

ALASKA LEGISLATURE SPECIAL COMMITTEE / SUBJECT FILES 8672

860 S COMM 30: CONFERENCE ON ALASKA'S FUTURE FRONTIERS 1979

reserves or reservations had a separate option to take the surface and subsurface title to the land on the former reserves. As discussed later in this paper, village corporations generally are entitled only to surface rights. Village corporations on a reserve who took this option, would not participate in any of the monetary aspects of the Act. Six villages with a population of 1,522 Natives living on four reserves took this option because the four million acres of land to be received by taking the reservation option was considerably more than what the village would have been entitled to under the regular provisions of ANCSA. In addition, the Metlakatla Indian reservation in Southeast Alaska retained its trust relationship to the Federal government at the request of its residents and to resolve the difficulty which resulted from previous compensation to the Tribe for the loss of aboriginal rights.

B. Monetary Benefits

The Settlement Act provides for the payment of \$962.5 million to Alaska Natives. \$462.5 million is appropriated by Congress to the Alaska Native Fund over a period of eleven years.

The other \$500,000,000 in payment for settlement of the Alaska Native Claims come from a 2% "overriding royalty" on all minerals that are subject to disposition under the Mineral Leasing Act of 1920 that are developed in the state of Alaska on State or Federal lands, primarily coal, oil, and gas. The State and Federal governments are required to pay such funds into the Alaska Native Fund until a total of \$500,000,000 has been reached. As of September 30, 1979, \$500,884,000 of the \$962,500,000 has been distributed to the Alaska Native Fund.

The money in the Alaska Native Fund is distributed quarterly to the regional corporations based on the number of shareholders enrolled to the region. The regional corporations in turn are required to make the following distributions: for the first 5 years - 10% to individuals; 45% to villages; 45% remaining with the regions. After the first 5 years, the region distributes at least 50% to the village corporations and retains the other 50%. After 5 years, no mandatory individual distributions are required except to "At-Large" shareholders.

An example of the amount of distribution to individuals can

be seen by reviewing the distributions which have taken place so far. A village shareholder received about \$430 for his share of the Alaska Native Fund for the first 5 years. An "At-Large" shareholder has received about \$4,500, thus far.

C. Monetary Benefits - Regional Revenue Sharing

Section 7(i) of the Settlement Act provides that "70% of all revenues received by each regional corporation from the timber resources and sub-surface estate patented to it pursuant to this Act shall be divided annually by the regional corporation among all twelve corporations organized pursuant to this section according to the number of Natives enrolled in each region pursuant to Section 5." The intent of this section is to assure that there is some distribution of resource revenue among regions. Congress felt that it would be unfair if one or two regions became very wealthy because of resource development while other regions suffered because of lack of resources.

Section 7(i) of the Act is probably the most controversial section enacted by Congress both because not all regional corporations are enthusiastic about sharing income from their lands and because there have been strident differences of opinion as to how this provision should be implemented. The difficulty comes in defining revenues. There have already been two court cases on this subject and there is every indication that there will be many expensive legal battles before the courts determine who shares what.

D. Land

The land entitlement in ANCSA breaks down as follows:

Section 19 (former reserves)	4 million acres ±
Section 12(a) & (b) village surface, regional sub-surface	22 million acres
Section 12(c) (regional corporations)	16 million acres
Section 14(h) (misc. selections)	<u>2 million acres</u>
TOTAL	44 million acres ±

Villages selected surface land which generally is close to the village. They are required to select all available land within the township in which the village is located and other selections must be compact and continuous to the original township unless broken by third party interest, navigable waters or other land which is unavailable for selection. Villages will receive land under the following formula: 25 to 99 enrolled shareholders - 69,120 acres; 100 to 199 - 92,160 acres; 200 to 399 - 115,200 acres; 400 to 599 - 138,240 acres; 600 or more - 161,280 acres. The villages were to have filed their selections by December 18, 1974 and some conveyances to village corporations have already been made.

In addition to the subsurface estate received under village corporation land selections, the regional corporations have 16 million acres of the 44 million conveyed by Section 12(c) of ANCSA. The major difference between regional selections and village selections is that the regional selections are based on what is known as the "land lost" formula. Regional entitlement is arrived at by determining each region's percent of the land base of Alaska exclusive of Southeastern Alaska which is covered by each of the eleven regional corporations excluding the Sealaska Corporation. (Southeast Alaska is excluded because this region is covered separately in the Act). The entitlement due each region under this section also takes into account the amount of land conveyed to the village corporations in each region as it relates to the 38 million acres to be conveyed under Sections 12(a), (b) and (c) of the Act.

The net effect of all these calculations is that only six regions receive lands under the region selection section of ANCSA (Section 12(c)). Of those six regions Doyon receives over half of the sixteen million acres and Arctic Slope receives another third of the sixteen million.

Because the Tlingit-Haida Indians of Southeastern Alaska received a cash settlement in the mid-60's as a result of the Tlingit-Haida Court of Claims case (Tlingit-Haida v. U.S., 147 Ct. Cl. 315, 177 F.Supp. 452; 182 Ct. Cl. 130 and 382 Fed. 2nd 778), the villages in Southeastern receive land on a different basis than the villages in the rest of the State. Ten villages in Southeastern Alaska will each receive 23,040 acres of land or approximately one township with the regional corporation

receiving the sub-surface rights. The regional corporation is entitled to no regional selection under Section 12, but will receive some land under Section 14(h).

Section 14(h) allocates two million acres of land for special purposes. These purposes are cemetery sites, historical sites, groups of Natives (locations have less than 25 enrolled Natives), land for persons enrolled to Sitka, Juneau, Kenai and Kodiak, individual Natives whose primary place of residence is separated from a village, certain Native land allotments, and a "floating" selection right for the remainder of the two million acres after the specific purposes have been satisfied. Many of the Regional Corporations are using the floating selection right to obtain potentially valuable timber and mineral lands.

It is obvious from the above discussion that the land selection process is fairly complex. Both the Settlement Act and the Bureau of Land Management land selection regulations (43 C.R.R. parts 2650-2654) provide for a number of eligible village corporations, the enrollment to each village corporation and regional corporation easement identification third party rights existing at the time of passage of ANCSA, navigability determinations, reduction of existing federal withdrawals, third party rights established by the State of Alaska on tentatively approved land, and overlapping selections between villages and between villages and the regions. Because of these problems, the Bureau of Land Management has conveyed 9,803,186 acres of land of the 44 million which they are due to convey to Alaska Natives.

Generally, most Native lands will be conveyed initially with an interim conveyance document. This document is comparable to (but probably more secure than) tentative approval of State land selections, for those familiar with that concept. Interim conveyance of land gives Natives all the rights of a land owner. However, the actual boundaries of land are subject to final survey. Surveys of Native lands may take as many as 20-30 years because of the complex survey problems existing in Alaska. After the land has been surveyed, the Native corporations will be issued patent to the land.

Native corporations have the right to sell, lease, or otherwise

commit their land immediately upon conveyance. ANCSA provides on restrictions on the alienation of land. However, Native Corporations, for the most part, are not inclined to sell the land as they consider it a cultural resource which must be protected for future generations. Therefore, most Native corporations will be interested in issuing leases or use permits rather than in selling their land.

E. Summary

The Native corporations set up under Alaska corporate law have the same functions and responsibilities as any profit-making corporation. In other words, the Native corporations are in business to make money for their shareholders. They have no legal responsibility to provide health, education social or legal services. The corporation's only legal responsibility in these areas is to pay taxes as do other profit-making corporations.

This does not mean, however, that the Native corporate leadership can ignore social and cultural problems. Because of the structure of the corporation, and the fact that the shareholders are almost entirely Native, there is no question that the regional Native corporations will be more aware of social and cultural issues than are most profit-making corporations in this country. The shareholders of these corporations are primarily low income persons, many of whom do not speak English as their first language. The majority of shareholders live in small rural communities and are dependent on subsistence hunting and fishing for much of their livelihood. Thus, investment and land use decisions of the Native corporations must reflect the concerns of their shareholders, even though many of these concerns are social. Native shareholders want more than just a dividend. They want protection of the subsistence lifestyle, jobs, access to their corporate leaders, enhancement of their culture, and other considerations which seldom, if ever, are discussed in the board rooms of profit making corporations.

It is obviously too early to tell whether or not Native corporations can overcome the complicities of the Act and the economic and cultural conflicts which are inherent in the settlement. Some Native corporations have already experienced un-

fortunate failure while others are off to a somewhat better but perhaps not too secure start. It is abundantly clear to me that Native corporations will need the cooperation and support of the State if they are to survive and prosper. It is obvious that should the Claims Act fail in its goals to increase Alaska Natives standard of living while still protecting their culture, Alaska Natives will become both an economically and culturally deprived people. Such failure would be a major disaster for the State of Alaska and would be extremely costly both in economic and social terms.

Other Perspectives

The Department of Interior is the Federal government agency with the major responsibility for implementation of the Alaska Native Claims Settlement Act. Within the Department of Interior, the Bureau of Land Management is primarily responsible for those portions of the Act dealing with land. The Bureau of Indian Affairs is responsible for other activities such as enrollment, certification of villages, and certification of cemetery and historical sites.

Unfortunately, the Department of Interior took a very antagonistic attitude towards the implementation of the Settlement Act in the early years of implementation. This attitude was most notably present in the long and bitter fight over the identification of easements on Native land but also pervaded the entire land selection regulation process as well as many other activities in the Department.

Equally, unfortunately the State of Alaska often participated in the vigorous attempts to undercut the congressional intent of the Claims Act. Some of the State's belligerency is understandable as many State officials felt that the State never should have participated in the Claims Act on either a monetary basis or by having to relinquish certain land selections. It is interesting to note that the attitude towards the Claims Act has changed drastically over the last several years. This is somewhat as a result of the three lawsuits which were brought regarding easement on Native land. Those lawsuits essentially were decided in favor of the Natives, and there was a finding by the court that the Claims Act was to be treated as a piece of "Indian Legislation." Thus in instances where there was a doubt as to the interpretation of an issue, the issue would be decid-

ed in favor of the Natives. It is my belief that both the Department of Interior and the State of Alaska now view ANCSA as a piece of "Indian Legislation" and are much more supportive towards ANCSA.

Evidence of this exists in the thorough review of the Claims Act which was undertaken by Secretary Andrus and his staff early in his administration. Also, under the auspices of the Federal State Land Use Planning Commission a total review of the Claims Act was made to determine what amendments might be necessary to strengthen the Claims Act. Both the State and the Department of Interior were participants in this process. As a result, a whole series of amendments has been proposed to the Settlement Act. These amendments have been included in the various versions of the d-2 land legislation presently before Congress.

The other major outside influence on the Claims Act is the United States Congress. It is important to note that the Congress has been very receptive to making changes to the Claims Act when necessary. Generally, in order to get a change in the Claims Act, the Alaska Natives, the State of Alaska, and the Federal government (usually in the guise of the Department of Interior) must agree to the changes. This receptivity to change is important because, as the government and the Native corporations gain more experience with the Act, it is clear that certain changes are going to be needed if the Act is to be successfully implemented. Equally important is the cooperation of the Federal government and the State government in any process which results in changes to the Settlement Act.

Directions

The number of areas in which the State might benefit Native corporations is practically limitless. However, I will confine my recommendations to a few major areas of potential assistance.

1. Land Exchanges

Once Native conveyances have been more or less finalized and once the State of Alaska receives full entitlements to statehood land, there should be a number of opportunities to make land exchanges in order to consolidate land holdings. The State may want to review its present statutes regarding land exchanges. One possible area of refinement would be to allow ex-

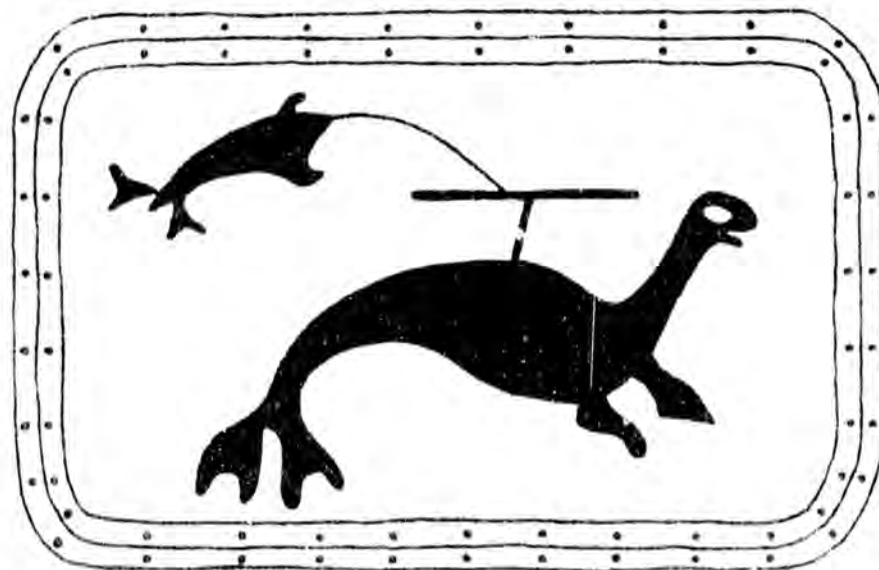
changes on other than equal value basis. In some cases, it might be more beneficial to the citizens of the State to have certain Native lands placed into recreational use while trading away State owned lands with economic potential to be developed by a private corporation. The monetary values here would clearly favor the Natives, but the public interest values might well favor the State.

2. Cooperative Management

There will be a number of opportunities for cooperative management between Native Corporations, the State of Alaska, and the Federal government. The State has considered cooperative management legislation but the legislature has never taken final action on any of the various proposals. If the d-2 legislation passes Congress, there will be a cooperative management section in the bill and the State may want to look at modeling their legislation after the federal bill.

3. Economic Developments

Native Corporations have an important role to play in the economic development of the State. This is particularly true in



the area of renewable resources, although the Natives will be developing non-renewable resources on their lands also. Any State loan programs designed to benefit Alaskans should be tailored so that Native Corporations are eligible. In addition, the State may want to consider special grant programs to Native corporations for experimental development in areas such as agriculture. There might also be grant programs to assist Native corporations in developing businesses which are marginal profitable but which provide employment to people in rural areas. Tax incentives for experimental business development or employment related programs are another possible tool that the State would use.

4. Land Bank

The various versions of the Alaska lands legislation presently being considered by Congress all contain a provision for a land bank for private lands. Placement of lands in the land bank would provide for mandatory cooperative agreement between the land owner and the State or Federal government. In return, the private land owner would receive protection from the imposition of property taxes as long as the land was not developed. The legislation provides that the Federal government will run the land bank program unless the State of Alaska develops comparable legislation. It is my recommendation that the State begin to develop such legislation.

5. Easement Management

Although the Federal government will have the primary responsibility for easement management on Native lands, the State could play an important role in assisting the Native corporations, the Federal government, and the public to understand the various uses of these easements. The major problem the State may have to address is that of trespass. Unless there is proper easement management, there is going to be a good deal of misunderstanding about potential misuse of Native land, and it is clear that the State can assist in the public information program which will be necessary in order to limit confrontations between land owners and land users. In addition, the State may be able to negotiate with Native corporations for some of the recreational easement which the State felt that Natives should give away for free.

6. Education and Technical Assistance

It would seem that the University of Alaska could play a very important role in both educating Native corporation shareholders to take advantage of the many employment opportunities which are occurring because of the Claims Act. The University has already begun some special programs in rural areas to meet these needs. However, the University has only scratched the surface in terms of the educational needs of potential corporate leaders and corporate workers. In addition, the University could provide important technical assistance to developing corporations. This is particularly true of village corporations. The State may want to consider developing a program either through the University or in conjunction with organizations such as the Alaska Native Foundation to increase the assistance available to these young and struggling corporations.

Conclusion

This paper was not meant to be definitive either in its discretion of the Claims Act or in its presentation of potential actions that the State might want to consider in order to help implement the Alaska Native Claims Settlement Act in a successful manner. However, the ideas presented here are meant to spark discussion of how cooperation between the State and the Native corporations can be beneficial to everyone concerned.

There is no question that successful implementation of the Act is very important to the State's future. The new direction that the State has taken recently to cooperate in the implementation of the Act is an important one. The positive relationship which has developed between the State of Alaska, the Federal government, and the Native corporations should be continued, nurtured, and enhanced. The State should keep in mind that Alaska Native corporations for the most part invest in Alaska, and the profits go mostly to Alaskans. One of the best investments the State of Alaska can make is to foster the growth and development of Alaskan owned Native corporations.

Biographical Sketch
John T. Shively

John T. Shively is the Vice President of Operations for NANA Development Corporation, the business holding company for NANA Regional Corporation, one of the thirteen regional corporations established pursuant to the Alaska Native Claims Settlement Act. He is responsible for overseeing NANA's business operations which include a hotel, a construction company, a reindeer herd, a jade mining and processing facility, and a number of services to the oil industry. He is also responsible for working with the State of Alaska, the Department of Interior and the United States Congress. Mr. Shively has lectured to a variety of groups on the Settlement Act and has taught a college level course on the subject. He has a B.A. Degree in Political Science from the University of North Carolina - Chapel Hill. Prior to working for NANA, Mr. Shively was Executive Vice President of the Alaska Federation of Natives.

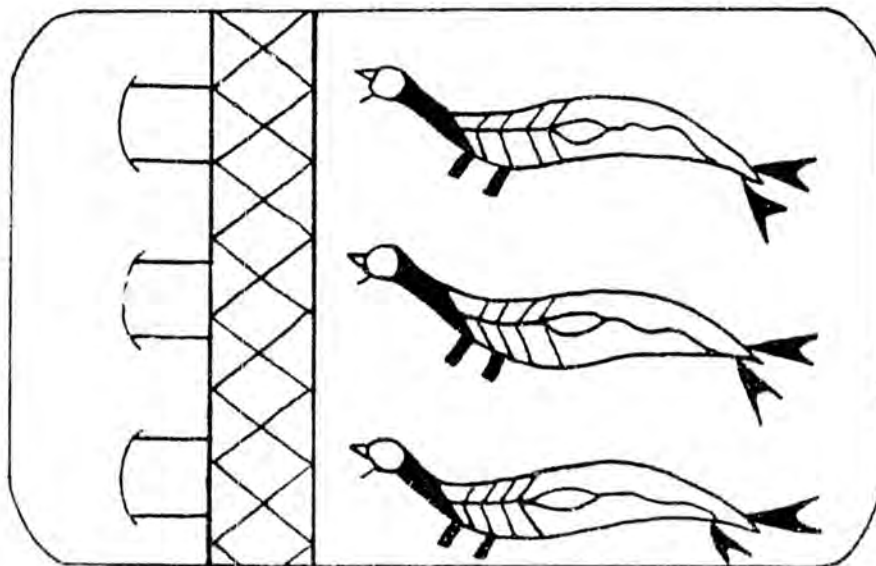
Acknowledgement

Much of the information and some of the text contained in this paper comes from a paper entitled "Alaska Native Corporations and Native Lands" written in 1976 for and copyrighted by the Rocky Mountain Mineral Law Foundation.

Dedication

I wish to dedicate this paper to Mr. Joseph Rudd who provided the inspiration and guidance for the writing of "Alaska Native Corporations and Native Lands."

NOTES



RURAL ECONOMIC DEVELOPMENT

by
Michael Deman

Alaska is geographically and psychologically remote from the rest of the United States. Although Alaskans, by and large, like their isolation, they depend upon the "lower 48" for many of the necessities of life and most of the material luxuries as well.

Much of rural Alaska is as foreign to its urban residents as the state itself is to a New Yorker, for example. The distance from eastern portions of the state to western regions are so great that traversing it involves four time zones, four or five hours by plane and great expense. More often than not, Natives and non-Natives alike live in one region and have never seen much of the rest of the state. Just as Alaska is dependent on the rest of the country for supplies, its rural areas are dependent on urban Alaska, e.g., for medical, legal and governmental services, and for consumer goods.

In many ways, civilization has brought something less than advantages to all Natives. For 40 percent of the Native population the White Man's world has brought extreme poverty. Alaska Natives, who for centuries provided for themselves through subsistence living, now see the resources on which they depend seriously threatened. The use of firearms, easier access with power boats and snow machines, and new population growth all contribute to depletion of Natives' precious subsistence resources. The location of schools, public services and medical facilities has altered the settlement pattern of villages, creating the need for year-round housing and sanitation facilities, all of which require cash and all of which contribute to the present conditions of poverty.

The Senate report on the Alaska Native situation presented in conjunction with Native claims legislation, drew the following picture for rural Alaska Natives:

In an economy based importantly in a pattern of life of sub-

sistence fishing and hunting, the large majority of these Alaskans are unemployed or only seasonally employed. Though some of the families have incomes of \$5,000 or more annually, the bulk of them live in dire poverty — the poorest of America's poor. Village family income for those who have any income, averages less than one-quarter of the family income for non-Native Alaskans ... Largely because they lack cash income and because the costs of purchased goods and services are high, most Natives live in small, dilapidated or substandard houses under unsanitary conditions ... Another dimension of the contrast between the Native and non-Native sector of the population is *that of the lack of opportunity for economic advancement among most Natives.*

The sharp contrast between rural and urban Alaska is illustrated by the extent of poverty in these two areas. According to the 1970 census, two-thirds of Alaska's population lives in urban areas, yet of Alaska's 35,614 people classified as poor, 71 percent live in rural areas. Seventy percent of the rural poor, or 17,809, were Alaska Natives. Hence, most of Alaska's poor are Natives living in rural areas.

The conditions presented are not new; they were recognized long ago. The Land Claims Act provided a hope for future change and as an aside, a structure and methodology for a rural Alaska development strategy. The word "strategy," however, inherently implies a unified direction and implementation, which has not "naturally occurred." Alaskans, residents of "The Last Frontier," are highly resistant to the great and benevolent planners in Juneau or Washington, D.C., but central, dedicated support is badly needed to implement this "strategy."

Hope is present in the potential of the village and regional corporations established under the Alaska Native Claims Settlement Act of 1971. Under the terms of that act, profit-making corporations were established in each eligible Alaskan Native village (a total of 206 in all).

The Alaskan Native has been treated somewhat differently under the terms of this act than has any other aboriginal group in the U.S. In all other cases of aboriginal claim, sovereign title has been granted to a portion of the lands occupied by Native Americans. The

balance was placed in the public domain and the aboriginal titles extinguished after payment of "fair" value to the aboriginal group.

"Alaska was not made sovereign, but instead was transferred to private ownership. In return for extinguishing Native Claims, the U.S. agreed to pay Native Alaskans \$962 million and grant them 44 million acres of land (or approximately twelve percent of the State)."

Under the terms of ANCSA, a twenty year moratorium was placed on taxation of any of these lands. The intent of Congress was that during this twenty year period, the corporations established under the act would become economically viable entries in rural Alaska.

This entire notion, however, is a double edged sword. While on the one hand the resources, in the form of cash and land, are provided to achieve economic viability for Native Alaskans, and indeed rural Alaska, the requisite managerial capability does not yet exist within these corporations.

"At the time of ANCSA's passage, Native Alaskans were ill equipped to understand or effectively deal with the many complicated provisions of the Act. Living in remote settlements which had only become permanently established in the last three or four generations, Natives were totally unfamiliar with the concepts of corporations, investments, and other attributes of a modern economy which the Act thrust upon them. Even today, most Native Alaskans do not live in a cash economy as we know it in the Lower 48."

Despite these problems the truth of the matter is that these corporations, taken as a whole, represent the most viable potential for rural Alaska. These corporations possess not only capital, but significant assets, i.e. land. Further, they have access to a vast labor pool: village residents. *No other entities exist in rural Alaska which have these qualities.* The single most apparent lack within these corporations is the technical ability to successfully manage their assets (capital, land, labor) in a way which is consistent with traditional rural Alaska lifestyles and cultures *and* which is economically sound.

Contrast this change with the rural Alaska of only a short time ago. The economy was totally subsistence based. Hunting, fishing

and gathering provided all sustenance. Villages were non-existent. Temporary camps and settlements existed, and changed depending on the season. Only a few short generations ago permanent settlements came into being, mostly at points of white contact. With those permanent settlements came the rapid transition from a nomadic subsistence lifestyle to the current mixed dependence on subsistence activities and cash economy. The transition has been rapid and difficult, and is still in process.

As the villages have moved into a cash economy, they have, in effect, become conduits for this cash. Cash has come from three primary sources: the few relatively stable jobs which are common to most villages (postmaster, school custodian, health aide, etc.), transfer payments, and the income brought home by various types of seasonal, temporary, or sporadic employment opportunities (firefighting, construction of the pipeline, etc.).

Because there is no significant manufacturing or industry in the villages, most of the cash which enters the village economy turns right around and exits: with exception of the few foods, some fuel, and certain clothing materials provided by subsistence activities, everything villagers need must be purchased elsewhere. The school custodian, whose salary brings cash into the village, orders his family's clothing from a catalogue and sends money out of the village to cover the cost of the purchase. The firefighter, who brings his summer's wages home, buys food at the village store - and the storekeeper buys his stock from an urban wholesaler. The examples are endless and the results are obvious: what cash does come into the village goes out again for imported goods and services.

A number of authorities are of the opinion that the rate of out-migration of villagers will continue to increase, in part because of the scarcity of local sources of income. If this occurs, village economies will suffer. Nonetheless, the villages are essential to those who are not willing or able to make the transition to urban life, and a number of recent studies indicate that many current village residents would prefer to remain in their villages. A recent survey conducted by the Alaska Native Foundation in Ruby and Galena found that most residents of these two villages not only want to continue living right where they are, but that they would rather have jobs in the village than to leave for temporary employment

elsewhere. The Ruby/Galena study results have been confirmed by other data indicating that despite the continuing out-migration many if not most village populations have actually increased in size over the last decade.

Assuming, however, that those predicting an increased out-migration are correct, and that (as some fear) the village resident will be primarily the old, the young, and the unemployable, then it becomes critical that some infrastructure be developed to support these people. This possible eventuality presents an even greater challenge to the corporate leadership if they are to avert the potential despair and squalor which could lead to the complete collapse of village Alaska.

Whatever the future holds for the villages, one thing is certain: the village corporations hold the key and therefore must assume the responsibility of stabilizing the village economies.

At the risk of over-generalizing, we can define three types of villages, each of which can respond to the present challenge in a different way. Of course, there are villages which fall into more than one of these categories, and which therefore have greater options.

1. One group of villages will have indigenous resources of one sort or another — resources which are, or will be, in demand outside of the village itself. For instance, it is estimated that as much as ten billion barrels of oil and 19 trillion cubic feet of gas exist beneath the surface of Native-owned lands.³ These resources, and others, fall into the extractive category, and will be developed primarily at the initiative of big outside businesses who are interested in the particular resource. These villages will most likely develop a rather conventional export-based economy. Their corporations can play some sort of reactive, passive, or accommodating role: they can make land available, can build facilities, and can undertake training programs to enable village residents to take advantage of the local employment opportunities which may evolve as a result of the extractive industry. In such cases, the necessity for entrepreneurship on the part of the village corporation itself is minimal, but the potential for disruption of village life and the depletion of village life and the depletion or destruction of corporate assets is magnified, as are benefits if such development is successfully managed.

