies	$ 277	
Travel	$ 322	
=	$24,,7,89	$18,839

Break even point with net,"' profit ,

$$\frac{24,789 + 18,839}{.78} = 55,933 \text{ lbs}$$

Production

In the preceding analysis, production of 55,933 lbs of char is required given the necessary cost reductions to realize a net profit. Without reduction in fixed costs, this level of production is still required to break even, if the variable cost reductions are achieved.

In the past season, 30,000 pounds of char went through the Rankin plant. This is a drop of 20,000 pounds from the previous year. Three major 'causes-as responsible for this decline 1) Tony Eecherk failed to take the Ferguson River quota in 1986
2) the Chesterfield InletFish Plant absorbed char which in the previous year came to the Rankin plant
3) the Corbett Inlet quota was not taken this summer.

The following conditions enable a confident prediction that the Rankin plant will see in excess of 55,000 Pounds next summer.

1) Tony Eecherk will fish the Ferguson River next summer, harvesting at a minimum '10,000 lbs.
2) The Netsers of Southampton Island will fish the Thomsen and Cleveland Rivers with a weir and their new freezer-packer vessel. Potential catch is' 25,000 lbs.
3) The quota in Corbett Inlet will be taken, providing an yield 'increase of 7,000 pounds over last summer'.

Both the Ferguson and the Corbett Inlet quotas have been harvested regularly in the past. These quotas alone will push production up to 47,000 pounds" An additional 9,000 pounds is required to reach the target quotas. Input from Southampton Island will meet and surpass this requirement. Additional production may come from Repulse Bay, where a summer test fishery is projected for 1987. No test quotas have been arrived upon, so such quotas cannot be included in this analysis.

ISSATIK FOOD PLANT

JPH OPERATION

PRO FORMA CASH FLOWS:

Monthly for 1987-88

Quarterly for 1988-89

Annual for 1989-90, 1990-91, 1991-92

ISSATIK FOOD [illegible] (JPH OPER [illegible])

BUDGETED CASH [illegible] SUMMARY
QUARTERLY -19[illegible]

