

SCOMM

#13:8

PARTIAL BUDGET

OFFICE & STAFF, 5 months.....\$19,675.00

Director & Coordinator.....\$2500 per mo.  
Secretary..... 750 per mo.  
Office rent..... 100 per mo.  
Telephone..... 100 per mo.  
Office parking space..... 15 per mo.  
Supplies & postage..... 50 per mo.  
Travel/per diem..... 420 per mo.

REPRODUCING REPORTS.....Total 1,000.00

MISCELLANEOUS & CONTINGENCY.....Total 500.00

COMMITTEE TRAVEL.....Total 12,600.00

(Based on 4 trips of 5 days each)  
Per diem.....\$600.00  
Plus travel of \$200.00 per trip  
for 9 members.....800.00

TOTAL.....\$33,775.00

## SCOPE

### IMPACT FACTORS

#### ELEMENT I (Immediate or most concern)

- A. Employment
- B. Population
- C. Housing
- D. Public Services
- E. Public Works - Utilities, Sewers, etc.
- F. Transportation
- G. Health
- H. Cost of Living Factors.
- I. Local Government - Organization & Financing -  
Revenues & Taxes
- J. Schools

#### ELEMENT II (Less Urgent Concern)

- A. Service Industries in Support of Functioning Community
- B. Environmental Considerations
- C. Communications
- D. Land Use and Availability
- E. Other Industry
- F. Recreation
- G. Department of Defense Interests
- H. Planning Needs.\*

All factors should be studied in terms of both short and long range impact and need.

\*Planning needs should be determined regardless of the scope of the study.

A. - NOTES ON EMPLOYMENT

1. Historical Information
2. Present Employment conditions
  - a. Labor Force
  - b. Full and partial employment & unemployment - characteristics and statistics.
  - c. Employables, not working, not now considered part of the labor force.
  - d. Numbers of persons unemployed with handicaps of various kinds, with characteristics and education/training levels.
3. Determine employment directly associated with pipeline construction.
  - a. Pipeline consortium.
  - b. Prime and Sub contractors.
  - c. Transportation in direct support - common carrier and contract.
  - d. Contract services in direct support.
  - e. Independent services in support - not directly arranged for by Alyeska or its contractors.
4. Learn if and to what extent construction camps will be set up.
  - a. Total numbers of employees affected and characteristics and locations.
  - b. Logistic Plan for support.
  - c. Extent of dependence of such employees on local supply of:
    - A. Local purchases of personal items.
    - B. Recreation.
    - C. Other services or commodities.
    - D. Time-off policy for employees.
5. Local hiring policy and extent.
  - a. Kinds of labor or skills.
  - b. Utilization of native labor - Native Corp. policies on recruitment.
  - c. Training programs.
  - d. Union policies on local labor.
  - e. Union jurisdictions anticipated.
  - f. Apprentice programs.
  - g. Wage scale schedules - Alyeska policies.
6. Construction phase time period.
  - a. Approximate beginning dates.
  - b. Periods of time for the different phases, with respect to the types of employment and numbers.
7. Other employment generated in local communities not directly associated with construction.
  - a. Expansion of existing industry, or services, and projected increases in employment.
  - b. Anticipated new industry or services and numbers of employees.
  - c. Increased local, state and federal employment based in the community.
  - d. Employment expected for new commercial investments or public works during pipeline construction period.
  - e. Explore potential of using present unemployed during construction.
8. Estimate of numbers of transient workers supported by the community during construction.

A. - NOTES ON EMPLOYMENT

9. Determine employment following pipeline construction by the pipeline complex and the marine transport operations:
  - a. Living in, and supported by, the communities involved.
  - b. Learn support logistics of others not completely part of the community.
10. Estimate employment changes in community at the end of the construction period.
  - a. Contraction of business and industry and associated dis-employment.
  - b. Construction created jobs that will carry over.
  - c. Determine new community jobs that will be indirectly created by the start of pipeline and marine operations.
  - d. Characteristics of new and terminated jobs.
  - e. Effects on community of any job decrease after construction.
    - A. Excess of housing.
    - B. Less of revenue to local and state governments.
    - C. Effect on debt service of local community.
    - D. Effect on quantity and quality of community services.
    - E. Total unemployment.
    - F. Welfare rolls.
11. Possible postponement of other construction during pipeline construction period.
  - A. Government projects, local, state or federal that could be postponed.
  - B. Large private investments not necessary for construction period.

B. -- NOTES ON POPULATION

1. Present population.
  - a. Historical record.
  - b. Total composition and characteristics.
2. Estimate of total population that will live in community during construction, exclusive of work-camp population.
  - a. Composition of population with respect to:
    - A. Permanent residents
    - B. Transient & temporary workers
    - C. Dependents and ages (Non-working)
    - D. Racial composition
    - E. Sex composition
  - b. Size of labor force.
3. Estimated total population after construction, for 5 to 10 years.
  - a. Any future construction anticipated or planned by Alyeska or the pipeline industry or oil industry.
  - b. Normal growth due to natural increase and net in-out migration.
  - c. Increased employment due to other industry or services - new or expanded.
  - d. Increases expected from expanded government activities or public works activities.
  - e. Population characteristics of estimated post construction periods, including labor force estimates.
  - f. Anticipated exploration and development programs.