2. Another group of villages may be favorably situated, have buildings of particular historic or aesthetic significance, or have a unique and commercially-valuable handicraft tradition. These assets would make such villages of interest to tourists — an industry which will create some employment and will inject varying amounts of cash into the local economy, depending, of course, on how the industry is developed.

3. However, the vast majority of villages are unlikely to ever have a commercial economic base in the traditional western sense: very few will have items which can be exported on a competitive commercial basis and which would therefore create jobs for local people and bring cash into the local economy. The corporate management in these villages is faced with a different challenge, on which can perhaps only be met by the development of cottage-type industries which produce goods and services for local or regional consumption only. This approach would create local jobs and would keep more the cash within the local economy. This approach has been described in the recent federal-state Land Use Planning Commission study, "The Evolving Pattern of Village Alaska:"

"The ideal industry for the region may be described abstractly: it should use local materials, it should produce output with a high value to weight ratio, it should be labor intensive, it should be capable of high productivity at small scale of operations (perhaps even cottage industries), and it should be counter-seasonal, to complement the higher levels of activity in the summer."⁴

We are, of course talking here about import substitution, the residual effects of which are obvious: each dollar not spent outside of the community remains within the community and has a multiplier effect.

"Mathematically, the multiplier is the inverse of the propensity to import, so that if investment can improve the local economy's ability to provide locally what had previously been imported, each dollar that comes in from the outside will cycle longer with in the local economy and provide more local jobs and income. In the developing countries, and economic strategy of increasing the multiplier has been called an import

substitution strategy. If village Alaska cannot devise exportable production, it can probably find ways to increase the local bank from the buck of its outside income by developing its capacity to serve its own population."⁶

The import substitution idea can be applied to labor as well as goods: construction is a good example in Alaska. For instance, the State of Alaska has identified the need for rental or lease housing, overnight facilities, offices, warehouses, and laboratory space in a total of 55 rural villages.⁸ No doubt this need will eventually result in contracts for construction, a service which could be provided by village corporations.

In March of 1978, the State Department of Administration let a request for proposals for the design, construction, maintenance and renting of facilities in 11 rural villages. Again, another opportunity for village corporations. Such requests are common and frequently are awarded to contractors from the urban areas who bring work crews in with them. While this has some positive economic effect on the village, it is not nearly as great as it could be. Regardless of the type of village involved, the corporations have only one real choice: they must take full advantage of the opportunities which exist for their village.

The potential is there for the development of a sound economic base in rural Alaska. The possibilities abound. Strategies need not be as grandiose as may be required in the urban lower 48. The problems are different, the people are different and the scale is certainly different. The addition of only a handful of jobs in a rural Alaskan village can have a significant impact on the economy of that village. That theme, repeated throughout rural villages can go a long way to assuring a continued and healthy economy in rural Alaska.

Clearly solutions can be found. And they will be, if the new managers of the new village corporations are given the technical assistance they need to help them determine what kind of solution is appropriate to their village.

Finding the proper solution is half the battle. The other half is making the solution into a lasting reality. Management expertise, accounting expertise, planning expertise — all these things can be bought, for a price. But the village corporation management

themselves must at the very least know how to select the right kind of experts, how to direct them, monitor their efforts, and evaluate the results. Given the current lack of experience in such matters, an immense effort is required — management personnel and the corporate board members must be given the kind of training which will make them capable of fulfilling their mandate and meeting the needs and desires of their shareholders — the village residents.

The approach we are suggesting will take policy decisions by the State of Alaska and the Federal government to assist and build the village corporations in basic ways. Other groups, like the Alaska Native Foundation, may serve as the cutting edge of such decisions, but the powerful weight of government must be applied to make a REAL difference. Failure to do so will result in a continuation of present rural Alaskan conditions and will require *public*, not private, development dollars, and that will increase the tax burden on everyone.

The corporate success itself, of course, must be two-pronged. The corporations must provide a return to their shareholders, most of whom are villagers and who therefore will spend at least some of their dividend earnings in the village. This influx of cash will function to bolster the economy in much the same manner as any indirect income transfer. In addition, the corporations have an implicit responsibility to solidify an economic infrastructure if they are to meet both Congressional intent as expressed in ANCSA and the obvious needs and desires of their shareholders. Each prong of corporate success will impact the village economy. In combination, the impact will increase geometrically.

Any use of surplus state income must be used with an eye both to the kinds of investments (renewable, non-renewable) it makes and the uniqueness of the Alaskan development structure, which has been put in place and which must survive if a full measure of benefits is to be gained by the state.

Biographical Sketch

Michael Deman is Vice President of the Alaskan Native Foundation. While at the Foundation he has directed the Donner Project, the OCS Management of Change Project, Kellogg Manpower Training Project and Village Management Assistance Project as designer and first director. Mr. Deman presently works on rural economic issues with several state and federal policy groups.

Footnotes

¹T.J. Smith. "Native Alaskan Economic Development: Issues and Recommendations;" Economic Development Law Project Report. January/February 1978, p. 22.

²*Ibid* p. 27 and 28.

³*The Alaska Native Management Report*, June 1, 1977.

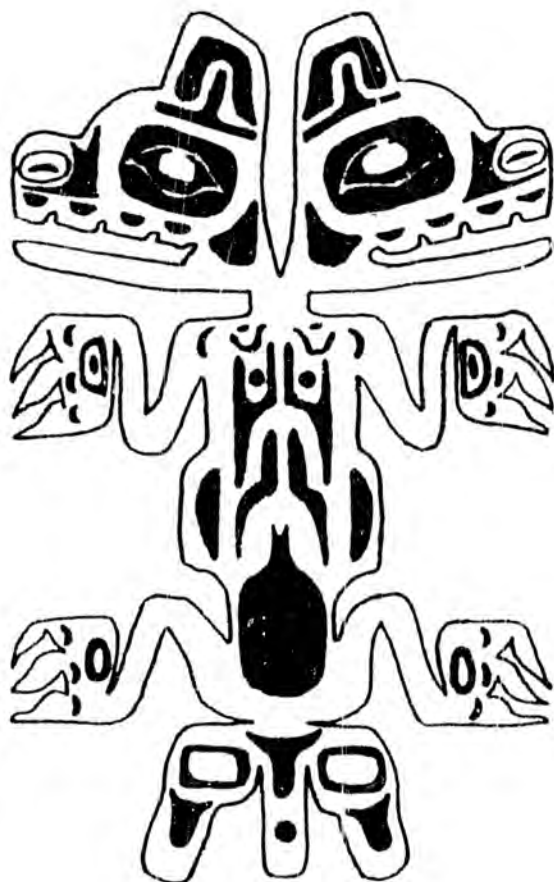
⁴W. Alonso and E. Rust. "The Evolving Pattern of Village Alaska, Federal-State Land Use Planning Commission for Alaska," *A Commission Study 17*: March 1976, p. 37.

⁵*Ibid* p. 39.

⁶Letter from B.B. Allen, Commissioner of Administration, April 5, 1978.

⁷*The Alaska Native Management Report*, July 1, 1977.

NOTES



ENERGY EFFICIENT CAPITAL CONSTRUCTION

Prepared by
Mark Fryer

Abstract

Alaska's building industry is treated in overview with emphasis on the constraints to reducing energy consumption in new capital construction. Some generic areas of the industry are cited for examination by the conference, specifically, the financial environment and the human resources needed to reduce energy consumption in new capital construction.

Energy Efficient Capital Construction

Although all capital construction consumes energy, both in initial fabrication and life cost, the greatest opportunity for reducing energy use in capital construction lies in the design and operation of buildings. I speak now on the level of construction. In the planning sphere, the institution may be able to save energy by selecting means other than through constructed facilities to deliver services, but once the decision is made to build, the opportunities for reducing energy consumption appear to be in building design and operation.

This paper is intended to give a brief overview of buildings as energy intensive capital construction and suggest some specific elements of that industry that the people of the State may wish to address in a formal manner.

A Brief Overview

Over the next 25 years, about 150 million square feet of new buildings will be constructed in Alaska.¹ Two-thirds of this space will be residential, the remainder will be a mix of commercial, institutional, and industrial space. If we construct and use this space in the same manner as we have in the past, by the year 2005 we can

expect this new built space to consume 39 trillion BTU's of space heat and 1.5 billion kilowatt hours of electricity.² The *total* energy consumption, combining thermal and electric systems for this new increment of space, is estimated to be about 84 trillion BTU's.³

If we make the assumption that all energy sources combined will have an average cost of say 90 percent, the cost of U.S. fuel oil, and further assume fuel oil prices will inflate at an average annual rate of 7 percent over the next 25 years, the annual fuel bill for the new buildings constructed between now and 2005 would be about 2.4 billion dollars (\$16,800 per family per year assuming per capita cost of \$6,720 per year).⁴

It is not the purpose of this paper to make economist's projections of energy costs. The foregoing is but a setting meant to suggest the impact of the energy consumption character of new buildings. Let us, for these purposes, compare 1980 energy costs with 2005 energy costs to the consumer. The most graphic example of this comparison is in Anchorage. If the 1980 average natural gas price to electric producer, residential and commercial consumers is \$1.50 per million BTU's, the annual average per capita bill of energy would be \$355 per year.⁴

Although the dollar at 6 percent inflation will, by 2005, be worth 23 1980 cents, the 2005 energy dollar for the Anchorage citizen will only be worth about five 1980 cents. That is to say, in relative terms, the price of energy will have increased by a multiplier of nearly 5 times. For Fairbanks, the energy cost change will be less dramatic with the 2005 energy dollar being worth about fourteen 1980 cents. This example is not a forecast; it only purports to extend into the future our history of energy use and cost.

The Building - Time House of Involvement

In the free market place, *today's* economics influence the character of the construction. Builders still use electric heat; 2" x 4" wall construction is still the norm in southcentral and southeast Alaska. The market place sets the standard. To change the criteria for design we must persuade the banker, the builder, the designer, and the owner that they are all better off by reducing building energy use. This is currently difficult because all of these interests are short term:

The Banker: The banker, upon financing the building "sells his paper." Within 12 months of longterm financing arrangements, the banker is out of the picture, his job has been performed.

The Builder: Obviously he is "out" as soon as the owner accepts the building. Usually within a month or two after completion of the building.

The Designer: The designer's job is usually done when construction starts, however, in some cases, he will see the job to final owner acceptance. Although his job is to look after the owner's interest, it is the owner who perceives the place in the economy for the building, sets design goals, goals that relate to his (the owner's) interests. Thus, economics questions related to energy are usually resolved with cost/benefit equations that are quantified in terms of years to pay out. The higher the inflation rate, the larger the investor's expected return on investment, and the shorter the payback period required for a "good" investment.

The Owner: The character of "the owner" could not be uniformly simplified. The public owner takes on the character of the administrator whose responsibility it is to get the facility built. Some want as much area as can be squeezed from the budget, some want quality construction, some want only hassle free projects with little regard to the end product. These "owners" are influenced by political and administrative forces rather than market place economics.

The private owners are a mobile lot with time frame of involvement ranging from a year or so, to perhaps five years. Exceptions are the business and industrial people whose buildings house longterm business investments (i.e., hotels, fabrication shops, etc.).

The graphic illustrated in figure 5-1 indicates the different incentives offered by differing time frames of involvement of the owner. A \$5,000 expenditure for energy conservation for the five-year owner (using 12½ percent money) can result in an energy savings of 225 million BTU's per year, while the same expenditure need only be worth 110 million BTU's per year to be a "good deal" if the owner were to take the 25 year view. For the developer (the guy who is "in-and-out" in 18 months) energy conservation can

not reasonably be an issue except as it may affect finance and selling opportunities.

Maintenance Aspects of Energy Consumption

The building, once constructed and in use, starts to consume energy. The rate of that consumption is now, not only a matter of original design, but is affected by use patterns and maintenance and service factors as well. Here again, the time frame of involvement is important. The owner of leased space enjoys tax incentives that minimize his interest in energy consumption. Because of our tax structure, many commercial and industrial building owners work to turn the property over every five years or so. Because of cash flow requirements, the regular maintenance and service costs are usually minimized at the expense of energy consumption and the general condition of the building. Inflation works to increase the value of a property while accelerated tax write-off artificially devalues the building. The net result is the owner takes a tax loss while building deterioration and inflation work so that the dollar value slowly increases (i.e., deterioration is less than inflation). The incentive to spend cash to maintain the facility in new, or near new, condition is mitigated by the tax structure. Thus, buildings of this ownership, together with their energy system deteriorates over the long term.

Maintenance of the housing stock is affected by the economic situation of the owner. In the case of owner occupied housing, psychological factors, not quantifiable in this paper, are at work. Rental residence operation is influenced by economics that govern other commercial lease or rental space.

The institutional owner, as is his habit in designing buildings, is driven by factors political and administrative rather than marketplace economics. Let us use a positive example of what can be done to reduce energy consumption in existing buildings just through the maintenance and operations level. The experience of the University of Alaska - Fairbanks is graphic 7.

In 1973, that institution started a vigorous electric energy conservation program. That program is continuing today. The results to date are:

Peak demand during the winter of 1972-73 was about 3.0 megawatts.

Peak demand projected for 1973-74 was 3.25 megawatts.

Because of their program, peak electric demand *realized* during 1973-74 was 2.4 megawatts.

* A 26 percent reduction in peak electrical demand.

Total annual electric use since the program was started is about 25 percent below the 1972-73 level, yet services have grown over this period.

Since the University's physical plant system includes a coal fired heating plant, containing electric generation features, they were able to reduce their dependence on the local electric utility. Those measures reduced purchased electricity (generated from petroleum fuels) from 18 million KWH per year to 3 million KWH.

* A reduction of 83 percent.

The primary conservation moves employed and responsible for the large reduction in electrical use were:

1. Dedication to the program by operations personnel.
2. Changing custodial work from night work to day work.
3. Relamping buildings.
4. Cycling ventilation equipment to match building activities.
5. Improved waste heat utilization.
6. Replacement of water cooled refrigeration with air cooled equipment.

Note: Operating costs were decreased, because of this program, by over \$500,000 per year.

It should be carefully noted that this dramatic example of energy conservation occurred in the institutional setting. Although it was cost effective, the motivations of the people responsible were (and are) not those that control the private market place.

The Technology

Regardless of our motive and dedication to reducing energy consumption in capital construction, we must not forget that people are required to actually carry out the work of conserving energy. In the case of the University of Alaska, the Director of Physical Plant has degrees in mechanical engineering, engineering management and process engineering. He is experienced with all phases of physical plant operations and directs a staff of highly skilled journeymen craftsmen.

Modern buildings contain computerized controls, sophisticated equipment and are generally one-of-a-kind designs, therefore, knowledge of how one building operates does not necessarily give the operation deep insight into the rationale for design of other buildings.

About one-third of the cost of new buildings resides in the energy consuming systems contained therein. The systems are complex, requiring innovation in design and high skill levels in operation. Even though this is obviously the case, time and again we see "custodians," "building engineers," and "janitors" who have little or no technical training left to operate million dollar physical plants. For example, in the case of fan energy consumption (see note on page 4), 8,00 KWH per year, and several hundred dollars annually, could have been saved had the "custodian" known that he should change air filters regularly.

Acquiring the services of well trained and experienced building mechanics is difficult. The condition and problems of physical plants located in rural Alaska is a case in point. Although the maintenance people may be skilled in some disciplines, energetic and intelligent facilities all too frequently fall into disrepair merely because no one knows how the mechanical and electrical plant was designed to operate.

On the professional level, a similar lack of talent is apparent. My firm, Professional Engineers, specializing in the design of energy systems, has been unsuccessful in its attempts to recruit talented, experienced engineers who specialize in this area of the profession. We perceive a nationwide shortage of such people.

Summary

1. Energy costs will inflate several hundred percent over the next 25 years.
2. Population pressures will demand a growth in built space at the rate of over 400 square feet of built energy consuming space for every new citizen.
3. The business climate discourages energy consumption through tax structure, entrepreneurial motives, regulation, and the fluidity of our society.
4. Energy consumption in new buildings can technically be reduced by as much as 60 percent with little lifestyle or social impact.
5. Energy consumption in existing buildings can practically be reduced by as much as 25 percent with little or no social impact.
6. There exists in Alaska an acute shortage of energy technicians and professionals. The people are required to do the actual work of reducing energy consumption of new or existing facilities.

Recommendations and Conclusions

Since the predominate stock of energy consuming builds resides in the private sector, the greatest energy conservation opportunity resides there. Market place economics will be the primary force affecting energy conservation. The steps required to affect this sector could be in the form of incentives that affect:

1. Interest rates.
2. The time frame of involvement of the various professions to building, design, construction, and operation.

Energy machines are, by their very nature, technically sophisticated machines. Since we now lack an adequate stock of energy specialists (engineers and qualified building mechanics) we should undertake a vigorous training and education program aimed at the development of Alaskans capable and willing to become expert in these disciplines:

1. Expand and intensify community schools, colleges, and trade programs to produce skilled energy knowledgeable journeymen.
2. Expand and intensify mechanical and electrical engineering programs with specialty course work deferred in the applied fields of energy systems design.
3. Develop graduate degree programs in applied energy systems design, both in mechanical and electrical engineering disciplines.

Finally, no attempt to alter the direction of the past can happen without the complete dedication and support of the people.



APPENDIX OF NOTES, REFERENCES AND CALCULATIONS

1. The assumption is made that population will increase at a constant 2½ percent over the next 25 years. Further, each new citizen will require 425 square feet of space to house and support him (this is the figure accepted by the New Capital Site Planning Commission for construction of the Alaska new capital city).

$$2005 \text{ population} = 414,500 \times (1.025)^{25}$$

$$768,500 = 414,500 \times (1.64)$$

$$\text{New citizens} = 768,500 - 414,500 = 354,000$$

$$\text{New space} = 425 \frac{\text{sq. ft.}}{\text{capita}} \times 354,000 \text{ population} = 150,000,000 \text{ sq. ft.}$$

2. Refer to table 2-1:

$$\begin{aligned} \text{Electric energy use} &= 0.667 \times \frac{4 \text{ kwh}}{\text{sq. ft.}} \times 150 \times 10^6 \text{ sq. ft.} \\ &+ 0.333 \times \frac{280,000 \text{ BTU}}{\text{sq. ft.}} \times 150 \times 10^6 \text{ sq. ft.} \\ &= 1.5 \times 10^8 \text{ KWH} \end{aligned}$$

$$\begin{aligned} \text{Thermal energy use} &= 0.667 \times \frac{250,000 \text{ BTU}}{\text{sq. ft.}} \times 150 \times 10^6 \text{ sq. ft.} \\ &+ 0.33 \times \frac{280,000 \text{ BTU}}{\text{sq. ft.}} \times 150 \times 10^6 \text{ sq. ft.} \\ &= 39 \times 10^{12} \text{ BTU} \end{aligned}$$

3. Total Energy Consumption:

$$\text{For Thermal: } \frac{39 \times 10^{12}}{0.6} = 65 \times 10^{12} \text{ BTU}$$

Note: Assuming system efficiency at 60 percent

$$\text{For Electric: } \frac{1.5 \times 10^8}{0.9 \times 0.3} \times \frac{3413 \text{ BTU}}{\text{KWH}} = 19 \times 10^{12} \text{ BTU}$$

Note: 90 percent transmission efficiency.
30 percent conversion efficiency.

$$\text{Total Fuel} = 65 \times 10^{12} + 19 \times 10^{12} = 84 \times 10^{12} \text{ BTU}$$

4. The cost of hardware, operation, and transmission from energy sources to end use is omitted from the calculation.

5. "Pay Back" examples: If an institution pays 7 percent for bonds of 30 year duration, a \$5,000 investment costs \$402.95 per year in debt services.

A good investment will then be an annual savings of 65 million BTU's^a per year of 8,000 KWH per year.

The investor in a home that he will keep for the duration of the mortgage at 10½ percent for 20 years will look at his \$5,000 as \$400 today and \$480.60 per year. If our home buyer has the \$400 in the bank, his investment is really about \$572/yr or equivalent savings of 93 million BTU's or 11,400 KWH.^a

a. Assumes 85 cent per gallon oil or 5 cent per KWH electricity.

6. A building requiring 8,000 cu. ft. of air per minute of ventilation:

Case 1: Let the fan run 24 hours per day, 365 days per year, with poor air filter change: Electric fan energy = 38,000 KWH/yr.

Case 2: Same as Case 1, but clean filters. Electric fan energy = 30,750 KWH/yr.

Case 3: Same as Case 2, but with automatic fan shut down when building is not in use. Electric fan energy = 10,425 KWH/yr.

Case 4: Same as Case 3, except system is designed variable air volume. Electric fan energy = 5,850 KWH/yr.

7. Personal Communications with E. Staples Brown, Director of Physical Plant, University of Alaska - Fairbanks.



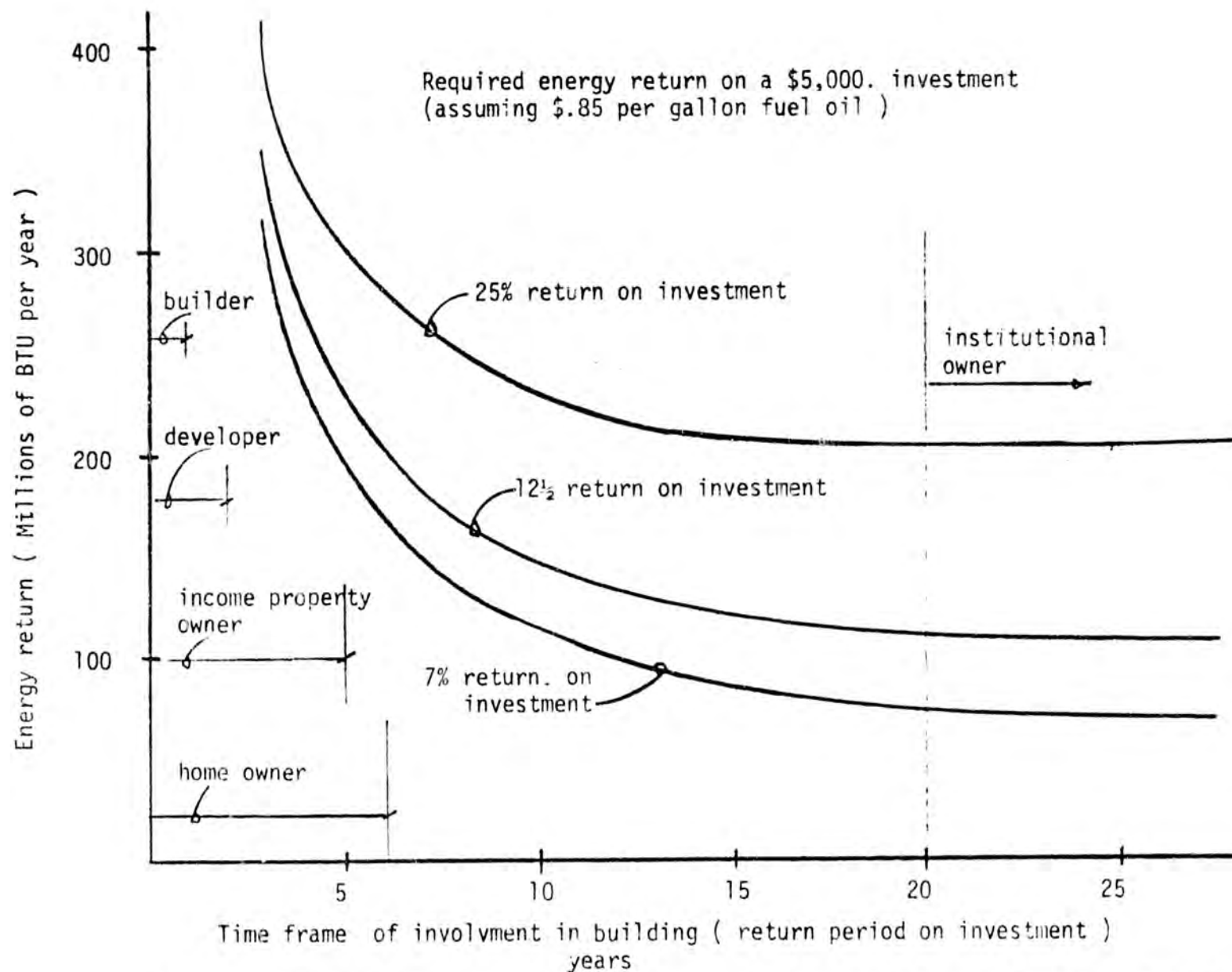


Figure 5-1 The Relationship between required energy savings and time frame of involvement

Table 2-1

Annual Energy Consumption of Buildings — Past, Present & Future

NOTES

	Electric	Thermal
	KWH	BTU
	sq. ft.	sq. ft.
Existing Buildings		
Residential	4.0	250,000
Commercial and Institutional	22.5	280,000
Buildings Constructed During the Late 1970's		
Residential	4.0	190,000
Commercial and Institutional	24.5	200,000
Buildings Constructed During the 1990's^a		
Case 1:		
Residential	3.5	110,000
Commercial and Institutional	19.0	90,000
Case 2:		
Residential	3.0	50,000
Commercial and Institutional	15.0	90,000

a. Case 1 assumes market place influence on energy consumption.

Case 2 suggests technically and socially attainable goals for energy consumption.

Mark Fryer is the president of Mark Fryer and Associates of Anchorage, Consulting Engineers.

PROPOSED TAX STRUCTURE FOR ALASKA DURING A BUDGET SURPLUS

prepared by
Ken Gain

Introduction

During the decade of the 70's Alaska's burgeoning oil production, increased taxes on the petroleum industry, and the rapidly accelerating price of petroleum due to inflation and the high prices established by the O.P.E.C. cartel have produced substantial unanticipated revenue to the State of Alaska. As a result the State will be entering the decade of the 80's with surplus revenues in the range of \$2-4 billion. In view of this large surplus, it is only appropriate that Alaska review and perhaps modify its existing tax structure.

History

Since Statehood, the tax revenue needed to support state government has come primarily from the following sources:

- (1) Severance taxes on petroleum extraction, and ad valorem taxes against petroleum related facilities;
- (2) Excise taxes levied primarily on the sale of gasoline, tobacco and alcohol;
- (3) Gross business tax levied against the gross receipts of Alaska business; and
- (4) Corporate and personal income tax.

At the beginning of the 70's, the principal source of State revenue was the corporate and personal income tax. However, during the decade, a series of new and larger taxes levied against the petroleum industry as well as the increasing production of and price of petroleum, have increased the revenue from petroleum related taxes to the point where they constitute over 65% of the State's current tax income. This increased income from petroleum related taxes as well as the State's royalty income from the sale of State owned oil, has been responsible for creating the large unanticipated surplus.

