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# ALASKA NATIVE HIRE ON THE TRANS-ALASKA OIL PIPELINE PROJECT

*This article is based on a research project performed by Larry L. Naylor and Lawrence A. Gooding (in conjunction with the Institute of Social and Economic Research) for the Bureau of Indian Affairs, Juneau area office, U.S. Department of the Interior.*

## INTRODUCTION

One of the most controversial local issues arising from construction of the trans-Alaska pipeline of 1974-77 was the question of Native[1] hire. Alaska Native organizations lobbied hard for a special minority hire provision that would focus on the aboriginal Natives of Alaska. While no hiring provision specifically naming Alaska Natives was written into the pipeline legislation, there was included a general statement on minority hire that charged the Secretary of the Interior with the responsibility for ensuring that no person was excluded from working on the project because of race, creed, color, religion, sex, or national origin.[2] The Secretary of the Interior, in turn, allowed the specifics of Alaska Native involvement in the construction of the pipeline project to be worked out between the Alaska Federation of Natives and the Alyeska Pipeline Service Company. Subsequent negotiations between Alyeska and the Alaska Federation of Natives ultimately established what all parties seemed to agree was a fair allotment of jobs for Natives on the mammoth project, a project that over its 3-year period was to employ over 60,000 persons.[3]

Behind the concern for Native hire was the history of chronic low employment and lack of economic opportunities for Alaskan Natives. For example, only 40 percent of the Native civilian population 16 years or older were employed in 1970, as opposed to 60 percent of the whites. Among the

**Larry L. Naylor is an assistant professor of Anthropology, and Lawrence A. Gooding is an assistant professor of Sociology. Both are with the University of Alaska at Fairbanks.**

[1]"Native," as used here (capitalized) refers only to the aboriginal peoples of Alaska.

[2]U.S. Congress, House, *The Trans-Alaska Pipeline Authorization Act of 1973*, Pub. L. 93-153, 93rd Congress, 1st session, 1974, Title II, Section 403, p. 590.

[3]However, no more than 21,000 workers were employed on the pipeline at any one time. The 60,000 cumulative employees reflects the high turnover rate among the general pipeline workforce.

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village Natives, 6,200 Native families or 56 percent of all Native families had a median income of only $5,200, and this in remote areas where the cost of living for persons depending on wage labor for income can often double that of the lower United States.[4] Seriously compounding such concerns was the fact that rural Natives have limited access to job information outside of their community or region.

Today, with the trans-Alaska oil pipeline construction a part of history, the question now arises, to what extent were Alaska Natives involved in the project? In order to address this question, we will examine five broad areas:

1. The number of Natives employed on the pipeline.
2. Native population groups employed.
3. Types and levels of jobs held.
4. Training for jobs.
5. Time on job and approximate amounts of money earned.

### Data Source and Accuracy

The data on which this report is based was supplied by the Alyeska Pipeline Service Company. It was originally gathered by Alyeska to satisfy both internal company needs as well as certain laws and regulations of governmental agencies. The data file on each individual was begun when each person employed filled out personal information forms during orientation. These files were forwarded to the individual's various supervisors where specific job information was added. The files were then forwarded to the various contractors, who recorded salary levels and other pertinent information on craft, position, and job level. Finally, the completed file was sent to Alyeska's office of Manpower Utilization, which had the responsibility of accumulating all Alyeska employee records. Ideally, files created through this process were continually updated as individuals were hired, terminated, rehired, promoted, given salary raises, or their status changed in any way.

While we cannot vouch for the accuracy of all the information contained within these records, a random sample of Natives hired was drawn and checked against Native regional corporation rolls and found to be accurate within 10 percent. However, the accuracy applies only to the names of Natives employed, their social security number, and their regional corporation membership. There was no way to check the accuracy of such things as job assignments, job levels, progression on the job, pay, and reasons for termination. As might also be expected, incomplete records and a nonsystematic accumulation of record data in the early months compounded the problem of analyzing the materials supplied by Alyeska.

## NATIVE HIRE

Native hire appears to have surpassed the numerical goals established by the Alaska Federation of Natives and Alyeska (and subsequently accepted by the Secretary of the Interior), a goal to hire a total of 3,000 Natives over the course of the project. During the first year, April 1974 through April 1975, Alyeska plans called for hiring 1,000 Natives and thereafter gradually building up to the desired 3,000. According to company records, the goals for the first and subsequent years were exceeded. By March 1975, approximately 2,100 Alaska Natives had been hired

[4] U.S. Department of the Interior, 2(c) *REPORT: Federal Programs and Alaska Natives, Task I—Analysis of Alaska Natives' Well-being* (Anchorage: Robert Nathan Associates, no date), p. 18. However, because such figures tend to ignore cultural differences that separate Alaskan Natives from Euro-American populations, caution must be exercised in using these figures to evaluate Native well-being. While on the Euro-American standard, the wage income of Alaska's rural Natives would often approach the poverty level, in the mixed economy of rural Natives, such a conclusion is not necessarily warranted. Most Natives have elected to continue some level of the traditional subsistance economy. This means that they generally blend the traditional subsistance pursuits of hunting, fishing, or trapping with part-time wage work. Most choose to work for wages only long enough to earn the money required to continue their traditional subsistance lifestyle. Compounding the difficulties in assessing Native well-being is the different values that Natives place on the accumulation of material goods, a factor of some importance in identifying poverty levels.

for specific jobs. Throughout the entire construction period, over 5,770 Natives were hired to work on the pipeline.[5] Of this total, 4,884 Native workers were men and 881 were women (Table 1).

**Table 1**

**Number of Alaska Native Pipeline Workers Hired and Number of Jobs Held—By Sex**

| Sex | Individuals Hired | | Jobs Held | |
|---|---|---|---|---|
| | Number | Percent of Total | Number | Percent of Total |
| Male | 4,884 | 84.6 | 13,122 | 87.2 |
| Female | 881 | 15.3 | 1,920 | 12.8 |
| Unknown | 5 | 0.1 | 5 | 0 |
| Total | 5,770 | 100.0 | 15,047 | 100.0 |

For many Natives, as with non-Natives, work on the pipeline often involved a succession of several different jobs. Native workers on the average held slightly less than three different jobs each, which amounted to a total of 15,047 actual jobs held by the 5,770 Natives who worked on the pipeline.[6] Some of these job changes represented only administrative changes in level, salary, or other administrative shifts. In such cases (204), the Native was not terminated and rehired, but administratively terminated and re-entered at a new level.

Drawing from an adult Native population estimated at 35,000, the project employed 16.6 percent of the adult population, a significant percentage. Not surprisingly, the pipeline employment was unevenly distributed throughout the adult population. For example, the project employed more men than women, more younger than older people, and more people from some communities and regions of the state than others.

While it is unfortunate that we do not know more about the effects of a project of this magnitude on its workers' skills, attitudes, and future employment potential, or about its economic impact on family, community, or culture, we do have a wealth of job-related information on the Natives who worked on the pipeline. This information should provide a useful and essential base for discerning some effects of the work experience itself, as well as to help identify areas where research on the more far-ranging impacts of the project is seriously lacking.

## Ethnic Group Representation

While the Alaska Native population from which pipeline workers were hired comprises a diversity of peoples, it is primarily broken down into three major ethnic groups: Eskimo, Aleut, and Indian. Many actual cultures are represented within each of these three general categories, cultures that were separated by rather distinct geographic boundaries in traditional times. Today, however, twelve of the thirteen Native regions created by the Alaska Native Claims Settlement Act (ANCSA) of 1971 (public law 92-203), roughly represent the major ethnic and cultural groups found in Alaska.[7] The regions are listed in Table 2, along with the associated Native group and the size of the land mass under their control. Their locations and regional boundaries are shown in Figure 1.

## Regional Participation

Table 3 shows how many Natives from each of the twelve Alaska Native regions worked on the Alyeska pipeline project. In both numbers of Natives hired and numbers of distinct jobs held, Doyon was highest with 1,556 Natives hired or 27.1 percent of the total; Koniag was lowest with 80 Natives hired or 1.4 percent of the total Natives hired.

The number of Natives hired per corporation was not necessarily proportional to the regional corporation's population. More important seemed to be proximity to recruiting centers. The Doyon region, which was bisected by several hundred miles of pipeline and includes Fairbanks, had the largest number and percentage of employees (1,556, or 16.9 percent of its estimated population), despite being only third largest in population among the corporations. Sealaska Corporation, with the largest enrollment population, held 15.8 percent of the jobs but only contributed 6.2 percent of its population

[5]Totals for Native hire on the pipeline have been derived from last-hire records unless otherwise noted. This means that only the final job record entry for an individual was used. Because some individuals worked at only one job while others worked at several, an individual's job record folder may contain anywhere from one to a dozen or more job record entries.

[6]Figures for the total pipeline workforce show approximately 60,000 individuals filling 131,000 jobs during the course of the project, averaging just over two jobs each. Natives held 11.5 percent of the total jobs and represented 9.7 percent of the pipeline workforce.

[7]In reality, even within these twelve regions, there is considerable diversity of cultural tradition.