## C. - NOTES ON HOUSING

1. Existing housing.
  - a. Total units and type
  - b. Persons per unit
  - c. Standards
  - d. Kinds of units.
    - A. Residential
    - B. Apartments
    - C. Public housing
    - d. Mobile homes
    - E. Hotels and motels
    - F. Trailer & other
    - G. Parking
  - e. Range of values
  - f. Total population housed
  - g. Vacancies
  - h. Housing trends since 1968
  - i. Permit records
2. Housing needs - construction phase.
  - a. Total units
    - A. Family
    - B. Worker and spouse
    - C. Single
  - b. How to meet temporary needs
    - A. Apartment
    - B. Temporary barrack type
    - C. Mobile home
    - D. Trailer or other
  - c. Location - zoning restrictions
  - d. Utilities, water, sewer, road requirements
    - A. Subdivision regulations and other code requirements
  - e. Other services or public works requirements
  - f. Post-pipeline-construction disposition of any added facilities
  - g. Costs to community of temporary housing
  - h. Building and housing codes
  - i. Financing - private, Government, or combination
  - j. Rent requirements
  - k. Management
3. Housing needs - post construction
  - a. Total requirements
  - b. Population characteristics, income categories
  - c. Type
    - A. Apartment
    - B. Residential
    - C. Mobile home and other
  - d. Utility, Sewer, water, streets, & other improvements needed
  - e. Land use plan, zoning, etc.
  - f. Availability of suitable land
  - g. Availability of capital
  - h. Construction costs
  - i. Tax rates, revenues, rates and impact on tax base
  - j. Building codes, housing codes, other codes
  - k. Skilled labor supply
  - l. City, State planning
  - m. Availability of federal or state aid
  - n. A.F.N. housing commitment

NOTES ON  
D. - GOVERNMENT PUBLIC SERVICES

1. Historical.
2. Existing services.
  - a. Garbage and solid wastes
    - A. Disposal facilities and disposal methods
    - B. Extent of coverage
    - C. Consideration of health hazards & water pollution
  - b. Street maintenance & snow removal
  - c. Police protection - Local
    - A. Number of personnel - professional proficiency
    - B. Methods of operation
    - C. Cooperation with other law enforcement agencies
    - D. Communications
    - E. Transportation
  - d. State police
    - A. Number of personnel in area
    - B. Jurisdictional area
  - e. Fire protection
    - A. Area of coverage
    - B. Equipment - age and other characteristics
    - C. High-pressure hydrant coverage area
    - D. Alarm system
    - E. Length of runs
    - F. Communications
    - G. Limitations of use beyond normal area of coverage
    - H. Full-time personnel, proficiency, and volunteer reliability
    - I. Facilities and stations
    - J. Protection of water supply from freezing
    - K. Electrical & other codes affecting fire hazards
    - L. Fire prevention programs
    - M. Fuel storage regulations
  - f. Street lighting
  - g. Traffic volumes and control
  - h. Parking facilities - general
3. Estimate adequacy of services, based on expected population, during construction and the impact of non-resident workers.
4. Estimate adequacy of services, based on the estimated post-construction population, following the construction period.
5. Willingness of local community to accept responsibilities.

E. - Notes on UTILITIES & SEWERS

1. Water supply.

- a. Source and capacity
- b. Potential new sources
- c. Transport system and distance
- d. Treatment
- e. Distribution system, meters or flat rate
- f. Adequacy of protection
- g. Conservation methods
- h. Extent of coverage
- i. Percentage of modern living units
- j. Industrial and commercial water uses
- k. Chlorination and fluoridation
- l. Estimate of present per capita use
- m. Estimate of future per capita use
- n. Projected improvements required
- o. Financing

2. Electric power

- a. Present capacity - Yearly KWH potential and Maximum capacity in Kw
- b. Reserve capacity
- c. Present KWH usage
- d. Type of generation
- e. Location of generation
- f. Transmission length and routing
- g. Total customers
  - A. Residential
  - B. Commercial
  - C. Industrial
- h. Fuel source
- i. Fuel storage facilities & capacity
  - A. Normal days of usage
- j. Capability of expansion with respect to:
  - A. Additional generation units
  - B. Transmission line capacity
  - C. Distribution lines and transformer capacities
  - D. Purchase of electrical energy from other sources
  - E. Engineer and technical services
- k. Rates schedule
- l. Emergency maintenance and repair capability
- m. Estimates of increased demands
  - A. Construction phase
  - B. Post-construction period
- n. Estimate of new or modified facilities to meet increased demands
- o. Estimated costs & methods of financing
  - A. Amortization forecast
- p. Federal & State aid programs available

3. Sewage and disposal system

- a. Present system
- b. Capacity of trunks and laterals
- c. Excess capacity above present needs
- d. Treatment
- e. Effluent disposal
  - A. Pollution potential