Current Status

By 1978 it became obvious that the State would begin accruing surplus income from oil taxes and royalties and therefore, certain modifications of the tax structure were adopted by the 1978 Legislature. As of January 1, 1979 the gross business tax, which was an extremely unpopular tax with business people, was repealed. In addition, the net cost of the personal income tax to Alaska residents was reduced through enactment of an "Individual Income Tax Credit." This resident tax credit allows a tax credit of \$100 per taxpayer (\$200 for joint returns) against taxes otherwise due in 1979 and will increase to \$300 per taxpayer (\$600 for joint returns) in 1981.

As a result of the unanticipated surplus, considerable discussion has been generated in recent months on the subject of abolishing or significantly reducing the personal income tax. Although it would of course be possible to reduce other taxes, no substantial support has developed toward reducing them. It is considered highly unlikely that anyone but the petroleum industry would support a reduction of taxes against that industry and therefore the author will address only the probabilities of reduction or elimination of some of the other taxes. Because alcohol and, to a lesser degree, tobacco create substantial public health costs as well as other social welfare costs (related to alcohol), the current taxes on these items do not yet offset their social costs. Therefore, repeal of these taxes would meet with substantial opposition. The increased price of petroleum, which is responsible for the unanticipated surplus, has also greatly increased the cost of gasoline to the Alaskan consumer. Therefore, support could be generated for a repeal of the excise tax against gasoline which would thereby reduce its cost to the Alaskan consumer. However, in terms of the overall current price of gasoline and the future anticipated cost, the elimination of this tax would not make a substantial price difference. Moreover, it is the opinion of this author that price is the ultimate answer to the conservation of petroleum products and therefore elimination of the excise tax against gasoline would only delay petroleum conservation in Alaska. Based on the foregoing, it therefore appears that the prime candidate for reduction or elimination is the personal income tax and the corporate income tax.

Putting the Income Tax in Perspective

In analyzing Alaska's personal and corporate income tax, it is important to understand the relationship with the Federal income tax. The regulations for the Alaska income tax closely parallel those for the Federal income tax and is based upon a percentage computation of the Federal tax. There is, however, one significant difference. Federal income tax rules provide that State income taxes are an allowable deduction for taxpayers who itemize deductions on their Federal Income Tax Return. Therefore, an Alaskan taxpayer, in the highest Federal bracket (70%) may deduct 70% of the amount of State income tax he pays from the amount of Federal income tax he pays. This means that for the highest income brackets, the net cost of the State income tax is only 30¢ on the dollar. For a person at the lower end of the income bracket (14%), the net cost is a sharply increased 86% of the actual tax. For the person who does not itemize deductions on his Federal tax return, the amount of Alaska income tax paid has no affect on the amount of Federal income tax paid, and therefore the net cost to him of the Alaska income tax is 100% of the amount paid. In almost all cases, it is usually advantages for persons who own homes (due to the fact that mortgage interest and real estate taxes are itemized deductions), or who have high incomes to itemize their deductions on the Federal return. Therefore, it can readily be seen that the persons who pay the highest percentage of net dollars (although not necessarily the most dollars) in State income tax are those persons who rent or who are in the lower income tax brackets.

In analyzing the income tax, it is also important to analyze just who is really paying that tax. In a recent talk, Governor Hammond indicated that the gross revenue from the personal income tax was approximately \$130 million, of which amount \$30 million is paid by non-residents of the State of Alaska.¹

It must be remembered that most projections indicate that the income from petroleum taxes and royalties will sharply diminish within fifteen years unless there are additional oil discoveries. Therefore, the projected level of state spending will begin resulting in deficit budgets. Any elimination or reduction in taxes to Alaskan residents is likely to be temporary in nature.

Before enacting any new tax, four basic questions which must be answered are as follows:

- (1) Is the tax reasonably fair?
- (2) Is the tax reasonably easy to administer?
- (3) Is the tax reasonably related to the ability of taxpayers to pay?
- (4) Will the tax have an undue negative affect on the economy? (Since government is not as efficient in its utilization of capital as private enterprise, higher taxes will always have some adverse economic impact.)

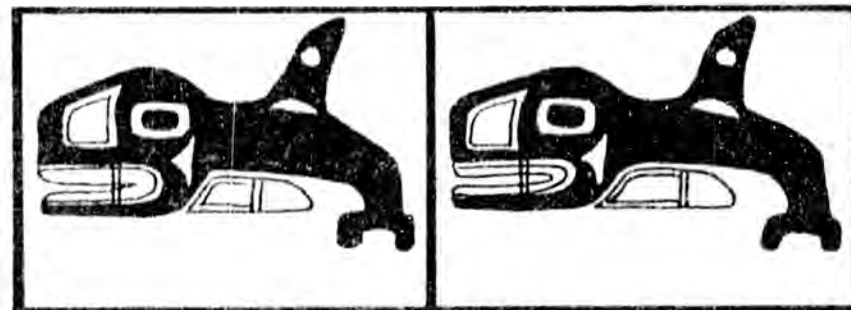
Therefore, when consideration is given to the reduction or elimination of the tax, it is only reasonable the same criteria should be applied.

One Alternative is to Simply Eliminate or Reduce the Current Income Tax

In analyzing the pros and cons of the alternatives the criteria which would be used for imposing a new tax will be applied.

Pros

The reduction or complete elimination of the income tax is incredibly simple to administer. With taxes reduced, it is a simple matter of reprinting the tax schedule. If they are eliminated it would be relatively easy to disband that portion of the Department of Revenue dealing with the income tax. It is certainly reasonably related to the ability to pay since no one would be paying any income tax. On the one hand it can be argued that it is very fair, since those persons who will benefit are those persons who are paying the taxes in the first place. However, a sub-



stantial argument can be made that the reason the tax can be eliminated is due to the profits derived from Alaska's natural resources, and that since these resources belong to all of Alaska's residents, all of them should share in an equitable manner. Unfortunately, the matter as to which approach is the most fair is pretty much a matter of individual philosophy and should be the subject of a book on philosophy rather than a brief paper on tax structure.

Cons

The negative arguments against complete elimination of the income tax begin with a discussion of whether or not it is fair which, as discussed above, is a matter of individual philosophy. The overwhelming argument, and of this author's opinion, the key issue against eliminating the tax is the economic impact on the State of Alaska. As discussed earlier in this paper, any reduction in the Alaska income tax will, for the taxpayer who itemizes his deductions, increase his Federal income tax. Therefore, a significant portion of the amount of reduction in Alaska income tax will be offset by a corresponding increase in Federal taxes. Although the author does not have at his disposal hard statistics as to the percentage of Alaskans who itemize Federal returns and their average Federal tax rate, it is reasonable to assume that since approximately 50% of all Alaskans are homeowners, approximately 50% do in fact itemize deductions on their Federal tax returns. Based on examination of Alaska's per capita incomes, it is reasonable to assume that the average Alaskan who itemizes his Federal tax return would conservatively be in the 30% Federal tax bracket. Therefore, complete elimination of the \$100 million in State income tax paid by Alaska residents (Governor Hammond's figures) would amount to a corresponding increase of \$15 million in Federal income taxes ($50\% \times \$100 \text{ million} \times 30\% = \$15 \text{ million}$). Considering that \$30 million of the total \$130 million in income tax is paid by non-residents, the complete elimination of the personal income tax would result in only \$85 million (or approximately 65% of the loss of revenue to the State) in the pockets of Alaska residents. While an additional \$85 million at the personal disposal of Alaska residents would certainly enhance the economy, it is this author's opinion that we should strive for a higher return.

The Recommended Tax Structure

It is this author's opinion that the State would better be served by keeping the income tax in force and providing a series of tax credits which will either reduce, eliminate, or provide a negative tax based on a series of tax credits related to the high cost of living in Alaska. This proposal would be based on continuation of the current "Individual Income Tax Credit" with additional credits equal to the amount of real property taxes and heating and electricity paid, or indirectly paid as a renter, on a permanent residence within the State of Alaska. Obviously, there would have to be some limitation as to the amount of such credits. These credits could easily be established, year to year by the Legislature, depending on the amount of revenue needed to operate the State. Assuming that it is the intent to completely eliminate the \$130 million collected in income tax, it would be possible to calculate these credits as the maximum of the actual total (i.e., sum of the current individual credits, plus the cost of real estate taxes on the residence, plus the total cost of the heating and electricity for that residence) or say \$325 per family member, which is the approximate per capita amount based on \$130 million income tax revenue. Since a portion of this recommendation is to allow an actual negative income tax, it is important to separate the tax structure from the welfare system. It is therefore recommended that an additional maximum limitation be established as 50% of the taxpayer's gross earned income.

To allow renters to take advantage of credits for taxes and utilities, which they indirectly pay through the owner of the property, it will be necessary to place a certain administrative burden on owners of rental property. To offset their cost in providing this service to tenants, it is proposed that owners of rental property be allowed to deduct as tax credits the amount of credits for real estate taxes which would be attributable to vacant units. As an illustration of how this would work, assume that a taxpayer owned a four-unit apartment building on which the real estate taxes were \$1,200/year and that throughout the year he averaged a vacancy of 25%. In this instance, the renters of each unit would receive a \$300 credit and the owner would receive the remaining \$300 credit. The renters would, in addition to the credit for real property taxes paid, receive credit for their pro rata share of the utilities.

Relief to corporations paying the corporate income tax could be provided by allowing tax credits to help offset the high cost of doing business in Alaska. While it would be possible to establish corporate credits for real estate taxes paid, and utility costs, it is this author's opinion that a more beneficial type of credit should be related to the number of Alaskans employed. It is therefore recommended that corporate income tax relief be related to Alaska employee credits. Under this system each corporate taxpayer would be allowed a tax credit, equal to an amount established by the Legislature, for each employee who is an Alaska resident. By utilizing this form of credit, there would be greater incentive to those types of industry and business which are labor intensive and therefore provide greater benefits to more Alaskans. It would even be possible to allow higher credits for certain industries, the development of which the Legislature would like to encourage.

Since these credits are likely to be temporary in nature, and may vary from year to year, the most efficient method of administering the credits is to prepare an additional schedule to the current income tax form. After the taxpayer completes his normal income tax computations, he would then prepare the form for his credits. So that the taxpayer realizes that he will ultimately pay for any new government programs enacted, and that the credits are in fact temporary, the form should have a label such as "Temporary Tax Credits Due to Surplus Petroleum Revenues." By utilizing this method, the amount or limitation on the credits could be varied from year to year, depending on the State's revenue needs, while at all times maintaining a high level of consciousness with the taxpayer that he is ultimately responsible for the cost of government programs.

Pros

The recommended alternative is fair if the reader subscribes to the philosophy of fairly equal distribution of the benefits among the entire population. Because it spreads the amount of tax reductions more evenly through the populace and is related to cost of living and doing business in Alaska, it is more related to the ability to pay than the alternative of a complete elimination of income taxes. With the exception of credits which would accrue to non-resident corporations employing Alaskan residents, all of the credits would accrue to the residents of Alaska and therefore would provide a greater dollar impact on our

economy. Because of the broader distribution and the allowance of a negative income tax, the benefits would accrue more heavily to persons who do not itemize their Federal income tax returns, and therefore will reduce the amount of the tax reduction benefits, which would be lost through increased Federal taxes.

Cons

An argument against this recommendation is, of course, the element of fairness which again depends on philosophy. Another argument against the proposal is that it would be more complicated to administer than a complete elimination of the income tax. On the other hand, the mechanism already exists for administering the income tax and with the exception of providing regulations for determining the amount of credits to renters, it should not be significantly more difficult to administer than the present law. Since owners of rental property would be receiving some benefits in exchange for calculating credits to renters, they should be quite cooperative.

Summary

In summary, it appears that the recommended course of action is preferable to complete elimination of the income tax in that it directs more dollars into the Alaska economy, and will benefit more Alaskans, particularly those currently receiving no reduction in Federal taxes for the amount of State taxes paid. It also has the benefit of providing the greatest tax reduction for those businesses providing the most jobs for Alaskan residents.

While adoption of this tax structure would leave some higher income Alaskans still paying income taxes, it must be remembered that these higher income persons are already receiving substantial credits against the amount of their Alaska income tax through reduction in the amount of their Federal income tax. Therefore the issue of fairness does not seem to be an overwhelming one.

The major objection against the recommended tax structure, as opposed to the alternative of eliminating income taxes, is that there is no cost or effort involved in the elimination of income taxes. However, it is likely that at some future date it will be necessary to again levy income taxes and the amount of tax reduction benefits lost to the Federal government and non-

residents greatly exceeds the current cost of administering the income tax. In addition, the recommended tax structure will allow the Legislature to distribute benefits from our petroleum wealth greater than the amount of income taxes, but still retain the necessary mechanism to levy taxes which might be required in the event of some unforeseen change in petroleum revenues.

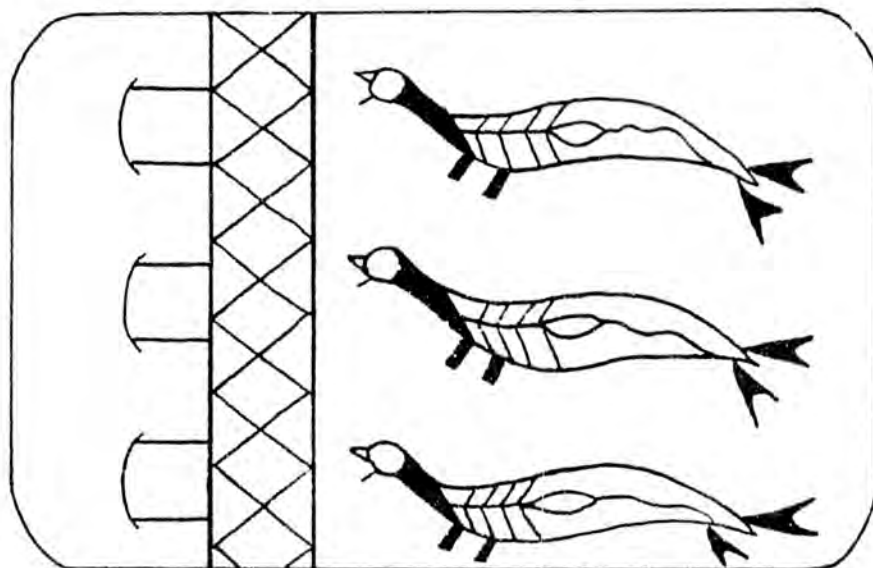
NOTES:

Footnote

¹According to the Department of Revenue, actual revenue for fiscal 1979 from income taxes was \$117,181,248.80 from personal income taxes and \$24,828,170.87 from corporate income taxes for a total of \$142,009,419.60. They were unable to, as of the date called, verify the amount paid by non-residents.

Biographical Sketch

Kenneth Jay Gain, MAI, SRPA, SRS, CCIM, is a 28-year Alaska resident who is currently employed as President of Professional Realty, Inc., and as Chairman of Real Estate Services Corporation, of Anchorage, Alaska. In his personal practice he specializes in counseling clients in achieving tax shelter through investment in real estate. He has also organized and currently manages some 15 partnerships designed to provide tax shelter for investors.



PERMANENT FUND

prepared by
Emmitt Wilson

Since it became apparent several years ago that Alaska would be able to accumulate a sizable surplus due to mounting revenues from the North Slope Oil Reserves, everyone and everybody has developed their plan for managing or spending these revenues. The past two sessions of the State Legislature have considered the idea of a permanent fund bill to establish the control of this apparent wealth.

In reviewing the report on the Brookings Institute Conference held ten years ago after the \$900 Million oil lease sale, it is obvious that trying to predict and predetermine the actions and consequences of the next ten years will be nothing more than guesswork on the economists part. Throughout a history that has experienced the failure of four distinct economic systems, economists, for the most part, have only projected from current assumptions and later explained why their predictions failed. Ten years from now it is unlikely that my statements and recommendations will have stood the test of time but I offer them in the belief they would be good for Alaska today and well into the future.

The number one controversy that exists within Alaska at this moment is what to do with \$1 to \$4 Billion the State will apparently receive this fiscal year, over and above all operating costs and the possible \$45 Billion of such accumulated surplus by 1995. It appears we are now in the position that John Maynard Keynes would describe as having a budget balanced at naught on both sides, with the community starving to death because of inability to put itself to work. Theory and practice have lost contact.

At the very same time we are amassing these billions of surplus dollars, we are witnessing the failure of hundreds of Alaska businesses due to the lack of financing. Our homebuilding industry that is so vital to continued economic growth and expansion is being devastated because of the lack of mortgage money within the income limitations of the homebuyer. Moreover, hundreds of

good people are being forced to leave the State because they can't be gainfully employed. What is holding us back? I think we need to answer at least four questions:

- (1) Should Alaska continue to tie itself to the monetary policy of the Lower 48?
- (2) What exactly is economic growth and is it desirable?
- (3) Have we enough of it now?
- (4) How can we get more of it, if we desire?

Should Alaska continue to tie itself to the monetary policy of the Lower 48?

By sharply increasing interest rates and adopting direct controls on the money supply, Chairman, Paul Volcker and the Federal Reserve Board have ordered what could be a long and severe recession with higher unemployment a certainty. This could be costly to Alaska's economy even if Mr. Volcker were right in predicting that it will bring inflation down, perhaps to 10% by the end of the year.

This is unlikely, however, since Alaska's unemployment rate is well above the Lower 48 and much of the inflationary boom is beyond the reach of monetary policy. The market power of big business to set wages and prices is a good example. So too is OPEC oil pricing, with another increase expected in December. A huge increase in social security payroll taxes in January will increase employer costs, drive up prices and reduce employee take-home pay, creating new pressures for catch-up wage increases. Higher interest rates are in themselves inflationary in the short run, since they increase the cost of money. Federal tax collections will decline with the Gross National Product and federal outlays for recession relief will rise steeply. The resulting increase in the deficit will be upwards of \$20 Billion for each percent of unemployment. This deficit will have to be financed at the higher rates of interest decreed by the Fed, which will further increase the deficit.

Productivity, the lack of which is another cause of inflation, is not improved during recession. Factories have to be operated at less than efficient levels of capacity and investment falls off due

to the bad business climate. Lane Kirkland, George Meany's successor as head of the AFL-CIO, has called the Volcker package "the wrong move at the wrong time."

Since World War II there have been three recessions with nearly five million unemployed, with ratios rising to almost 8 percent. This is not an indication of healthy economic growth. The main problem appears to be the huge U.S. trade deficit we are acquiring due primarily to the demand for energy that last year amounted to \$40 Billion and is estimated to reach \$90 Billion in the coming year.

Alaska does not face such deficits. Instead, we are blessed with resources that insure tremendous increases in our Gross National Product." We have sources of continued cash flow, far and above the needs of prudent state government. Why then should we not return some of this income to the electorate in the form of tax relief, low interest loans and programs to benefit education and health? Instead, we are becoming part of an orchestrated recession being created by the Feds. We have the resources, the markets, the people and finally the money we have always lacked, until now, to build ourselves the best life and dynamic economy of any state in the Union, and of most countries, for that matter.

What is economic growth and is it desirable?

There are a variety of criteria for economic growth such as "the dollar output of goods and services," or some in the more abstract, such as "progress," "well-being," "higher living standards," etc. Measurements, meanwhile, can be in physical units, such as energy, tons, dollars, and also in human terms, such as the number of people employed and unemployed.

Affluent societies do not need to increase their tonnage of physical goods as much as they need to increase services, including the arts of living. Beyond the dollar totals, beyond full employment, lies this central question - *How well does the gross output serve the people who live in the economy?* Alaska is abundantly supplied with hard and soft minerals, water, forests, fish and money. We are seriously under supplied with job opportunities, schools, teachers, hospitals, housing, livable cities and many public necessities. We need to monetize our resources and our men and women.

Have we enough of it now?

Our economy is far below potential at the present time. We should never forget the fundamental goal; *to keep citizens employed and the community healthy.* Until every person who wants to work is working, until every housing unit has food, shelter, clothing, health services and education, we have not adequately managed our economy.

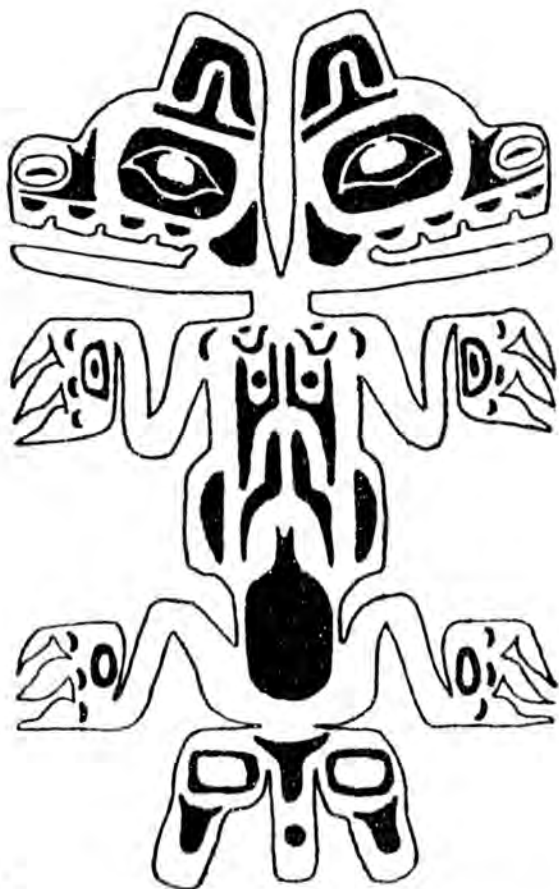
How can we get more of it (economic growth) if we desire?

It has never been done in an open society without increasing its debt. Our so-called free enterprise system is primarily a debt system, where bank money, which began as a debt of the borrower, is converted into new wealth. To increase the growth rate, money must go into the flow faster than it is taken out. The new money, it has been found, will also stimulate an increase in spending over and above the amount of the original addition.

John Maynard Keynes was the first to draw attention to what is now generally known as the "multiplier." When money is motionless, as in a sock or a vault, nothing happens-except to the ego of its possessor. When it is spread around the market, the initial expenditure activates a series of waves, like a stone thrown into a pool of water, which continue to expand for some time.

Most of us assume that the initial spending is the only spending; we completely neglect the multiplier. Thus \$1 Billion, borrowed from the banks and spent by the government to put a man on the moon might be regarded as a total loss, to some, money down the drain. Actually, owing to the multiplier effect, perhaps \$2 Billion will be spent for food, shelter, clothing, health and education. The scientists, engineers and workmen spend their salaries and wages. The individuals who receive the money spend most of it, save some of it. Business firms also save some of it, as the dollars go around and around in the circuit.

Professors Canto, Joines and Webb of the University of Southern California, Graduate School of Business Administration, did a study on the effect of Proposition 13 in California. Proposition 13, which became law in July, 1978, placed a lid on property taxes at 1% of market value and dropped revenues on which counties, municipalities and school districts rely, from \$12 Billion



to about \$5.6 Billion. The \$6.4 Billion cut in property taxes was apportioned as follows: only \$2.3 Billion went to homeowners, with the landlords getting \$1.2 Billion and commercial and industrial interests winning a \$2.9 Billion cut.

The \$2.9 Billion cut for the Business Community prompted Governor Brown to urge corporations to invest their tax savings in California to create more jobs and a "Buoyant Economy."

The report which was presented a year after the Bill was enacted showed there was a decline of 100,000 jobs in the public sector but a creation of 552,000 new jobs in the private sector. The unemployment rate in California declined from 7.6 percent to 6.2 percent while the U.S. rate declined from 6.1 percent to 5.8 percent; the lowest gap in 20 years for California.

To substantiate their evidence the professors found that personal income tax cuts in Puerto Rico in 1976 were followed by a drop in unemployment and a dramatic increase in the Commonwealth's surplus. Similarly, the professors noted that in 1962 and 1964 tax cuts resulted in the national economy experiencing "a period of unprecedented expansion," with unemployment declining from 6.7 percent to 3.8 percent in 6 years.

These examples illustrate the multiplier effect. It doesn't matter if it is in the form of a tax cut or *new* loans. If it allows an addition to current investment which would not have occurred otherwise, incomes will necessarily be increased and at a rate which will normally exceed the rate of the increased investment.

Money lenders, centuries ago, issued gold certificates to an amount greater than the gold in their vaults. They thus created money "out of the air," or more properly, created the means to finance an increase in production. They took a calculated risk that the gold certificates with inadequate metal behind them, would stimulate enough activity by the borrower so that he would possess new wealth, and could repay the loan and interest.

Keynes summarizes the modern process. A grant of bank credit, and the checks resulting therefrom, will tend to:

- (1) increase the output of wealth,
- (2) increase employment,
- (3) improve wages, and
- (4) raise the gross national product.

The bank credit comes "out of thin air" to begin with, but usually materializes into useful economic events. Credit can be extended to a businessman, to a government, to an individual or to a charitable enterprise, for that matter. The businessman normally gives his note, the government its bond, or short-term paper. Both help to create money or numbers never before in existence!

The only thing that has ruined this desirable process is infla-

tion, "The condition or state of generally rising average prices for like or equivalent goods or services. Inflation can be independent of, and is not necessarily correlated to, the amount of money or credit available."

We've been offered hundreds of contributing causes of inflation, most of which are really effects, not causes. In any vicious cycle, an effect becomes a cause, and vice versa. High interest rates are a case in point. Inflation requires high interest rates. Lenders are entitled to receive back at least as much value as they lent. If the dollar is worth less at the end of the loan period, equity demands that the lender receive enough additional dollars to make up for the loss in value of dollars lent, but interest costs are part of the expense of doing business, so high interest *resulting* from inflation in turn *causes* more inflations.

Until we completely change our U.S. corporation tax structure to a graduated rate (above \$100,000 earned) we will not stop inflation. With a graduated corporate rate, price and profit increases would be as worthless to business as wage increases are to labor. As it is now, wage increases are just added on to the price, plus the profit on the increase, and passed on to the consumer.

A graduated corporate tax program that would achieve this end of price-wage spiral would be profitable to business, labor and the entire economy since each would gain more real buying power instead of dollars worth less all the time.

Martin J. Meyer and Dr. Joseph M. McDaniel, Jr. wrote a book entitled *Don't Bank On It*. In it they say "Believe it or not, any sum of money deposited in any Bank or Savings and Loan Association at any time during the past 10 to 25 years, after deductions of average income taxes on interest earned, would have brought more loaves of bread, more heads of lettuce, more rides on the subway or more copies of the *New York Times* with the original deposit than it will today will all of the compound interest added. Money must be made to multiply itself many times over in the span of a score of years if the thrifty are to keep pace with inflation."