	JUNE	SEPT.	DECEM	MARCH	TOTAL
RECEIPTS:					
FISH SALES-Ch[illegible]					
Whole frozen	0.00	$15,000.00	0.00	2500.00	17500.00
Char Fillets	0.00	0.00	0.00	0.00	0.00
Whole Fresh	0.00	45000.00	0.00	0.00	45000.00
Smoked fillet	3400.00	120000.00	175000.00	80000.00	378400.00
TOTAL F 15 H-Chu	3400.00	180000.00	175000.00	82500.00	440900.00
CARIBOU SALES					
-Steaks	5433.75	5433.75	5433.75	5433.75	21735.00
-Roasts	4252.50	4252.50	4252.50	4252.50	17010.00
-Ribs	3402.00	3402.00	3402.00	3402.00	13608.00
-Jerky	9072.00	9072.00	9072.00	9072.00	36288.00
-Smoked	5433.75	5433.75	5433.75	5433.75	21735.00
-Hamburger	5906.25	5906.25	5906.25	5906.25	23625.00
TOTAL CARIBOU	33500.25	33500.25	33500.25	33500.25	134001.00
HUNTING SALES	0.00	15750.00	0.00	0.00	22750.00
SEAL SALES	900.00	900.00	900.00	900.00	3600.00
NETS & FISH SALES	0.00	2500.00	0.00	0.00	2500.00
TOTAL SALES:	37800.25	232650.25	218400.25	116900.25	603751.00
C.E.I.C. Assist	25500.00	25500.00	0.00	0.00	51000.00
TOTAL RECEIPTS.	63300.25	258150.25	218400.25	116900.25	654751.00
DISBURSEMENTS:					
OPERATIONS:					
Cost of Sales-					
-Freight	3420.00	22530.00	3330.00	3675.00	33615.00
Purch.-Fish	3200.00	80272.50	6300.00	5250.00	95022.50
-Caribou	10631.25	10631.25	10631.25	10631.25	42525.00
-Hunting		4500.00	2000.00		6500.00
-Seal	300.00	300.00	300.00	300.00	1200.00
Nets & Fish Supplies		1750.00			1750.00
Plant wages and benefits	8750.00	19100.00	8750.00	14350.00	52950.00
Shop supplies	1575.00	1575.00	1575.00	1575.00	6300.00
W.C.B.				1800.00	1800.00
OVERHEAD:					
Travel	3600.00	3600.00	3600.00	3600.00	14400.00
Management training	9000.00	9000.00			18000.00
Power	3509.10	11340.00	3509.10	3509.10	21867.30
Heat	2653.00	1689.60	3769.92	6338.00	14455.52
Insurance	3500.00				3500.00
Plant maintenance	1296.00	1296.00	1296.00	1296.00	5184.00
Office supplies	630.00	630.00	630.00	630.00	2520.00
Mgmt salaries	15000.00	15000.00	15000.00	15000.00	60000.00
Acctg & Legal	2945.00	945.00	945.00	945.00	5780.00
Telephone	393.75	393.75	393.75	393.75	1575.00
E.L.F. Payments	4767.00	4767.00	4767.00	4767.00	19068.00
Misc. expense and [illegible]	157.50	2257.50	157.50	157.50	2730.00
Advertising	12075.02	12075.02	12075.02	12075.02	48300.08
Vehicle expense	236.25	8236.25	4336.25	4336.25	17145.00
TOTALOPERATIONS:	88645.87	211888.87	85025.79	94026.87	476187.20
NET CASHFLOW	-25345.42	46261.38	-131374.46	22873.38	176563.80
OPENING CASH FLOW	6003.00	-19342.42	26918.96	158293.42	-4800.00
END.CASH FLOW	-19342.42	26918.96	158293.42	181166.80	171763.80

ISSATIK FOOD PLANT

BUDGETED CASH FLOW SUMMARY
ANNUAL-1989 to 1991-1992

	1989-90	1990-91	1991-92
RECEIPTS:			
FISH SALES:			
Whole frozen	18375.00	19293.75	20256.44
Char Fillets	0.00	0.00	0.00
Whole Fresh	47250.00	49612.50	52093.13
Smoked fillets	397320.00	417186.00	438045.30
TOTAL FISH	462945.00	486092.25	510396.86
CARIBOU SALES			
-Steaks	22821.75	23962.84	25160.98
-Roasts	17860.50	18753.53	19691.20
-Ribs	14286.40	15002.82	15752.96
-Jerky	38102.40	40007.52	42007.90
-Smoked	22821.75	23962.84	25160.98
-Hamburger	24808.25	26046.66	27348.89
TOTAL CARIBOU	140701.05	147736.10	155122.31
MUKTUQ SALES	23807.50	25081.88	26335.97
SEAL SALES	3780.00	3969.00	4167.45
NETS & FISH FLIES	2625.00	2756.25	2894.06
MISC. SALES	633938.55	665635.48	698917.25
G.S.T. REC'D	0.00	0.00	0.00
TOTAL RECEIPTS	633938.55	665635.48	698917.25
DISBURSEMENTS			
OPERATIONS:			
Cost of Sales			
-Freight	35295.75	37060.54	38913.56
Purch.-Fish	99773.63	104762.31	110000.42
-Caribou	44651.25	46883.81	49228.00
-Muktuq	6825.00	7166.25	7524.56
-Seal	1260.00	1323.00	1389.15
Nets & Fish supplies	1837.50	1929.38	2025.84
Plant wages + benefits	55537.50	58377.38	61296.24
Shop supplies	6615.00	6945.75	7293.04
W.C.B.	1890.00	1984.50	2083.73
OVERHEAD:			
Travel	15120.00	15876.00	16669.80
Management fees + bring	0.00	0.00	0.00
Power	22960.87	24106.70	25314.13
Heat	15178.69	15936.38	16733.84
Insurance	7875.00	8268.75	8682.19
Plant maintenance	5598.72	6046.62	6530.35
Office supplies	2646.00	2778.30	2917.22
Mgmt salaries	112000.00	117600.00	123480.00
Acctg & Legal	6069.00	6372.45	6691.07
Telephone	1653.75	1736.44	1823.26
E.L.F. Payments	19068.00	19068.00	19068.00
Misc. expenses and taxes	2866.50	3009.83	3160.32
Advertising	50715.68	53250.64	55913.36
Vehicle expense	18002.25	18902.36	19847.46
TOTAL OPERATIONS	533438.68	559366.18	586565.56
NET CASH FLOW	100499.87	105461.88	110734.66
OPENING CASH FLOW	173763.80	274203.67	379665.53