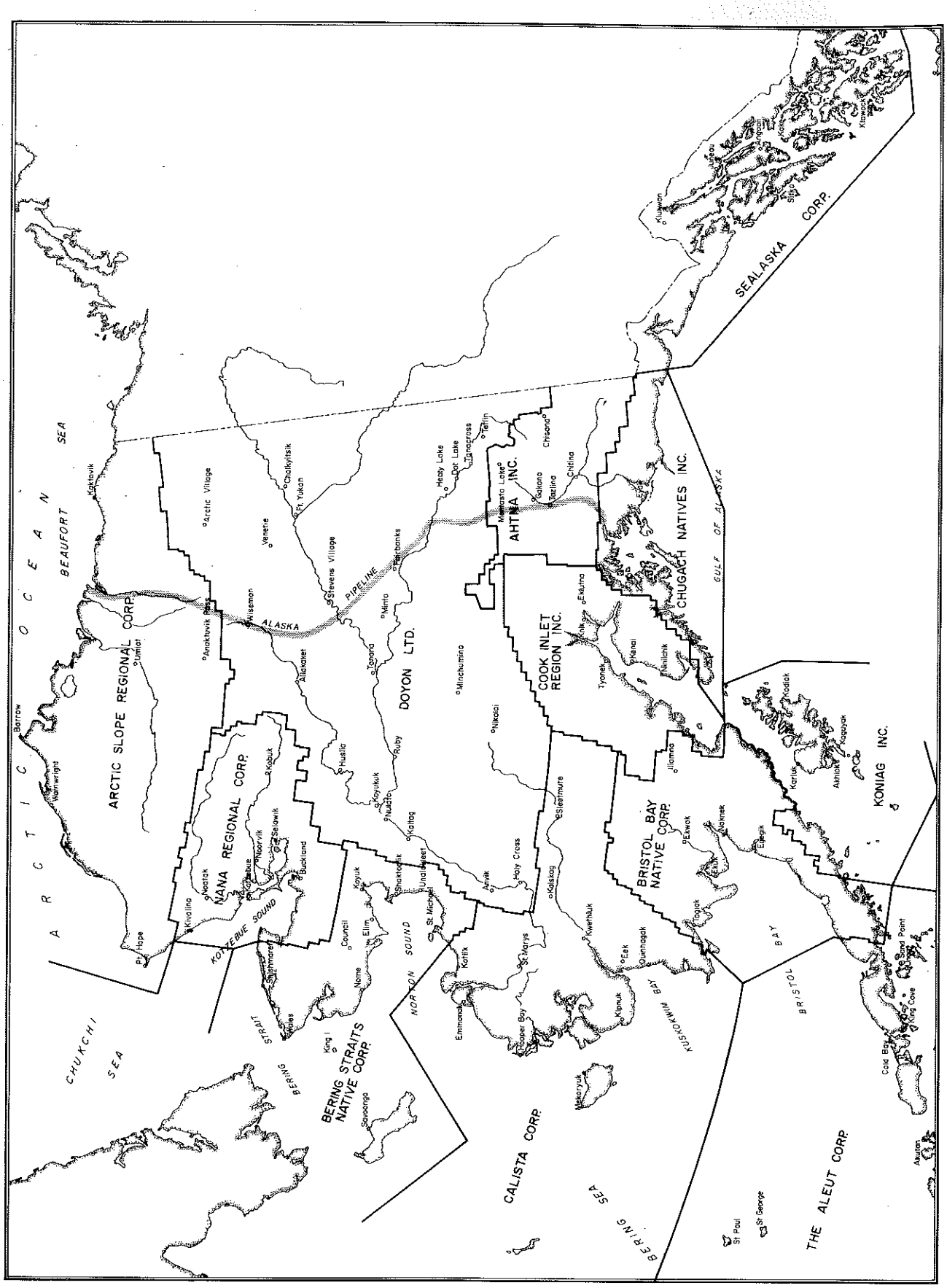


**Figure 1. The Twelve Alaska Regional Corporations**

**Table 2**

**The Thirteen Native Regional Corporations**

| Regional Corporation | Land Mass within Region (million acres) | Ethnic-Cultural Makeup |
|---|---|---|
| 1. Aleut | 7.1 | Aleut |
| 2. Arctic Slope | 54.1 | Inupiat Eskimo |
| 3. Calista | 35.8 | Yupik Eskimo |
| 4. Bering Straits | 14.8 | Inupiat Eskimo |
| 5. Bristol Bay | 26 | Yupik Eskimo |
| 6. Chugach | 9.5 | Yupik Eskimo, Aleut, Tlingit |
| 7. Cook Inlet | 24 | Eskimo, Aleut, Indiar |
| 8. Ahtna | 18.4 | Athapascan |
| 9. Koniag | 4.6 | Yupik Eskimo |
| 10. Nana | 23.1 | Inupiat Eskimo |
| 11. Sealaska | 21.8 | Tlingit, Haida |
| 12. Doyon | 128.2 | Athapascan |
| 13. Thirteenth | N/A | * |

*Created for Alaskan Natives who have left the state and claim no in-state affiliation.

(representing 16.4 percent of all Natives hired). Ahtna, on the other hand, which has the smallest enrollments (with only 1.3 percent of the Native total) contributed 16.5 percent of its population or 3.0 percent of all pipeline workers (175). The lower figures of the Aleut and Koniag corporations, which are both far removed from pipeline recruiting centers, would seem to suggest that distance from recruiting centers had a definite effect on a regional corporation's rate of participation.

Among the other factors that help to account for the varying rates of pipeline job participation by regions were: effort and planning by regional corporations to get people hired on the pipeline; regional corporation job contracts with Alyeska; and, special recruiting by Alyeska in particular regions and communities. In addition, a cultural factor, difficult to measure, would also appear to be significantly involved; not all regions have acculturated to the same level of participation in the Euro-American economy and lifestyle. Native participation in the labor market is not the same everywhere; wage labor opportunities vary, as does Native willingness to participate in such labor—an activity that detracts

**Table 3**

**The Distribution of Alaska Native Pipeline Workers And Population by Native Regional Corporation Memberships**

| Native Regional Corporation | Individuals Hired | | Jobs Held | | 1976 Corporation* Membership | | No. of Jobs Held per Individual |
|---|---|---|---|---|---|---|---|
| | Number | Percent of Total | Number | Percent of Total | Number | Percent of Total | |
| Ahtna | 175 | 3.0 | 480 | 3.2 | 1,059 | 1.3 | 2.7 |
| Aleut | 108 | 1.9 | 226 | 1.5 | 3,062 | 3.9 | 2.1 |
| Arctic Slope | 253 | 4.4 | 638 | 4.2 | 3,797 | 4.8 | 2.5 |
| Bering Straits | 431 | 7.5 | 1,083 | 7.2 | 7,422 | 9.5 | 2.5 |
| Bristol Bay | 210 | 3.6 | 458 | 3.0 | 5,280 | 6.7 | 2.2 |
| Calista | 409 | 7.1 | 902 | 6.0 | 13,248 | 16.9 | 2.2 |
| Chugach | 223 | 3.9 | 564 | 3.7 | 1,874 | 2.4 | 2.5 |
| Cook Inlet | 540 | 9.4 | 1,473 | 9.8 | 5,994 | 7.6 | 2.7 |
| Doyon | 1,566 | 27.1 | 4,817 | 32.0 | 9,233 | 11.8 | 3.1 |
| Koniag | 80 | 1.4 | 175 | 1.2 | 3,120 | 4.0 | 2.2 |
| Nana | 379 | 6.6 | 941 | 6.3 | 4,763 | 6.1 | 2.5 |
| Sealaska | 944 | 16.4 | 2,377 | 15.8 | 15,115 | 19.2 | 2.5 |
| Out of state/ Unknown | 452 | 7.8 | 913 | 6.1 | 4,537 | 5.8 | 2.0 |
| Total | 5,770 | 100.0 | 15,047 | 100.0 | 78,504 | 100.0 | |

*Supplied by U.S. Department of the Interior, Bureau of Indian Affairs, Enrollment Office.

from or precludes traditional subsistance pursuits. However, we do not know how much weight to give such considerations at this point, since little research has been performed on these areas of Native life.

The numbers of pipeline workers hired per community or village also appear to have been heavily influenced by proximity to recruitment and administrative activities as well as by the size of resident populations (Table 4). However, complicating the analysis of the hometown distribution of Native workers was the apparent confusion among the workers in filling out "place of residence" on their job forms. Many Natives actually recorded their place of dispatch, others used their permanent mailing address, and still others listed the village corporation of which they were a member. This confusion has in some cases resulted in some distortion in the numbers of Natives reportedly hired per village or town (Tables 4 and 5). For example, it is unlikely that 80 percent of all Native residents of Fairbanks actually worked on the pipeline. It is more likely that many Natives from other towns and villages who came to Fairbanks for pipeline training and work assignments erroneously listed Fairbanks as their current residence on their job forms.

Despite the caution one must exercise in interpreting data in both Tables 4 and 5, one pattern can be safely discerned: there is as much variation within regions as there is between regions in the proportions of pipeline workers.

Thus, while only 5.8 percent of the total Bering-Straits' Regional Corporation membership worked on the pipeline, over 15 percent of the village of Shaktoolik's membership was involved, but less than 1 percent of Gambell's. This uneven pattern, which appears throughout all the Native regions, supports the notion that factors other than proximity may also be significant in influencing the numbers and percentages of pipeline workers hired. Unfortunately, available data does not permit a more discriminating analysis.

### Native Men and Women

Table 6 presents the number of Native workers by sex and region and as proportions of the estimated adult male and female populations. While one of every four adult Native males worked on the pipeline statewide, approximately one of every two of Doyon's and Ahtna's adult male membership worked on the line and less than one of every nine of Aleut's and Koniag's members were pipeliners.

This pattern of uneven inter-regional representation was also true for Native women. Where statewide, one of every twenty Native women worked on the line, Ahtna's and Doyon's ratios were about one of six and Koniag's was one of forty-five. Also, the ratio of each region's female pipeline workers to its total female population followed the pattern discussed earlier for male pipeliners, with Doyon and Ahtna having the highest ratio for both sexes and Koniag having the lowest.