E. - NOTES ON UTILITIES & SEWERS

3. Sewage and disposal system (cont'd)
  - f. Extent of coverage
    - A. Connections - Residential, commercial & Industrial
  - g. Maintenance program
  - h. Storm drainage system - adequacy with additional population
  - i. Estimated impact of necessary improvements
    - A. Construction period
    - B. Post-construction period
  - j. Costs and methods of financing
  - k. Federal or state assistance available
4. Public buildings
  - a. Present facilities
    - A. Government operations
    - B. Maintenance and repair facilities
    - C. Other
    - D. Present excess capacity
  - b. Estimate of improvements needed
    - A. Construction phase
    - B. Post-construction period
  - c. Costs & methods of financing
  - d. Federal & State assistance available

## F. - NOTES ON TRANSPORTATION

1. Historical Recap
2. Air
  - a. Services provided - scheduled
  - b. Capacity - passengers and freight
  - c. Private and contract potential, with airport and runway limitations in mind
3. Airport facilities and services
  - a. Traffic control
  - b. Navigational facilities - all-weather operations
  - c. Runway lengths and surfacing - loading information
  - d. Runway lighting facilities
  - e. Communications
  - f. Terminal facilities
  - g. Parking
  - h. Aircraft servicing and maintenance
  - i. Fuel facilities and storage
  - j. Traffic capabilities
  - k. Estimate of necessary improvements or expansion
    - A. Costs and method of financing
    - B. Federal and State aid programs available
4. Water Transportation
  - a. Services presently provided
  - b. Potential of contract and private services
  - c. Present capacity in tonnages per month - scheduled
  - d. Adequacy of present & potential services
5. Terminals and Docks
  - a. Navigational and harbor control methods and facilities
  - b. Dock capacity and facilities - characteristics
  - c. Unloading facilities - mechanization
  - d. Efficiency of transfer to land transport
  - e. Storage and warehouse facilities, dock-side and other
  - f. Availability of longshoremen
  - g. Shipping costs, total
  - h. Normal dock time for ships normally used
  - i. Availability of pilots and tugs
  - j. Communications
  - k. Coast Guard availability
  - l. Parking
  - m. Tug availability and capacity
  - n. Regulations on tanker operation
  - o. Estimate of improvements necessary
    - A. Construction phase of pipeline
    - B. Post-construction period
    - C. Plan for meeting needs
    - D. Costs and financing method
    - E. Possible Federal and State aid

F. - NOTES ON TRANSPORTATION

6. Highway
  - a. Common carrier services provided
  - b. Contract and private potential
  - c. Capacities involved
  - d. Highway load limitations
  - e. Problems of keeping passes open
  - f. Estimated needs
    - A. Capability of increasing services
    - B. Alaska Transportation Commission approval
7. Railroad
  - a. Present capacity
  - b. Rates
  - c. Roadway problems
  - d. Capability of increasing services
    - A. Condition of present equipment
    - B. Acquisition of new rolling stock
    - C. Source of funds
8. Pipeline
  - a. Local and state regulations for operation
  - b. Source of power for pipeline operation
    - A. Purchase from other sources?
    - B. Generate own - any excess for sale?
  - c. Source of communications needed for pipeline operation
    - A. Purchase services?
    - B. Provide own - capacity for public use?
  - d. Labor policy of pipeline operators re: transportation
9. Ferry
  - a. Routes
  - b. Schedules and fares
  - c. Kinds of traffic
    - A. Cargo
    - B. Passenger
    - C. Vehicle
  - d. Future plans and capabilities

### G. - NOTES ON HEALTH

1. Historical
2. Present hospital facilities
  - a. number of beds
  - b. Professional help - resident
  - c. Facilities
    - A. Occupancy rates
    - B. Patient days and average stay
  - d. Degree of seriousness or severity of cases that can be handled
  - e. Methods of transport to hospital
  - f. Emergency facilities & procedures
  - g. Parking
  - h. Emergency power facilities
  - i. Out-patient facilities
3. Back-up facilities
  - a. Anchorage
  - b. Seattle and others
  - c. Methods of transport and time element involved
4. Available clinical and doctor's office facilities available as supplemental to emergency hospital services
5. Community professional personnel - Health
  - a. Physicians and surgeons
  - b. Dentists and their facilities and services
  - c. Psychiatrists
  - d. Nurses - RN & LPN
  - e. Other - Paramedic program
  - f. Availability from other communities, if needed
6. Long-term care facilities
  - a. Facilities
  - b. Statistics of past use
7. Needs during construction phase
  - a. Will needs be acute enough for additional facilities and services? Or, can outside facilities (Anchorage, etc.) be used without serious consequences?
  - b. Anticipated hospital & medical needs due to construction, and responsibility of serving all workers within the service area
  - c. Transport requirements, if deemed inadequate
  - d. Survey and analyses necessary to determine expansion in personnel or modification of facilities and procedures
8. Review of State and Federal programs which might be available for expansion of health facilities or services.
9. Health factors related to environment.
10. Occupational safety programs
11. Welfare problems

## H. - NOTES ON COST OF LIVING

1. Elements of economy where potential may exist for shortages, or demand pressures being created.
  - a. Lack of adequate or efficient shipping into community
  - b. Storage or warehouse shortage
  - c. Lack of competition in private enterprise functions
  - d. Lack of labor or shortages in particular skills which might bid up labor costs
  - e. Lack of sufficient or adequate housing
  - f. Lack of necessary financing for general uses
  - g. Lack or shortage of significant and important private or government services which could result in higher prices or labor costs
  - h. Unwarranted or improper bidding by contractors for skilled labor, technicians, and engineers, on a unilateral basis, in the interests of meeting construction deadlines.
2. The necessity of attempting to anticipate any and all shortages of labor, services and supplies, and devise ways to mitigate them on a timely basis.
  - a. Coordinated program, probably under leadership of a State agency.