ISSATIK FOOD PLANT

JPH OPERATION

WORK SHEETS FOR PRO FORMA BALANCE SHEETS

Plant equipment	
Smoking equipment	$55,000
Processing equipment	23,475
Ice harvest equipment	19,909
	98,384
Less: Applicable portion of government assistance	68,909
	29,475
Depreciation 29,475 X 20% X 6/12 =	2,948
Balance, 31 March 1988	26,527
Other equipment	
Tools	5,000
Cash register	800
2 sleds	1,600
Office furniture	1,500
	8,900
Depreciation 8,900 X 20% X 6/12 =	890
	8,010

Boat & Motors	
48' Longliner 6 cyl. inline cummings 14;	50,000
24' Canoe	2,500
20' Canoe	1,500
55 HP Evinrude outboard motor 1984	2,000
25 HP Merc outboard motor 1983	1,000
Boat refrigeration and motor	40,000
	97,000
Less: Government assistance	40,000
	57,000
Depreciation 57,000 X 15% X 6/12 =	4,275
	52,725
Vehicles	
Dodge Van 1984	12,000
Ford Stadium Wagon 1979	3,000
Bombadier 1971	15,000
Bombadier 1964	7,000
Dodge Pickup 1979	3,000
Ford Pickup 1978	3,000
GM Suburban 1975	2,000
225 Yamaha Trike 1986	2,500
	47,500
Depreciation 47,500 X 30% X 6/12 =	7,125
	40,375

E. L.F. Financing

116, 6 7

10 yea I-s

10 3/4

Monthl payments $1,589

Balanc, 31 March 1988	113,233
Ba la nc, 31 March 1989	106,552
Balanc, 31 March 1990	99,124
Ba lanc, 31 March 1991	90,858
Ba lance, 31 March 1992	81,652

Organization Costs

Incorporation fees		1,200
Amortization		
31 March 1988	1200 X .5 X 6/12 =	300
31 March 1989	1200 X .5	600
31 March 1990	1200 x .5 X 6/12 =	300

Fixed Assets

Building - Plant	
Building structure	510,000
Sewage hook-up	30,000
Design foundation	16,000
	556,000
Portion of Government Assistance applicable to plant	460,000
Net depreciable value	96,000
Depreciation 96,000 X 5% X 6/12	2,400
Net book value 31, March 1988	93,600
Building - Other	
Building 30'X40'	11,000
Store – Kals Country Food 30'X20'	10,000
	22,000
Depreciation 22,000 X 5% X 6/12	550
	21,450

Due to Shareholders

Boats & Motors

48' Longliner 6 cyl inline Cummings 14	50,000
24' Canoe 1985	2,500
20' Canoe 1983	1,500
55 HP Evenrude outboard 1984	2,000
25 HP Mere outboard 1983	1,000
	57,000