One interesting difference among regions is the varying ratio of males to females hired. For example, about ten times more men than women were hired from Arctic Slope, Nana, and Sealaska corporations. This contrasts with a ratio of about three men to one woman for Ahtna, Aleut, and Koniag corporations.

**Table 4**
**Communities Supplying the Most Alaska Native Pipeline Workers***

| Community | No. of Individuals Hired | 1976 Native Enrollment |
|---|---|---|
| Anchorage | 2,469 | 2,920 |
| Fairbanks | 732 | 913 |
| Juneau | 204 | 2,657 |
| Ketchikan | 174 | 1,823 |
| Nome | 190 | 2,041 |
| Kotzebue | 130 | 1,976 |
| Barrow | 116 | 2,029 |
| Metlakatla | 91 | 0 |
| Tanana | 89 | 590 |
| Bethel | 87 | 1,724 |
| Nenana | 84 | 451 |
| Sitka | 80 | 1,816 |
| Minto | 75 | 286 |
| Fort Yukon | 74 | 134 |
| Copper Center | 61 | 257 |
| Unalakleet | 51 | 827 |
| Kodiak | 49 | 520 |
| Valdez | 48 | 102 |
| Holy Cross | 47 | 422 |
| Dillingham | 46 | 925 |
| Seward | 41 | 339 |
| Allakaket | 40 | 147 |
| Stevens Village | 40 | 166 |
| Galena | 39 | 344 |
| Point Hope | 38 | 498 |
| Kenai | 38 | 480 |
| Total | 5,133 | 24,387 |

*Many persons reporting current residence recorded their place of dispatch, others used their permanent mailing address. Therefore, reporting is not uniform and caution should be exercised in interpreting the data presented.

## Table 5

### Hometowns of Alaska Native Pipeline Workers[a] (By Native Regional Corporation)

| Regional Corp./ Hometown | No. of Jobs Held by Natives | No. of Individual Natives Hired | 1976 Native Membership | % of Native Membership Working on Pipeline |
|---|---|---|---|---|
| Ahtna | | | 1,059 | |
| Cantwell | 4 | 3 | 72 | 4.2 |
| Chistochina | 6 | 2 | 32 | 6.3 |
| Chitina | 41 | 13 | 237 | 5.5 |
| Copper Center | 194 | 61 | 257 | 23.7 |
| Gadona | 41 | 14 | 35 | .4 |
| Glennallen | 74 | 37 | 4 | |
| Gulkana | 21 | 7 | 106 | 6.6 |
| Kenny Lake | 4 | 1 | 2 | 50.0 |
| Mentasta Lake | 31 | 12 | 97 | 12.4 |
| Slana | 4 | 1 | 22 | 4.5 |
| Tazlina | 2 | 1 | 116 | .9 |
| Tonsina | 6 | 3 | 4 | 75.0 |
| Aleut | | | 3,062 | |
| Akutan | 2 | 3 | 106 | 2.8 |
| King Cove | 26 | 9 | 342 | 2.6 |
| St. Paul | 7 | 5 | 540 | .9 |
| Sand Point | 7 | 4 | 401 | 1.0 |
| Unalaska | 26 | 9 | 268 | 3.4 |
| Arctic Slope | | | 3.797 | |
| Anaktuvuk | 15 | 8 | 132 | 6.1 |
| Kaktovik | 35 | 10 | 112 | 8.9 |
| Meade River | 2 | 2 | N/A | |
| Nooiksuk | 14 | 7 | 212 | 3.3 |
| Pt. Barrow | 308 | 117 | 2,029 | 5.8 |
| Pt. Hope | 106 | 38 | 498 | 7.6 |
| Pt. Lay | 14 | 3 | 89 | 3.4 |
| Wainwright | 24 | 14 | 369 | 3.8 |
| Bering | | | 7,422 | |
| Brevig Mission | 21 | 12 | 135 | 8.8 |
| Diomede (Inalile) | 1 | 1 | 104 | .9 |
| Elim | 26 | 8 | 234 | 3.4 |
| Gambell | 9 | 4 | 427 | .9 |
| Golovin | 23 | 8 | 171 | 4.7 |
| King Island | 7 | 3 | 205 | 1.5 |
| Koyuk | 28 | 10 | 184 | 5.4 |
| Nome | 338 | 140 | 2,041 | 6.9 |
| St. Michael | 19 | 9 | 251 | 3.6 |
| Savoonga | 9 | 2 | 415 | .5 |
| Shaktoolik | 70 | 31 | 205 | 15.1 |
| Shishmaref | 43 | 13 | 310 | 4.2 |
| Soloman | 3 | 1 | 37 | 2.7 |
| Stebbins | 3 | 1 | 472 | .2 |
| St. Lawrence Island | 5 | 1 | 9 | .1 |
| Teller | 35 | 20 | 274 | 7.3 |
| Unalakleet | 120 | 52 | 827 | 6.3 |
| Wales | 20 | 9 | 167 | 5.4 |
| White Mt. | 31 | 9 | 196 | 4.6 |
| Bristol | | | 5,280 | |
| Aleknagik | 15 | 8 | 231 | 3.5 |
| Chignik | 8 | 3 | 284 | 1.1 |
| Clarks Point | 6 | 3 | 111 | 2.7 |
| Dillingham | 111 | 46 | 925 | 4.9 |
| Egegik | 19 | 4 | 165 | 2.4 |
| Ekwok | 3 | 1 | 112 | .9 |
| Iliamna | 10 | 5 | 75 | 6.7 |
| King Salmon | 2 | 1 | 16 | 6.3 |
| Manokotak | 8 | 6 | 226 | 2.7 |
| New Stuyakhok | 3 | 3 | 229 | 1.3 |
| Pedro Bay | 9 | 2 | 104 | 1.9 |
| Perryville | 2 | 1 | 130 | .8 |
| South Naknek | 29 | 14 | 179 | 7.8 |
| Togiak | 10 | 4 | 399 | 1.0 |
| Calista | | | 13,248 | |
| Akiachak | 8 | 5 | 331 | 1.5 |
| Akiak | 4 | 3 | 211 | 1.4 |
| Aniak | 21 | 16 | 249 | 6.4 |
| Bethel | 185 | 87 | 1,724 | 5.0 |
| Chevak | 27 | 14 | 422 | 3.3 |
| Crooked Creek | 1 | 1 | 128 | .8 |
| Eek | 11 | 5 | 200 | 2.5 |
| Emmonak | 1 | 1 | 476 | .2 |
| Georgetown | 10 | 2 | 45 | 4.4 |
| Hooper Bay | 40 | 27 | 623 | 4.3 |
| Kalskag | 27 | 10 | 159 | 6.3 |
| Kipnuk | 2 | 1 | 360 | .3 |
| Kongiganak | 2 | 2 | 248 | .8 |
| Kotlik | 7 | 2 | 220 | .9 |
| Kwethluk | 32 | 12 | 450 | 2.7 |
| Marshall | 5 | 2 | 215 | .9 |
| Makoryuk | 27 | 15 | 305 | 4.9 |
| Mt. Village | 28 | 13 | 488 | 2.7 |
| Napakiak | 27 | 10 | 255 | 3.9 |
| Nightmute | 7 | 2 | 99 | 2.0 |
| Nunapitchuk | 2 | 1 | 325 | .3 |
| Pilot Station | 3 | 2 | 320 | .6 |
| Platinum | 3 | 2 | 68 | 2.9 |
| Quinhagak | 43 | 15 | 346 | 4.3 |
| Russian Mission | 2 | 1 | 115 | .9 |
| St. Marrys | 12 | 8 | 297 | 2.7 |
| Scammon Bay | 8 | 4 | 190 | 2.1 |
| Sheldon Pt. | 2 | 1 | 131 | 1.5 |
| Sleetmute | 4 | 2 | 163 | 1.2 |
| Stoney River | 4 | 2 | 80 | 2.5 |
| Toksook Bay | 16 | 7 | 281 | 2.5 |
| Tuluksak | 9 | 6 | 183 | 3.3 |
| Tuntutuliak | 5 | 2 | 211 | .9 |
| Tununak | 27 | 10 | 295 | 3.4 |
| Chugach | | | 1,874 | |
| Cordova | 162 | 74 | 271 | 27.3 |
| English Bay | 10 | 5 | 71 | 7.0 |
| Eyak | 13 | 4 | 326 | 1.2 |
| Port Graham | 13 | 6 | 190 | 3.2 |
| Seward | 112 | 41 | 339 | 12.1 |
| Tatitlek | 29 | 12 | 215 | 5.6 |
| Valdez | 134 | 48 | 102 | 47.1 |

Table 5 (cont.)