## I. - NOTES ON LOCAL GOVERNMENT

1. Organization
  - a. Election process
  - b. Administrative system
  - c. Class city - powers
  - d. Taxing powers - limitation
  - e. Area of coverage
2. Financing
  - a. Property tax base - assessed evaluation
  - b. Taxes
    - A. Tax rate
    - B. Total property tax revenue
  - c. Other taxes
  - d. Other revenues
  - e. Utility ownership
  - f. State revenue sharing and other State aid
  - g. Federal aid programs
3. Debts
  - a. Debt service
  - b. Total obligations
    - A. General obligation bonds
    - B. Revenue bonds
    - C. Other debts - method of amortizing
  - c. Credit rating
  - d. Interest rates on outstanding debt
4. Cost of Government
  - a. Annual General Fund budget
  - b. Special operating budgets
5. Anticipated needs during construction
  - a. Operating budgets
  - b. Public works acceleration
  - c. Utility expansion needs
  - d. School operation and construction
6. Estimate of added revenues due to increased population and employment
  - a. Property taxes
  - b. Sales taxes
  - c. Utilities
  - d. Other
7. Post construction forecast and problems

J. - NOTES ON SCHOOLS

1. Historical - Statistical - Characteristics
2. Present plant
  - a. Capacity
  - b. Characteristics
  - c. Excess capacity
3. Enrollment - Characteristics
4. Faculty and staff
5. Anticipated enrollment - Construction period
  - a. Characteristics
  - b. Teachers needed
  - c. Plant needed
6. Financing
  - a. Operation - State & Federal aid programs
  - b. Construction - State & Federal aid programs
  - c. Local support - tax rates
  - d. Indebtedness
    - A. Outstanding debt - rates
    - B. Debt service - source of payments
7. State-operated schools
  - a. Needs along pipeline
  - b. Special construction programs
  - c. Available funds
  - d. Transportation problems
8. Special academic programs
  - a. Vocational training (Private and State)
  - b. Vocational rehabilitation
  - c. MDTA programs
  - d. Other

CHAMBER OF COMMERCE

Claire Banks Sept. 11 lunch  
Bill Tobin

1. The Chamber has had a committee making an economic impact study.....Frank Danner, Chairman  
Jesse Carr....Teamsters  
Bob Richards..NBA economist  
Will get report from them.
2. The Chamber intends to hold a seminar on the Piepline impact with the aim of acquainting business men with what to expect.
3. Mr. Tobin and Mr. Banks were much interested in ways of holding local inflation down, however, no concrete suggestions were made. They agreed if anything could be done to alleviate shortage it should be done.
4. Bill Tobin recommended I see Gen. Sherrill. Contact Col. Roy Brunhart, P.R.
5. Financing may be difficult for private enterprise services needed.
6. Stressed need of careful study of school needs. Discussed 45-15 plan for year-round school.

COPPER CENTER-Interviews  
George Ashby-Mr. Rogge & Mrs. Bayles

1. Copper Center also has no excess housing and there is very little private land. The U. of A. also has land there. Some is already on 55 year lease.
2. Mr. Ashby believes there may be some school impact even here, to the extent that workers and families want to live here. Presently there are only two class rooms and two teachers. The school is presently full (Primary). High school students go to Glennallen and that too is believed to be almost full.
3. If very many more people move into Copper Center, they will have a pollution problem with sewage because of permafrost. They, of course, have no sewers or water systems.
4. Same concern was stated for the availability of money for housing, if there is a housing need.

DELTA JUNCTION - September 6, 1973  
4th Class City

Attendance at meeting.

Don Kobierowski.....Mayor  
Mary Kobierowski.....Wife of Mayor  
Ray Servela.....Highway Director  
Loretta Nessler.....President Chamber of Commerce  
Ken Ryther.....Councilman and Fbxs. Med. & Dental  
Physicians Association  
Glen Chowning.....Councilman and Principal Ft. Greely  
schools  
Roy Gilbertson.....Councilman  
Trooper Brooks.....State Troopers  
Tom Dull.....State Parks  
Bill Freeze.....Delta Chamber and Alaska Motor Coaches  
Fern Harkness.....Husband with I.T.T.....representing  
community  
Don Jameson.....R.C.A.  
Evelyn Peek.....works here at hotel & owns apartments  
in Anchorage  
Garret Vermeulen.....Service Station  
Lloyd Anderson.....owners  
Joe Nessler.....husband of Chamber president

1. Population & Employment. Delta Junction has 2000 population in 10 mile radius. They believe many new families of pipeline workers will want to live in Delta Junction. The people here are not sure whether Alyeska will hire Alaskan residents, however, it was stated Alaska unions have signed agreements and that local members will be hired.

The people of Delta Junction expect a large impact from people just seeking employment, because if they come up the Alaska Highway, Delta Junction will be the first point they hit the pipeline.