Vehicles

Dodge Van 1984	12,000
Ford Station Wagon 1979	3,000
Bombadier 1971	15,000
Bombadier 1964	7,000
Dodge Pickup 1979	3,000
Ford Pickup 1978	3,000
GM Suburban 1975	2,000
225 Yamaha trike 1986	2,500
	47,500

Building

30'X40' building	11,000
30'X20' building (store)	10,000
2 sheds	1,000
	22,000

Equipments

Tools	5,000
Cash register	800
2 sheds	1,600
Office furniture	1,500
TOTAL	135,400

ISSATIK FOOD PLANT

JPH OPERATION

Pro forma balance sheet and income statement as at 31 March 1988

Pro forma balance sheet and income statement as at March 31 1989

IS SATIK FOOD PLANT

BUDGETED INCOME STATEMENT

31 MARCH 1988

Sales	77,352
COSt of Sales	29,900
Gross Profit	47,452
GENERAL AND ADMINISTRATIVE EXPENSES	
Power	5,570
Heat	9,755
Insurance	3,500
Plant Maintenance	2,000
Travel	1,000
Office Supplies	250
MGMT Salaries	0
Acctg and Legal	1,500
Telephone	625
Interest on Long Term Debt	6,092
Miscellaneous	1,090
Advertising	6,250
Vehicle Expense	375
Depreciation and Amortization	18,488
	56,485
NET LOSS FOR THE PERIOD	(9,043)

ISSATI K FOOD PLANT

BUDGETED BALANCE SHEET

AS AT 3 L MARCH 1988

ASSETS	
CURRENT	6, 003
FIXED	242,687
OTHER - organization costs	900
TOTAL /\ SSETS	249,590'
LIABILITIES	
Current portion of long term debt	6,681
LONG TERM DEBT, Eskimo Loan Fund	106,552
Due to Shareholders	145,387
SHAREHOLDERS EQUITY	
Share capital	3
Retained earnings (deficit)	(9,043)
Net equity	(9,040)
	249,590

ISSATIK FOOD PLANT

SCHEDULE OF SALES - 1988

FISH - Whole frozen	2,000
- Smoked	41,650
TOTAL FISH	43,850
CARIBOU	
Steaks	13,682
Roasts	10,708
Ribs	4,590
Jerky	2,229
Smoked	2,493
TOTAL CARIBOU	33,702
TOTAL SALES	77,352

ISSAl' I K FOOD PLANT

SCHEDULE OF COST OF SALES

Freigh t	3,900
Fish	1, 600
Caribou	13,500
Plant wages	6, 600
Shop supplies	2, 500
W.C. B .	1,800
TOTAL COST OF SALES	29,900

ISSATIK FOOD PLANT

NOTES '1'0 FINANCIAL STATEMENTS

31 MARCH 1988

1. GOVERNMENT ASSISTANCE

Government assistance has been recorded in the accounts as a net against the capital expenditure or operational cost in which it was received for.

2. FIXED ASSETS

	cost	Accumulated Depreciation	
Building-Plant	96,000	2,400	
Building-Other	22,000	550	
Plant equipment	29,475	2,948	
Other equipment	8,900	890	
Boats and motors	57,000	4,275	
Vehicles	47,500	7,125	
TOTAL	260,875	18,188	
NET FIXED ASSETS			242,687

3. OTHER ASSETS-Organization costs

	cost	Accumulated Amortization	
Incorporation costs	1,200	300	
NET			900

IS SATIK FOCD PLANT

BUDGET ED INCOME STATEMENT

31 MAR 'II 1989

SALES	603,751.00
COST OF SALES	238,663.00
GROSS PROFIT	365,088.00
GENERA I AND ADMINISTRATIVE EXPENSES	
POWER	21,867.30
HEAT	14, 455.32
INS URANCE	3,500.00
PLANT MAINTENANCE	5,18$.00
TRAVEL	14,400.00
OFFICE SUPPLIES	2,520.00
MGMT SAL ARIES	30,000.00
ACCTG A ND LEGAL	5,780.00
TELEPHO NE	1,575.00
INTEREST ON LONG TERM DEBT	12,387.00
MISCELLANEOUS	2,730.00
ADVERT I SING	48,300.08
VEHICLE EXPENSE	17,145.00
DEPRECIATION AND AMORTIZATION	33,280.00
TOTAL	213,123.70
NET INCOME FOR THE PERIOD	151,864.30