| Regional Corp./ Hometown | No. of Jobs Held by Natives | No. of Individual Natives Hired | 1976 Native Membership | % of Native Membership Working on Pipeline |
|---|---|---|---|---|
| Cook Inlet | | | 5,994 | |
| Alexander Creek | 5 | 2 | 37 | 5.4 |
| Anchorage | 2,469 | 1,007 | 2,920 | 34.5 |
| Anchor Point | 14 | 5 | 25 | 20.0 |
| Chugiak | 79 | 28 | 46 | 60.9 |
| Eagle River | 43 | 19 | 32 | 59.4 |
| Eklutna | 5 | 3 | 126 | 2.4 |
| Girdwood | 6 | 3 | 0 | |
| Homer | 19 | 9 | 52 | 17.3 |
| Kasilof | 5 | 2 | 44 | 4.5 |
| Kenai | 84 | 38 | 480 | 7.9 |
| Knik | 1 | 1 | 28 | 3.6 |
| Mt. View | 9 | 4 | | |
| Ninilchik | 19 | 7 | 207 | 3.4 |
| Palmer | 56 | 25 | 97 | 25.8 |
| Salamatof | 4 | 2 | 129 | 1.6 |
| Seldovia | 38 | 10 | 255 | 3.9 |
| Soldotna | 15 | 8 | 10 | 80.0 |
| Spenard | 17 | 7 | 9 | 77.8 |
| Sutten | 4 | 3 | | |
| Talkeetna | 1 | 1 | 60 | 1.7 |
| Tyonek | 5 | 5 | 303 | 1.7 |
| Wassila | 18 | 9 | 38 | 23.7 |
| Willow | 11 | 4 | 2 | |
| Doyon | | | 9,233 | |
| Alatna | 13 | 6 | 30 | 20.0 |
| Allakaket | 128 | 40 | 147 | 27.2 |
| Anvik | 17 | 7 | 129 | 5.4 |
| Arctic Village | 87 | 26 | 147 | 17.7 |
| Beaver | 58 | 15 | 190 | 7.9 |
| Bettles Field | 14 | 3 | 82 | 3.7 |
| Chalkyitsik | 26 | 9 | 90 | 10.0 |
| Chicken | 1 | 1 | 14 | 7.1 |
| Circle | 30 | 9 | 101 | 8.9 |
| Clear | 9 | 3 | 4 | 75.0 |
| College | 52 | 24 | 7 | |
| Delta Junction | 43 | 17 | 15 | |
| Eagle | 64 | 19 | 100 | 19.0 |
| Fairbanks | 2,078 | 732 | 913 | 80.2 |
| Ft. Yukon | 257 | 74 | 734 | 10.1 |
| Galena | 115 | 39 | 344 | 11.3 |
| Grayling | 83 | 26 | 178 | 14.6 |
| Holy Cross | 112 | 47 | 422 | 11.1 |
| Hughes | 52 | 21 | 88 | 23.9 |
| Huslia | 93 | 31 | 225 | 13.8 |
| Kaltag | 93 | 34 | 250 | 13.6 |
| Koyukuk | 66 | 24 | 163 | 14.7 |
| Manley Hot Springs | 15 | 7 | 42 | 16.7 |
| McGrath | 61 | 21 | 176 | 11.9 |
| Minto | 246 | 75 | 286 | 26.2 |
| Nenana | 354 | 84 | 451 | 18.6 |
| Nikolai | 11 | 5 | 93 | 5.4 |
| North Pole | 11 | 6 | 9 | 6.7 |
| Northway | 44 | 19 | 206 | 9.2 |
| Nulato | 59 | 29 | 392 | 7.4 |
| Rampart | 156 | 31 | 173 | 17.9 |
| Ruby | 114 | 37 | 289 | 12.8 |
| Shageluk | 13 | 8 | 186 | 4.3 |
| Stevens Village | 206 | 40 | 166 | 24.1 |
| Takotna | 32 | 12 | 38 | 31.6 |
| Tanacross | 84 | 27 | 167 | 16.2 |
| Tanana | 248 | 89 | 590 | 15.1 |
| Tetlin | 13 | 6 | 125 | 4.8 |
| Tok | 39 | 13 | 2 | |
| Venetie | 33 | 10 | 156 | 6.4 |
| Koniag | | | 3,120 | |
| Akhiok | 5 | 1 | 93 | 1.1 |
| Karluk | 5 | 2 | 186 | 1.1 |
| Kodiak | 93 | 49 | 520 | 9.4 |
| Larsen Bay | 7 | 2 | 203 | .9 |
| Old Harbor | 4 | 4 | 334 | 1.2 |
| Quzinkie | 1 | 1 | 334 | .3 |
| Port Lions | 15 | 7 | 114 | 6.1 |
| Nana | | | 4.763 | |
| Ambler | 25 | 13 | 166 | 7.8 |
| Buckland | 5 | 3 | 159 | 1.9 |
| Deering | 10 | 4 | 162 | 2.5 |
| Kiana | 82 | 28 | 341 | 8.2 |
| Kivalina | 68 | 31 | 185 | 16.8 |
| Kobuk | 3 | 3 | 68 | 4.4 |
| Kotzebue | 333 | 130 | 1,976 | 6.6 |
| Noatak | 26 | 13 | 288 | .7 |
| Noorvik | 103 | 36 | 485 | 7.4 |
| Selawik | 61 | 34 | 478 | 7.1 |
| Shungnak | 18 | 6 | 163 | 3.7 |
| Sealaska | | | 15,115 | |
| Angoon | 70 | 37 | 628 | 5.9 |
| Auke Bay | 9 | 4 | 10 | 40.0 |
| Craig | 36 | 16 | 320 | 5.0 |
| Douglas | 41 | 15 | 19 | 78.9 |
| Haines | 68 | 32 | 319 | 10.0 |
| Hoonah | 82 | 32 | 867 | 3.7 |
| Hydaburg | 39 | 15 | 564 | 2.7 |
| Juneau | 537 | 204 | 2,657 | 7.7 |
| Kake | 29 | 15 | 551 | 2.7 |
| Ketchikan | 450 | 174 | 1,823 | 9.5 |
| Klawock | 28 | 13 | 510 | 2.5 |
| Klukwan | 5 | 2 | 251 | .8 |
| Metlakatla | 258 | 91 | 0 | |
| Petersburg | 74 | 32 | 424 | 7.5 |
| Saxman | 4 | 1 | 198 | .5 |
| Sitka/Mt. Edgecumbe[b] | 180 | 80 | 1,816 | 4.4 |
| Ward Cove | 8 | 5 | 0 | 4.7 |
| Wrangell | 85 | 35 | 739 | 4.7 |
| Yakutat | 52 | 16 | 340 | 7.6 |
| Out-of-state/Unknown | 765 | 346 | 4,537 | 7.3 |
| Total | 15,047 | 5,770 | 78,504 | |

[a]Many persons reporting current residence recorded their place of dispatch, others used their permanent mailing address. Therefore, reporting is not uniform and caution should be exercised in interpreting the data presented.

[b]Population combined.

**Table 6**

**Proportions of the Adult Native Men and Women Pipeline Workers Per Region**

| Regional Corporations | 1976 Native Membership | | | Native Men Hired | | Native Women Hired | |
|---|---|---|---|---|---|---|---|
| | Total No. | Estimated Adult Male* | Estimated Adult Female* | Total No. | % of Adult Male Memberships | Total No. | % of Adult Female Membership |
| Ahtna | 1,059 | 278 | 251 | 137 | 49.2 | 45 | 17.9 |
| Aleut | 3,062 | 870 | 686 | 90 | 10.3 | 24 | 3.4 |
| Arctic Slope | 3,797 | 911 | 771 | 232 | 25.4 | 23 | 2.9 |
| Bering Straits | 7,422 | 1,818 | 1,633 | 386 | 21.2 | 53 | 3.2 |
| Bristol Bay | 5,280 | 1,262 | 1,172 | 178 | 14.1 | 32 | 2.7 |
| Calista | 13,248 | 3,020 | 2,795 | 355 | 11.7 | 62 | 2.2 |
| Chugach | 1,874 | 523 | 457 | 204 | 39.0 | 25 | 5.4 |
| Cook Inlet | 5,994 | 1,337 | 1,714 | 463 | 34.6 | 87 | 5.0 |
| Doyon | 9,233 | 2,188 | 2,253 | 1,268 | 57.9 | 322 | 14.2 |
| Koniag | 3,120 | 824 | 714 | 65 | 7.8 | 16 | 2.2 |
| Nana | 4,763 | 1,010 | 976 | 349 | 34.5 | 38 | 3.8 |
| Sealaska | 15,115 | 3,628 | 3,507 | 881 | 24.2 | 91 | 2.5 |
| Subtotal | 73,967 | 17,669 | 16,929 | 4,608 | 26.0 | 818 | 4.8 |
| Out of State/Unknown | 4,537 | N/A | N/A | 276 | N/A | 63 | N/A |
| Total | 78,504 | | | 4,884 | | 881 | N/A |

*Adult population defined as 16 years of age and over. Estimates are based on the age/sex proportions present in the 1970 census.

The reasons for the differences are not clear, but are believed to relate to a combination of factors, including cultural differences in the perceptions of women's roles, proximity to the pipeline recruiting centers, and type of job held.

### Workers' Ages

The distribution of the Alaska Native pipeline workers by age (Table 7) shows most (3,292 or 62 percent) to be in the 18-to-34 year old bracket. Although we have no age-employment records on non-Native pipeline workers for comparison, there would appear to be nothing unusual in this age distribution; it is what one would expect in any general age breakdown of construction employees.

### Job Levels and Kinds of Jobs

The first jobs Natives held on the pipeline were more or less evenly divided between journeyman and training levels (Table 8). Thus, the "pipeline jobs" of about half (44 percent) of the Native workforce essentially involved some training. Most of this training was either of an institutional (classroom) nature or on-the-job; however, a few Natives did directly enter an apprenticeship program.

A comparison of first and last Native job levels shows that a significant movement from the training to journeyman levels did take place. It is also noteworthy that about one-fourth of all Native

**Table 7**

**Number of Alaska Native Pipeline Workers Hired and Number of Jobs Held—By Age**

| Age Category | Individuals Hired | | Jobs Held | |
|---|---|---|---|---|
| | Number | Percent of Total | Number | Percent of Total |
| 18-24 | 1,447 | 25.0 | 3,953 | 26.3 |
| 25-34 | 1,845 | 31.9 | 5,436 | 36.1 |
| 35-44 | 841 | 14.6 | 2,544 | 16.9 |
| 45-65 | 649 | 11.3 | 1,772 | 11.8 |
| 66 and over | 28 | 0.4 | 81 | 0.5 |
| Unknown | 960 | 16.6 | 1,261 | 8.4 |
| Total | 5,770 | 99.8 | 15,047 | 100.0 |

pipeline workers were in training positions or categories when they were terminated. Not all of these, however, started and ended their jobs as "trainees" in the same program. Some had entered new training programs when their original jobs were completed.