The best Master Trust Agreements offered by the top banks and money managers with their "very *aggressive*" asset mix of

10% bonds, 80% stocks and 10% cash are expecting a rate of return of 11.8% over a five year period. Their "very *conservative*" asset mix of 80% bonds, 5% stock and 5% cash is projected at 9.3%. After adjustments for management fees and taxes (in the case of corporations and individuals) the net after tax return is more like 6.4% to 6.8%.

The State of Alaska, to my knowledge, has never had a net effective yield on its investments in excess of 8% annually. Meanwhile, an inflation rate of at least 10% is predicted for this year.

Under these conditions how can anyone argue that "Saving" our surplus money for future generations is the correct path to take when we are not even getting our own money back at the end of the year.

The State can, however, realize a much higher rate of return if we can obtain the direct results of the multiplier effect within our economy.

Take for example an 11% net return from a master trust agreement in comparison to an 8% - 30 year loan on a new home built in Alaska using a \$100,000 principal amount. The 11% will make the State \$11,000 in interest the first year. The 8% home loan will only return \$8,000. How can we justify this? At least 50% of the \$100,000 is labor that the economists say turns over 5 to 7 times before winding up in someones bank account. Let's be conservative and just figure 4 times, or \$200,000 of direct benefit to the economy generated by the labor portion of this one loan. The land that was subdivided required permits from the municipality, soils tests, engineering, title reports, legal documents, utility design and construction, all before the lot was produced. The house, besides the labor, required the materials and equipment and tools, all of these things contribute to a continuous sequence of expansion and we call the multiplier process. And taxes are paid to the municipality and state each time the sequence occurs. The property tax at 9 mil's on an \$80,000 assessment would be \$720 per year. The state income tax on \$200,000 in a 9% tax bracket would be \$1,800.

The difference between the 11% and the 8% rate to the homeowner would be \$218.50 less per month. Assuming most of this

went back into circulation with the multiplier effect of 4-1 it would mean \$10,488 per year additional benefit to the economy. Considering these compounding beneficial effects how could anyone say that "outside" investment is better for Alaska, unless you do not want growth or employment.

The similar advantages of providing superior rate financing to Alaska businesses would be just as dramatic. If you would pull 20 case files at random from the State Business Loan Section, that were made without bank participation, you would find typically a \$100,000 loan at 8% for 10 years will provide that business \$500 - \$700 of new money per month that it didn't have before. Applying the multiplier effect to this, it should become obvious that just as the tax cut under Proposition 13 put new money into play, that created jobs and actually more than made up the tax loss, this same result could be accomplished in Alaska by just lending people their own money at reasonable rates.

I would strongly recommend that 50% of the Permanent Fund be allocated for investment in a revolving loan fund for Alaska homeowners and businesses.

From every indication, the abnormally high interest rates decreed by the Feds will be forced back down within one year. Treasury Secretary, G. William Miller, the administration's chief economic spokesman, in a recent appearance before a subcommittee of a House-Senate joint economic committee, assured them the administration is prepared to "offer alternatives" to the current policy. The Treasury-Secretary said he believes a two-tiered system of bank interest rates, with lower rates for smaller business "makes good sense."

Lawrence B. Simons, Assistant Secretary of Housing and Urban Development, on November 9, 1979 confirmed that they are about to ask Congress for money to buy single family mortgages at below-market interest rates. A 1974 law authorizes \$10 Billion for such purposes.

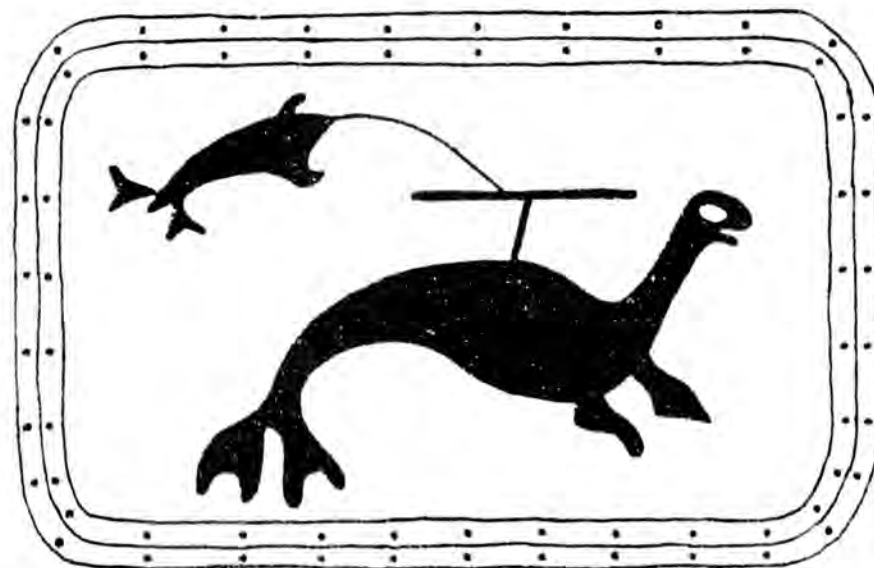
When the rates drop, Alaska could sell its mortgage portfolio or utilize the bond market "to create money," if it wished. In this manner the original funds could be leveraged to many times their original amount.

These loans should be available to all *qualified* Alaskans, regardless of income or mortgage amount limitations. The process for smaller business loans should be simpler and faster, and bank participation should be a choice of the borrower, not a compulsory requirement.

The Permanent Fund can provide the energy Alaska's economy has been waiting for...an adequate flow of money that can add millions of dollars of income and thousands of jobs.

Biographical Sketch

Emmitt Wilson is the director of the Alaska Teamsters 959 Credit Union.



ALASKA'S OIL AND GAS POLICY

by
Chancy Croft

Historical Perspective

The oil and gas potential of Alaska was known long before Alaska became a State. Oil seeps and their use by the Native peoples of Alaska were recorded prior to the turn of the century. Commercial production in fact was obtained in two different fields in Alaska prior to statehood; at Katalla in the Gulf of Alaska in the 1920's and 30's and at Swanson River on the Kenai Peninsula where Richfield, the forerunner of the present Atlantic Richfield Company, made a major discovery in 1957.

Nonetheless, at the time of statehood, oil was not as important to the State of Alaska as it is today and the attitude of State government reflected it. Until recently, no overall State policy toward oil and gas development existed. A leasing statute did exist, but there was no comprehensive leasing policy. The severance tax of 1% produced little revenue. There was no State authority to regulate pipelines and environmental concerns were for the most part nonexistent. Having said all that, though, it must be acknowledged that the State made one great accomplishment. Whatever disadvantages resulted to the State from the deficiencies were probably transitory and the result of the one great accomplishment of the State is more or less permanent. The State did select — as it was entitled to do under the Statehood Act — from the federal government — lands for the most part covering the great oil and gas basins of the State and thus obtained them for State ownership.

While others exist, the best example of the tremendous benefit of this policy is Prudhoe Bay. The State selected these lands in the early 1960s. As an oilfield, Prudhoe Bay was found in 1968. It remains to be produced, not discovered, at least 8 billion gallons of oil are recoverable under the present state of industry technology. An additional 12 billion barrels of oil exist in the reservoir. It is the largest oilfield ever found on the North American continent. Numerous dry holes had been drilled on the North Slope prior to its

discovery. There are those in the industry who say that the discovery well was the last one to be drilled and if it had been unsuccessful, further efforts of North Slope exploration would have been abandoned for years. But now the odds are not 1 in 10 — the industry average for finding new fields; they are 1 in 1. In Alaska we are now dealing with certainties, not probabilities. Of immediate concern is development, as well as exploration.

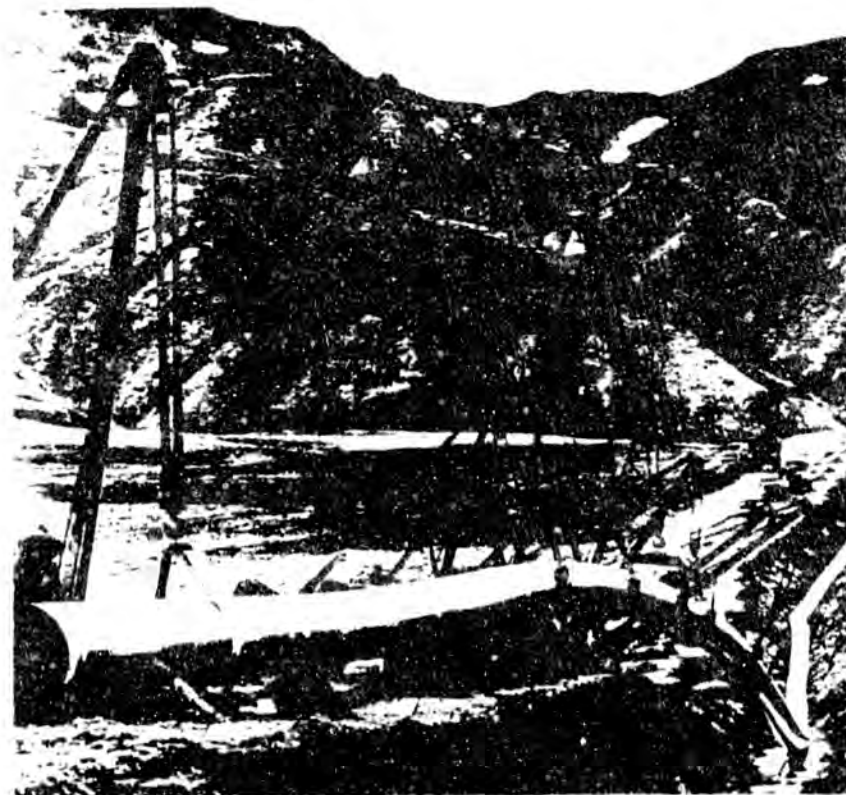
Prudhoe Bay has been leased. The State of Alaska has sold under its leasing program to the North Slope producers the exclusive right to 87½% of Prudhoe Bay production. The State has retained a royalty of 12½%.

In some ways, the history of oil and gas development in Alaska has somewhat paralleled that of other states, but in one very large aspect the State of Alaska is different and the State's policy must be a new and different one from that formulated by other oil producing states because of that factor. Those policies are often irrelevant to the situation in which Alaska finds itself. In Alaska the major areas of oil development are owned by the State. The Native corporations have lands with substantial oil and gas potential but all significant production now is on State owned land and this likely will continue for years. With some exceptions, oil production in the other states is owned by private individuals in those states and not the states themselves. While it is true that such states as Texas have some state-owned production, the vast majority of the production is owned by private individuals. As such, the State of Texas is in a position of deriving whatever benefit it can from a transaction to which it, at least initially, was not a party. Such is not the case in the State of Alaska, which is one of the two parties to the initial transaction. Stated another way, the State of Texas primarily derives its oil revenues from its taxing power; the State of Alaska will derive its oil revenues, if proper policies are followed, primarily from its proprietary power as owner of the oil itself. Because of this fact, the State of Alaska must develop an oil policy which is unique to the other oil producing areas of the United States.

CURRENT STATUS

Presently the State of Alaska derives the majority of its income from oil and gas operations, the largest single item being the royalty

of 12½% which is the traditional land owners share of oil production. In addition to royalty, the State receives a severance or production tax which varies with the profitability of a producing unit ranging from zero to one which can be comparable to the royalty rate on highly productive Prudhoe Bay wells. In addition, the State has an ad valorem tax on pipeline and transportation facilities and had for two years a tax on oil and gas reserves in place. The 1978 session of the Legislature revised the corporate income tax so that there is a separate tax applicable to the oil and gas industry, even though its purpose and effect is to simply insure that oil and gas companies pay the same corporate tax rate as other Alaska corporations. The Pipeline Regulatory Commission was established in 1972 by the Legislature but was not activated until 1974 by the State administration. The Interstate Commerce Commission — now a part of FERC — is a federal instrumentality created to regulate pipelines for the public interest. It has done a dismal job and is generally considered one of the weakest and worst of the Federal regulatory agencies. The purpose of the State Pipeline Commission was to establish a strong regulatory commission to protect both the Alaska public interest and the interest of the State of Alaska in a realistic wellhead value. Generally speaking State royalty and tax income reflects wellhead value — the higher the value the more State revenue. Transportation charges effect wellhead value since that is determined by deducting transportation charges — tariffs — from the refinery price. Thus the higher the tariff the lower the wellhead value and State revenues. Despite some aggressiveness, the State Pipeline Regulatory Commission has been for the most part ineffective. The State has a good statutory framework with regard to leasing. However, between November of 1973 and July of 1979, there were no oil and gas lease sales in the State of Alaska. Now a major sale is scheduled in conjunction with the federal government in the Beaufort Sea in December, 1979. The State of Alaska has suffered from a lack of technical expertise with regard to the oil industry. Some expertise is being developed in the State government, mostly in the Department of Natural Resources and Revenue. The major handicap towards the formulation of the State's policy has been the absence of any expertise at the University of Alaska. There are two great exceptions — the Institute of Social & Economic Research and the Arctic Environmental Information & Data Center. All major oil and gas producing states have had Universities with first rate people involved in oil and gas matters — Texas, Louisiana, Oklahoma and California — but the State of Alaska does not. We do



have a couple of good vocational programs in Kenai and Seward Alaska.

But any evaluation of the current status of State policies must involve a consideration of several other factors.

The role of the State with regard to oil development is as a seller of a product. This involves a departure from the traditional role of government, which is to provide services or protection for its citizens which they cannot or should not provide by other means. Certainly, in at least one respect, it is no longer the arbiter of conflicting interests within its own citizenry, but is instead the marketer of products owned by it — on behalf of its citizens — to non-citizens.

As the seller of a product it is important to recognize that the State's most valuable product is vast areas of unexplored land with

great hydrocarbon potential; one of the few areas with that characteristic on the North American continent, if not the Western Hemisphere, and certainly the only such area in the United States. In contrast, of minimal value are such traditional governmental economic stimulants as favorable tax rates, industrial incentive, and the like. In short, it is the State's ownership of land and not its ability to use traditional governmental economic regulators which is the State's greatest asset.

Sellers are one-half of the parties to a sale. The direct purchasers of the State's products share some unusual characteristics themselves. In the first place, the Oil industry has enjoyed for a long period of time in the United States a very favored position with regard to governmental policy in general and tax policy in particular. Industry has obtained this favorable position because it constitutes — or at least did until recently — one of the most powerful economic and political interests in the United States. Secondly, the oil industry involves a vertically integrated regime. One company often controls the product from its initial extraction through all of the refining and marketing processes to the ultimate consumer. The company controls the exploration, discovery, production, transportation, refining, marketing and sale of the product; as such, the industry is in an extremely powerful economic position. On the other hand, the industry is, for the most part, undiversified. As such it is, ironically, in a vulnerable economic position.

In the third place, many phases of the product's handling involve monopoly or near-monopoly control of the product — probably the result permitted if not compelled by vertical integration and lack of diversification. No better example is available than the fact that for years to come the transportation of North Slope crude will involve one facility owned by a few companies. In this case the owners of the production and the transportation facility will for practical purposes be substantially identical.

In the fourth place, while the purchasers of the product are in a strong position, that position varies from company to company. Some companies are long on reserves and short on capital, others possess tremendous refining capacity but little production.

The character of the product itself is unique. In the first place, its value is subject to many factors beyond the control of the State. For

example, the value of domestic oil production is probably more affected by OPEC prices than any other factor. While a greatly increased demand for the product is forecast if present trends continue, the whole future of the product as a fuel source is open to some question. In addition, the product is a non-renewable resource, and as such, regardless of vast quantities of oil on the North Slope, the quantity is still finite. The market may be long-term, but is certainly not permanent.

The oil industry must always be viewed by the State of Alaska as the purchaser of a product the State has for sale. As such, it is naive and unrealistic for the State to expect that the industry will voluntarily discuss with candor the value of the product the State is selling and the industry is buying. If the State's information as to the value of the product is limited to the value publicly attributed to the product by industry, the State will never have sufficient information to formulate valid State policy. Only an independent evaluation by the State, coupled with marketing techniques which themselves demonstrate the value, will provide the information regarding value from which the State can formulate a realistic oil policy.

Alaska's task of being an informed seller is a formidable one. The informational sources of the buyers are sensitive and accurate. In addition, while the industry can discuss and decide in private, the State must do so publicly.

OTHER PRESPECTIVES

A myriad of other perspectives can be brought to bear in determining the State's oil and gas policy. For example, the current fight between environmental and developmental concerns. Are we failing to take advantage of an opportunity because of fear? Are we losing our values for a fast buck? Probably the truth lies somewhere between the claims of both sides. The oil industry has for the most part operated in a safe manner in the State of Alaska and has demonstrated its ability and willingness to abide by the conditions imposed either by the environment or by government. The State has benefitted from this attitude. But the industry has benefitted as well from the expertise of government and the Trans-Alaska Pipeline will stand not only as a monument to the engineering ability of the American oil industry but to the fact that it was government concern which avoided a fiscal and environmental disaster. Also bearing on

the formulation of State policy is whether development should occur quickly or slowly, whether government should tromp on the gas pedal or apply the brake. Consideration of these factors often causes a discussion to spill over into a question of whether or not the public or private sector will benefit most — or should benefit most — from oil and gas development. A related question is whether the government should use its regulatory or its proprietary powers. Should it act as an unbiased umpire or should it assert its prerogatives as an owner of a resource and can it do both efficiently and fairly? And how is the decision to be made? How does a representative democracy handle publicly its relationship with an industry that makes most of its decisions in private? Is a leasing policy or a tax policy one most likely to produce the greatest long term benefits for the State? What about varying interests between the federal government, the State government and the stockholders of Native corporations in Alaska? Most of the lands suitable for oil and gas development lie under State or Native control, but it is the federal government that is the most desperate to obtain new supplies of oil. To what extent will the interest of all three be better protected and advanced through cooperation rather than an adversary position? A gas pipeline has now been proposed to transport Prudhoe Bay gas to market. The statement has been made that State financing is necessary. Should the State participate? What should the State do with regard to petrochemical development? What about production of both oil and gas from known reservoirs? Other states regulate the rate, should we? Presently it is anticipated that more oil will be left in the ground than produced. Should the State undertake research to increase ultimate production?

DIRECTIONS

The result of these factors is simply that economic conflict between the State of Alaska and the oil industry is inevitable. The policy of the State could be developed, should be developed, must be developed, which will allow both the State and the industry to benefit from the State's oil development. If a policy of such a nature is not developed it is quite possible neither will benefit. But the fact that both may ultimately benefit does not change the fact that both will still be adversaries. Certainly, transactions exist — hopefully will exist between the State and the oil industry — in which both the buyer and the seller, because of unique circumstances peculiar to

both, enjoy an extremely profitable transaction. But to assume that this will invariably be the case with Alaska's oil is naive and in most situations increased benefits for one result from decreased benefits from the other.

Considering these factors, what principles will best guide Alaska oil policy in the future?

It should be recognized from the beginning there is no policy the State of Alaska can pursue that is without risk. If we develop now to the maximum instead of later we take the risk that we are selling the product too cheap. If we wait too long, additional energy sources may be found. They may be worse environmentally, they may not exist in the State of Alaska at all. If we lease on a net profits basis, there may be no oil in the ground. If we sell on a bonus basis, we may be disposing of another Prudhoe Bay.

It is absolutely essential that State oil policy be flexible. Because so many factors affecting oil policy are outside the control of the State of Alaska, a permanent irrevocable policy is unsatisfactory. Because the State will never obtain all the information it desires, it can never refuse to change policy in light of new information. Such a policy has its pitfalls. Instability may result in increased cost resulting from maintaining flexibility should be viewed as a cost of securing a far more valuable ability to cope with changing situations as they arise. Such a policy is bound to produce cries of alarm from an industry dedicated to preserving the status quo. But an industry which can successfully profit from a discovery program where its chances are only one in ten can successfully cope with a reasonably flexible policy on the part of the State of Alaska.

Secondly, the actions of the State of Alaska must be governed by the actions of the oil industry and not the industry's attitude. Whether the oil companies love us or not is irrelevant; we're not buying love, we're selling oil. While there are vast quantities of oil to be produced in the state the rigs will run; if the oil is gone the companies will leave. We can hope for no more and plan on no less.

A policy must give recognition to the differing positions of differing companies. A 1969 oil lease sale would have been a disappointment for the State if the participants had been limited to Atlantic-

Richfield, British Petroleum (now Sohio BP) and Humble (now Exxon). Sohio BP holds approximately one-half of the total recoverable resources at Prudhoe Bay, yet its total cash contribution to the 1969 sale was \$3 million — 1/3 of 1% of the total bonus received by the State. Those companies had their production and were reserving their capital to secure transportation. It was the companies without production who made the sale a success. We must be able in the future to capitalize again on a situation in which one company would bid a little and another a lot. In order to insure the viability of such a policy, it is necessary for the State to act in order to maximize the number of potential purchasers. Allowing monopolies to exist at any stage or in any phase of oil development could well jeopardize this policy.

Because the public sector owns the oil, the public sector of the economy will be the primary beneficiary of oil development. For example, at full pipeline throughout annual oil revenues to the State will be double the total yearly payroll to residents and non-residents at the peak of pipeline construction. Doubtless, the private sector will advance as a result of the sale of public oil. But the benefit will usually, if not always, be greater in terms of increased State revenues rather than private economic development.

Since oil is a non-reoccurring resource, our oil policy must be viewed as a means to an end rather than an end itself. It must be the goal of the State to channel the revenue derived from oil development to other social goals; either to permanent social improvements which will outlive the oil supply, or to development and perpetuation of renewable resources which will outlive the non-renewable supply. As oil, the product, is exhaustible, so the economic structure around it is exhaustible as well. In one critically important respect, the brightness of Alaska's future depends on the soundness of the oil policy we develop; the duration on how wisely we reinvest the income that policy produces.

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Author

Chancy Croft was a member of the Alaska Legislature for 10 years. He was chairman of the first Legislative committee to address the overall State oil and gas policy. Legislation written and research undertaken by that Committee has set the basic oil and gas policy of the State of Alaska. Mr. Croft was President of the Alaska State Senate in 1975 and 1976.

References

The first effort at analyzing the relationship between the oil and gas industry and the State of Alaska began with the Institute of Social, Economic & Government Research at the University of Alaska. In particular, Arlon Tussing and Gregg Erickson pioneered in the field. The 1969 Science Conference at the University of Alaska in Fairbanks was the first major public discussion of oil and gas policy and the papers of numerous participants are highly recommended.

In addition to work done by the Institute of Social, Economic & Government Research at the University of Alaska, the work of the Arctic Environmental Data & Research Center under the direction of David Hickock should be consulted with regard to environmental and technical information.

The Legislature has commissioned or obtained considerable sources of information. Under contract to the Alaska Legislature for approximately 10 years, Milton Lip-ton of Walter Levy & Associates of New York City has identified areas of concern to the State over a broad spectrum. The Legislative Research Division itself contained some of the greatest expertise in the field and numerous papers prepared by legislative research are recommended.

In the area of leasing, the definitive work was done by Mason Gaffney and in reservoir engineering the works of Professor Doscher of the University of California are recommended. The pipeline impact committee files of the 1971 and 1972 sessions and the work done under the committees headed by John Huber and Chancy Croft in 1975 and 1976 are also recommended.

With regard to the gasoline itself, the work done by Arlon Tusing and Connie Barlow under contract to legislative research, while controversial, is a fine product.

The administration has been responsible for several studies. Particularly the 1977 Department of Revenue study of taxation is a monumental work in that field, and recently the Department of Natural Resources has conducted a study of leasing methods in conjunction with the Legislative Committee headed by State Representative Joseph McKinnon. Ed Phillips' work for the Department in particular should be singled out for consultation. Far and away the most work in the area of petrochemicals has been done by the State Oil and Gas Royalty Advisory Board. Joe Moore, a consultant to that committee, is probably the most knowledgeable person in the area of Alaska petrochemical potential.

The industry has made numerous contributions in the field. Often contributions have been with regard to technical information concerning, say, geology of the North Slope. But they have contributed to the policy discussion as well, and probably the most monumental work that has been performed was the 1977 Arthur Anderson study concerning the profitability and taxation of Alaska operations. This was updated in 1978 and was done for the major North Slope producers. AOGA has done a study entitled *Alaska's Emerging Fiscal Crisis*, and it should be consulted.

IN-STATE USE OF THE STATE'S PETROLEUM RESOURCES

Prepared by
Connie Barlow

Thumbing through the reports and recommendations generated at the 1969 Brookings conference, I am struck by the absence of any mention of "in-state use" of the State's oil and gas resources. Nowhere were the prospects for refining or petrochemical development even mentioned. In the aftermath of the \$900 million sale of North Slope leases, oil and gas was viewed almost exclusively as a source of unexpected state wealth. Today, while this conference and statewide discussion in general still center on what to do with the cash windfall flowing from sale of petroleum resources, government officials and business interests are also talking about whether and how something more than money can be squeezed out of our oil and gas royalties — whether Alaska's share of North Slope production might be "used" within the state.

Recommendation #1.

My first recommendation is for delegates to refrain from labelling all petroleum processing proposals as "in-state use", and for delegates to urge state officials to do likewise. That may sound awfully petty, but I believe that sloppy use of the phrase by government officials is, in part, responsible for some of the misconceptions held by Alaskans as to the benefits of certain projects now being promoted.

If, for example, oil is refined in Alaska and the products find their way into our cars, snowmobiles, home furnaces, and electric generators, that certainly qualifies as "in-state use". The Earth Resources facility at North Pole and the Tesoro refinery on the Kenai do process oil for in-state use. However, if light hydrocarbons (known as gas liquids) are turned into basic petrochemicals like ethylene and polyethylene, Alaskans still will have to buy their baggies and pantyhose from Outside suppliers. All but the most optimistic promoters acknowledge that a petrochemical industry in

Alaska will provide only *primary processing* of resources; it will not supply much of anything that can be used within the state.

The timber industry in Southeast Alaska is a good example of this difference. While pulp and cant mills are important sources of local jobs and taxes, they do little to relieve our statewide dependence on Seattle for finished products like paper and lumber. There is nothing inherently wrong with manipulating state resources or even providing outright subsidies in order to bring about primary processing to help out local economies. But it is wrong to subtly suggest that there is something in it for all Alaskans by coining the phrase, "in-state use" — particularly if subsidies are provided from statewide revenue sources. When polled by the Fairbanks North Star Borough in 1978, for example, 58 percent of the borough respondents had the false impression that some sort of finished product would be available locally as a result of petrochemical development.¹

The rest of my recommendations target the crying need to bring some realism and responsibility into state policy-making with respect to primary processing of state petroleum resources.

First, it must be remembered that Alaska is not an ideal location for a petrochemical plant. We are far from major markets, labor costs more here than down south, our climate requires expensive construction techniques, and the facility itself must be specially designed to operate at cold temperatures. In addition, most experts agree that now is not the best time to build an ethylene plant anywhere. That's because too many chemical companies did just that a few years ago — in large part, coaxed by local and national governments striving to enter the industrial world. Now many plants are operating well below capacity and the word "glut" is typically used to characterize the current state of world markets for ethylene and ethylene derivatives. True, a foresighted company might believe it wise to start building now in anticipation of an end to the glut in the late 1980's, but lenders are hard to convince.