ISSATIK FOOD PLANT

BUDGETED BALANCE SHEET

AS AT 31 MARCH 1989

ASSETS	
CURRENT	
Cash	184,566.80
FIXED	210,006.00
OTHER-organization costs	300.00
TOTAL ASSETS	394,872.80
LIABILITIES	
Current portion of long term debt	7,427.50
LONG TERM DEBT, Eskimo Loan Fund	99,124.00
Due to Shareholders	145,397.00
SHAREHOLDERS EQUITY	
Share capital	3.00
Retained earnings (deficit), Begining of year	-9,043.00
Net income for the year	151,964.30
NET EQUITY	142,924.30
TOTAL	394,872.80

IS SAT[illegible]K FOOD PLANT

SCHED[illegible]LE OF SALES

FISH – Whole Frozen	17, 500.00
Whole Eresh	45, 000.00
Smoked ?	378,400.00
TOTAL FISH	440,900.00
CARIBOU	
Steaks	21,735.00
Roasts	17, 010.00
Ribs	13, 608 .00
Jerky	36,288.00
Smoked	21,735.00
Hamburger	23,625.00
TOTAL CARIBOU	134,001.00
MUKTUQ SALES	22,750.00
SEAL SALES	3,600.00
NET AND FISH SUPPLIES	2,500.00
TOTAL SALES	603,751.00

ISSATIK FOOD PLANT

SCHEDULE OF COST OF SALES

Freight	33,615.00
Fish	95,022.50
Caribou	42,525.00
Muktuq	6,500.00
Seal	1,200.00
Net & Fish Supplies	1,750.00
Plant wages and benefits "	49,950.00
Shop supplies	6,300.50
W.C.B.	1,800.00
TOTAL COST OF SALES	238,663.00

E. FINANCING

Financing from NEDP is required because of the large capital expenditure necessary for this project. The capital costs of new purchases are $695,584. The funding requirements exceed the limits for other programs presently available.

OTHER FUNDING SOURCES

Six sources of funding were considered for this project; the Economic Development Agreement (EDA), the Sepcial Agricultural Rural Development Agreement (S/ARDA), equity financing, the Business Loan Fund (BLF), the Eskimo Loan Fund (ELF), and the Native Economic Development Program.

The past EDA agreement has lapsed and the new agreement will not be in place until the fall, far too late for the requirements of the project. In effect, the EDA no longer exists. The criteria for Special ARDA specify a maximum contribution of $250,000 after which the request must proceed to the federal Treasury Board. The time frame for this process is much too long to allow the' project to be completed in the time required.

The present business has a low cash flow, with a high ratio of fixed assets to current assets. The Territorial Department of Economic Development and Tourism has agreed to provide JPH with $100,000 in equity capital towards the project. JPH will contribute $10,000 towards the capital purchases in addition to their considerable fixed assets, valued at $100,000. However, their fixed asset contribution does not contribute towards the actural new infrastructure capital requirements of the project. Equity financing cannot meet the entire project funding requirements.

Long - term debt will be assumed to meet a portion of the funding needs. JPH will apply to the Eskimo Loan Fund for a loan amortized over a ten-year period at 10 3/4%. The ELF has been chosen over the BLF because of its more favorable interest charges. The loan principal will amount to $116,675. JPH is not willing to assume more risk at this point.

The Native Economic Development Fund is being approached to provide the balance of funding required, 448,000.