While the job-level term of "journeyman" generally implies a skilled craft, it was used on the pipeline project to embrace a wide range of unskilled and skilled jobs (from laborer to electrician) and cannot be used here to infer either the nature of the job held or the skill required to perform the work.

Table 9 provides a more instructive view of the positions Natives held on the pipeline. Nine positions comprised over two-thirds of all types of jobs Natives held. In descending order of numbers in each position, these were: (1) laborer, (2) operator (light and heavy machinery), (3) teamster (driver or warehouseman), (4) oiler, (5) carpenter, (6) welder helper, (7) bullcook, (8) mechanic, and (9) graded helper. For many of these positions, generally recorded as journeyman level, work experience rather than formal training was required. In view of their relatively low levels of formal training and limited experience in the job market, it is not surprising that the bulk of Native workers tended to be concentrated in these positions.

Virtually all pipeline construction employment occurred via 30 craft unions. Dominant among the unions for Native pipeliners was Teamster's Local 959, Operating Engineers 302, and Laborers 942 (Table 10). Combined, these three unions had jurisdiction over almost 60 percent of the jobs held by Natives.

One hope often expressed by proponents of Native hire was that the pipeline experience and training, combined with a craft affiliation, which few Natives previously had and was a prerequisite for many jobs, would lead to a positive long-term craft affiliation and expanded post-pipeline job opportunities. Unfortunately, research that would either refute or substantiate the validity of this assumption or aspiration has not been conducted on this important auxiliary question. Because primary employment on projects of this magnitude tend to go to the craft-affiliated workers, and because Alaska will experience similar projects in the near future, this question merits further attention and inquiry.

Table 11 reclassifies the last-hire jobs held by 5,770 Natives into skill categories conventionally used by the U.S. Department of Labor. As the table shows, the significant categories are craftsmen, operatives, laborers, and service workers. These last two categories are generally regarded as unskilled or requiring few skills or prior training. In contrast, craftsmen and operatives generally require some skills and prior experience, depending upon the actual position.

**Table 8**

**Level of Jobs and Training Categories of Alaska Native Pipeline Workers**

| | Individuals Hired (1st record) [a] | | Individuals Hired (last record) [b] | | Jobs Held | |
|---|---|---|---|---|---|---|
| Job Level | Number | Percent of Total | Number | Percent of Total | Number | Percent of Total |
| Journeyman | 2,415 | 42.7 | 3,762 | 65.1 | 9,230 | 61.3 |
| On-Job Trainee | 1,063 | 18.8 | 575 | 10.0 | 2,027 | 13.5 |
| Inst. Trainee | 1,247 | 22.1 | 480 | 8.0 | 1,632 | 10.8 |
| Unknown [b] | 522 | 9.2 | 384 | 7.6 | 840 | 5.6 |
| Helper | 222 | 3.9 | 322 | 5.0 | 786 | 5.2 |
| Apprentice | 143 | 2.5 | 214 | 3.7 | 444 | 3.0 |
| Foreman | 38 | 0.7 | 33 | 0.6 | 88 | 0.6 |
| Total | 5,650 | 100.0 | 5,770 | 100.0 | 15,047 | 100.0 |

[a] Many individuals held several jobs. The difference between first and last hire records is the difference between the level of the first job held compared to the level of the last job held.

[b] Category includes administrators and unspecified trainees.

## Table 9

### Classifications of Positions Held by Alaska Native Pipeline Workers

| Position Classification | Individuals Hired: Number | Individuals Hired: Percent of Total | Individuals Hired: No. of Jobs Held |
|---|---|---|---|
| Unknown | 101 | 1.8 | 312 |
| Administrative | 22 | 0.4 | 69 |
| Welder helper | 256 | 4.4 | 853 |
| Ironworker | 114 | 2.0 | 283 |
| Sheetmetal | 22 | 0.4 | 33 |
| Operator | 548 | 9.5 | 1,639 |
| Powder helper | 3 | 0.1 | 8 |
| Technical Engn | 3 | 0.1 | 5 |
| Driller | 9 | 0.2 | 43 |
| Painter | 19 | 0.3 | 27 |
| Carpenter | 385 | 6.7 | 859 |
| Graded helper | 252 | 4.4 | 573 |
| Laborer | 951 | 16.5 | 2,640 |
| Wireman | 35 | 0.6 | 88 |
| Timekeeper | 17 | 0.3 | 33 |
| Mechanic | 240 | 4.2 | 658 |
| Surveyor | 75 | 1.3 | 177 |
| Tireman | 157 | 2.7 | 395 |
| Camp maintenance | 6 | 0.1 | 19 |
| Culinary Gen. help | 30 | 0.5 | 68 |
| Buyer staff | 2 | 0.0 | 3 |
| Engineer | 4 | 0.1 | 8 |
| Welder | 9 | 0.2 | 19 |
| Teamster | 530 | 9.2 | 1,512 |
| Millwright | 1 | 0.0 | 2 |
| Insulation worker | 57 | 1.0 | 107 |
| Staff security asst. | 116 | 2.0 | 260 |
| Asbestos worker | 31 | 0.5 | 47 |
| Bullcook | 278 | 4.8 | 710 |
| Flagman | 5 | 0.1 | 7 |
| Compressor op. | 7 | 0.1 | 24 |
| Electrician | 113 | 2.0 | 224 |
| Oiler | 434 | 7.5 | 1,273 |
| Greaser | 54 | 0.9 | 180 |
| Plumbing & heating | 35 | 0.6 | 97 |
| Instrumentman | 7 | 0.1 | 20 |
| Dispatcher trucks | 1 | 0.0 | 1 |
| Employee relations pe | 7 | 0.1 | 15 |
| Staff geotech engr | 1 | 0.0 | 2 |
| Blue print operator | 1 | 0.0 | 1 |
| Telephone | 2 | 0.0 | 3 |
| Communications man | 15 | 0.3 | 29 |
| Warehouseman | 121 | 2.1 | 294 |
| Incinerator op. | 0 | 0.0 | 2 |
| Gradechecker | 53 | .9 | 14 |
| Draftsman | 54 | .9 | 6 |
| Cook-baker | 55 | .9 | 88 |
| Field medical tech. | 56 | 1.0 | 6 |
| Culverts | 2 | 0.0 | 5 |
| Pipefitter | 45 | 0.8 | 79 |
| Expediter | 15 | 0.3 | 21 |
| Clerk-typist | 212 | 3.7 | 355 |
| Deck hand | 3 | 0.1 | 8 |
| Brush cutting | 0 | 0.0 | 4 |
| Air traffic admin. | 0 | 0.0 | 1 |
| Gen. foreman | 25 | 0.4 | 56 |
| Roofer | 2 | 0.0 | 2 |
| Counselor | 36 | 0.6 | 72 |
| QC inspector | 1 | 0.0 | 2 |
| Data Recording Oper. | 40 | 0.7 | 56 |
| Floorlayer | 1 | 0.0 | 3 |
| Partsman expeditor | 51 | 0.9 | 88 |
| Materials clerk | 5 | 0.1 | 6 |
| Swamper | 64 | 1.1 | 206 |
| Waitress | 14 | 0.2 | 34 |
| Teletype oper. | 1 | 0.0 | 2 |
| Fuel man | 74 | 1.3 | 169 |
| Weather observer | 1 | 0.0 | 1 |
| Laborer chain saw | 4 | 0.1 | 28 |
| Glazier | 2 | 0.0 | 3 |
| Rigger | 6 | 0.1 | 11 |
| Sewer plant oper. | 8 | 0.1 | 18 |
| Power plant | 23 | 0.4 | 63 |
| Boilermaker | 0 | 0.0 | 1 |
| Boat oper. | 7 | 0.1 | 11 |
| Bricklayer | 1 | 0.0 | 3 |
| Marine Engineer | 0 | 0.0 | 1 |
| Screen Plant Oper. | 0 | 0.0 | 1 |
| Lineman | 1 | 0.0 | 1 |
| Total | 5,770 | 100.0 | 15,047 |

## Training

From the beginning of the project, Alyeska and federal and state government agencies involved in training assumed that the potential Native pipeline workers, especially the rural Native, would be essentially unskilled in pipeline-related work. The integration of this workforce into the construction project required a comprehensive training program. Thus, in cooperation with state and federal agencies, Alyeska contracted with the state for classroom training at existing training centers in Fairbanks,