What all this means is that processing of North Slope ethane and propane into petrochemical building blocks within Alaska is not an inevitable consequence of having an oil and gas extraction industry. On the contrary, petrochemicals will only happen if we make them happen. That should be fairly obvious: Why else would there be so

much hoopla about the State doing something with its royalty gas? After all, EXXON, ARCO, and SOHIO own gas too — but, then, their interest clearly is in making money.

Some third world producing countries with geographic and labor problems similar to Alaska's have managed to attract petrochemical industries. They have accomplished this, however, by offering something special: like free gas feedstocks (which, till then, had been flared anyway for lack of a market) or long-term commitment of precious oil in exchange for a commitment to purchase the output of the petrochemical plants.

Why should our state leaders be concerned about whether or not primary processing of petroleum resources is a realistic strategy for Alaska? There are several reasons.

First, for the past two years and accelerating at a remarkable pace, legislators, top officials in the Administration, and key staff have been devoting a lot of time and creative energy to this topic — not to mention state money. While I am no critic of spending state money to analyze issues that might yield a healthy return or to look for loopholes in promotional efforts that could prove to be real boondoggles, the time and energy of state officials and staff is finite. To the extent that petrochemicals capture their attention and demand their own personal efforts, less time can be devoted to other state needs. There can be no doubt that petrochemicals have captured a good portion of the available state effort. The question is whether that ought to continue.

A second reason to give serious consideration to the feasibility of primary processing is that no matter how safe a contract is negotiated for sale of royalty oil or gas, the state cannot insulate itself from the impacts of a faltering industry once the industry has become an established and vital part of any regional economy. One need only look at the plight of Chrysler today and the Come-by-Chance refinery that went bankrupt in Nova Scotia several years ago. In order to keep thousands of Midwest workers out of unemployment lines, Congress has little choice but to issue a federal loan guarantee of a billion or more dollars; the provincial government, too, was virtually trapped into purchasing a second mortgage at Come-by-Chance. With royalty gas or oil feeding a large primary processing facility in Alaska, the obvious response in the event of trouble would be to reduce the feedstock price —

regardless of what the contract may or may not say.

For these reasons I make the following recommendations:

Recommendation #2.

Before any deal for construction of a primary processing facility is cut, state leaders should require the proponent to submit a qualitative and easily understood discussion of how the inherent Alaska disadvantages would be overcome. For example, would the facility employ new technology that is substantially more efficient or less costly than that found in existing plants elsewhere? Would it be cheaper to build in Alaska because pollution abatement is less expensive? Would pre-constructed modules or the advantages of back-haul be used? (It should be noted here that while the Collier Chemical urea plant and the Phillips gas liquefaction plant at Nikiski took advantage of a lack of alternative markets in negotiating a feedstock price of 15¢ per mcf or less for Cook Inlet gas, alternative markets do exist for North Slope gas and oil. The Chevron, Tesoro, and Earth Resources refineries receive a variety of federal regulatory advantages, or "small refiner bias", that would be off limits to a large export refiner.)

Recommendation #3.

State leaders should attempt to make a royalty contract as safe as possible. This would include recognition that contracting to a subsidiary of a large and prosperous firm is safer than contracting to a smaller or, worse yet, "paper" corporation. In the event of a short-term marketing crunch in which revenues fall short of meeting required debt payments, the parent could be expected to make up the difference, rather than necessitating a reduction in feedstock price. In the event of outright default on contract terms a company linked to a large parent corporation would have something worth suing.

Recommendation #4.

Nevertheless, no contract for sale of state royalties, no matter how safe it appears on the surface, should be entered into if the proponent has not provided sound evidence that it can build and operate a viable enterprise. The creation of a few hundred long-term jobs is not worth endangering the financial well-being and credit

strength of the State. It appears that state leaders today feel compelled to award a royalty contract unless staff can prove the economics are faulty. Even then, the proponents argue it is their right to give it a try. That is a dangerous and backwards approach. Instead, whenever the State's major financial asset is in question, the proponents ought to bear the responsibility to prove the likelihood of project success.

None of these recommendations, however, addresses the most immediate question of whether state leaders ought to continue making a herculean effort to ensure that decisions made by the federal government, the producers, and Northwest with respect to the gasline and conditioning plant don't worsen the prospects for attracting a petrochemical industry. To my knowledge, nobody has criticized the massive State effort now directed at petrochemicals; nobody has expressed concern that the State might find itself trapped by the direction now being taken. A very vocal group of supporters, however, would like the State to do even more — even to the point of making these demands the central (if not sole) bargaining point on which to trade State financial participation in the gasline.

This is where my final and most important recommendation to conference delegates comes in:

Recommendation #5.

More than anything else, we need to generate some debate on the question of selling royalty oil and gas for the purposes of attracting large-scale, primary processing enterprises. Right now, the only voices that state leaders hear are those of certain business and local government leaders promoting the concept. How much do Alaskans, in general, look forward to developing a petrochemical industry, if indeed it is something that would be considered an asset? What if it might require a feedstock subsidy and consequent reduction in our royalty revenues? Is it the most important item that the State could bargain for during the upcoming gasline financing negotiations? Is *no* gasline better than a gasline that fails to make gas liquids easily and cheaply available?

I realize it sounds heretical now to question something that has received nothing but favorable review. We all have read and heard

about the splendors of petrochemicals (even if we still don't know what a petrochemical is). But the lack of debate just isn't healthy — not in a place as diverse as Alaska.

Part of the reason that debate is so muted on this point may be because discussion has been channelled into a very technical level. But the most important considerations cannot be answered by technicians. On the contrary, most any Alaskan should be comfortable venturing his or her opinion on such matters, providing he or she has been given an opportunity to understand what the development would entail.

I'm not suggesting an anachronistic debate of the environment versus development, although that issue certainly could and should be a part of the discussion. At least four other questions, however, merit attention:

(1) Should the State encourage entry of an industry whose prospects for success are questionable, yet by the very nature of its size would link a region's economic well-being to its own? Should the State allow its financial nest egg (i.e., its royalties) to become tied up in the industry's operations?

(2) Why is it that our leaders talk about broadening Alaska's economy and becoming less dependent on oil and gas production, yet fail to mention that petrochemicals and petroleum refining will do just the opposite?

(3) Why is it fashionable to deride the boom and bust syndrome of large-scale construction, yet promote actions that will only add to the inevitable construction boom surrounding the gasline? If a petrochemical plant is built in Alaska for processing North Slope gas liquids, construction of the plant (and maybe a separate liquids pipeline from the North Slope or products line to tidewater) almost certainly would occur at the same time as construction of the Northwest gas pipeline, the conditioning plant, and a waterflood facility. If one also considers the employment required to build a second gas liquefaction plant at Nikiski (proposed by Pacific-Alaska LNG Associates) and maybe even an Alpetco oil refinery, simultaneous construction could present real problems.²

(4) Finally, what about the whole question of encouraging heavy

industrialization? Ten years ago delegates at the Brookings conference were highly skeptical of bringing industry to Alaska. The overall tenor at that time was for Alaska to do things differently than they do it down south. Well, if bringing in heavy industry is okay, what *don't* we want from Outside? What do we plan on doing differently? Is there any practical application of the rhetoric we all still spout about valuing our differences and maintaining our supposedly unique lifestyles? There is something ironic about Alaska trying so hard to attract reluctant industries when many lower 48 communities are fighting to keep them out. The question isn't pollution, nor even growth in a direct sense. It's a question of power: Who will be the citizens of Alaska, entitled to guide our State ten years from now? What will have brought them here, why will they stay, and what will they value in life? The type of jobs we choose to encourage in Alaska will make a difference. Whether employment grows in a way that tends to further urbanize Alaska will make a difference too.

I'd like to close with an anecdote that illustrates my point about power and employment.

The Alaska Royalty Oil and Gas Board held a meeting in Valdez in the fall of 1977 to discuss several proposals for the sale of royalty oil. The town turned out in force. Those who spoke extolled the merits of locating a petrochemical plant or refinery in their town. Those who filled the seats nodded their heads in agreement. But those who gathered along the back wall said nothing — their intent easily discerned, nonetheless. A police officer discreetly warned the state officials of potential "problems". No problems, in fact, arose; the fishermen left after a short time. There was really no reason for them to stay. Valdez, after all, was no longer a fishing town.



Footnotes

¹The "Fairbanks Petrochemical Study" report was issued by the Institute of Social and Economic Research in March 1978, and prepared through a grant from the Fairbanks North Star Borough.

²Round figure estimates of peak direct construction employment are:

Northwest Alaska gas pipeline	-	9,000
Gas conditioning plant	-	1,500
North Slope waterflood facilities	-	1,500
a small ethylene complex	-	1,500
a liquids or products pipeline	-	2,000
Pacific Alaska LNG plant	-	1,000
Alpetco oil refinery	-	3,500

These projects total 20,000 short-term jobs, compared to a peak TAPS oil pipeline workforce of 22,000.

Biography

Connie Barlow is vice-president of Arlon R. Tussing Associates, and co-author of a series of reports for the Alaska Legislature: "Financing the Alaska Highway Gas Pipeline: What Is To Be Done?" (April 1979), "The Alaska Highway Gas Pipeline: A Look at the Current Impasse" (January 1979), "An Introduction to the Gas Industry" (November 1978). Previously, she served as a special assistant on oil and gas matters to the Commissioner of Natural Resources during the negotiations leading to the sale of royalty oil to Alaska Petrochemical Company (Alpetco). She filled a similar role in the office of the Senate President and provided staff support during consideration of the now defunct North Slope royalty gas contracts and changes in the state's petroleum taxation laws.



ALASKA PETROLEUM AND ITS PEOPLE SOME PERSPECTIVES ON OIL & GAS POLICY

Milton Lipton
President, W.J. Levy Consultants Corp., New York

1. Ten years ago the Legislative Council's "Conference on the Future of Alaska" was convened hard on the heels of the \$900 million North Slope lease sale. This year's conference on "Future Frontiers" is convened barely a week before the scheduled Beaufort Sea lease sale. The timings are fortuitous but obviously not accidental.

2. The problems and prospects of Alaska, the concerns and choices of its people have been fundamentally and irreversibly changed by the discovery and development of major petroleum resources within the State. The pace and purpose of continuing oil/gas exploration/production will surely be pivotal in shaping Alaska's future, from whatever perspective the future is regarded -- societal, industrial, financial, personal. Hence the critical importance to all Alaskans of State oil/gas policies; and inevitable conflict of values in the shaping of those policies.

3. The ten years just past have been fateful ones for Alaska with difficult decisions having to be taken relatively quickly and with little prior exposure to options or consequences. The ten years ahead will afford Alaska the benefit of past experience. But they will also confront Alaska with a distinctly different world in which issues of oil/gas policy will have to be resolved.

4. Looking back over the decade between conferences, two facts stand out above all others.

Not a barrel of oil, hardly an mcf of gas has been added to Alaska's known petroleum reserves.

The value of Alaska's oil at refineries in the Lower 48 has escalated from less than \$3 per barrel to over \$25.

The contrast is striking, and meaningful.

5. In an energy-straitened world, our nation is vitally interested in an optimum contribution from Alaska's petroleum potential. For Alaska, that will involve hard choices between accelerated exploration/development and concomitant social/environmental costs.

6. Meanwhile, the sharply rising value of Alaska's oil and gas production not only enlarges the opportunities for financing desired objectives, but poses an enviable problem of balancing current revenues against conservation.

7. A few words about the very changes that have taken place in the world oil environment and how these will bear on issues of Alaskan oil and gas policy.

8. Ten years ago energy supplies world-wide still looked to be reasonably ample; oil prices, reasonably stable after having been depressed through the decade of the Sixties. Looking ahead from the vantage point of 1969, there was reason to be concerned about longer-run trends -- about the pressure of rapidly rising world oil consumption on future productive capacity and hence inevitably higher real energy costs. But these were distant concerns.

9. Petroleum issues in Alaska reflected in perceptions of the time. Oil tax policy for example. There was then, as also now and doubtless in the future, debate over the State's appropriate share of the value of its energy resources. But with oil values lagging and Alyeska costs soaring, there was superimposed serious concern over the "adequacy" of the State's projected oil revenues. In response, there was introduced a cents-per-barrel floor to Alaska's severance tax. Subsequent escalation and external indexing of severance tax rates were enacted against the background of disappointing crude price and hence oil revenue trends.

10. The same relatively unfavorable external environment confronted efforts to use the State's oil and gas resources as a basis for downstream investment -- investment that hopefully would generate jobs and income and help to reduce the comparatively high costs of various products in Alaska. Inhibiting those efforts were the ready availability and competitive pricing of alternative supplies in export markets.

11. One more example. Whether on matters of taxation or leasing policy, a balance had, and has, to be struck between the State's desire to maximize and the danger of seriously impinging on incentives to further exploration and development. That's been an especially difficult balance owing to the combination of relatively low market values and relatively high production/transportation costs of Alaska's energy resources.

12. The turn-around in world oil balances and even more dramatically in world oil pricing has to affect significantly Alaska's future directions. This is likely to be true not only of narrow questions of oil/gas policy, but for the complex of revenue/spending decisions that more than elsewhere in our country bear intimately on the State's social, cultural, and economic evolution.

13. That the distant concerns over world oil supplies and prices emerged so frighteningly in 1979 is owing to a combination of circumstances. As in 1973-74, political interdiction of foreign oil supplies was an immediate cause. But now, as then and over the years ahead, it is an increasingly tenuous world oil balance that makes us susceptible to political interposition. So we are at once exposed to the shortages that political interposition may bring; worse still, our very exposure is itself conducive to political adventure.

14. But underlying it all, and basic to the energy environment of the decade ahead, and beyond, is the progressive encroachment of world oil consumption on the resource base. It's getting harder and harder to replace the reserves that are used up each year. Conservation will help; so too will substitution, and in time, development of alternatives.

15. Withal, *real oil prices* will be in a distinctly rising trend -- reflecting both the increasing costs of looking harder and farther, and the increasing scarcity value of remaining reserves.

16. Coming back then to Alaska. Two perspectives. There are the various questions of oil and gas policy to be considered. There are also the various guises in which the State itself appears on the scene.

17. With respect the latter, the State starts out playing a major role as *landlord*, reflecting the importance of state lands to the exploration effort. As landlord *per se*, Alaska would want the fullest possible evaluation of its resources potential and optimum rental payments for access to its resources.

18. Increasingly it appears that the State will end up as *investor*, reflecting the timing and prospective accumulation of surplus oil and gas revenue receipts. Whether subscribing capital to a natural gas pipeline, gas conditioning plant, or other undertakings, as investor *per se*, Alaska would want maximum security for its capital and optimum return on its investment.

19. Meanwhile, the exercise of State *sovereignty* impinges on the petroleum sector in a wide variety of ways -- including but hardly limited to regulation and taxation.

20. To some extent, there may be conflict of interest among the several guises in which the State appears. More important is simply the necessity to understand the interrelations among overlapping decisions as Alaska acts out its multiple roles in the course of settling upon diverse policy issues.

21. More on this in the context of policy questions.

22. We neither presume to be exhaustive in our references to policy questions, nor definitive in discussion of issues. We try only to set these against the shape of the decade ahead.

23. Among questions of policy are the pace and conditions of ongoing *exploration* of State lands. Here the pressures for rapid and facilitated exploration will come largely from outside -- reflecting the critical contribution that Alaska's oil and gas potential could make to our nation's energy balance. Alaska's own circumstances will be conducive to more deliberate evaluation of competing interests.

24. Little need be said about the importance of Alaska's prospective contribution to U.S. oil/gas requirements. By now it's obvious. Within the year, financing the natural gas pipeline looked to be a tough nut at best; it's hardly less so now, but it's reasonably well

assured that the pipeline will be built -- by the run-up in competing oil costs and the political/economic price of undue dependence on imported energy.

25. On the other side of the equation, there is first that rising real energy prices will open up still wider the potential for development of Alaska's high-cost energy resources.

26. Second, the margin of decision between exploration incentives and standards of environmental protection has probably become a more realistic one.

27. Third, the societal concomitants of exploration/development -- coastal zone management, land use, current versus deferral revenues, etc. -- ought to be able to be debated and compromised in a less pressurized atmosphere than heretofore.

28. Nonetheless, pressures will be intense. And if Alaska's options are enlarged, decisions will probably be even more difficult precisely because the decision may no longer be constrained by the otherwise intractable circumstances of State Government.

29. Another area of policy. State *revenues* from leasing, taxation. In a perfect world of complete foresight, no problems. All leasing alternatives would bring down the same present value of future rents. All taxation alternatives could be translated into a straightforward projection of development/production/revenue at the margin. But the real world is beset by Byzantine unrealities.

30. It was not in the past a matter of indifference to Alaska whether lease revenues accrued early via bonus or later via higher royalties/net profit. It was not a matter of indifference whether tax alternatives bought in less earlier or more later. In a crucial year of threatened budgetary deficit, one alternative was a Beaufort Sea lease sale; if so, immediate bonus income would have been its objective. Alternatively, recourse was had to a *reserve tax*, in fact bringing forward (at no interest costs to the State) revenues that would otherwise have accrued later via severance tax.

31. Today, Alaska can take a more relaxed position with regard to leasing/taxation alternatives. Choices may not be more clear, the ideal no less illusive, the alternatives still subject to conflicting interests, but budgetary compulsion is hardly the constraining

factor it was in years past.

32. Similarly, in almost every aspect of *resource-based development*, Alaska should be able to apply more exacting criteria, more carefully define its objectives and apply its stipulations than heretofore. When royalty oil was first held out as a fulcrum for downstream investment, it had virtually no leverage. When later, four projects -- energy refinery or petrochemical facility -- were put into the hopper, the comparative evaluation revolved around tenuous and uncertain comparisons. The Alpetco contract emerged, fraught with conflicting opinions and interpretations.

33. Whether it's a review of a restructured Alpetco project, LPG availability and use, NG pipeline, or whatever, Alaska's position is strengthened by the sheer importance of physical access to petroleum supplies in investment decisions. What's happened in the world outside has moved Alaska ten years ahead.

34. A final point, and one that's apt to affect Alaskans more directly at least than other policy questions.

35. Petroleum is more needed in Alaska than in other areas of the United States for heating and for transportation. Simply put, a lot of oil (or gas) has to be used in the home, be it city or village. Whether on the ground or especially in the air, it takes a lot of oil to move Alaska's ton/miles of traffic, be it people or goods.

36. In the past, because Alaska is remote from where petroleum products were refined, transportation added substantially to cost of oil for Alaska's consumers.

37. In the present, because Alaska is remote from where its crude is refined, transportation subtracts substantially from the value of Alaska's production.

38. To what extent should Alaska, as a matter of policy, seek conciliation between costs and prices of its internal petroleum production/consumption? If so, how? Given a rising trend in real oil prices and the relatively heavy weight of energy consumption in Alaska's households and in its economy, the impact on future costs of living and of doing business could be substantial. And State policy could make a big difference.

THE NEW PERCEPTIONS ABOUT ALASKA'S FISCAL FUTURE

OIL AND GAS POLICY IMPLICATIONS FOR THE DECADES AHEAD

by

Kenneth E. Showalter

ALASKA AT THE CROSSROADS: THE 1969 CONFERENCE RECOMMENDATIONS

No group of Americans in recent times has had such an opportunity freely to plan its future. An oil bonanza has enriched the treasury of a state previously penurious and underdeveloped. This new condition gives today's Alaskan an unparalleled opportunity...¹

Those were the thoughts of the Delta Group as contained in their Statement following the 1969 Conference on the Future of Alaska. In reading the reports from the seminar entitled "The Financial Foundations for Future Alaska," one becomes aware of several prevailing trends of thinking. First, there was definitely a perceived need to improve educational opportunities and social programs to better the lives of Alaskans. Second, the conference attendees clearly viewed environmental protection as an important priority, along with the need to foster fisheries and other non-oil kinds of development within the State. Third, there was virtually no indication that oil and gas policy for the future was even a subject warranting discussion.

In the October 20, 1979 Alaska Growth Policy Council Symposium entitled "Alaska's Financial Future," Governor Jay Hammond provided an understanding of what was in people's minds at the time. At that time, according to the Governor, "it was thought that the \$900 million was enough to sustain us for many years..." As a result, the Government set out to implement programs to meet the needs of the people, and within ten years, State expenditures had risen 900%. During that period, there was not one major lease sale to broaden the State's revenue base. Instead, the State government looked to broaden the State's revenue base. Instead,

the State government looked to the Prudhoe Bay producers for additional revenue to support the government, raising the field's taxes 900% with eleven tax increases in as many years. Given the perception that Prudhoe Bay would sustain Alaska indefinitely, it is understandable to a degree why there was virtually no concern for fostering an economic climate and a leasing policy that would encourage further oil and gas exploration and development in Alaska.

In addition to carrying out needed educational and social programs, the environmental goals reflected in the 1969 seminar were implemented not only at the State but also at the Federal level. Several of the most well-known environmental goals reflected in the 1969 seminar were implemented not only at the State but also at the Federal level. Several of the most well-known environmental laws that have been passed in the last decade reflect those concerns; the National Environmental Protection Agency is surely the most prominent. Additionally, there is the Endangered Species Act, the Ocean Dumping Act, the Coastal Zone Management Act, the Marine Sanctuaries Act, and, as a part of the Native Claims Settlement Act, there is D2.

The effect of these changes over the past decade has been monumental. For the people of Alaska, the changes have resulted in a unique economic environment. Alaska has the highest per capita income in the U.S., yet individual Alaskans pay a relatively small percentage of personal income as taxes. Alaska's state government has loaned out more money than any other. In the Lower 48, Alaskans are known as "the blue-eyed Arabs" because of Prudhoe Bay and the oil potential thought to exist in the State. With the recent OPEC price increases, Alaska now looks forward to a \$1 billion surplus in unexpected revenues. From an oil industry perspective, Alaskans can hardly be viewed as environmental rapists either. The concern for the environment has made itself increasingly evident: from the repurchase of the Kachemak Bay Leases to a set of leasing regulations that result in a permit package weighing close to 93 pounds compared to some 3 pounds for such a package ten years ago. Given the beliefs of a decade ago, therefore, many of the perceived needs expressed in the 1969 Conference have been met. But, as Governor Hammond recently reiterated, Alaska depends on one resource—petroleum—for some 70% of the State's day to day needs.

To the extent that there was a perceived need to diversify the revenue base in 1969, that goal has largely not been met. At this point in time, a decade after the first such symposium, it is most appropriate for thoughtful people in the State to pause again and examine not only where we have been in the past decade but where indeed should the State be headed in the decades ahead.

Current Status: Some New Perceptions About Alaska's Fiscal Future

In the past year, several prominent economists have reached similar conclusions about Alaska's fiscal future given their perceptions about Alaska's current status. Economists at the Institute of Social and Economic Research of the University of Alaska were among the first to write about the problem: the growth of State expenditures coupled with extremely high dependence on one field - Prudhoe Bay, which will decline - for the bulk of the State's revenue. Alaska Pacific Bank economist Bob Richards then wrote a report reflecting the same concern and analyzing some of the options. A year ago, the Alaska Oil and Gas Association commissioned a report entitled "Alaska's Emerging Fiscal Crisis" which highlighted the conclusions of both studies and cited further evidence of concern from legislative consultants such as Bonner and Moore and Milton Lipton as well as University of Alaska Professor Bradford Tuck. In the recent Public Symposium on Alaska's Financial Future, Arlon R. Tussing addressed the same problem and provided his own insights as to what can or can not be done about the problem.

Interestingly, these economists not only appear to agree about the problem but also about several elements affecting a solution. Yet it appears that many Alaskans in policy-making positions within the government are still operating with the assumptions of a decade ago, assumptions that are incorrect in light of the perceptions of 1979. As stated in the University report mentioned above "The future financial health of Alaska's State Government is one of the most crucial, and least understood, challenges facing Alaskans."² From our own experience in Alaska, Sohio would agree that the problem is not well understood. As the largest single tax-payer in the State, as well as a company with 75 of our assets here, we consider ourselves to be Alaska citizens and are concerned about these misunderstandings not only because they directly affect our ability to operate in Alaska but also

because they affect the future of the State as well. Sohio's contribution to this conference would appropriately be therefore, to highlight the findings of these economists and legislative consultants in the hope of both establishing the importance of oil and gas policy directions for the future well-being of the State and all its citizens (individuals and corporations) and suggesting policy alternatives that are appropriate to today's understanding of Alaska's fiscal position.

As previously stated, there is virtually unanimous agreement among major economic consultants to the State that Alaska faces a serious problem of dependence on a field that will decline for the bulk of its revenues. There is recognition of this fact increasingly evident in the government as exemplified in public statements by the Governor. What is not well understood is what should be done about it or what can be done about it. The popular answer was voiced to a degree, without the current sense of urgency, back in 1969 before there was recognition of the implications of a government financially based on the Prudhoe Bay field. Without recognizing the problem, Alaskans felt a need to diversify the economic base. That is still a worthwhile goal today, but few in policy-making positions seem aware that there are limits to the degree that diversification can, in the near term, meaningfully contribute to the State's economy: that indeed Alaska is now and will be for the foreseeable future dependent on oil revenues to operate the government. This fact has profound implications for oil and gas policy, but before detailing these, it is important to understand why petroleum development is inevitably the keystone to Alaska's future economic well-being.

The Alaska Oil and Gas Association's "Emerging Fiscal Crisis" lays out much of the current thinking on the problem. In addition to submitting that booklet for the record of the symposium, I would like at this time to quote the following which explains why, despite its vast resource potential, Alaska will still have to depend on petroleum reserves for the foreseeable future:

Professor Bradford H. Tuck, Economic Analyst of the Federal State Land Use Planning Commission and Associate Professor of the University of Alaska recently showed, by a few comparisons, how unrealistic it is to believe that non-petroleum resource revenues could possibly contribute enough revenue—soon enough—to eliminate the need for petroleum revenue.

To match petroleum revenue expected by the Department of Revenue in 1979 (\$709 million):

Revenues from commercial fishing would have to increase by a factor of 80, or

Alaska annual coal production would have to amount to 5.53 times total 1975 U.S. production, or

Alaska copper production would have to rise to 8.76 times total 1977 U.S. production, or

Personal income tax of Alaskans would have to increase by a factor of approximately five.

