

## OIL PIPELINE IMPACT

Alaska has passed through several "impact periods" in its history, which have significantly shaped the state's economy. First there was the gold rush of 1898 followed by the military buildup during World War II. The 1950's brought the construction of the DEW line which was followed by the discovery and production of oil and gas on the Kenai Peninsula in the 1960's. Presently, Alaska is undergoing an oil pipeline construction impact period.

The oil pipeline impact is greater in scope than any previous "impact period" that Alaska has experienced. The whole pipeline corridor — from Prudhoe Bay on the Beaufort Sea where oil will be brought out of the ground, across the state, to Valdez where the oil is to be pumped aboard oil tankers — has felt the impact of the pipeline. One major impact has been employment.

The number of people employed in Alaska has risen sharply in the last couple of years. The average monthly employment in 1974 was 128,179, an increase of 18,328 over the 1973 average monthly employment of 109,851.

Taking a closer look, we find that the greatest employment impact has been in the construction industry. In September, 1973 there were 10,300 employed in this industry. By September, 1974, there were 20,100 and the preliminary figures for September, 1975 show 34,000 employed in construction. This is an increase of 94% between 1973 and 1974, and an increase of 69% between 1974 and 1975. If we compare 1973 to 1975, we find an increase of 228% in just two years! Most of the rise in construction employment has been directly attributable to construction of the pipeline.

As of mid-September 1975, Alyeska reported an employment of 21,600 people involved in some phase of pipeline construction. Alyeska divides its workers into three groups: Pipeline Department, Pump Station Department, and the Valdez Terminal. Of the 21,600 people employed, 17,300 were employed with the Pipeline Department, 1,600 with the Pump Station Department and 2,700 at the Valdez Terminal.

This high employment on the pipeline has had the ultimate effect of causing increased employment in other industries. Because of the continuous interaction between the various elements of a region's economy, an increase of employment in one industry will cause a rise in employment in another industry. This pattern is referred to as the "multiplier effect". Since the same correlation does not necessarily hold true for more than two industries, a table of multipliers has been worked out which can be used to calculate the effect of increases in the employment in the pipeline construction on the employment in state and local government, other construction, retail trade, wholesale trade, transportation and service industries, and Finance, Insurance and Real Estate (F.I.R.E.).

Human Resources and Planning Institute (HRPI) of Seattle, Washington, in its study, Manpower and Employment Impact of the Trans-Alaska Pipeline, has developed a "multiplier effect" table showing this inter-industrial linkage. HRPI's table of "multiplier effects" also shows the anticipated lag pattern between industries. Because of the interaction of economic factors, a varied amount of time will elapse between a change in the employment in one industry and the time at which the reciprocating effect occurs in the employment in another industry. This time differential is referred to as the lagged pattern.

Using HRPI's "multiplier effect" table, let us look at the impact that is possible on employment in other industries given an increase of 1,000 workers in pipeline construction. At the end of one year we find that state and local government will increase by 20 workers, other construction by 10, retail trade by 110, wholesale trade by 30, finance, insurance and real estate by 30, transportation by 170, and services by 240. By 1980 the impact of the 1,000 workers would be that state and local government workers will increase by 270 workers, other construction by 130, retail trade by 390, wholesale trade by 90, finance, insurance and real estate by 110, transportation by 260 and services by 530. This means that the 1,000 workers in pipeline construction will generate new jobs in the first year totaling 610. Each successive year the impact will

grow so that by 1980 the total projected impact will be 1,780 new jobs in other industries. It should be kept in mind that these are only projections but should suffice to serve as guidelines in future planning. Because of many variables, the actual performance could be above or below these projections.

Pipeline impact has not been limited solely to economic and labor force matters. Another area that has been affected is the store of knowledge about prehistoric ages.

Before construction crews can begin any work such as opening a gravel pit, cutting a section of road, expanding a construction camp, or commencing any excavation project, an archeologist must first inspect the site. For this purpose, archeologists from the University of Alaska have responsibility for surveillance of 640 miles of the pipeline route from near Glennallen to Prudhoe Bay and archeologists from Alaska Methodist University have responsibility for the 160 miles of the route south to Valdez. The archeologists are responsible for the salvaging of all archeological and paleontological specimens along the 798 mile long pipeline route.

Artifacts more than 10,000 years old and representing prehistoric cultural phases not previously recognized have been discovered along the pipeline route.

This advancement in knowledge of Alaska's history is due to the Federal Antiquities Act of 1906 and federal and state stipulations attached to the pipeline right-of-way permits that require all artifacts uncovered or disturbed during pipeline construction be preserved for the public.

It is important to realize that "pipeline" impact does not have to mean "negative" impact. Alaska, as we know it today, has been substantially shaped by similar economic events. The most far reaching impact created by pipeline construction will probably be the benefits derived from state oil and gas royalty revenues. Although the growing pains are many and varied, we are concurrently gaining in knowledge and real economic growth.

MULTIPLIERS 1972 - 1980

Construction (Pipeline)

For Changes in Basic Activities	Employment Multiplier		
	1st Quarter	1st Year	1972-1980
Total Employment . . . . .	1.11	1.61	<b>2.78</b>
Non-categorized . . . . .	0	0	0
Service . . . . .	0.12	0.24	0.53
Transportation . . . . .	0.13	0.17	0.26
F.I.R.E. . . . .	0	0.03	0.11
Wholesale Trade . . . . .	0	0.03	0.09
Retail Trade . . . . .	0	0.11	0.39
Construction . . . . .	0.95	1.01	1.13
State & Local Government . . . . .	0.00	0.02	0.27