**Table 10**

**Craft Affiliations of Alaska Native Pipeline Workers**

| Craft Category | Individuals Hired | | Jobs Held | |
|---|---|---|---|---|
| | Number | Percent of Total | Number | Percent of Total |
| Unknown* | 196 | 3.4 | 376 | 2.5 |
| Bricklayers, No. 7 | 62 | 1.1 | 135 | 0.9 |
| Carpenters, No. 1243 | 308 | 5.3 | 737 | 4.9 |
| Hotel & Rest., No. 878 | 163 | 2.8 | 435 | 2.9 |
| Ironworkers, No. 751 | 123 | 2.1 | 333 | 2.2 |
| Laborers, No. 942 | 708 | 12.3 | 2,088 | 13.9 |
| Bricklayers, No. 2 | 6 | 0.1 | 36 | 0.2 |
| Carpenters, No. 1281 | 108 | 1.9 | 212 | 1.4 |
| Hotel & Rest., No. 879 | 344 | 6.0 | 886 | 5.9 |
| Laborers, No. 341 | 285 | 4.9 | 664 | 4.4 |
| Op. Engineers, No. 2 | 68 | 1.2 | 138 | 0.9 |
| Op. Engineers, No. 302 | 1,319 | 22.9 | 3,793 | 25.2 |
| Piledrivers, No. 2520 | 25 | 0.4 | 80 | 0.5 |
| Plaster & Cement No. 91 | 4 | 0.1 | 5 | 0.0 |
| Painters * Etc., No. 114 | 14 | 0.2 | 26 | 0.2 |
| Painters & Etc., No. 155 | 12 | 0.2 | 17 | 0.1 |
| Sheetmetal, No. 23 | 10 | 0.2 | 13 | 0.1 |
| Asbestos, No. 97 | 86 | 1.5 | 157 | 1.0 |
| Latherers, No. 529 | 2 | 0.0 | 4 | 0.0 |
| Roofers, No. 190 | 2 | 0.0 | 2 | 0.0 |
| Plaster & Cement, No. 8 | 48 | 0.8 | 120 | 0.8 |
| Teamsters, No. 959 | 1,086 | 18.8 | 2,936 | 19.5 |
| Teamsters, No. 959, Tech. | 77 | 1.3 | 169 | 1.1 |
| Cement Fin., No. 867 | 1 | 0.0 | 2 | 0.0 |
| Cement Fin., No. 912 | 1 | 0.0 | 1 | 0.0 |
| Sheetmetal, No. 72 | 12 | 0.2 | 21 | 0.1 |
| Boilermakers, No. 104 | 19 | 0.3 | 35 | 0.2 |
| Plumbers & Pipe, No. 36 | 23 | 0.4 | 56 | 0.4 |
| Plumbers & Pipe, No. 37 | 47 | 0.8 | 99 | 0.7 |
| Pipeliners, No. 793 | 331 | 5.7 | 867 | 5.8 |
| IBEW, No. 1547 | 195 | 3.4 | 416 | 2.7 |
| Trainee | 5 | 0.1 | 14 | 0.1 |
| Management | 80 | 1.4 | 173 | 1.1 |
| Total | 5,770 | 100.0 | 15,046 | 100.0 |

*Includes administrator and unspecified trainees.

Anchorage, and Seward.

Although these programs were slow in starting (a comprehensive state plan for training, specifically for pipeline employment, did not exist until a month before actual pipeline construction began),[8] the programs did not lack funding over the long run. In addition to the funds provided by Alyeska to support state training centers, funds were also provided by federal and state agencies through the Comprehensive Employment Training Act (CETA) and the Department of Vocational Rehabilitation. All parties combined, Alyeska and state and federal governments, spent approximately 9 million dollars on institutional training centers, which, over the 3 years of construction, enrolled, according to Table 8, a total of 1,247 Natives or 22 percent of the total Native workforce. According to last-hire records, over a third of these (480 Natives or 8 percent of the Native workforce) did not finish training and did not move directly to a pipeline job by the time the project was terminated.

Other major training came about through cooperation between Alyeska, the various craft unions, and pipeline contractors. This involved use of on-the-job training (OJT) and the various union apprenticeship programs. Alyeska reported spending about 5 million dollars on their OJT program. This category represents the largest trainee grouping, with 1,063 Natives originally hiring into OJT positions. OJT positions, over the course of the project, accounted for 2,027 of the 15,047 jobs held by all 5,770 Native workers.

The apprenticeship programs comprised the smallest training category. These were primarily run by the unions and varied from union to union, as circumstances and custom dictated. The union apprenticeship program, according to last-hire records, made up 3 percent or 444 of the 15,047 jobs

**Table 11**

**Skill Categories of Positions Held by Alaska Native Pipeline Workers**

| Skill Category | Individual Natives Hired | | Jobs Held | |
|---|---|---|---|---|
| | Number | Percent of Total | Number | Percent of Total |
| Officials & Managers | 19 | 0.3 | 52 | 0.3 |
| Professionals | 60 | 1.0 | 117 | 0.8 |
| Technicians | 78 | 1.4 | 161 | 1.1 |
| Sales | 1 | 0.0 | 5 | 0.0 |
| Office & Clerical | 282 | 4.9 | 472 | 3.1 |
| Craftsman | 2,035 | 35.3 | 5,035 | 33.5 |
| Operatives | 1,777 | 30.8 | 4,987 | 33.1 |
| Laborers | 872 | 15.1 | 2,531 | 16.8 |
| Service Workers | 601 | 10.4 | 1,477 | 9.8 |
| Unknown | 45 | 0.8 | 210 | 1.4 |
| Total | 5,770 | 100.0 | 15,047 | 100.0 |

[8]Mim Dixon and Georgina Herron, *Minority Hire and Alaska Hire on Pipeline* (Fairbanks: Fairbanks North Star Borough Impact Information Center Special Report [February 1975]), p. 12.

held by 5,770 Natives.

Table 8 shows numbers of Natives enrolled in (1) apprentice, (2) OJT, and (3) institutional categories. Training statistics were assembled by taking known contracted numbers for training.[9] The total number of jobs held that were associated with some kind of training equals 4,103 or some 27 percent of the 15,047 jobs held by 5,770 Natives.

A total of 2,453 Natives received training, according to first-hire records. This figure does not include 642 Native hires for whom the job category was unspecified or those individuals who held administrative jobs. Also, according to first-hire records, 43.4 percent of the Natives who worked on the pipeline project were identified as trainees. This would suggest that the Native labor force was basically unprepared in terms of the necessary skills needed for employment on the pipeline project. (Non-Native pipeline workers may have been similarly unprepared; however, available data deals only with Natives.) We know from Table 8 that 42.7 percent of the Natives first hired into jobs that were classified at the journeyman level. Despite the large number of Natives starting in training positions (43.4 percent of the total), last-hire records show that by project's end, the percentage of journeymen had increased by 22.4 percent to 65.1 percent of the total Native workforce, a significant increase. However, there was not always a unilateral progression from a training position to the journeyman level. To the contrary, there appears to have been substantial movement back and forth between the two categories.

A few additional observations can be made about pipeline training. First, based on an analysis of job tenure of persons in training positions, it is apparent that few institutional trainees (16.6 percent) stayed on their subsequent jobs beyond 8 weeks, compared to 46.4 percent of the on-the-job trainees and 53.4 percent of the apprentice trainees. Second, the distribution of trainees by sex makes it apparent that 84 percent of the women in training positions were in institutional training programs, whereas less than half of the men in training were placed in the institutional programs.

Finally, the age patterns of trainees show that the younger the trainee the more likely he/she would be placed in institutional training and the older, the more likely he/she would be placed in on-the-job training. The apprentice program was an exception to this pattern, in that over 90 percent of all trainees were in the young adult group. This, however, was likely influenced by union custom and tendencies to hire the young for apprentice positions.

[9]However, the possibility exists that of the 10,104 job positions listed with no training, many may have actually included on-the-job training by the individual contractors.

### Relevance of Pipeline Training to Village Needs

While on the subject of training, there is a further consideration that the authors feel should be a primary factor in the design of any future training programs over which the state or federal governments exercise some degree of control. This consideration is the relevance or usefulness of the types of training offered, not only to the needs of the project at hand, but also to the needs and lifestyles of the rural villages to which most Natives will return following completion of the short-term project.

It is true that with Alaska's vastness and diversity, village lifestyle needs are also diverse, varying from place to place and culture to culture. It is also true that the nature of the project for which training is to be offered will dictate the types of jobs for which training must be designed. Still, among the range of jobs for which training is required, some will be generally relevant to rural village needs, while others will not. And we feel that it is in the state and federal governments' interest in influencing the design of training programs (as well as counselling prospective job trainees) to focus on or emphasize training programs that will, as much as possible, also have some utility for and be relevant to rural village lifestyle needs.

Within this context, it is interesting to examine the kinds of training offered Natives on the trans-Alaska oil pipeline project and the relevance of that training to the needs of the villages to which the Natives returned following completion of pipeline construction. The degrees of relevant training received by Native workers in their various programs is shown in Table 12.

The apprenticeship program primarily focused on those skilled jobs that generally happen to be relevant to or of direct use in the villages of rural Alaska. Forty-two percent of the positions in the apprenticeship program fell into this category. The major proportion of these opportunities were in two trades, carpenters with sixty-five positions and electricians with forty-nine, for 16 and 12 percent of apprentice positions, respectively. Thirty-four percent of this total fell into the "occasionally relevant skills" category, while 18 percent of apprentice positions were not relevant to village needs.

The OJT program positions were somewhat more evenly distributed across all categories, except

## Table 12

### Relevance to Rural Village Lifestyle of Training Positions Held by Alaska Native Pipeline Workers

| Type of Training | Number of Positions | | Relevant Admin. Skills[a] | | Relevant Trade Skills[b] | | Occasionally Relevant Trade Skills[c] | | Irrelevant Skills[d] | | No Skills[e] | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Unk. | Total | No. | Percent | No. | Percent | No. | Percent | No. | Percent | No. | Percent |
| Apprenticeship | 30 | 444 | 5 | 1.1 | 184 | 41.4 | 139 | 31.3 | 74 | 16.7 | 12 | 2.7 |
| On-the-Job | 6 | 2,017 | 104 | 5.1 | 382 | 18.8 | 643 | 31.7 | 366 | 18.1 | 526 | 25.9 |
| Institutional | 14 | 1,632 | 73 | 4.5 | 181 | 11.1 | 547 | 33.5 | 639 | 39.2 | 178 | 10.9 |
| Total | 50 | 4,103 | 182 | 4.4 | 747 | 18.2 | 1,329 | 32.4 | 1,079 | 26.3 | 716 | 17.5 |

[a]"Relevant Administrative Skills" includes all possible administrative skills that might be of use in rural village life. For example, organizational jobs such as expediter, clerical jobs, foreman or administrator.