BREAKDOWN OF FUNDING SOURCES AND APPLICATIONS

Economic Development and Tourism Equity Contrib.	$100,000	Sewage Hook-up	30,000
		Legal Fees	1,200
ED&T Resource Dev. Contrib.	19,909	Smoking Equip	55.,000
Eskimo Loan Fund	116,675	Processing Equip	23,475 ?
Cash Equity	10,000	Foundation design	16,000
NEDP	448,000	Bldg.	51,000
		Boat Refrig.	40,000
		Ice Harvest Equip	19,909
TOTAL	695,584		695,584

12. RISKS

The major risks associated with the project lie in production and marketing. The plant is dependent on supply from fishermen and hunters for fish and caribou; in marketing? there is a risk that the market cannot be penetrated, especially for smoked char.

Production Risks

The Rankin Inlet fish plant produced approximately thirty thousand pounds of char in the summer 1986 in whole, filleted and smoked form. This volume is down from the previous summer of 1985. This decline can be attributed to the failure of fishermen to take the Ferguson River and Corbett Inlet quotas, and competition from the Chesterfield Inlet fish plant.

The risks associated with char supply are reduced by shipment of fish from different suppliers: Eskimo Point, Whale Cove, and Rankin Inlet fishermen. In the summer of 1987, Netser and Sons from Coral Harbour will sell char to the plant harvested from the Thomsen and Cleveland Rivers. They should harvest twenty thousand pounds of frozen char. Char production from the Ferguson quota should kick in again as Tony Eecherk of Eskimo Point plans to harvest all or part of this quota with his freezer/packer vessel. Tony has harvested 10,000 pounds regularly from the Ferguson quota for an additional 10,000 pounds.

In addition to a broad base of suppliers, the new plant will provide a market for the winter char fishery. However, as the volume potential of this fishery is unknown, only very low amounts have been estimated for winter supply.

Accordingly, we have estimated a dressed catch weight of 55,000 pounds landed in Rankin Inlet during the summer season and an additional 13,000 pounds landed during the months of

Marketing Risks

The viability of the project depends on successful penetration 01 the smoked fish market. The first year pro forma financial statements and cash flow assume production of product volumes in proportion to those produced in the operating season of the government plant in 1986. The ensueing years assume a switch almost entirely to smoked char production with 30,800 pounds produced per years, 10,000 pounds of fresh fish exported south in the summer and production of 6,000 pounds of frozen fish.

With relatively small volume of smoked fish, we should command demand high enough to meet our projected prices of $12 and $14 dollars in the second and ensueing years (pro-rated to increase at 5 per cent). The different product lines allow us to adjust **our production to suit demand.**

Risk associated with product development will be minimized by the training program and product development schedule involving support of a qualified manager and fish smoker. Price projections predict prices at the 1986 level ($7/lb) for' smoked fish for first year, thus allowing at least an eight to ten months lead time for development of products which can command the higher price levels predicted for the third, fourth and fifth years.

H) PROJECT WORK **PLAN**

The work plan is structured according to infrastructure, marketing and product development along a three year time line. The market plan has already been discussed-in detail in the section on marketing. .

Infrastructure

Processing Plant

Design Phase

A structural foundation on piles has been selected as the most appropriate form for the plant. Construction will require pre-design soil testing to produce an appropriate design. Thurber Consultants will coordinate the testing and design a foundation for $16,200 (see quote in appendix). Testing and design are scheduled for May 1987 depending on confirmation of funding.

Working drawings have been solicited from the general contractor, Argyle Steel, Ltd. for cost estimates. The design work for the final drawings will be completed after the soil testing and foundation design have been completed. Estimated completion date of final drawings is May 30; however, sufficient work will have been completed before this date to allow the company to begin pre-fabrication of the building. Cost of the federal Department of Fisheries and Oceans and Agriculture Canada for approval.