It was believed that construction camps would be temporary, mobile-type buildings, self-contained.

They have not had enough information to project employment increases.

Delta Junction has not had any official word of where the construction camps will be located nor the exact route of the pipeline. They have heard that it will go through the center of town, but the City fathers have not been contacted by anyone from Alyeska. The people there said I was the first person who has talked with them about the pipeline, except 2 years ago, Alyeska PR men talked to the Chamber of Commerce, but not much about how Delta Junction would be affected.

2. Public Safety. Delta Junction has 1 State Trooper and an enforcement officer for Fish & Game has just been assigned there. They believe they need at least one more trooper, and that Delta Junction has been bypassed in past trooper increases. Delta Junction does qualify for \$10,000.00 from State but so far they have no local revenues for the required matching funds. (This would probably only be enough for one man and his quarters).

Delta Junction now has a volunteer fire department and 3 pieces of equipment - 2 pumpers (one poor) and a tanker. They believe a full time chief will be needed.

3. Transportation. Delta Junction believes the State should study the air transportation requirements for the area, and determine improvements needed. An area adjacent to town is needed for helicopter pad. They are not now permitted to land in town. The landing field at Ft. Greeley is now jointly used by the military and the public, however, there are no fuel facilities there for public use and should be provided. The airport is virtually always open (weather conditions), since it's been closed only one day in 10 years. Heavy vehicular traffic and smog may change this.

4. Housing. There are 14 private homes under construction in Delta Junction. There was not much concern expressed about the availability of land for housing. There are three trailer mobile-home courts with 14 units being added to one of them now. There is adequate space for 50 more.

5. Government. Delta Junction is a 4th Class City with an elected council and mayor. They presently have no property or sales tax but the Council is considering a tax program (I believe only in the talking stage. Some tax program probably will be necessary)

6. Utilities, Public Services & Health. No concern was expressed on the lack of electric power during the construction. (They are connected to the Fairbanks power net) The City has no central water supply or distribution. Water is dependent upon wells.

Neither is there any sewage system. Because of this an important impact on Delta Junction will be with the health problems created. If the population grows to any great extent some sewage disposal methods may be required.

The Fairbanks Medical & Dental Physicians Ass'n. has a clinic there. It is believed that with population growth and any significant services provided to construction workers, the clinic will be over-loaded. (The professional help apparently commute from Fairbanks on a scheduled basis)

The City will have an ambulance by January 1, 1974.

The City feels the State needs more representation in Delta Junction. There is no public health nurse, only a social worker whose responsibilities take her up and down the highways out of Delta Junction. There are few other State offices.

Solid waste disposal is already a problem. They say the garbage dump is good for only 2 more years at the present rate of use and that only a modest increase in population will overload the present area. Some thought has been given to some kind of solid waste treatment plant.

7. Courts. No concern was expressed in Delta Junction regarding the court system, possibly because it is not too far from Fairbanks. (It is believed further study needs to be done in this area)

8. Planning. Statements were made that the principal impact on Delta Junction will be following the construction. Pumping station No. 9 (Phase 2, probably 1978) will be 2 miles beyond Ft. Greeley.

They claim unable to plan intelligently because Alyeska has been too secretive.

9. Schools. Delta Junction doesn't know how many to plan for in schools because of lack of information. The present schools are full and over-flowing. There are 472 pupils at Delta Junction schools and 338 at Ft. Greeley, both State operated. Of course, they can and may need to double-shift (no community really wants to do this), but more teachers will be needed.

This year when school opened 50 new students registered. No one knows at this time (school had just opened) where they came from, what the parents do, but they think it is indicative of what is going to happen in their community.

There was some concern expressed regarding information they had that the pipeline was to pass very near the city-located schools. They are also worrying about whether the pipe will be above ground because of local soil conditions. They have not been told.

FAIRBANKS - Capt. Ralph E. Shafer, State Troopers  
September 7, 1973

1. The Troopers problem has been to guess at what will happen during the pipeline construction. They haven't been able to get much information. There are many conflicting stories. They have a wide area of coverage and when a single complaint is filed or an investigation necessary it takes a trooper two days in an area where he must fly. The closest man they have in the North is at Barrow. It is usually easier to send a man from Fairbanks to points between Fairbanks and the North Slope.

The Troopers presently have direct communications with Dead Horse from 8 to 10 hours per day (via commercial radio phone services).

Sideband radio is not the answer to the policing problem. VHF with repeaters is the answer.

There is evidently the intent, if the budget is approved, to put two men at Dead Horse and two at Livengood. Housing at Dead Horse will be a problem. Bettles will need a trooper.

Col. Dankworth has talked to the oil companies (and presumably Alyeska) and asked each Trooper Post to submit budget requests. (I have not yet had an opportunity to talk with Col. Dankworth).

Capt. Shafer expects that with a large influx of people they will face abnormally high rates of law breakers (or peace breakers), because of the questionable character of camp followers. The troopers presently police the North Star Borough areas outside the City. City police now adequate but will need more. Furthermore, there will be industrial accidents and fatalities, and for insurance reasons, the first person usually called is the police. He was in Kenai also, and is thoroughly familiar with the problems. Troopers are called for everything, rescue and recovery work, too.