Professor Tuck acknowledged that, to a degree, the above is unrealistic in that, for example, no one revenue source would have to make up for the full burden of replacing petroleum dollars in the future, but the facts present a strong message.³

In his prepared remarks for the October 20, 1979 symposium on Alaska's financial future, Arlon Tussing's words evoked the same message and took it A FEW STEPS FARTHER TO POINT out some conclusions relevant to State policy planning. In summary, Tussing's message was as follows:

Surplus state revenues guarantee economic growth for Alaska, but this growth is not likely to create a stable, diversified economic base, no matter how the money is spent or invested in Alaska.⁴

Tussing's reasoning is based on the observation that a number of factors including high labor costs and inflated land prices will continue to discourage investments that have to face price competition in national or world markets. Thus, he wrote, "only the biggest deposits of oil, gas, or metallic minerals, the densest and most accessible stands of timber, and the highest-value fisheries, will be able to overcome Alaska's high cost of doing business or its remoteness from the world's population centers."⁵ Tussing further stated:

The critical limits to the growth of Alaska agriculture of bottomfish processing, for example, are not investment capital



or infrastructure, but rather include market development, technical experience, managerial competence, and the general sophistication of the surrounding economy. *Each of Alaska's other basic industries probably has its own natural pace of development; while state and federal regulation can retard its growth, the ability of government funds to force accelerated development is strictly limited.* (Emphasis added.)⁶

It is further pointed out that even construction of a gas line or a world-scale petrochemical plant or a world-scale refinery will not serve to diversify Alaska's economic base; in fact, the opposite is true. Alaska's dependence on petroleum will even be heightened, as each of these depends on a continuing source of petroleum. To avoid a total gloom and doom projection perhaps, Tussing concluded by stating that it is conceivable that "new oil and gas discoveries or the growth of some other basic industry" might postpone the predicted fiscal crash indefinitely. Sohio is in no position to guess what the "other basic industry" might be, but we are in a position to suggest some policy options that the State might wish to consider at this juncture in its history.

Implications for Oil and Gas Policy Now and in the Decades Ahead

To summarize up to this point, the fiscal trends of the past decade were reflected in the position papers of the 1969 conference

on Alaska's future. The perceptions at the time included (1) a feeling that Prudhoe Bay revenues would be more than adequate indefinitely to support the kinds of social programs that were felt to be needed at the time and (2) a desire to promote non-oil and gas economic activity within the State. With these perceptions, there was little interest much less concern about fostering economic and regulatory policy conducive to oil and gas exploration in the State. The major focus of concern regarding resource development was in fact environmental alone.

Today, many Alaskans share a new concern, but few are aware of several important factors related to that concern. The concern is over the fact that the government is highly dependent on one field which will start its decline in the next decade. Further, there is virtually unanimous agreement among economists knowledgeable about Alaska's economy that the State faces a potential fiscal crisis as a result of the trends of the past decade; and the "charismatic" fiscal chasm, to use Revenue Commissioner Tom Williams words, may occur in some ten to twenty years, possibly as early as 1992.

A critically important factor that has yet to be widely recognized, particularly in government circles, is that for the foreseeable future, Alaska's continued dependence on petroleum revenue is inevitable. Because of Alaska's uniquely high costs, non-petroleum investments will perforce continue to face difficulties in view of price competition in national and world markets. The question emerges: will the State of Alaska have new sources of petroleum revenue from new oil and gas discoveries when they are needed to prevent possible collapse of the State's economy? In view of the perceived lack of need even to hold a major lease sale on State land in the past decade and considering past and recent regulatory and tax policy trends, the answer is unclear at best.

What is clear is the State's urgent need at this point in time to reassess or indeed assess for the first time Alaska's oil and gas policy trends in the light of the newly recognized fact that new oil and gas discoveries are *crucial* to the State's ability to survive as an economically viable institution in the decades ahead. With a contemporary understanding of the importance of new oil and gas discoveries to Alaska's survival, the State cannot afford to be capricious as to State policy affecting oil and gas. Indeed, there is a critical need to design and implement

policies that will encourage much more exploration than has taken place in Alaska in the past decade. With some 30% of Alaska's jobs dependent on the petroleum industry, Alaskans have a vital interest in this matter.⁷

In view of the high costs of operating in Alaska, concerned Alaskans need to step back and examine past and current leasing, tax and regulatory policy to determine if there are steps that can be taken to improve Alaska's perceived investment climate relative to that of other states. Even Sohio, with some 75% of its assets here in the State, has to consider outsiders' opinions of the Alaska investment climate for petroleum as it is often people outside the State who make the financial decisions as to whether or how much to invest in Alaska exploration and development. When Sohio was trying to raise capital to build the Trans Alaska Pipeline System, for example, we were turned down by potential investors who, in explanation during the formal Federal Energy Regulatory Commission proceeding, cited as reasons "the generally negative posture of environmentalists and the hostile political climate then existing" as well as the "hostile atmosphere" against the petroleum industry.⁸ In light of the above, we offer the following suggested policy alternatives to enable Alaska to compete more successfully for oil and gas exploration and development dollars in the years ahead.

Leasing: To attract exploration dollars to Alaska, the State needs to allow access to areas believed by the industry to be most favorable for oil and gas discoveries, and this needs to be done on a scheduled, predictable basis. As Arlon Tussing observed in the recent conference on Alaska's financial future, cited above, even with oil and gas, "only the biggest deposits...will be able to overcome Alaska's high cost of doing business or its remoteness from the world's population centers."⁹ Thus, it is important to lease acreage that the industry has expressed high interest in. Predictability in the schedule will not only allow efficient planning by the industry but also foster lower cost operations and assure that the infrastructure of service companies and contractors that have evolved in Alaska will continue in place, keeping their thousands of employees at work on a steady basis. Aborted lease sales or changes in the schedule create uncertainty that is devastating to industry planning and to the support industries. Lease sales in areas that are of little interest to the industry will not, of course, either attract investment dollars nor sustain

the support service companies. As to the use of innovative leasing systems, it would seem that to the extent that they discourage needed private investment dollars in exploration or unduly risk the State's financial future, they are not in the State's best interest. With the use of net profits bidding in the Beaufort Sea Lease Sale, for example, the State is running the risk of emerging a net loser which, in view of the predicted fiscal crisis ahead, would be an unmitigated disaster for Alaskans.

Tax Policy: If Alaska wants to compete for exploration dollars with other states, changes in petroleum tax laws may be warranted, particularly considering that the current tax structure is tailored to Prudhoe Bay, the largest oil field ever discovered in the United States. Again, particularly considering Alaska's high costs, the need to be competitive suggests that the total tax burden on oil and gas should at least be no higher here than in other prospective areas. Even in Alaska, the future is not likely to be more Prudhoe Bay-sized fields but rather smaller fields with marginal economics where tax policy will make a difference both as to exploration dollars invested and the decision as to whether a discovery is sufficient to be developed. Further, as with leasing policy, there is a need on the State's part to be predictable. As Milton Lipton stated in 1978:

I think it's true that insofar as the State's budgetary needs or revenue deficiencies always seem to be made up by oil industry taxation, this becomes a disabling and discouraging thing for industry...This cannot be a matter of indifference to companies that have their choice of operating any place.¹⁰

Regulatory Policy: With the contemporary understanding of the crucial role of new oil and gas discoveries in maintaining the State's fiscal viability, it is critical that State officials re-examine the unprecedented regulatory burden that has evolved as a result of preparations for the Beaufort Sea Lease Sale. If there was ever a time to recognize that there must be a balance struck between environmental and developmental goals, it is now. As Senator Ted Stevens recently observed in a speech before the Anchorage Chamber of Commerce, the people in the Lower 48 are going to need and want Alaska's resources, and when the national need is perceived to be great enough, the people in the rest of the country will demand Alaska's resources—particularly oil and gas—and they won't care particularly what happens to Alaska's environment in the process.

Thus, rather than extremist measures such as the March 31 drilling deadline proposed for the Beaufort Sea Sale—a deadline that could result in two to three years of unnecessary delay in drilling of a single well—Alaskans should work together to find solutions to concerns (such as the May 15 deadline proposed by Natural Resources Commissioner Robert LeResche) that neither compromise the environment nor indirectly lead to a backlash against such stipulations because of the delay they cause. For the same reasons, the emerging Coastal Zone Management Programs around the State need to be examined carefully by the Coastal Policy Council and legislature to ensure that local, state and national interests are considered in order to avoid a potential backlash harmful to the very environment that the proposed ordinances are trying to protect. The responsibility of State officials to work to find a balance between environmental and developmental goals at this juncture in Alaska's history is awesome, but that responsibility must be taken by all officials with responsibilities in those areas, and it must be taken now.



I would like to close by thanking the sponsors of this important conference for inviting a member of Alaska's oil industry to participate. The fact that the perceptions of 1969 led to the policies of the last decade gives us hope that the perceptions of 1979 will enable us to work together with those in Alaska's government in the decades ahead to create an environment in which Alaska's natural resources may be developed in a manner consistent with the goals expressed in the State's constitution: "It is the policy of the State to encourage...the development of its resources by making them available for maximum use consistent with the public interest"...of all Alaskans."

NOTES:

Footnotes

¹"The Financial Foundations for Future Alaska," A Conference on the Future of Alaska, Seminar One Reports, Delta Group, p. 7.

²"Alaska's Revenue Forecasts and Expenditure Options," Institute of Social and Economic Research, University of Alaska, Vol. XV, No. 2, July 1978, p. 1.

³Starratt, Patricia E., *Alaska's Emerging Fiscal Crisis*, Alaska Oil and Gas Association, 1979, p. 7.

⁴Tussing, Arlon R., "Investing in Economic Development," Remarks delivered at a Public Symposium on Alaska's Financial Future, Alaska Growth Policy Council, October 20, 1979, title page.

⁵*Ibid.*, p. 2.

⁶*Ibid.*, p. 5.

⁷Reaume, David, Department of Commerce and Economic Development, Statement before Eighth Annual Economic Development Workshop for Alaska Communities, November 7, 1979.

⁸Bank, Richard K., Metropolitan Life Insurance Company, Prepared Testimony, TransAlaska Pipeline System, Docket No. OR78-1, Federal Energy Regulatory Commission, November 20, 1977, pp. 7 and 12.

⁹Tussing, *op. cit.*, p. 2.

¹⁰Starratt, *op. cit.*, p. 12.

¹¹The Constitution of the State of Alaska, Article VIII, Section 1, Full text: "It is the policy of the State to encourage the settlement of its land and the development of its resources by making them available for maximum use consistent with the public interest."

Biographical Sketch

During high school, Kenneth Showalter worked as a farm laborer, freight handler for B&O Railroad. During college years he worked part time in his father's hardware store and during the summer he worked as a carpenter on construction projects. Showalter joined the Standard Oil Company (Ohio)—Better known as SOHIO—in November of 1950 as a marketing department trainee. He worked a great variety of jobs in a half dozen locations around Ohio, including industrial sales, consumer sales, sales manager, site developer (real estate), division manager and department manager of pricing. In early 1975 he was assigned the job of Assistant Director of Alaskan Affairs and later promoted to Director of Alaska Government Affairs, his current job. His current employer is SOHIO Petroleum Company.

FISHERIES MARKETING IN JAPAN

Prepared by
John B. Martin

Introduction

The marketing of seafood in Japan is an art developed through centuries of dependence upon seafood as a staple in the Japanese diet. The Japanese dependence upon seafood for protein is a direct result of the limited land mass in Japan and the even more limited amount of land suitable for agriculture. It is estimated that the amount of arable land in Japan is less than 14 million acres¹ and industrial and other uses for this land increase every year. Japan is well situated, though, for seafood production and the Japanese diet reflects this reliance on the sea for protein.

Seafood has been important in the Japanese diet from the time the Japanese islands were initially inhabited. In recent years, consumption of protein from all sources has been on the rise due to increasing income levels in Japan. Although consumption of meat, poultry and dairy products is growing faster than seafood, the Japanese currently consume approximately 4½ times more seafood per capita than Americans. According to the National Marine Fisheries Service (NMFS), in 1965 the Japanese consumed 164.7 pounds live-weight per person, while the average American consumed 35.1 pounds of fish and shellfish.²

As an industrialized nation with limited land area and natural resources, Japan has traditionally depended upon imports for raw materials and semi-finished products. These imports are financed by subsequent manufacturing and export of finished products throughout the world. Alaska has been a logical source of raw materials for Japan due to the geographical proximity and relatively undeveloped resource stocks available. Japanese capital, as well as the Japanese market, has played a vital role in the development of two of the major industries in Alaska — forest products and seafood products. The objective of this paper is to describe the

development of markets for Alaska's seafood products in Japan and discuss the ramifications of depending on this one market for disposition of much of the seafood produced in Alaska.

Historical Perspective

In 1968, a little over eleven years ago, a distinguished group of Alaskan economists and international trade specialists published a report entitled *Alaska Japan Economic Relations*.³ Several of the recommendations of this work focused upon the opportunities for increased trade between Alaska and Japan, particularly in the area of seafood products. Indeed, as Table 1 indicates, fisheries exports from Alaska to Japan totaled only \$1.5 million in 1965, \$4.2 million in 1966 and \$2.8 million in 1967. The benefits from increased trade were predicted to be additional employment, increases in federal, state and local tax revenues and a positive impact on the U.S. balance of payments. By 1978, seafood exports from Alaska to Japan had increased to \$201.4 million, an impressive increase, at least in nominal terms. In addition, these export figures do not reflect Alaska seafood products transhipped through the state of Washington to Japan. It is reasonable to assume that an additional \$200 million worth of Alaskan seafood was exported to Japan from Washington in 1979. In short, the Japanese market has become extremely important to Alaskan seafood producers. It might be useful at this point to discuss how this complex market functions and how Alaska's seafood products have become so important.

Trade Practices in Japan

Trade practices and institutions in Japan often appear hopelessly complex and intertwined to American businessmen. A large number of processors, wholesalers and distributors are typically involved in the handling of most consumer products, including seafoods. Although manufacturing has become more concentrated in recent years, leading to increases in productivity, the distribution sector still consists principally of many relatively small enterprises.

The most obvious aspect of seafood trading in Japan is the presence of large international Japanese trading companies. Most of the trading companies got their start during the modernization of Japan in the late 1800's. Many of these companies are vertically and horizontally integrated and involved in trading, banking, manufac-

turing, transportation and marketing. In a country as highly dependent on foreign sources of raw materials as Japan, the large traders play a key role in Japan's development. Their diversity and huge financial resources allow them to organize ventures overseas for procurement of raw materials. Indeed, Alaskans familiar with either the timber or seafood industry have witnessed this capability.

There are three types of trading companies in Japan. The large, often multi-national, general trading companies specialize in foreign trade and represent essentially the nine largest wholesalers in Japan. According to the Japan External Trade Organization, these nine companies handle over \$227 billion worth of goods and services, an amount which far exceeds the national budget of Japan.² Specialized trading companies comprise the majority of the 78,000 trading companies in Japan and typically concentrate their sales in a limited number of items. Finally, there are the "captive" trading companies, which perform foreign trade functions for particular manufacturers and are usually export-oriented.

Gaining entry into the Japanese market generally requires a long-term approach. Negotiations are often lengthy and the initial costs high. For example, negotiations regarding size, grading and product quality for seafood products can be very extensive; however, once established, a producer has entered one of the most advanced and growing industrial economies of the world. Seafood producers seeking to establish markets in Japan must recognize that most Japanese firms are anxious to establish a long-term relationship rather than merely buy on a spot basis. Importers will often examine a five-year production statement of the exporter, recognizing that annual production fluctuates, in order to determine whether the exporter represents a potential long-term source of supply.

Two fundamental options exist for gaining entry into the Japanese market. The first is to utilize the existing network of large trading companies described above. These companies handle about 80% of all imports of all commodities and, as such, can offer economies of scale in distribution, warehousing and marketing. These companies are familiar with import procedures and documentation, have foreign language capabilities and can often provide financing to the exporter. An alternative strategy for entering the Japanese market is to establish one's own distribution

system. In order to undertake this commitment, a firm must have adequate knowledge of the target market size as well as substantial financial resources. In actuality, several Washington processors of Alaska seafood products do maintain sales and distribution offices in Japan.

Seafood Marketing in Japan

The supply of fish in Japan comes from three principal sources: 1) fishing cooperatives and associations; 2) fishing companies; and 3) trading and processing companies. The cooperatives and fishing companies supply fish both from domestic landings and imports, while the trading and processing companies rely mainly upon imports for raw product. While most of the imports go directly to processing and cold storage facilities, the bulk of domestic landings are sold by auction at markets in the producing areas, primarily in Northern Honshu and Hokkaido. Following purchase by a wholesaler in the producing area, the products will either be processed and stored in cold storage or shipped directly to a market near a major consumption center such as Tokyo, Osaka or Sapporo. One such market is the Tsukiji Fish Market in Tokyo, the largest seafood market in the world. An average of more than five million pounds of seafood is auctioned daily, six days a week, at the Tsukiji market. The auctions begin around 4:00 a.m. and by 10:00 a.m. the 52-acre central wholesale market is devoid of activity. Within the Tsukiji market itself, a product may change hands as many as two or three times, which helps to explain the large mark-up between wholesale and retail price.

As local supplies of fresh seafood have declined due to intense fishing pressure, a greater percentage of frozen product is reaching the wholesale markets in Japan. As can be seen in Table 2, the percentage of frozen product in the six largest wholesale markets in Japan has increased from 20% in 1965 to 37% in 1979. Due to the difficulty of shipping fresh seafoods to Japan, the increasing percentage of frozen products in Japanese wholesale markets is, of course, to the advantage of seafood exporters in Alaska.

Upon purchase at wholesale, seafoods are then handled by distributors and jobbers, who subsequently move them to retailers and restaurants where they are ultimately purchased by the consumer.

Table 1

ALASKAN SEAFOOD PRODUCTS EXPORTED DIRECTLY TO JAPAN,
1965-1978, VALUE IN THOUSANDS OF DOLLARS

Product	1965	1966	1967	1968	1969	1970	1971
Salmon, fresh & frozen	21.0	51.0	208.3	547.6	2,069.5	2,858.9	2,414.9
Fish roe ¹	359.0	3,369.0	1,042.1	5,584.8	4,952.5	5,053.4	7,115.9
King crab, frozen ²	---	---	---	---	---	---	---
Snow crab, frozen ²	---	---	---	---	---	---	---
Other fish & shellfish	<u>1,117.2</u>	<u>747.0</u>	<u>1,593.4</u>	<u>834.8</u>	<u>1,282.1</u>	<u>1,304.6</u>	<u>1,001.1</u>
TOTAL SEAFOOD EXPORTS, JAPAN	1,497.2	4,167.0	2,843.8	6,967.2	8,304.1	9,216.9	10,531.9
TOTAL SEAFOOD EXPORTS, ALL NATIONS	---	---	3,609.0	7,182.8	10,695.2	9,838.3	11,322.2

Product	1972	1973	1974	1975	1976	1977	1978
Salmon, fresh & frozen	814.5	2,317.3	2,197.9	945.4	459.7	4,004.7	38,823.4
Fish roe ¹	4,170.9	1,606.8	2,277.2	5,578.5	9,300.2	25,182.7	52,534.0
King crab, frozen ²	---	---	---	---	---	7,202.1	74,249.5
Snow crab, frozen ²	---	---	---	---	---	---	27,644.4
Other fish & shellfish	<u>1,435.3</u>	<u>2,576.6</u>	<u>497.6</u>	<u>1,341.3</u>	<u>3,036.6</u>	<u>13,060.6</u>	<u>8,194.5</u>
TOTAL SEAFOOD EXPORTS, JAPAN	6,420.7	6,636.6	4,972.7	7,865.2	12,796.5	49,450.1	201,445.8
TOTAL SEAFOOD EXPORTS, ALL NATIONS	6,543.2	6,824.0	5,911.7	8,251.1	13,376.2	52,106.3	205,707.1

¹Prior to 1978, Fish Roe included in category entitled Cured Fish, Not Canned. For purposes of comparison, it was assumed that this category consisted entirely of roe exports.

²Except for years indicated, included in Other Fish and Shellfish category.

Source: 1965-1966, U.S.-Japan Trade Council; 1967-1978, U.S. Department of Commerce and Alaska Department of Commerce and Economic Development.

Table 2
Arrivals at the Wholesale Markets in the Six Largest Cities in Japan
By Product Form, 1965, 1970, 1975 and 1978

	1965	1970	1975	1978
Arrivals at six big markets	10,000 tons			
	156	191	211	216
Frozen product	32	57	76	79
(%)	20	30	36	37
Fresh product	79	72	62	61
(%)	50	38	29	28

Source: Ministry of Agriculture, Forestry and Fishery, 1978. "Annual Report on Fishery Trends in Fiscal 1977." Foreign Press Center, Tokyo, Japan.

Characteristics of Seafood Demand in Japan

The Japanese consumer is extremely conscious of the appearance and aesthetic appeal of seafood products. The principal reason is that a high percentage of seafoods are eaten raw or cooked whole, which means the end user often sees the product in an unprocessed state. As stated by one exporter of frozen salmon to Japan, "The Japanese buy 70 percent with their eyes." As a result of these strict demands by Japanese consumers, Japanese importers of seafoods pay very close attention to product quality. Although price is often important in seafood negotiations, importers are not reluctant to pay a higher price if superior quality can be guaranteed. During the years when the supply of a particular seafood product is limited, Japanese buyers are naturally less critical of product quality. However, during times of abundant supply, importers are noted for emphasizing subtle distinctions in skin color and general appearance and will pay a price as determined by the lowest quality portion of a shipment. When the market is down, importers use a variety of ways to reject a shipment, including poor quality, improper glaze allowance, inaccurate gross and net weight measurements and improper markings on the shipping container. In short, for an exporter to maintain a long-term market relationship with a Japanese importer, he must produce consistent high quality.

The Current Status of U.S.-Japan Seafood Trade

In 1978, a total of 210.9 million pounds of seafood valued at \$513.6

million was exported from the United States to Japan. Also during 1978, the United States imported \$256.8 million worth of seafood from Japan, for a net export balance of \$256.8 million. The value of seafood exports to Japan from the U.S. reached an all-time record in 1978, aided considerably by favorable exchange rates. Table 3 lists Japanese imports from the U.S. from 1973 to 1978, clearly depicting an upward trend. The record exports to Japan in 1978 consisted of \$220.9 million worth of frozen salmon, \$142.5 million worth of frozen crab and \$96.3 million worth of salmon roe -- all products which came from Alaskan waters.

Table 3
Japanese Imports of Marine Products from the U.S.
And From All Countries Combined, 1973-1978

Year	United States		All Countries	
	Million Lbs.	\$ Million	Million Lbs.	\$ Million
1973	79.11	90.3	1,448.4	1,019.3
1974	31.7	59.9	1,329.0	1,113.9
1975	53.3	72.9	1,562.7	1,296.6
1976	46.4	96.0	1,791.9	1,900.2
1977	142.1	234.9	2,290.6	2,446.5
1978	207.0	531.8	2,227.3	3,259.6

Source: Japan Marine Products Importers Association, 1979. *Japanese Imports of Marine Products, Calendar Year 1978*. Tokyo, Japan.

The record quantity and value of imports to Japan in 1978 is due to factors other than favorable exchange rates. It has been estimated that about 40 percent of the total Japanese catch in 1977 came from within 200 miles of foreign nations' shores.⁴ With the advent of extended jurisdiction worldwide, Japan now faces catch quotas on pollock, herring, flatfish, crab and other species which were previously harvested freely by her distant water fleets. With very few unexploited stocks of fisheries resources remaining in the world, Japan will clearly turn increasingly to imports to satisfy the demand for seafoods.

Alaska-Japan Seafood Trade, 1979

As is evident from Table 1, nowhere is the increase in seafood exports to Japan more evident than in Alaska. Not only is Japan the

sole market for certain products, such as salmon and herring roe, but the Japanese market has contributed significantly to the increase in price of frozen salmon and king and snow crab from Alaska. The total ex-vessel value of seafood landed in Alaska exceeded \$558 million in 1978, compared to \$351 million in 1977 and \$241 million in 1976. This marked increase in landed value is due in part to increased harvests, but mainly to the strong Japanese market.

Through the end of 1978, few would deny that much of the prosperity in Alaskan fisheries was due to healthy markets in Japan. However, it is now obvious that the Japanese market alone is not sufficient to support our expanding seafood industry. The frozen salmon industry in Alaska in 1979 is a good case in point. According to preliminary statistics of the Alaska Department of Fish and Game, fresh/frozen salmon production in 1979 exceeded 140 million pounds valued at approximately \$154 million to the fishermen. Of the fresh/frozen production, frozen sockeye accounted for 60 percent by total weight and 69 percent of the total value. Record prices were paid to fishermen as a result of anticipated wholesale prices to Japanese buyers equaling or exceeding 1978 levels. In actuality, Japanese buyers are offering only \$2.25-2.35 for frozen sockeye in 1979, down 15 percent from 1978. Currently, alternative well-developed markets do not exist for this product either in the U.S. or Europe. Consequently, Alaska processors are either selling at a loss to a glutted Japanese market or holding in inventory. According to NMFS, cold storages in Washington, Oregon and Alaska held approximately 39 million pounds of frozen salmon on August 31, 1979, compared with 26.5 million pounds on the same date a year ago. There were also large quantities of product in Alaska which had not been shipped to Seattle by that date. In addition to sluggish sales and high inventories, the DF&G is predicting a run of 52 million sockeye for Bristol Bay in 1980, with a harvestable surplus of 34 million fish. The Japanese market can be expected to absorb only a portion of next year's expected record salmon harvest in the state, leaving producers in a precarious position.

The Alaska frozen salmon industry is thus faced with high inventories, large anticipated 1980 production and weakening prices in the only currently full-developed market — Japan. At the same time, sources of supply for the Japanese market are increasing. First, production of chum salmon from hatcheries in Hokkaido is increasing.

Also, according to the NMFS, the Japanese have reached an agreement with the U.S.S.R. to harvest Russian chum salmon. Third, the Japanese are also assisting Chile with development of salmon hatcheries in that country. Finally, the high seas catch of salmon by the Japanese mothership fleet is anticipated to increase in 1980. Clearly, new markets must be sought and developed in order to maintain a viable salmon freezing industry in Alaska.

The dependence on the Japanese market extends to the frozen king and tanner crab industry as well as the frozen salmon industry. In 1978, frozen king crab sections were selling at \$3.30/pound to Japanese buyers. This year, due to large inventories, the price has fallen to \$2.50/pound, a reduction of 25 percent. This has precipitated a decrease in ex-vessel price from \$1.23/pound to \$.86/pound. Again, when the Japanese market weakens, the effects are felt through the entire industry in Alaska.

The market for frozen tanner crab sections from Alaska is almost exclusively Japan. Therefore, it is unsettling to note that the Japanese have recently agreed to a joint venture with the U.S.S.R. to harvest 4,530 metric tons of tanner crab (*C. bairdi*) at \$.41/pound. Given high inventories of frozen tanner crab currently in Japan, the market for tanner sections appear weak in 1979 as well.