Construction Phase

Pending approval of the financing package, the building pre-fabrication will begin in May. During this time sub-contractors will be chosen for foundation construction, erection of the building, installation of refrigeration, mechanical and electrical systems. All construction materials and supplies will be shipped by rail to Churchill in July for barge shipment in late July and early August. Construction will begin in August with foundation installation of electrical, mechanical and refrigeration systems in October. The plant is scheduled for completion at the end of October, ready for caribou processing.

Installation of Refrigeration Gear in Longliner

Design Phase

Estimates for design, supply and installation of refrigeration equipment will be solicited in April 1987. A supplier will be contracted and equipment and supplies shipped by air in June in anticipation of the coming fishing season. The department of Fisberies and Oceans will be approached for advice and approval of the vessel as a registered processing vessel.

Installation Phase

The vessel will be outfitted in June and early July, 1987 for operation from late July to the end of the fishing season.

Ice harvesting Equipment and Related Structures

Design Phase

Negotiations with the hamlet will confirm a site for the harvest and a location for the ice storage silo, if the silo is located away from the plant. The feasibility of using the proposed ice harvest system will be determined in April and May 1987. Specifically, present infrastructure and equipment availability will be examined to determine if the technical requirements for the ice harvest can be met. If the system proves feasible, then the ice machine included in the original design for the [processing plant will be dropped from the plants.

Implementation Phase

If the ice harvest system proves feasible, the equipment required for the ice harvest will be shipped by rail to Churchchill and barged to Rankin Inlet in late July or early August. The silo will be constructed in August in conjunction with the plant. Equipment will be stored for use in the following spring of 1986. If the design is not feasible, the alternative of the ice machine will be shipped instead.

Product Development

Pre-development Reseach and Trail Marketing

In December 1986 and thoughout the rest of the winter of 1987 JPH purchased caribou from the commercial quota and processed different cuts and products for trial sale in Rankin Inlet. Arctic char was also purchased for cold smoking products and to improve quality consistency in the hot smoked products. 'I'his trial period identified products to be developed and training requirements.

From this pre-development stage a quality control and continuous monitoring program was established. A recording system for batch processes was developed to monitor product development. A food consultant, Harry Bairn, assisted in this pre-development process.

Product "Refinement

JPH will work with the Department of Economic Development and Tourism in the spring and summer of 1987 to refine and test market products from the research phase. Emphasis will be placed on development of a basic product line consistent in quality and supply. The summer operation will emphasize char production; in the fall and early winter of 1987, caribou production will coincide with the start-up of the new plant.

Training

The training program will commence at the begining of July 1987 in the present government processing facility in Rankin Inlet. The processors will begin work with in the plant, while the assistant manager will concentrate on business management practices and marketing.

Training will continue through the summer into the end of October, when the new plant should be ready for operation. The training location will then be the new facility. Training will then proceed until the end of September, 1988. A synopsis of the proposed training program **can** be found in the section on employment.

SUMMARY OF MARKET STUDY FOR SMOKED CHAR

CANADIAN MARKET POTENTIAL
FOR
SMOKED ARCTIC CHAR
FINAL REPORT

Prepared for:
Department of Economic Development and Tourism,
GNWT

Prepared by:
DPA Consulting Limited

June, 1980

1.0 INTRODUCTION

The objective of the study was to investigate the potential market for smoked arctic char in southern Canada. The report presents the results of an investigation by DPA Consulting Limited into the Canadian smoked fish market, including a survey of brokers, wholesalers, and retailers with sample products supplied from the Issatik fish plant at Rankin Inlet. The market research and survey work were carried out by the Project Team in Vancouver, Winnipeg, Toronto, Ottawa, and Montreal between February and June, 1980. The report provides information regarding market size and location, product preferences, packaging, and pricing. It identifies the segments of the smoked fish markets where smoked char can compete with possible success. The report provides an overview of the general market for char products, suggesting a broad, long-term approach to industry char marketing. The short-term strategy for introducing Issatik fish plant smoked arctic char to the Canadian market coordinates Product possibilities with potential market users, and outlines the steps to be taken to launch a marketing program. A discussion of the optimum distribution system covering air and land transport males and costs concludes the report.