FAIRBANKS - City Manager Wally Droz  
September 7, 1973

1. Employment & Population. Fairbanks has the same uncertainties as other communities as to the numbers of families of pipeline workers that will come to Fairbanks. They think that there will be a gradual influx despite Alyeska efforts to keep them out.

Mr. Droz believes Alyeska will make an effort to hire native workers, but that many will not stay, for several reasons. One is drinking. Fairbanks had an alcoholic rehabilitation program but were forced to discontinue because of abuse by the natives.

Mr. Droz believes much of the construction work will be such that the workers will need to be imported from the other states. He thinks Fairbanks will get mostly service people and few white-collar workers.

2. Public Safety. Fairbanks has made little headway in anticipating problems created by the pipeline construction, and no projection of anticipated police costs. He predicts there will be organized crime activities and all kinds of "fast buck" artists. The City of Fairbanks, however, is sponsoring a Pipeline Law Enforcement study aimed at determining some of the problems and what needs to be done. This study is federally funded under the L.E.A. program.

(No special concern was expressed at this interview in respect to fire-fighting problems. However since the North Star Borough has no fire-fighting powers, this subject needs further study)

3. Transportation. Air transportation is considered adequate since scheduled carriers could increase service and there is charter and contract carriers available. The airport is considered adequate. The A.R.R. now has a spur to the airport.

The only problem with Air will be from the States and they probably can't handle required cargo.

There are potential problems with surface transportation. He believes the highways will not be able to carry the load during the peak of construction. (Teamsters are requiring cargo to move by highway that could be carried by the A.R.R. See interview with the General Manager of the A.R.R.)

Mr. Droz also thinks the railroad capacity may not be adequate.

4. Housing. Mr. Droz doesn't expect housing problems, at least in the early stages of construction, because of the presently high vacancy rate. (It is not known what the break-down is on the relative amounts of high, medium and low income housing is available. This needs study)

5. Government. A distracting element at this time in the Fairbanks area is the attempt toward unification of the City and Borough governments.

6. Utilities. Mr. Droz considers the utility services and capacities to be adequate to handle construction period loads with the exception

of the telephone utility (It has been learned that both trunking and switching equipment are not adequate and are already the cause of many problems).

All areas have water except two but service is being extended to these. The City Government doesn't own the utilities as in Anchorage, but are under separate operating boards.

7. Health. Fairbanks has their new hospital in operation. Medical & dental professions have adequate personnel at present and Droz is confident more will come. Ft. Wainwright is closing half of the post. The hospital there will be de-activated and might be made available for public use if needed.

Air pollution during the severely cold weather is already a problem. Further study by E.P.A. is being done. Severe restrictions are expected in those present activities which add to the smog problem, such as leaving the auto engine running while parked. The pipeline construction period will be certain to aggravate this problem.

8. Community Facilities. The sewer system now is extended to all areas in the City of Fairbanks (or is being constructed now). The 2nd sewage treatment plant will be under construction soon (Concurrently with the pipeline).

Other services are considered adequate or can be expanded.

9. Courts. Mr. Droz says the courts are over-loaded. There are also problems with detention facilities. (State owned)

The courts are expected to be completely over-loaded during the pipeline construction period.

10. Inflationary Pressures. Fairbanks is much concerned with the expected competition with the construction industry for help of all kinds.

There will be other government construction projects that will compete with pipeline construction, or add to the total impact. The flood control project will start. Fairbanks will have a new Federal Building. His belief is that non-urgent construction projects be delayed and phased in as the pipeline construction phases out.

GLENNALLEN - COPPER VALLEY ELECTRIC (& TELEPHONE)  
James Palin - Manager      Sept. 6, 1973

1. Copper Valley serves general Glennallen area, Valdez and points in between. They have been expanding only as fast as demand increases. They recently added a generator in Valdez (total now 3728 KW peak power, firm 1800 KW). B. & B. Fisheries freezer plant will soon start operating and will absorb nearly all surplus they now have. Generators cannot be added easily or quickly.

2. They have been unable to get any answers from Alyeska regarding estimates of electrical power needs. (Alyeska plans to provide their own, and evidently will neither need commercial supplies nor have any excess of their own to sell. (This is a question I have asked Alyeska).

GLENNALLEN - Interview

Sgt. Norman C. Chafin, State Troopers  
September 6, 1973

1. Sgt. Chafin made a report through headquarters on his estimated requirements to meet the pipeline impact. (will talk to Col. Dankworth)

He believes the largest problem will be with job-seekers rather than workers. He knows there will be work-camps but doesn't know where they will be located nor what working hours they will maintain nor their time of schedules.

2. Sgt. Chafin asked for 2 more troopers for Valdez (now 1), one clerical worker and a trooper for Glennallen. He wants to keep the office open 24 hours a day. He has 2 men at Paxson now and no more have been requested. They have 5 men at Tok (mostly involved with dope) and he has asked for one more. If there is much Alaska Highway traffic created by the pipeline construction, they will not be able to handle the problems.

There is presently 16 hours of patrol out of Glennallen, with men being on call the other 8 hours. His request would allow 24 hour coverage at all posts. Now the best he can do is concentrate manpower where needed.