The objective of the foregoing discussion is to show our dependence on Japan as the sole fully-developed market for much of Alaska's seafood production. From the standpoint of the stability of the industry, it is simply imprudent to rely so heavily on one market area. The consequences of this reliance are being felt this year by processors of salmon and crab. The impact on the developing bottomfish industry is deleterious due to the fact that profits from salmon and crab are necessary to finance investments in bottomfish harvesting and processing equipment. Without economically healthy high-value fisheries, bottomfish development simply cannot occur among existing Alaskan processors.

Alaskan seafood processors in 1979 are experiencing difficulty due to an overdependence on the Japanese market and an inaccurate assessment of what prices the market in Japan will bear. The former problem is addressed in the final section of this paper. The weakening Japanese market for seafood products, however, could have been anticipated by a more detailed analysis of seafood market trends in Japan as they relate to Alaska production.

There is reason to believe that the "golden age" of seafood price increases in Japan is waning. The per capita intake per day of protein from fishery products increased from 16.4 grams in 1965 to 16.6 grams in 1970, peaked at 18.1 grams in 1975 and decreased to 17.9 grams in 1976. The reason, of course, is due to rapid price increases. The total quantity of seafood purchased in 1977 in Japan was down six percent from 1976 and real consumer expenditures were down by ten percent for the same period. Prices for salmon and crab peaked in 1978, causing further consumer resistance in the marketplace. Consumer prices of seafood products have risen faster than prices overall during recent years. Between 1965 and 1970, consumer prices overall rose an average of 5.4 percent while prices of fresh fish and shellfish rose 12.1 percent. Again, between 1970 and 1975, prices overall rose 11.5 percent and seafood prices 15.6 percent. Finally, between 1975 and 1976, consumer prices rose 9.3 percent while fresh seafood prices rose 16.1 percent.⁴

Table 4 lists the relative prices of protein substitutes in Japan in 1965 and 1976. The relative prices of fresh fish and shellfish have increased 40 percent during the period, whereas the relative prices of pork have decreased 20 percent and the relative prices of chicken

have fallen 34 percent. Clearly, Alaskan seafood exporters cannot expect seafood prices in Japan to increase in the future as rapidly as they have in the past ten years. It is important that this factor be taken into account in future production and sales planning.

Table 4
Relative Prices of Protein Substitutes
In Japan, 1965 and 1976*

Protein Source	1965	1976	% change
Relative prices of fresh fish & shellfish	70	98	+ 40%
Relative prices of pork	173	139	- 20%
Relative prices of chicken	157	103	- 35%

*100 = average unit price of principal protein foods

Source: Ministry of Agriculture, Forestry and Fishery, 1978. "Annual Report on Fishery Trends in Fiscal 1977." Foreign Press Center, Tokyo, Japan.

New Dimensions in Seafood Marketing

A considerable effort has been expended to portray Alaskan seafood processors and exporters as being too dependent on a single market - Japan. This dependence ties a significant portion of the Alaskan economy directly to swings in the economy of Japan. One solution to this problem is to expand and diversify; the markets for Alaskan seafood products.

The markets for Alaska's seafoods in the U.S. and Europe are currently underdeveloped. In 1978, the per capita consumption of salmon in the U.S. was a mere 12 ounces, product weight, of which fresh/frozen salmon comprised less than two and one-half ounces.⁵ Currently, fresh/frozen sockeye is not an established product in Europe or the U.S. and a large-scale marketing effort will be required to introduce this relatively new product. The same holds true for many of Alaska's other seafood products.

The task of expanding and diversifying markets for Alaska's seafoods is a large one. It is very difficult for an individual firm to break into new market areas and essentially increase seafood demand overall. This task could be most effectively accomplished through the formation of an industry-wide market promotion organization. This organization could consist of firms currently in

the seafood industry and promote all seafood products from Alaska. The principal function of this organization would be to expand the marketability and consumption of Alaska seafoods through generic promotion programs targeted, initially, at consumers in the U.S. and, ultimately, at consumers throughout the world.

Generic promotion consists of nonbrand advertising to raise the overall level of consumer consciousness of seafoods from Alaska waters. Specific programs can include magazine and television advertising, printing of seafood recipes for distribution by retailers and publication of materials for institutional users to assist in selling the Alaska seafood concept. It is also likely that an association will develop a symbol to identify the products of member companies as quality seafoods produced from Alaskan waters.

The success of industry-wide promotion associations is well documented in other industries and in the seafood industry in other states. The Massachusetts Seafood Association and the Florida Seafood Association have both proven successful in promoting seafood products in those areas. In Alaska, a highly successful example of industry cooperation and promotion is the Alaska Visitors Association. A similar organization of seafood producers can prove equally beneficial to the vital and growing Alaska seafood industry. The proposed organization would not interfere with the functions of existing industry groups whose scope is more specific than generic market promotion. The organization would complement, rather than compete with, the marketing departments of seafood firms, as brand names would not be used in the generic promotion programs.

Another vital function of a marketing association would be to develop new product forms and conduct test marketing programs to assess the potential for the new product. Market penetration studies conducted by the association would assist in setting future priorities for promotional efforts of the organization. Finally, consumer education programs would be conducted to stress the nutritional value and quality of Alaska seafood products. Alaska seafoods are an important source of protein as well as high quality cuisine; the task at hand is to begin to market them in a manner commensurate with their importance to both the U.S. and the Alaska economy.

Future Prospects for Seafoods Marketing in Japan

As discussed in the previous section, in this author's opinion the future of seafood marketing for Alaskan producers lies in countries other than Japan. However, this is not to say that opportunities do not exist for marketing additional species and product forms from Alaska in Japan. There is currently an import ban on minced pollock, or surimi, in Japan. However, should this trade barrier be eliminated, Alaskan processors can be expected to market this product form in Japan to utilize our abundant resources of Alaskan pollock. There are also abundant resources of squid in Alaskan waters which are currently not harvested. Canadians have recently begun marketing a similar species of squid in Japan and Alaskan processors can presumably do the same as this fishery develops. Additionally, there are large quantities of sea urchins in Southeast Alaska which are not currently utilized. When the unique processing problems related to this product are solved, valuable sea urchin roe can be marketed in Japan. The opportunity also exists to market various other high-value products from Alaska in Japan as resource knowledge and processing technology is developed.

In conclusion, it is obvious that Japan will continue to be a Major market for Alaska's seafood products. Of paramount importance to Alaskans exporting seafood to Japan is product quality. A market for premium quality salmon, crab and other species will always exist in Japan; however, Alaskan processors will be able to establish long-term relationships with Japanese buyers only if they produce consistent high quality.



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John Martin is a fisheries consultant with Environmental Services, Limited of Juneau and Anchorage.

NOTES



BOTTOMFISH DEVELOPMENT FOR ALASKA

by
David L. Allison

The issues of management, regulation, harvesting and processing of the fish resources located off the shores of Alaska have been in the forefront of the debate over Alaska's Natural Resources Policy since prior to statehood. However, not since the 1930's and 1940's when codfish salteries located along the western and north-western coast of Alaska closed down, has there been significant domestic and Alaskan concern for high volume - low unit value seafoods such as pollock, cod, rockfish and sablefish.

In 1976, after much debate, and in the face of strong opposition from the U.S. Department of State, Congress passed, and the President signed, the Fisheries Conservation and Management Act of 1976 (FCMA).

The FCMA provided new opportunities and challenges to the State of Alaska. The extension of U.S. fisheries management jurisdiction from 12 to 200 miles opened up a vast protein resource to American fishermen and processors. The options for the State of Alaska were:

- (a) to do nothing about development of this new resource;
- (b) to follow the lead of industry;
- (c) to follow the lead of the federal government; or
- (d) to take the lead by coordinating the efforts of state, federal and private sector interests towards the goal of maximizing the benefits of development for Alaskans.

Governor Hammond chose the latter option, and, with the support of both houses of the Legislature, he established a Bottomfish Development Coordinator in his office and appointed members to a newly constituted Bottomfish Task Force. The Governor charged the task force with the responsibility of planning a State Bottomfish Development Program which would:

- (a) develop an efficient, competitive, quality bottomfish industry abot to enter freely and profitably in domestic and world markets;
- (b) develop, within a period of approximately 20 years, the domestic utilization of Alaska bottomfish resources to the fullest optimum yield;
- (c) encourage the establishment of permanent onshore processing facilities through state support of adequate port/harbor and community infrastructure;
- (d) encourage the maximum participation of Alaskan workers and entrepreneurs in the bottomfish industry; and
- (e) conserve and manage the fishery resource for a long-term, sustainable fishing and processing industry in Alaska.

Goals and policies were recommended by the Task Force and established by the Governor. State funded demonstration projects and surveys of industry and community needs were conducted. As a result of state executive and legislative efforts, the State of Alaska initiated the most complete and comprehensive program for domestic development of underutilized species of any of the states. Even federal assistance programs and policies, as we move into the 1980's, are keying on the state planning and development activities. *The State of Alaska Program for Development of the Bottomfish Industry* has become the framework within which a flexible and dynamic development program can be constructed, extended and maintained. This paper is an overview of the State program with notes on what it is, who is involved and where the program is headed in the future.

The State initiated program has now reached a significant stage of expansion. Community needs assessments directed by the Arthur D. Little planning document have been completed by the Department of Community and Regional Affairs through the first, or study, phase. Demonstration projects have been completed in several areas of the state and documents have been submitted detailing the experience of the processors and fishermen involved in those initial projects. Educational and informational conferences have been well attended, regulatory structures have been reviewed and potential barriers to full development have been identified.

The effects of the FCMA and state efforts are already beginning to become evident. Black cod (sablefish) fishing and processing effort has shifted from Japanese fleets to U.S. vessels during the past nine months. The domestic black cod fleet has expanded in only 18 months from fewer than 20 small handline vessels to more than 50 boats with state of the art automatic longline gear on many of them. Foreign vessels are being moved out of the tanner crab fishery over the next two years, and even that action is regarded as too slow by the fishermen. The latest 125 foot class vessels from the troubled king crab and salmon fleets are being modified with bottomfish and mid-water gear and onboard heading and gutting equipment to allow seasonal participation in the bottomfish fishery. Diverse elements of the industry, including processors and fishermen in small towns and villages around the coastal rim as well as federal and regional assistance agencies, are turning to the State of Alaska for direction and information on how and where the most effective further development of the industry should take place.

In establishing the State development program to date, the following elements of state government have directly participated and will, along with additional divisions and departments, have continuing responsibility through completion of the twenty-year plan:

(1) Office of the Governor:

- a. Bottomfish Coordinator and several Special Assistants*
- b. International Fisheries and External Affairs*
- c. Coastal Zone Management*
- d. Division of Policy Development and Planning*

(2) State Legislature*

- a. Joint Committee on Resources
- b. Bottomfish Interim Committee
- c. Office of the Speaker of the House
- d. Office of the President of the Senate

(3) Department of Commerce and Economic Development*

(4) Department of Community and Regional Affairs*

(5) Department of Education

(6) Department of Environmental Conservation*

(7) Department of Fish and Game*

(8) Department of Labor*

(9) Department of Public Safety

(10) Department of Transportation and Public Facilities*

(11) University of Alaska

*Represented on Work Group or Task Force

In addition, the Governor's coordinator and the legislative program managers have integrated into the planning process fishermen and fishermen's organizations, native regional corporations, village corporations, labor unions, seafood processing and marketing representatives, the Alaska Fisheries Development Foundation, Economic Development Administration, National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS), North Pacific Fisheries Management Council, and the Army Corps of Engineers.

The effective coordination and correlation of these local, state and federal agencies with one another and with the private sector industry interests remains an essential part of the fishery development program as we move from the organizational stage into active implementation of the program design.

Phase II of the development program, the implementation phase, is ready to get underway. In Phase II fishermen off Alaskan shores should accelerate their capture of progressively larger portions of the optimum yield (OY) of bottomfish and other underutilized species. Both onshore and offshore domestic processing expansion should begin to impact foreign allocations. Port and harbor development, together with shore-based support infrastructure, will be moving rapidly into the design and construction stage.

Sufficient data is also becoming available through studies

commissioned by the bottomfish coordinator, the legislatures' interim committee on Bottomfish and the Sea Grant programs of the University of Alaska and the University of Washington to answer long standing questions regarding socio-economic impacts, cost-benefit comparisons between gear and vessel types, likely employment scenarios, foreign investment impact and quality assurance requirements. Such study and research efforts will continue as an integral part of the implementation phase with the results of those efforts being incorporated into the twenty-year development program on an ongoing basis. The state program is moving according to schedule toward realization of goals and objectives set by Governor Hammond in 1977, 78 and 79.

Projects underway and tentatively planned for FY81 and FY82 are directed towards accomplishing the following tasks:

- (1) Complete a full analysis of the labor force characteristics of the fishing and fish processing and marketing industry.
- (2) Encourage and facilitate the creation and utilization of a trained Alaskan labor pool.
- (3) Reduce the extent of the boom-bust economic cycle and extremes of seasonal unemployment in coastal areas, both in fishing communities and business and supply centers.
- (4) Analyze the impact of foreign investment and market control on Alaskan fishery development and work towards resolution of problems flowing from such situations.
- (5) Refine and expand data base on amounts and locations of stocks of fish and increase the utility and availability to the industry of data accumulations.
- (6) Develop and implement means and methods to more effectively distribute necessary technical and practical information to fishermen and processors. [A comprehensive whitefish processing manual is now available as a result of a Kodiak demonstration project this past year.]
- (7) Make available additional bottomfishing education programs for fishermen and processors from basic bottomfish fishing and processing skills to specialized procedures for trawl

and longline fisheries, hand filleting of bottomfish and operation of high technology bottomfish processing equipment.

- (8) Complete the identification of appropriate locations and begin design and construction process for establishment of port and harbor facilities as well as water, power, sanitation, housing and transportation infrastructure in targeted communities.
- (9) Update and refine goals, policies, objectives and activities of the state program to conform to results of ongoing study and research efforts.
- (10) Identify and analyze new or expanded finance and bonding mechanisms for infrastructure development and direct financial assistance to fishermen, processors and marketing organizations to assist their entry into the bottomfishery.
- (11) Continue analysis of marketing and quality assurance problems and formulate proposals for addressing those problems.

Among specific communities and areas likely to be impacted by the development programs underway or contained in the FY81 and FY82 programs are:

Ketchikan*	Anchorage*	Kake
Kodiak*	Hoonah	Sand Point*
Petersburg*	King Cove*	Sitka*
Cold Bay	Juneau	St. Paul*
Yakutat*	St. George	Unalaska/Dutch Harbor*
Cordova*	Valdez	Dillingham (Bristol Bay)
Seward*	Homer*	Hooper Bay/Scammon Bay
Akutan	Kenai	Norton Sound - Nome

*probably major development impact

Virtually all programs impacting these communities are either:

- (1) one time study efforts, or
- (2) planning, design and construction of capital projects which will be eventually paid for by user fees.

The State and federal efforts, including investment of approxi-

mately 4.5 million dollars plus federal vessel financing guarantee programs, have generated or stimulated the following types of existing and planned development and investment: (approximate amounts)

- (1) Unalaska/Dutch Harbor: \$35+ million dock, harbor and port development (American President Lines, Village of Unalaska, City of Dutch Harbor). \$10+ million processing plant expansions (Pacific Pearl, PanAlaska, Unisea, others). \$5+ million commercial facilities expansion and development (private mall, Unisea, city and village).
- (2) Homer: \$10+ million combination port/harbor development for expanded fishing fleet and processing facilities.
- (3) Seward: \$20+ million shipyard construction.
- (4) Over \$125 million in construction of vessels designed for, or capable of conversion to, trawl fishing for pollock, codfish and other underutilized species.
- (5) Expansion of the U.S. black cod (sablefish) fleet off southeast Alaska from fewer than 20 vessels to more than 50 vessels, many specially designed and outfitted for highly efficient automated longline fishing.



- (6) Increased employment in fish processing, marketing and related activities in Anchorage, Ketchikan, Petersburg, Kake, Sitka, Sand Point, Kodiak, King Cove, Dutch Harbor, Unalaska, Cordova and Valdez.
- (7) Management, development and consultation services generated by the private sector in Anchorage, Fairbanks, Kodiak, Juneau and Seattle.
- (8) Multi-million dollar proceeds from Aleutian Islands Area State Land Sales.

In addition to direct financial investment and returns, other types of benefits for Alaskans and industry have flowed from the investment to date:

- (1) Clear demonstration of the ability of Alaska to take a leadership position in State-Federal cooperative planning and management of natural resource utilization and community development.
- (2) Increased concentration of federal research and development funding in areas impacted by development of the fisheries off the coast of Alaska.
- (3) Reduction of foreign fishing fleet activity off the coast of Alaska and replacement by American vessels with American crews.
- (4) Demonstration of the effectiveness of advance planning and policy formulation for major state projects.

Additional tangible benefits are likely to flow from continuation of Alaskan fishery development and the Bottomfish Program:

- (1) Development of a labor force of Alaskan citizens to take advantage of 10,000 to 20,000 new jobs over the next 10 to 20 years.
- (2) Development of viable fishery oriented communities in rural coastal areas with strong local government units.
- (3) Increased feasibility of surface transportation from Anchorage

to the Aleutian Islands and western Alaska as year-round fisheries and processing expand the permanent population base in those areas.

- (4) Reduction of state's dependence on non-recurrent revenues.
- (5) Provision of government services to meet the needs of southwestern, western and coastal Alaska citizens in a more effective and efficient manner.
- (6) Encouragement of economic development which offers long-term net benefits to all Alaskans.
- (7) Improved ability of the private market system to provide needed goods and services to Alaskans as well as to other domestic and foreign markets.
- (8) Promotion of rational development and management of fish and wildlife for the long-term economic and social benefits of all Alaskans.
- (9) Reduction of the boom-bust cycle in the Alaska economy.
- (10) Improved U.S. balance of payments.

The State of Alaska has made remarkable progress in moving towards realization of the Governor's Renewable Resource Development goals through the bottomfish program within the brief time since the FCMA was established. With continued cooperation, assistance and advice from individuals and agencies in the private and public sector, from fishermen, business people, consultants and advisors, from critics and supporters alike, we can continue the development and implementation of a program which is charting Alaska's future frontiers today.

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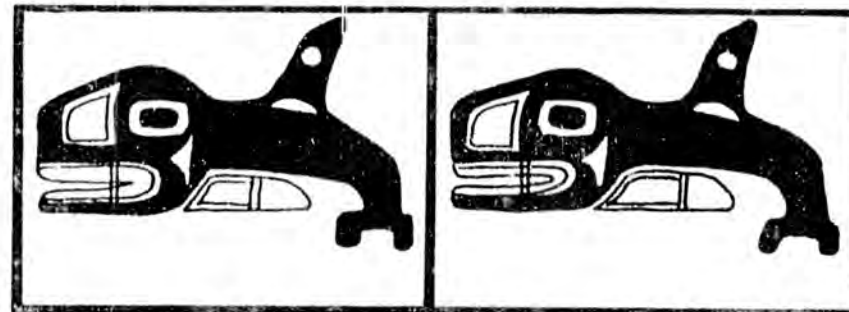
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Biographical Sketch

Dave Allison is a planning and program specialist with the Office of the Governor, Division of Policy Development and Planning. He specializes in bottomfish industry development issues and policies. He graduated from Marian College in Indianapolis, Indiana in 1964 and received his Juris Doctor Degree from Indiana University in 1968. He served as a State Representative in the Indiana Legislature in 1969 and 1970 and practiced law as a partner in the law firm of Allison and Barnhart until leaving Indiana for Alaska where he has lived since 1978. He has served on the boards of numerous civic and non-profit commissions and organizations and is a member of various professional associations in the fields of law and fisheries.



ECONOMIC ISSUES OF ALASKA BOTTOMFISH DEVELOPMENT

Presented by
Frank Orth

Introduction

The bottomfish resources lying off the coast of Alaska represent an immense development opportunity.¹ There are roughly 1.5 million metric tons of sustainable harvest requiring somewhere between 200 and 500 harvesting vessels (converted and new), and numerous shore-based and floating processing facilities. Direct investment in harvesting and processing facilities alone will run to between \$2 and \$3 in 1979 dollars. Heavy investments in direct support facilities,² support-sector businesses,³ and indirect support facilities⁴ will also be required.

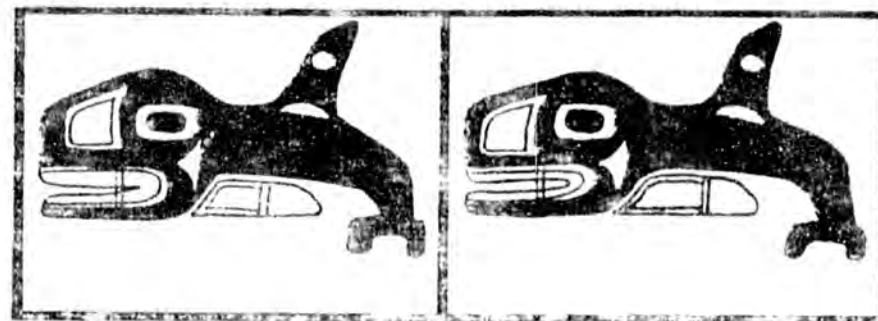
To most Alaskans, the development of these fisheries is synonymous with substantial benefits to Alaska residents in the form of profitable new business opportunities, employment opportunities, and, most of all, growth opportunities for existing seafood harvesting and processing businesses. Unfortunately, economic realities and the limitations of state jurisdiction suggest that the realization of these expectations is far from assured. Proper inclusion of the probable costs of state facility investments and programs for bottomfish development in a social benefit-cost calculation might further dampen enthusiasm from Alaska's point of view.

The theme of this paper is that if Alaska policymakers attempt to complement rather than ignore market forces, and if they view more realistically the contributions that governments can make, bottomfish may provide net benefits rather than net costs to Alaska. Actual development will be carried on by private businesses and individuals responding to technological alternatives, market prices, and market quality requirements, as well as to physical and technical constraints imposed by the resources and their environment. This should go without saying and Alaska's policies should reflect these realities.

As with other major potential economic developments in Alaska a wide range of controversial policy issues are debated. In fact, the entire subject has become politicized to a degree that is unhealthy to the formulation of sound policies. Some of the leading controversies are state vs. federal involvement, shore-based vs. sea-based operations, Japanese vs. U.S. investment, and Alaska resident vs. Seattle and other nonresident participation. Less frequently discussed, although more relevant in the long run, is how the established industry is likely to respond to the development opportunities, what kinds of other entrants can be expected, what types of state support will most complement market forces, and what programs and incentives can the state use to help those Alaskans who want to participate in the development.

This paper will develop policy recommendations for bottomfish development which the author believes are consistent with technical, economic, and political realities and at the same time sensitive to the state goal for resident participation. Before presenting these recommendations, supporting background information needs to be provided. For the most part, the discussion will be brief and general in nature due to the number of items and the overall space restriction. The following background items will be discussed:

- history of Gulf of Alaska and Bering Sea bottomfish utilization
- resource, physical and environmental considerations
- technological alternatives
- availability and costs of inputs
- market requirements and constraints
- potential entrants into bottomfish
- present federal development policy
- present state development policy



Together, these items constitute the economics of bottomfish development. There is substantial uncertainty concerning several of the items; this derives either from a rapidly changing environment, the absence of basic research, or both. Where a high degree of factual uncertainty exists, it is a barrier to assessing the economics of bottomfish development for investors and policymakers alike. It follows that efforts to reduce uncertainty should be considered with other policy alternatives.

History and Current Status

Bottomfish resources in the Gulf of Alaska and Bering Sea have been more or less fully utilized by foreign fleets for many years. With the exception of black cod, domestic utilization of these resources has been almost exclusively for bait. Pollock and Pacific ocean perch stocks have been overutilized and are in the process of being rebuilt. Countries which have utilized bottomfish resources off Alaska have included Japan, U.S.S.R., Republic of Korea, and Poland; Mexico has recently become involved through a joint venture with the Republic of Korea.

The Fishery Conservation and Management Act (FCMA) of 1976 was intended to establish strong regional management for conservation purposes and to give domestic fishermen priority in access to the resource. A recent amendment to the FCMA has extended this priority to U.S. processors as well; foreign processing is now permitted only to the extent that U.S. processing capacity is not sufficient to handle all U.S. caught fish. Overall, domestic harvesting and processing capacity, as well as resource allocations by the NPFMC, have been growing slowly since the enactment of the FCMA. Foreign interests have been successful in maintaining direct access to bottomfish resources. Japanese interest are attempting to insure future access by investing directly in domestic processing companies while the U.S.S.R. and South Korea interests hope to maintain their access through joint ventures with domestic fishermen.

Resource, Physical and Environmental Considerations

Each of the many species of fish within the term "bottomfish" has its own complex life cycle and productivity characteristics. Each has peculiar migration, schooling, growth, mortality and

predation characteristics. For even the most experienced harvesters, success rates vary considerably over time and space.

From the utilization perspective each species has its own flesh characteristics and within species these vary seasonally (particularly as flesh quality relates to the reproductive cycle). Thus, successful fishing requires proper timing and targeting on only those species with the flesh characteristics most desired by the market.

An especially important variable is the preservation and on-board handling characteristics of a species and how these characteristics vary over time and space. Other things being equal, these factors determine, in turn, how far from shore the resource may be harvested without processing at sea and how they must be handled aboard the vessel. The location of stocks from existing or potential shore-processing sites, in conjunction with on-board preservation characteristics and market quality requirements, determine the feasible distance from shore-based operations. Pollock, the most abundant resource, is least amenable to shore-based operations. Other species have roughly 100-150 mile operating distances and five-to-seven day shelf life on board in iced, round form. However, *effective economic distance* from a shore site is likely to be less than *effective technical distance* due to the loss of fishing time and fuel costs associated with shore-based operations. Given the distances of fishable concentrations from shore in the Bering Sea and in the Western and Northern Gulf of Alaska, the opportunity for selecting shore-based operations is constrained to a relatively small percentage of the total available resource. Weather, of course, is another important physical factor with which a bottomfish operation must contend. The number of days of actual fishing time realized in a year can vary considerably due to adverse weather conditions. A range of 150 days to 250 days appears to be realistic depending on mode of operations, distances from shore-based processing or resupply points, ability to find target species in fishable concentrations, and, as mentioned, the weather.

Technology

Realistic technological alternatives are directly influenced by the resource, physical, and environmental factors previously discussed. The following alternatives appear to be the most applicable to the range of available resource opportunities as constrained by these factors:

- a shore-based day fishery
- a shore-based processing, offshore harvesting wetfish fishery
- an offshore fishery with primary processing at sea, with delivery to a shore plant for reprocessing
- a totally sea-based harvesting and processing operation

There is little doubt that all of these alternatives and others will appear. Of importance is which alternatives will be selected most often and in which situations. The most probable selections by industry will determine whether and to what extent public sector investments are useful. Premature commitment to particular sites or types of facilities without adequate study and planning could result in the creation of wasting assets and/or cause high priority needs to go unmet. If this is the case after having spent tens of millions or even hundreds of millions of public dollars, resident Alaskans will have every right to be displeased.