SUMMARY

Smoked fish represents 5 percent of the total Canadian market for fish. The smoked fish market is divided into two distinct product groups having different end uses and price ranges, but not necessarily different retail outlets. Data differentiating these markets are lacking in government statistics.

Hot smoked fish, which covers several species, is used as an entree or main course item, and is priced generally in the range of other protein food such as meat. Historically, char has been hot smoked, but not so exclusively in this form. Cold smoked fish finds favour as a gourmet food item served as an appetizer, an expensive luncheon item, or in fancy sandwiches. Cold smoked Pacific red spring salmon (lox) dominates the market for this style of smoked fish. While there is evidence cold smoked char is starting to show up in the cold smoked market place, it is a relatively new product. As such it will require promoting and selling in order to penetrate the market now strongly held by a growing selection of cold smoked Pacific salmon species. Initially the cold smoked arctic char product will have to compete with the **Pacific** salmon for a share of the cold smoke market. However, through careful marketplanning there is an opportunity to establish cold smoked arctic char as a unique product, in its 'own'-'right. If this is achieved, smoked char will command its own market, its own price level, and while comparable to smoked lox salmon, it will not directly compete with it.

A survey of retail outlets in five Canadian cities revealed cold smoked salmon has limited exposure, confined mainly to gourmet food outlets, specialty fish shops, and delicatessens where it is sold in both whole side and sliced form. Here it commands the top prices compared to alternate fish products or the highest priced smoked meat items. It

is distributed throughout the major Canadian markets and is of growing interest to tourists as a "take home" item uniquely Canadian. Hot or cold smoked arctic char did not show up in the retail outlet survey.

The Study Team also carried out a survey of selected brokers, wholesalers, and retailers with samples of Issatik fish plant cold smoked char. Those sampling the product gave it a quality rating below that of the top of the market Pacific red spring product. The char is, therefore, expected to find an acceptable market price at the level of second quality red spring sides or smoked Pacific chum salmon sides initially.

The sample survey also indicated the need to adjust the salt level and thoroughness of curing in Issatik produced char in advance of initial production for market. The survey indicated vacuum sealing of whole sides and sliced smoked salmon is a growing marketing practice due to the protection of quality and longer shelf life it offers the product. This is the recommended packaging method for Issatik smoked char.

The market for cold smoked salmon is fussy, reflecting the discriminating tastes of the consumers of the product and the "high quality for a high price" concept of this gourmet market. Certain methods of slicing employed by gourmet shops to provide the choicest cuts for all customers require large smoked sides to minimize waste. Such fussiness in the market suggests market limitations for smoked arctic char over some Pacific salmon species.

The market image for char generally, be it fresh, frozen, or smoked, has become somewhat tarnished in recent years

through poor quality products finding their way into the market place, giving rise to questionable marketing practices adversely affecting char market prices. This situation suggests the need for a long-term market strategy encompassing industry organization or cooperation to establish minimum quality, size and other standards and to consider promotional efforts to upgrade char in the market place generally.

The shorter term strategy for marketing Issatik cold smoked char resulting from this study requires both production and marketing steps to be taken. At the production level, the quality of the smoked body could be upgraded (salt level and curing); further processing is required (trimming and slicing); package selection and vacuum-sealing equipment are also required. Marketing steps require the decision to go with branding the product and logo design before ordering packaging materials and starting initial production.

The selection of a market representative for Issatik smoked char requires that, first, samples of the branded products be made available to brokers. Second, it requires a discussion of marketing arrangements be undertaken with the endorsed list of brokers. If this does not result in a mutually acceptable marketing arrangement, a further food broker search must be undertaken.

The study revealed the optimum distribution method to be container air freighter, considering the remoteness of the Issatik plant, the perishable nature of the product, and the comparable cost of the longer haul truck and train routings.