Sgt. Chafin was in Kenai during the construction period there. They were continually snowed under with many emergency situations, including 6 murders. He says he would like to have a full-time investigator stationed in Valdez. Sgt. Chafin expects road traffic to increase 1000% and radar equipment is needed.

3. Communications, especially between base stations and the patrol cars is bad. They presently use the Highway radio system, which is manned only 8 hours per day 5 days per week. Even this is good out to a little over 50 miles toward Valdez, perhaps more in other directions, depending upon the atmospheric conditions. Communications to Anchorage is spotty. A patrol car on the road at night has no communication. Because of potential situations increased highway use and recreational activity of construction workers, better communications are needed. Only land line telephone between Valdez and Glennallen posts, subject to breaks in line at any time or sabotage. Better communications between State Troopers posts will be available when RCA installs the microwave circuits up and down the pipeline. See Delta Junction interview.

4. Sgt. Chaffin says the State jail at Glennallen is very inadequate. The Magistrate, the State Health office and nurse are in one small building. The magistrate has two small holding cells. Under present conditions often some of the detainees must sleep on the floor.

The Magistrate has requested more space. The Trooper thinks a District Court Judge and a prosecutor will be needed at Glennallen.

5. There have been additional liquor licenses issued recently in his jurisdiction, evidently in preparation for the pipeline construction. The Sgt. doesn't know if the population requirements were met since this is not the State Troopers function. There are

Glennallen.....Sgt. Chafin.....cont'd.....page 2.

more applications for liquor licenses on file.

6. There is very little land available for housing in private ownership. There is U. of A. land and also B.L.M. It was not known if the State has land in the immediate area.

7. He believes the schools (State operated) are not able to absorb many more students.

In general, Sgt. Chafin says the Glennallen area has not done anything to gear up for the pipeline construction.

GOLDEN VALLEY ELECTRIC - Robert Huffman, Manager  
September 7, 1973

The R.E.A. Coops of Alaska made a proposal to Alyeska to furnish electric power for certain of the pumping stations and other required power. The proposal, briefly was to run the line of those pumping stations south of the Yukon River which are in Phase 2 and Phase 3 of Alyeska's construction plans.

Great amounts of electrical energy are required (one estimate was for more than presently exists in Alaska). The eventual aim of the coops was to tie in all Central and South-Central Alaska with a common generation and transmission system. With the large loads possible with an integrated system, all users would benefit from lower rates and less reserve requirements. (I attempted three years ago to get some action started on this, in conjunction with the Alaska Power Adm.)

The State Administration (Joe Henri) has worked with the Coops in their study and proposal. The proposal has been turned down by Alyeska, especially in Phase 1. There seems to be some interest in Phase 2 and less in Phase 3.

Without going into details of proposal (I have the proposal and will summarize in further detail later). Mr. Huffman says their program can meet the time schedule needed by Alyeska for Phases 2 & 3, and Alyeska (Patton) did not quarrel with the economics except to question the Coops estimate for fuel costs. Huffman believes they can fully substantiate the economics of their proposal and that it is competitive with Alyeska's own proposed system.

When I asked about redundancy in the power supply, Huffman says Patton was not too concerned about this as long as they have some of the stations on firm power. With a few pumping stations operating, the oil can be kept flowing at a reduced rate.

The Coops were planning on a small LNG pipeline from the North Slope to bring gas to the generating units, and have been assured of the feasibility of this.

With a favorable legislative or Impact Committee position on this matter, Alyeska might review its position, particularly since they have not yet definitely turned down the Phase 2 & 3 proposals.

NORTH STAR BOROUGH - Mayor John Carlson  
September 7, 1973

1. Employment. Mr. Carlson thinks the MSNW report made for Alyeska on the impact is good and that the employment projections are fairly realistic. He says Fairbanks is a strong union town and that they will require local hiring.

2. Public Safety. Mr. Carlson does anticipate both law enforcement and fire protection problems, but since the Borough has neither power, was not prepared to discuss them to any extent.

3. Transportation. He sees one of the most immediate needs, in transportation as building a by-pass from the Alaska Highway to the Steese Highway so as to eliminate the need of all pipeline traffic going through the City. Such a by-pass would require the construction of another Chena bridge.

Mr. Carlson believes local merchants will have difficulty getting merchandise and food and that they may need to rely more on air transportation for many items. He recalled the problem immediately following the 1967 flood and that the air transportation was very inadequate. He was thinking of requesting Pan Am diverting their New York-Fairbanks-Tokyo flight through Seattle since Pan Am evidently has empty cargo space on the west-bound flights. (There could be serious obstacles in putting such a plan into effect).

Mr. Carlson says Wien has cut back their schedules into Fairbanks and Alaska Airlines has cancelled many flights, but assumes also that schedules could be increased.

As to the A.R.R., Mr. Carlson quoted Mr. Rogers Morton as saying the A.R.R. should beef up their power and other rolling stock.

4. Housing. Mr. Carlson says there is not much private land available that has sewer and water available. Much is being held for speculation. There are no large areas available for large housing development projects.

The F. E. Co. has 20 acres but it is not served by water or sewer.

He says the Borough has no involvement in supplying water or sewer services. This is a City function.

The Borough does not have health or sanitation powers. That is still a State function.