Availability and Costs of Inputs

Financial capital will be readily available to economically feasible projects with sound management. Adequate financing mechanisms and institutions for providing equity, subordinated debt, and debt have already been created and refinements are under consideration. Alaskans may have to pool equity for large scale operations. Likewise, entrepreneurial and management skills, upon which financing depends, will be in short supply. The cost of capital and its availability are not as likely to be a constraining influence in the long run as they are today.

The cost and availability of labor are definitely important considerations. Substantial training costs face any major development. Premiums will have to be paid for a remote site labor force and for sea-based operations. Housing, transportation, and other necessities will also add to labor costs. These factors suggest that most operations will be capital intensive and that they will require highly skilled and well-trained workers.

The cost of physical capital will be high but there should be no major problems with availability at either the harvesting or processing level. Construction time for a fully-equipped catcher/processor, for instance, is nine to fifteen months. And, while the cost of most items of physical capital is high in an absolute sense, their high pro-

ductivity per unit of time is a compensating factor. A good example of where capital is absolutely more expensive than labor but relatively cheaper (i.e., per unit of output) is provided by high-speed filleting machines.

Management skills necessary to efficiently manage major operations are apparently not all that plentiful. The cost of managerial inputs is not likely to be an impediment, however, at least no more so than in other industries.

Infrastructure is an important complex of inputs whose availability is definitely a constraint. However, it does not follow, as some analysts appear to believe, that infrastructure investments are in themselves sufficient to induce development or a particular pattern of development, e.g., shore-based operations. Many of the other factors discussed above, and several remaining to be discussed, also have a significant influence on developmental decisions. Nor does it follow, as some appear to believe, that the benefits of major infrastructure investments are so obvious and of such magnitude that normal project-evaluation procedures should be abandoned. Indeed, a rigorous social accounting should be made of all major infrastructure investments to insure to the extent possible that benefits exceed costs. To the extent that Alaska finances such investments, the analysis should adopt an Alaska perspective. Such analyses are never easy or inexpensive; however, they are almost always necessary to an informed decision.

Market Requirements and Constraints

Because of product diversity, market specialization, and obscure marketing channels, seafood markets are complex in the extreme. However, certain basic facts and principles are known and are pertinent to the economics of bottomfish development.

- Major markets for Alaska bottomfish (or species with comparable flesh characteristics) exist in the United States, Asia and Europe.
- Existing markets for frozen blocks are sufficiently connected to form a world market.
- Quality standards on the world market are high and gradations of quality exist. Buyers will reject low quality or inconsistent-quality shipments. Alaska presently has a poor market reputation for quality.

- Buyers require consistent, year-around suppliers, not operators looking to supply only during periods when high-valued species are unavailable.
- Competitive price levels on the world market are sufficiently close to costs of production that entry into Alaska bottomfish will be denied to all operations except those which employ the most efficient production techniques. Black cod is the major present exception to this generalization.
- Because countries presently producing Alaska bottomfish compete directly or indirectly with potential Alaska producers, the market provides only marginal incentive for the latter group to invest. This situation is not likely to change until either (1) world demand exceeds world supply by major amounts⁵ or (2) NPFMC schedules the removal of foreign users over a definite and relatively short period of time. Such action by NPFMC would create favorable price signals to U.S. producers and would reduce the uncertainty under which present investment decisions are made. The Council would have to place greater emphasis on "social and economic factors" than they do presently to justify the schedule approach.

Potential Entrants into Alaska Bottomfish

Just as the mix of resource, physical and environmental factors suggest a range of technological responses, the range of alternative types of development opportunities suggest certain organizational responses by industry. The response which is most appropriate to a particular situation depends on the economics of that situation and the existing business activities of potential entrants. The following categories appear most likely:

- Fringe expansion into bottomfish by those who seek minimal modification to existing vessels, gear, and plants but who desire to obtain off-season use of their capital assets.
- Expansion from existing operations through major conversions of vessels and plants or through the addition of vessels and plants.
- Major new entrants from the food manufacturing industry. The form of entry could be through internal expansion or acquisition of existing companies.
- Major new entrants from the manufacturing and extractive industries via internal expansion or acquisition.

A bias toward large scale, capital intensive operations is apparent in markets, technology and physical constraints. This bias suggests that companies in the latter two categories will have an advantage in entering bottomfish. In particular, major food manufacturing companies that presently have subsidiaries in Alaska fisheries (categories two and three above) would appear to be the most likely potential entrants. Examples of such companies are Del Monte, Castle and Cook and AMFAC. There are a number of other large, diversified food manufacturing firms having fish processing operations which are likely candidates for some form of direct involvement in Alaska bottomfish development.

Present Federal Development Policy

In May of 1979 the Administration announced for the first time a national fisheries development policy and program. The main thrust of this policy is to correct for market failures⁶ where they exist and to allow private (industry) decision makers to invest in response to market forces. This policy is being implemented through the creation of regional fisheries development programs. Industry, and local, state, and federal governments, are participating in these programs to create environments conducive to development. In the Alaska and Pacific Northwest region, examples of federal involvement are the Economic Development Administration/National Marine Fisheries Service (EDA/NMFS) and Alaska Fishery Development Corporation (AFDC) efforts. The EDA/NMFS effort is focused on coordinating federal agencies with jurisdiction and/or expertise in coastal infrastructure development. The AFDC effort is now focused on projects which demonstrate fish harvesting, preservation, handling, processing, and other methods. The purpose of these projects is to provide information to investors interested in harvesting and processing bottomfish. Future AFDC projects could supply information on other aspects of fisheries development.

Other examples of federal involvement are the NPFMC and ongoing activities of the NMFS. As mentioned above, resource allocations by the NPFMC could have significant implications for the mode and pace of domestic bottomfish development.

It is clear that the federal government is not prepared to provide massive subsidies to the fisheries industry. Rather, the government will modify existing programs and legislation and add and delete

programs and legislation to provide a favorable climate for U.S. investment in the fisheries industry.

Present State Development Policy

In July of 1978, Governor Hammond formed a Bottomfish Task Force composed of various state legislators and agency commissioners. The Task Force was directed to define specific goals for the State and to design a work plan for industry development. In June, 1979, the Bottomfish Task Force published *The State of Alaska Program for Development of the Bottomfish Industry*. The purpose of this document is to present a plan for the State's role in bottomfish over the next twenty years.

The Alaska plan is organized towards the accomplishment of five development goals. These are:

- To develop an efficient, competitive, quality bottomfish industry which will be able to enter freely and profitably in domestic and world markets.
- To develop within a period of approximately 20 years the domestic utilization of Alaska bottomfish resources to the fullest optimum yield.
- To establish permanent onshore processing facilities with adequate port/harbor and community infrastructure.
- To encourage the maximum participation of Alaskan workers and entrepreneurs in the bottomfish industry.
- To conserve and manage the resource for a long term, sustainable fishery and processing industry in Alaska.

These goals are clearly stated and comprehensive enough in scope to recognize the many faceted subject areas of bottomfish development. Utilizing the goals as a base, the plan is structured into five component program areas each containing specific projects for implementation. The program areas are:

- Resource Management and Environmental Protection
- Development of Support Infrastructure
- Providing Industry with Data, Experience and Technology
- Encourage Alaska Entrepreneurship
- Providing Industry with a Favorable Institutional and Legal Climate for Development

In spite of the substantial planning effort to date performed by the State, it appears that additional refinements to the Alaska Plan are still necessary in order to provide policymakers and investors with a complete planning structure. This effort will primarily be needed in three areas. The first concerns possible inconsistencies in the planning goals. Technological and economic research to-date has still not determined whether shore-based processing is indeed the most efficient method of harvesting the Alaska resource to OY in a manner which is economically competitive on world markets. The second area where more planning effort is needed is in the development of more complete budgets and schedules. Presently, detailed planning has concentrated on only the first several years of the twenty-year plan. Finally, a third planning element which would help to clarify the plan is the performance of benefit-cost analysis for program areas or major projects. Benefit-cost analysis could greatly assist the state in identifying strengths and weaknesses in its development program.

Policy Recommendations

In this section, policy recommendations for promoting bottomfish development are offered to Alaska policymakers. These recommendations are made in light of Alaska policy goals and the economic realities as discussed in the preceding sections. In reviewing these recommendations, the reader is requested to consider and distinguish the following situations from which benefits might accrue to Alaska from bottomfish development:

- direct investment by and employment opportunities for Alaska residents in shore-based facilities and their secondary income and employment benefits
- direct investment by and employment opportunities for nonresidents in shore-based facilities and their secondary income and employment benefits
- direct investment by and employment opportunities for residents in sea-based operations with secondary shore-side effects
- direct investment by and employment opportunities for nonresidents in sea-based operations with secondary shore-side effects
- direct investment by and employment opportunities for Alaska residents in sea-based operations without shore-side effects
- direct investment by and employment opportunities for nonresidents in sea-based operations without shore-side effects

The reader is challenged to rank these categories from the perspective of an "average" Alaska resident. In doing so you will find that the mode of bottomfish development is not strictly a resident vs. nonresident controversy. Indeed, the potential resident investor or employee will probably want to devote his or her financial capital and skills where they will yield the highest profit or wage income, even if the mode of development required to maximize returns is sea-based. On the other hand, another resident who has an established service business in a coastal community might strongly prefer that the development mode be shore based. To complicate matters further, are Alaskans made better off from a shore-based project which is owned by and employs mostly nonresidents than a sea-based project owned by and employing residents?

The point of all this is that Alaska policymakers should recognize that in the area of fisheries development even the interests of its residents are divergent to a significant degree. Investors' incentives will be to choose the mode of development (for each particular resource opportunity) which promises the highest (risk-adjusted) return. In many instances, the combination of resource factors, physical and environmental factors, input constraints, marketing constraints, and regulatory constraints will make the best mode sufficiently clear that state policy preferences will not affect the investor's decision. For instance, most black cod harvesters in Southeast will select a shore based mode of operation and most pollock harvesters in the Bering Sea will choose a sea based mode of operation independent of state policy preferences.

With this background, the recommendations implicit in the analyses in this paper are presented below.⁷

- Determine to the extent possible the most probable patterns of industry investment response *before* committing to major state programs intended to support the industry. This determination will require the categorization of specific opportunities according to the most probable mode of operation as defined by the factors which define and constrain the opportunity — resource, physical aspects, environment, technology, availability and costs of inputs, and market requirements. This understanding of specific opportunities and how the industry will respond to them will put the state planning effort on a sound factual footing and identify priority areas for additional research. It will also provide

the basis for determining *how* the state can be of greatest assistance to the industry and *how* to best satisfy the state's policy goals.

- Formalize the state bottomfish program into a systematic long-range planning process. The discipline of the process itself will encourage those formulating, authorizing and implementing the plan to: (1) logically sequence projects, (2) develop long range budgets, (3) develop detailed task schedules, (4) develop and use a formal system of project evaluation, (5) monitor project implementation and performance, and (6) periodically reevaluate plan structure and content.
- Develop a major state supported program for providing *practical* fisheries education and vocational training. A planning effort should be initiated as soon as possible under the direction of a select steering committee working under specific goals established by the Legislature. The planning process should be directed by the steering committee which would have representatives from industry (majority) and appropriate programs of Alaska educational institutions. It is recommended that the program focus on technical subjects useful to operating vessels and plants, and applied managerial subjects useful to managing marine businesses. Finally, it is recommended that the program be offered on a highly competitive basis with substantial economic incentives for remaining in Alaska and/or applying the training acquired in a manner consistent with state goals. The purpose of this program, of course, would be to create within the Alaska resident population a skilled work force for bottomfish development and to augment the supply of entrepreneurial ability and managerial skills necessary to own and manage such businesses. This program would complement the financial programs already established by the state.
- Financially support the technological-transfer projects of the Alaska Fisheries Development Foundation (AFDF) and other Foundation projects which are consistent with state goals for bottomfish development (as defined in the formal planning process recommended above). It is recommended that the support be provided on the following basis: (1) the grant would be administered by the AFDF Board of Directors, (2) the grant would be for five years, released annually in equal installments, (3) the grant would be accompanied by a statement of legislative intent and require an annual reporting of fulfillment of intent, (4) the grant would be unconditional except that release of installments

in years two through five would be contingent upon industry matching in increasing 25 percent increments (25 percent in year two, 50 percent in year three, etc.), and (5) the grants should be in significant amounts (i.e., a minimum of \$500,000 to \$1,000,000 per year.)

NOTES

There are additional justifications which can be provided for these recommendations. Unfortunately, space limitations require that these and the details associated with mechanics of implementation be developed elsewhere.

Footnotes

¹The term "bottomfish" is used here to refer to black cod, Pacific ocean perch, rockfishes, Pacific cod, pollock, and flatfishes (flounders and soles).

²Ports; harbors; roads; airfields; plant site preparations such as water, power, and sewerage; and crew housing.

³Equipment and gear sales; repair facilities; recreation facilities; wholesale and retail establishments; and service businesses.

⁴Schools; communications; family housing; medical care; transportation; police and fire protection; and social services.

⁵Newly developed or developing production areas for whiting make this unlikely for the near or intermediate term.

⁶Situations where the market is not efficient in allocating resources to the highest valued use. For example, overcapitalized fisheries have resulted from investment decisions made in response to a market imperfection — the absence of ownership of the resources. The government has stepped in to correct for this market failure by limiting access.

⁷They are based on the presumption that Alaska policymakers share the same basic goals for bottomfish development: (1) to maximize economic benefits to Alaskans, (2) to maximize private-sector participation and minimize public-sector involvements, (3) to avoid public sector expenditure commitments which exceed the dollar value of benefits created by the expenditure, and (4) to avoid undesirable environmental, cultural, and social effects.

Frank Orth is an applied economist with specialization in fisheries economics, business economics, finance, industry structure and regulation. He is currently president and chief economist of Frank Orth & Associates of Bellevue, Washington and Juneau, Alaska. From 1971 to 1978, Dr. Orth was an assistant and associate professor of Economics with the Department of Economics and Alaska Sea Grant Program, University of Alaska.

ALASKA'S FISHERIES OUR RENEWABLE PIPELINE

Prepared by
Larry Cotter

Alaska is richly endowed with an abundance of natural resources, and greatly dependent upon the utilization of those resources for economic stability. However, Alaska is also the land of "boom and bust", where the incidence of occupational seasonability is severe. Economic stability is nothing more than an illusion based upon non-renewable resource exploitation. This, of course, is an unfavorable situation for our state, and regardless of the fact that we are currently experiencing an unparalleled abundance of petro dollars we must move Alaska in a direction of constant, stable, full employment.

False economies inevitably collapse, just as economies based on non-renewable resource exploitation eventually wither away as the resource exhaust itself. Accordingly, the number one priority of the state in the next decade should be the establishment of a year-round economy based on renewable resource utilization, consistent with the philosophy, the needs, and the nature of Alaska.

Fortunately, within 200 miles of Alaska lie one of the greatest concentrations of renewable protein resources in the world — seafood. Recent National Marine Fisheries Service figures indicate nearly 90% of the total fisheries catch within 200 miles of the United States comes from within 200 miles of Alaska. Yet, as is commonly known, only an infinitesimal amount of that catch — (as little as 10% taking into account the annual domestic harvest of salmon, crab, and halibut) — is currently harvested by American fishermen. Arthur D. Little, Inc., estimates that in June of 1978 there were 8,700 employees aboard 327 Japanese harvesting, processing, and support ships operating within 200 miles of Alaska. That estimate does not take into account the Russian fleet, the Korean fleet, the Polish fleet, or the Taiwanese fleet. It is these fisheries which hold the key for the future economic stability of Alaska.

The seafood industry in Alaska, already the state's largest private

employer, is certainly not an infant. At the peak of the summer salmon season as many as 10,000 processing workers may be employed in over 90 processing plants, more than 20,000 fishermen on the grounds, and a few thousand support personnel on shore. It is, potentially, a lucrative industry as well. The value of the King Crab harvest to fishermen alone in the Dutch Harbor/Unalaska area this year was \$110 million — greater than the combined catch value of all species in any one port in the rest of the United States.

However, it is not necessarily a healthy industry. Vessel costs can easily surpass \$1 million. The amount of up-front capital required by processing companies to buy the catch is enormous. The rising price of fuel, high interest rates, a shortage of available "domestic" money, fluctuating foreign exchange rates, all combine to greatly compound industry costs. Add to that foreign domination of the marketing structure and we have an industry which, in itself, is the perfect example of boom and bust.

It is acutely important for us to stabilize this industry. We can no more afford market collapses than we can afford the atrocious seasonality of processing worker employment. We can no more afford foreign domination of our economic structure than we can afford boom and bust fishermen. We can no more afford our entrance into the bottom fishery than we can afford to ignore the central problems of the industry as they now exist. It boils down to making sure the foundation of our house is stable before we throw up the frame.

Of the 10,000 processing workers at the peak of the salmon season at least 50% are non-Alaskan residents. Minorities are heavily concentrated in the industry, and easily make up the majority of the workforce. Racial segregation in relation to housing and discrimination in relation to jobs is common. The average annual income of seafood processing workers is the lowest average annual income of any income group in the state. Fringe benefits, such as health insurance, are usually poor, if at all in existence. Working conditions consist of tortuously long hours spent in cold, wet surroundings. Many of the processing plants are located in extremely isolated areas bereft of recreational conveniences. The seasonality of employment is severe — among our members employed in the industry, I estimate 70% are unemployed 40% of the year.

While it is fashionable to complain about the large number of non-Alaskan residents employed in the industry, and while there is some merit to that complaint, the simple fact of the matter is that most Alaskans are either too sensibly greedy, too lazy, or too alternately occupied to pursue a career as a cannery worker. And they will continue to be reluctant until the "lot" of the cannery worker improves substantially. Such improvements will occur as a combination of the results of increased labor organization of the workforce and greater concentration on the non-economic problems of the industry by the state — such as health and safety and the seasonality of employment. However, as this process takes place, and more and more Alaskans become involved in the industry, the industry itself should expand beyond the labor-fulfillment means of in-state hire. We shall, in essence, have achieved the betterment of the core of the industry, but we shall still have significant non-Alaskan employment. What is important is not so much the eradication of non-Alaskan employment, but the maximization of Alaska resident employment. In order to achieve the latter, we have to improve the conditions of the former.

Aside from increased wages, which will occur as a result of labor organization, there is much the state can and must do in order to improve the employment aspect of the industry. Immediately pertinent are steps to alleviate the extreme seasonality of employment. Although we can project an eventual year-round industry as a result of development of the bottom fishery, such a fishery appears to be at least a few years away even in a partial sense. We should not wait for its development in order to achieve what we already have the means to largely achieve now — an extension of employment. This can be accomplished within the industry as it currently exists through two techniques:

Directions:

1.) Management of the Resource Geared Toward the Maximization of Employment.

Although the salmon industry is one in which the fish are immediately destination prone (if they aren't harvested before they reach the stream, they're gone) other seafood species are in a position to be more easily regulated as affects the harvest. These harvests should, and could, be regulated in such a way as to prolong employment in the processing sector without adversely affecting

the harvest result.

In the Bering Sea king crab fishery, for example, a total of 120 million pounds of crab were harvested in 5 weeks this past fall. Processing worker employment in that area for that period reached an estimated 3,000 workers — for one month. Following the fishery closure, processing employment decreased substantially, and will hopefully maintain itself at the 700 level until the tanner crab fishery starts up this winter. That fishery, in turn, will create and experience basically the same type of employment increase/decrease prior to the eventual arrival of the summer salmon season — when the same cycle will repeat itself.

These crab fisheries should and could be managed in such a way that the individual harvests would last 3 - 5 months. This would result in a continuity of harvests and employment which would greatly stabilize the industry in that area.

2.) The Establishment of a Primary Processing Policy.

A huge amount of Alaska seafood products are minimally processed in-state and exported either down below or overseas for final processing. The most obvious example is roe herring.



The roe herring fishery is one of the most lucrative, wide-spread fisheries in Alaska. The herring roe (the eggs) are greatly prized abroad as a delicacy. The fishery takes place in the early spring — a time of acute processing worker unemployment. The processing of the product is simple: the herring are either boxed and frozen, or salted and boxed. In either case, the vast majority of the product is exported overseas — primarily to Korea — where the roe is extracted and shipped to the Japanese market. Given the value of the product, and the consumer demand, there is absolutely no reason why total processing of the product should not take place within Alaska. In British Columbia, as a matter of fact, there is a law forbidding the export of herring with a roe content greater than 5% (roe herring is not commercially harvestable until a roe content greater than 8% occurs in the fish). The result of the British Columbia law has been an extraordinary increase in both the number of employees and the length of employment in that particular industry — without a decrease in the value of the fish.

In addition to roe herring, other processing aspects which need to be reviewed are the halibut and crab fisheries. Although virtually all of the halibut harvested and frozen in Alaska is exported down below in a whole state, when was the last time you saw a whole halibut for sale in a super market? They are not sold in that manner — they are steaked first. If Alaska were to forbid the export of halibut unless steaked, the level of processing worker unemployment would decrease significantly.

In the crab industry, a few companies are beginning to freeze the crab raw and export it to be cooked somewhere else as opposed to cooking the crab, then freezing it, and then exporting it. As crab cannot be eaten unless it is first cooked, there is, again, no reason why we as a state should allow the exportation of a minimally processed product when that product could very easily, and to our benefit, be completely processed in-state.

The establishment of a series of primary processing policies would have to be implemented in stages over a period of years, and in accordance with the region, the product, and the processing capacity of the region. It would be detrimental to the people and fishermen in the Togiak/Bristol Bay area, for instance, for the state to forbid as of January 1, 1981 the export from Alaska of herring with a roe content greater than 5% — the roe herring harvest is just too

large and the processing capacity too small to comply with such a regulation. However, such a regulation would not be impractical at all for the rest of Alaska by 1981.

It is only logical for the state to pursue maximum processing of a product in-state, particularly when we are dealing with luxury products and a needlessly over-seasonal industry.

3.) Upgrading the Quantity and Quality of Fisheries Employment.

When projecting the future picture of the industry in Alaska, it is important to note the employment ratio of fishermen to shoreworkers. At present, the nature of the Alaskan fishing industry is one in which we are focusing on comparatively low numeric yield/high profit species. This has resulted in an employment ratio of roughly 2 fishermen to every 1 shoreworker. As we move into the bottom fishery a large segment of the industry will begin to focus on high numeric yield/low profit species. This is currently the case in Scandinavian countries where the employment ratio for that type of fishery emphasis is 1 fisherman to an average of 5 shoreworkers.

Translating the Scandinavian ratio into the emergence of an Alaskan bottom fishery we can project an eventual reversal of the present Alaska ratio of fishermen to shoreworkers. How rapidly this will occur is anybody's guess, however it should be noted there has already been a substantial increase in employment in the Aleutian area through the development of the Bering Sea crab fisheries alone. The significance of this, and the Scandinavian ratio, is in the accretion of more shoreworkers, and thus, assumedly, an increase in employment problems as they relate to wage and hour violations, discrimination, and health and safety problems. Dealing with these problems will require large increases in state funding to those agencies charged with the responsibility to enforce pertinent laws and regulations. While expansive bureaucratic spending should be discouraged, it has to be recognized that a miserly approach to funding of certain regulatory agencies would be detrimental to the participants in this industry — and as a result, to the industry, and Alaskan desires for Alaskan employment, as a whole.

Violations of Alaska laws and regulations as they relate to processing workers are all too common. Both the Alaska Department of Labor and the Alaska Commission on Human Rights need to have

their funding substantially increased in order to assure the reasonable application of the law. Neither agency at this time is adequately funded. Neither agency can respond promptly and efficiently to the wide range of employment related problems in this industry as it currently exists, much less in an expanding future. For example, the employment boom in the Dutch Harbor/Unalaska area has resulted in significant wage and hour violations, return transportation violations, workmen's compensation problems, discrimination, and health and safety problems, yet there is no funding for the Department of Labor to open an office in that area for constant on-sight enforcement and assistance. Likewise, the Alaska Commission on Human Rights needs to be funded in such a way that it can adequately respond to allegations and occurrences of discrimination. Anything less is to continue the second-class citizen status processing workers in Alaska have labored under throughout the history of this industry — and that is not going to achieve anything close to real "Alaskan" participation in the industry.

In relation to health and safety, the state needs to approach the Federal Government for jurisdiction over all domestic factory ships operating within Alaska Territorial Waters. Currently the state has jurisdiction *only* on the shore. The difference in safety and health regulations between the state and the Federal Government can be significant with the state's regulations more expansive. The situation becomes ludicrously bureaucratic when you have a shore plant under Alaska jurisdiction connected to a factory ship permanently moored to the shore under Federal jurisdiction with the workforce commonly interchanged between the two different sets of regulations. To make matters ever worse, neither the state nor the Feds appear to have adequate funding to enforce either set of regulations.

Health and safety, discrimination, wage and hour violations are all part of the very important "work environment". If the work environment is lousy, it is not going to be conducive to employment desirability. This is an area where the state can very definitely make some advancements — an area where the state has to make advancements if the industry is going to become Alaskan.

4). *The Health of the Alaskan Industry.*

The emphasis of this paper has been on the relationship between

processing workers and the industry. Without departing from that emphasis it is logical to note that processing workers have a great vested interest in the overall health of the industry. To a large degree, that health is dependent upon the successful marketing of the products we produce. That success, in turn, is dependent upon the quality of the processed product, consumer identification, and demand.

While I do not intend to delve into the realm of marketing — which is a serious problem itself — I would strongly advocate the establishment of a quality assurance board for all Alaskan seafood products, the creation of an "Alaska" seal of quality, and a steady media campaign geared toward consumer identification of Alaskan seafood products. Successful marketing is tangibly related to the economic stability of this industry — even more so in the future — we should spare no effort to etch in the mind of the consumer the quality and desirability of "Alaska" products. However, in order to achieve this we first have to be able to assure the consumer of quality. Given the diversity of the industry, its expanding nature, and the entrance of many new, small processing operations we have no real base at this time for such assurances. The creation of a set of industry-wide quality standards, coupled with the issuance of the "Alaska" seal to those companies who comply with the standards, would be a first important step in securing priority consumer acceptance of Alaskan products.

5.) *Taxation, Politics and Foreign Fisheries.*

As it stands now, the preeminent amount of fishery resources within 200 miles of Alaska are being harvested and utilized by foreign countries virtually free of charge. Given the economic difficulties of domestic entrance into these fisheries (a large portion of which is due to the comparatively low overhead cost of foreign production in relation to the domestic cost of labor, compliance with EPA standards, OSHA regulations, and FDA requirements) it is only fair that foreign countries pay an equitable fee for the right to harvest what amounts to a resource belonging to the people of the United States.

There are precedents for fees. Japan and the Soviet Union, for instance, have recently entered into an agreement whereby Japanese fleets will be allowed to harvest and process 10 million pounds of