[b]"Relevant Trade Skills" includes those general trades that are applicable to the normal day-to-day life of a rural Alaska village; for example, carpenter, plumber, or mechanic.

[c]"Occasionally Relevant Trade Skills" may be occasionally useful under special circumstances in a rural village; for example, sheetmetal worker or welder.

[d]"Irrelevant Skills" are not useful in the normal day-to-day life of a rural village; for example, albestos worker or quality control inspector.

[e]"No Skills" includes jobs that may be relevant to rural village life, but which are not likely to have been upgraded by the pipeline activity; for example, laborer or dishwasher.

for "administrative skills." With 26 percent in the "no skills" category and 18 percent in the "no relevant skills" category, the OJT program offered a significantly lower percentage of training positions with relevance to village lifestyles than did the apprenticeship program.

The institutional training program positions were significantly over-represented in the "no relevant skills" category (39.2 percent). Add to this the positions requiring "no skills" for which institutional training was offered (10.9 percent), and we have 50 percent of all institutional training positions for Natives with no relevance to rural village needs. Another 33.5 percent of this total fell into the category of "occasionally relevant skills." Thus, only 15 percent of all institutional training positions (relevant administrative and trade skills) had any direct usefulness for rural villages.

Thus, it would seem that those who designed the program that cost the most tax dollars (institutional training), payed the least attention to this concern. This program trained the largest proportion of its people in occupations that had either no relevance to village life or at best, only limited usefulness. Yet, it is precisely this training program, heavily funded by state and federal monies, that the state and federal governments had most control over.

The training program with the most relevance to village needs turned out to be the apprenticeship program. However, this likely reflects a fortuitous circumstance rather than planning. Most of the union apprenticeship positions are in the building trades. Of all training positions, these are most likely to be relevant to village needs.

### Length of Employment

The total of 5,770 Natives who worked on the trans-Alaska pipeline over its 3-year construction period appears less remarkable when the number is viewed within the context of the amount of time Natives spent on the job (Table 13). For example, more than half, 51.5 percent of all Natives hired worked for 8 weeks or less. (This could also be true for non-Native pipeline employees, but we have no data on the work habits of these other groups.) Further, 25 percent of the Natives worked for only two weeks or less. On the other end of the spectrum, 0.4 percent worked throughout the entire construction period (171 weeks), and 7.7 percent worked longer than a year. It is suspected that this short-time employment is not unusual, given the

Native life-styles and previous history of limited participation in the wage-labor market. Certainly, by Euro-American working standards, the amount of time Natives spent on the job was not substantial. However, lacking comparative data for non-Native pipeliners, there is no way to determine the significance of these short work periods.

### Reasons for Job Termination

The short work times resulted from a variety of causes. Last-hire records show that the most significant reason for termination was "resignation" (Table 14). In reality, this category included such things as: sickness in the family, other employment, personal business, emergency, or the individual simply not liking the job. This category represents about 44.8 percent of those who were terminated (45.4 percent of jobs held). The remaining three reasons for termination of any significance could all be termed involuntary: the workforce being reduced, a job being completed, or discharged for cause. Combined, "involuntary discharge" accounts for 1,868 individuals or 46.6 percent of those terminated. It is also interesting to note that the categories of termination were general categories. For example, "discharge for cause" included such things as camp violations, equipment abuse, drinking, unqualified for job, unauthorized absences, or excessive tardiness.

**Table 13**

**Estimated Number of Weeks Alaska Natives Worked on the Trans-Alaska Pipeline**

| Number of Weeks Worked | Individual Natives Hired | | |
|---|---|---|---|
| | Number | Percent of total | Cumulative Percent |
| Less than 1 | 357 | 6.2 | 6.2 |
| 1 | 601 | 10.4 | 16.6 |
| 2 | 483 | 8.4 | 25.0 |
| 3 | 397 | 6.9 | 31.9 |
| 4 | 321 | 5.6 | 37.5 |
| 5-8 | 810 | 14.0 | 51.5 |
| 9-33 | 1,659 | 28.8 | 80.3 |
| 34-52 | 315 | 5.5 | 85.8 |
| 53+ | 497 | 8.6 | 94.4 |
| Unknown | 330 | 5.7 | 100.1 |
| Total | 5,770 | 100.1 | 100.1 |

A number of reasons explaining Native terminations after relatively short times on the job have been offered by Native counselors, company officials, and the Natives themselves. Counselors suggested that the short work times for Natives were probably best explained by: (1) camp environment

**Table 14**

**Reasons for Job Termination on Trans-Alaska Pipeline**

| Reason | Natives Hired | | Jobs Held | |
|---|---|---|---|---|
| | Number | Percent | Number | Percent |
| Retirement | 1 | 0.0 | 6 | 0.0 |
| Layoff/Workforce Reduction | 879 | 15.2 | 2,325 | 15.2 |
| Completion of Job | 541 | 9.4 | 1,924 | 12.8 |
| Discharge for Cause | 448 | 7.8 | 1,287 | 8.6 |
| Resignation (Rehire Possible) | 1,798 | 31.1 | 5,268 | 35.0 |
| Resignation (No Rehire Possible) | 171 | 3.0 | 393 | 2.6 |
| Death | 9 | 0.1 | 9 | 0.2 |
| Medical Termination | 55 | 1.0 | 173 | 1.1 |
| Transfer Only | 10 | 0.2 | 26 | 0.2 |
| Administrative Change | 100 | 1.7 | 204 | 1.4 |
| Dispatch Problems | 0 | 0.0 | 1 | 0.0 |
| Unknown* | 1,758 | 30.5 | 3,431 | 22.8 |
| Total | 5,770 | 100.0 | 15,047 | 100.0 |

*Unknowns also include those working at the time of the analysis; therefore, no termination is applicable.

(some camps were better for Natives than other camps),[10] (2) the Natives' inability to adapt to the 10-hour day, (3) the regimentation of the jobs, and (4) poor use of workers by the companies.[11]

Counselors also noted from termination interviews that alcoholism, drug abuse, discrimination, and poor job orientation were frequently mentioned by Natives.

The weight to be given such suggestions represents a difficult problem. It is certainly possible that Natives had difficulty in adapting to the 10-hour-day, 7-day-week job that involved doing the same thing over and over. Too, one would assume that rural Natives, accustomed to a short-time or part-time job coupled with seasonal subsistence activities, would have difficulty in pursuing such a job on a sustained basis. Because many Natives consider their subsistence activities to be of paramount importance—a necessary and an integral part of their Native tradition—they might tend to quit a job when the time came for such activity.[12] Viewed in this light, the tendency does not so much reflect an inability to adapt to new work conditions so much as it reveals that traditional values and attitudes were more powerful. The level of acculturation of individuals may have also played a part.

Listing their reasons for termination, Natives themselves often tended to emphasize such things as homesickness and the feeling of isolation. This would tend to reflect the strong family ties within Native culture groups. Natives also list as a cause for termination the fact that there were too many outsiders working in the camps and not enough Natives. This would suggest some cultural contact difficulties. Also mentioned frequently were difficulties that Natives of one group had in working with Natives of other groups. This seemed to be most significant where traditional rivalries were involved. In such a case, a Native would simply state that he would not work beside such individuals. Natives also made frequent reference to the "poor worker utilization" frustrations already discussed.

Another possible cause for short time on the job may have been related to Native/non-Native contact and accompanying forms of prejudice and discrimination, either real or imaginary. It is known that a large number of pipeline workers came from the blue collar working class and from a part of the United States where overt prejudice and discrimination has long been a fact of life. However, whether such prejudice and discrimination was actually a factor is only conjectural, since no research was undertaken on the personal or cultural interactions of individuals on the job. Social rejection, lack of confidence in Native intelligence and ability to do a job, or a patronizing attitude on the part of workers, supervisors or various company officials could certainly have had an effect on the Native's decision to remain on the job. Still, there is no direct evidence to show that any of these were behind the short times on the job for Natives. There is, however, some indirect support for the possibility.

For example, counselors and company officials both remarked that most unions did not have a sympathetic attitude toward Natives. In responding to questions concerning on-the-job training for Natives, supervisors frequently remarked that they had a job to do and did not want to take the time necessary to train the Natives. In addition, some supervisors criticized Native hire by characterizing the Natives as:

- Not being punctual (time meant nothing to them).
- Having no respect for equipment.
- Always being drunk, absent, or tardy.

The Natives themselves listed "too many outsiders" as a major reason for termination.

Finally, one principal and obvious reason for short job tenure was that many jobs to which the Natives were assigned were simply very short term. Perhaps related to this is the fact that since Natives held largely low-skilled or unskilled positions, they were often relegated to temporary or short-term jobs. We have no comparitive figures for non-Natives in similar low-skilled or unskilled jobs.

### Job Tenure versus Sex and Age

Table 15 shows that Native women tended to have longer job tenure than Native men. Because of the particularly heavy concentration of women in a few job categories, a closer analysis is necessary. The three occupational categories that have heavy female concentrations are clerk-typist, bullcook, and laborer. Data for these occupations do show different rates of tenure, but in all three categories the men seemed more likely to quit earlier than the women. Speculation on the reasons for the difference in job

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[10]The counselors generally agreed that such camps as Old Man, Dietrich, Atigun, Livengood, and Tonsina were better places for Natives to work than some of the other camps.

[11]Poor worker utilization might, for example, involve a Native being (1) hired, (2) told that training and a job were involved, but (3) told to do something (after he arrived on the job) and (4) criticized for not being able to perform what he had not yet been trained for.

[12]However, there is no evidence to suggest that this happened.

tenure between men and women would be premature without further analysis and research.

**Table 15**

**Length of Job versus Sex for Alaska Natives Working on the Trans-Alaska Pipeline**
N=4967*

| Length on Job (in weeks) | Male (Percent of Total) | Female (Percent of Total) |
|---|---|---|
| 1-8 | 57.5 | 45.0 |
| 9-33 | 27.6 | 38.4 |
| 34-52 | 3.7 | 6.1 |
| 53 or more | 11.1 | 10.5 |
| Total | 100.0 | 100.0 |

*Proportion of men and women reported is equivalent.

A comparison of age to length of job (Table 16) shows a modest relationship: the older the worker, the longer the job tenure. Although we suspect that further subdividing the 21-to 35-year-old age category would reveal an even stronger relationship, limited data precluded further analysis.

**Table 16**

**Length of Job versus Age for Alaska Natives Working on the Trans-Alaska Pipeline**

N=4149
Age of Native Worker

| Length of Job (in weeks) | 17-20 (Percent of Total) | 21-35 (Percent of Total) | 36-50 (Percent of Total) | 51 and over (Percent of Total) |
|---|---|---|---|---|
| 1-8 | 63.0 | 58.2 | 51.4 | 40.0 |
| 9-33 | 26.6 | 29.3 | 33.5 | 40.0 |
| 34-52 | 6.4 | 4.3 | 5.7 | 5.8 |
| 53 or more | 4.1 | 8.2 | 9.4 | 14.2 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |

## Native Work Times by Calendar

Table 17 shows the date or quarter on which Natives were hired to work. The columns relating to jobs held is the most informative in that it presents all jobs held by Natives, whereas the adjacent columns report the date of each individual's last pipeline job. In reviewing the table, it becomes apparent that Native hire was active throughout the construction period and tended to parallel the overall hire pattern: starting with a comparatively small workforce, building steadily to a peak workforce in the third quarter of 1975, and phasing down during the third and fourth quarters of 1976.

It is perhaps worth noting that Native participation did not fall during subsistence periods as many had suggested would occur, but instead responded to work opportunities. In fact, Native participation was highest during the summer season of 1975 and low that same winter season.

Although not conclusive, the table also suggests that approximately 2,500 Natives who worked on the pipeline during 1974 and 1975 either chose not to or did not have the opportunity to work on the pipeline in 1976. If the decision was voluntary, it would be useful for future planning purposes to know why they chose not to return. It would also give insight

**Table 17**

**Dates on Which Alaska Natives Were Hired to Work on Trans-Alaska Pipeline**

| Hire Date | Individual Natives Hired: Number | Individual Natives Hired: Percent of Total | Jobs Held: Number | Jobs Held: Percent of Total |
|---|---|---|---|---|
| 1974: 1st quarter | 21 | .3 | 40 | .3 |
| 2nd " | 186 | 3.2 | 715 | 4.8 |
| 3rd " | 243 | 4.2 | 1,179 | 7.8 |
| 4th " | 245 | 4.3 | 1,112 | 7.4 |
| 1975: 1st quarter | 479 | 8.4 | 1,626 | 10.8 |
| 2nd " | 478 | 8.4 | 1,720 | 11.4 |
| 3rd " | 627 | 10.9 | 2,188 | 14.5 |
| 4th " | 284 | 4.9 | 1,070 | 7.1 |
| 1976: 1st quarter | 678 | 11.8 | 1,515 | 10.1 |
| 2nd " | 1,014 | 17.7 | 1,929 | 12.8 |
| 3rd " | 847 | 14.8 | 1,230 | 8.2 |
| 4th " | 482 | 8.4 | 560 | 3.7 |
| 1977: Jan.-Feb. | 140 | 2.4 | 142 | .9 |
| Out of range | | | 19 | .1 |
| Total | 5,724 | 100.0 | 15,047 | 100.0 |

into what impact the pipeline experience had on the individual.

As reported earlier, 5,770 individual Natives held over 15,047 jobs throughout the construction period. Table 18 presents the number of different jobs Natives held. Over 33 percent held only one job; approximately 60 percent held at least two or less; but 40 percent held three or more, with some holding a dozen or more different jobs. While comparative data is missing for non-Native worker categories, the average for the total pipeline workforce was approximately two jobs, while for Natives it was slightly less than three jobs.

**Table 18**

**Numbers of Different Jobs Held by Alaska Natives on the Trans-Alaska Pipeline**

| Number of Jobs Held | No. of Individual Natives | Percent of Total |
|---|---|---|
| 1 | 2,161 | 37.5 |
| 2 | 1,272 | 22.0 |
| 3 | 881 | 15.3 |
| 4 | 558 | 9.7 |
| 5 | 380 | 6.6 |
| 6 | 186 | 3.2 |
| 7 | 111 | 1.9 |
| 8 | 70 | 1.2 |
| 9 | 57 | 1.0 |
| 10 | 44 | 0.8 |
| 11 or more | 50 | 0.8 |
| Total | 5,770 | 100.0 |

### Salaries

In general, pipeline worker's salaries ranged from $1,000 to $1,500 for a 10- to 12-hour day, 7-day week for laborers and skilled craftsmen. Since most Natives worked in the laborer or other lower-level skill categories, we can assume their salary averaged around $1,000 per week. Since 51.5 percent of all Native pipeline workers worked 8 weeks or less (see Table 12), these Natives, before taxes and other deductions, could have earned up to $8,000. The normal pay (net pay) for this group of Natives ranged from $550 to $600 per week, at least during the initial months of the project. Of this same group, 2,159 or 37.4 percent earned $4,000 or less; 1,441 Natives or 25 percent earned $2,000 or less. Of the total number of Natives hired, 1,659 Natives or 28.7 percent worked from 9 to 33 weeks, each earning from $9,000 to $33,000 gross. Three hundred and fifteen Natives or 5.5 percent worked 34 to 52 weeks, each earning from $34,000 to $52,000 gross. A little over 8 percent or 497 Natives earned over $53,000. Overall, 42 percent of the Natives who worked on the pipeline earned in excess of $9,000.

These figures show that the earnings of the 5,770 Natives employed on the pipeline project were impressive when compared to Native prepipeline earnings. By white standards, however, earnings were impressive for less than half the Natives. For 51.5 percent, the earnings fell below the national average. In comparison to potential earnings, the figures are not very high, but lacking comparative data for other workers, it is impossible to determine the significance of the earnings. It is true, however, that the level of Native involvement in the labor market does not compare to white involvement. This lesser involvement partially results from the Natives' different values and motivations. For example, a Native knows just how many dollars are needed to make it through the winter and enable one to buy necessary supplies and equipment. He often couples this with subsistence to provide for survival in his traditional life style.

## CONCLUSION

Although the data provided in this report is useful and informative, it is incomplete. More questions are raised than answered by the analysis of employment statistics alone. Comparative data on other worker categories, especially whites, are lacking. Baseline studies on prepipeline Native economy, work habits, culture, and lifestyle do not exist in a form that reflects the basically different cultural patterns of Natives. Therefore, extreme caution must be exercised in attempting to draw hard conclusions on the evidence at hand, especially those conclusions based on the Western culture. Still, we do feel that several generalized observations about the Native experience in pipeline employment can be offered with a reasonable degree of confidence in their validity.

First, Native hire unquestionably affected a large number of Alaska Natives. It can be assumed that these effects did filter down into the family, community, and culture. At the same time, the impact may not be as great as first suggested by simply referring to the gross numbers alone (5,770 Natives hired). This number of Natives did not get $60,000-a-year jobs, nor did all white pipeline workers for that matter. The impact is a differential one that can only be accurately measured by comparison to prepipeline activity. Unfortunately,

reliable baseline data does not exist. For a little over half of the Natives employed, it was a brief work experience. In terms of wages earned, the figures are significant when compared to Native prepipeline incomes.

Second, Native hire was unevenly spread about the state between regions, age groups, and sexes. Not everyone shared (or wanted to share) in the pipeline job opportunities and supposed benefits. Proximity to recruitment centers, regional corporation efforts, regional job contracts, special recruiting, degree of acculturation, and cultural factors were obviously involved. Most important to degree of participation appeared to be proximity to employment center and the recruiting efforts made on Native behalf by the regional corporations. Cultural factors were undoubtedly involved, but to what extent remains obscure.

Third, the majority of the jobs Natives held were in the low skill or unskilled category. Whether or not the work experience, training, or union affiliation has increased either Native employability or motivation to engage in the wage labor market on a more sustained basis are important considerations that have yet to be researched. Whether the skills learned were relevant to the post-pipeline job market is likewise unknown.

Fourth, much of Native employment on the pipeline was tied directly to training. Given the high cost of training per wages earned and the level of job skill required for most jobs, a much greater emphasis needs to be placed on manpower planning, job orientation, and placement. The apparent success of the on-the-job training and apprentice training programs suggests that a serious look at institutional training is warranted in view of its high cost and minimal impact in terms of jobs or significant skills.

Fifth, despite the obvious impacts of Native pipeline hire, we still know relatively little about how the experience affected human lives. Was it a positive experience or a negative one? How did it affect the individual worker, his family, his community, his traditional culture pattern? What meaningful human interaction took place on both the individual and cultural levels? Has the experience increased Native motivation to participate in the labor market? Did it lead to more job opportunities for Natives? Did it provide useful or necessary skills to the individual, community, or region? What aspects of the total experience are going to increase future prospects for development at all levels? In short, the experience of Native hire has primarily produced more questions than answers, especially concerning its sociocultural and economic impacts.

To sum up, we have reported the statistics that were available to us on Native hire during construction of the trans-Alaska oil pipeline. Specifically, these have mostly led to superficial generalizations, while in a deeper sense, the actual meanings of the experience remain obscure. Yet, as Alaska readies itself to man construction of another pipeline, we cannot ignore what experience we have gained, nor can we allow the questions raised by those experiences to remain unanswered.

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