Mr. Carlson said there has been talk of establishing service districts but none so far. He is recommending that they encourage cluster housing so that water and sewer can be more easily and efficiently provided.

There is also discussion of getting use of some of the housing being vacated on the closed portions of Ft. Wainwright. This will be studied.

5. Utilities. Mr. Carlson says there is not much concern for utilities with the exception of telephone (There evidently is not too much concern in Fairbanks about the ability of the two electrical entities to provide sufficient power. I did not have time to talk

to the electrical people about the Healy plant, but understand there has been considerable trouble. (This subject needs further study).

6. Health. Solid waster powers are under the Borough. Outside the City this is handled by private collection firms. The Borough operates the disposal area. There was no concern evidenced as to adequacy of the disposal areas.

7. Schools. The school system needs expansion. The fate of the needed construction is again up to the Borough voters in October. There are three bond issues-one to build a Junior High, one to build a Junior-Senior High and the third for maintenance. Carlson thinks there is a 50/50 chance of approval. (I'm not so sure. There is sentiment that since Alyeska is causing this problem, let them build the schools, or else the State should do so).

Mr. Carlson says if the bond issues don't pass, it will mean double shifting or portable school buildings.

In connection with schools, the Borough has what appears to be an excellent program for adult education and careers.

8. Inflationary Pressures. In addition to the \$10 million dollar flood control project, there is the \$15 million dollar Federal Building and if the bond issues pass, \$11 million dollars of school construction in the mill. Mr. Carlson expects there will be a crunch for skilled labor and the added impact. He is suggesting that the Federal Building construction be deferred. (The problems here again may be fear of loss of the appropriation).

Mr. Carlson also believes some of the OSHA regulations will have the effect of increasing the costs of construction.

9. Financing. Mr. Carlson is fearful that there will be a lack of financing for private industry needs and housing at any rate of interest.

VALDEZ - Interview Herbert W. Lehfeldt  
City Manager  
September 5, 1973

1. Mr. Lehfeldt state that there was considerable conflict among the several impact studies in respect to projections of employment and population in Valdez. He says the Powder Company will have 50 families living in Valdez which were not specifically mentioned in the Alyeska report.

He says that Alyeska plans 12 hour shifts and that men will be too tired to play. Mr. Lehfeldt believes there will be a 500 man construction camp at the terminal site across the Bay and one at mile 11 or 12 out of Valdez.

Population of Valdez now about 1000. Mr. Lehfeldt predicts 6500 people during (MSNW shows only about 3000 at the peak) the peak of construction and 300% permanent resident increase after construction.

Valdez is worried about the influx of people not directly associated with construction and people looking for jobs or just looking.

Mr. Lehfeldt thinks that if Alyeska hires most of their construction people outside there will be less serious adjustment problems after construction, especially among the natives. He says they will be unable to adjust to such radical changes.

Mr. Lehfeldt had no opinion as to the validity of the MSNW report that pipeline construction workers would require only 40% of the government services as permanent residents, and that other pipeline workers temporarily located in Alaska would need only 80% of government services offered.

2. Public Safety. Valdez now has <sup>3</sup>city policemen and should have 4 for the present population. Mr. Lehfeldt says they will need to increase their force beyond that, if they can get the men. (Based on Mr. Lehfeldt's Impact Statement he would require 6 more policemen). Mr. Lehfeldt says they expect two additional State troopers to be stationed at Valdez. The City also has 12 men police volunteers for back-up with some training for emergencies and back-up only.

Valdez has 2 Fish & Game Protection Officers stationed at Valdez and possible 2 additional promised.

Valdez uses sideband radio for inter-city police communications. Weather conditions makes it undependable at times. They have commercial telephone for back-up. The City of Valdez furnishes the State Trooper side band equipment so that he can monitor the City frequency.

The Trooper has poor communication with his own headquarters at Glennallen. Commercial telephone is the normal communications channel. The Trooper also is equipped with radio using the Highway Department frequencies, but this is HF gear and is quite limited as to range and can only be used from 8-5 when the Highway offices are manned.

Lehfeldt thinks union jurisdictional problems unresolved in Anchorage might have to be handled or controlled by the State Troopers along the pipeline route.

Valdez has 28 volunteer fire fighters and good equipment. They are expecting Alyeska to provide their own fire protection at the pipeline terminal, tank farm and docks, although they have not been advised of this. If this is not the case, the City would

have very limited capability in the pipeline terminal area without expansion. If they will be required to provide such service, the property tax millage rate on the Terminal property would reflect the service.

3. Transportation. Mr. Lehfeldt expects Alyeska materials will be received over both the City dock and an Alyeska dock to be built.

The Valdez airport is soon to be improved. There is available 2.3 million dollars for this work from a State bond issue. Engineering is complete and work should start soon. A delay has been caused by changes that were made and they are waiting approval of the F.A.A. There will be a 5000 foot, paved runway. There will be no runway lighting at this time nor the required navigational aids needed for all-weather operation. This will probably not be done until such equipment becomes more sophisticated. Alaska Airlines has talked of improved services for Valdez, however, at this time they have no service of their own. The contract with a bush pilot who offers service between Cordova and Valdez with single-engine equipment. Polar Airways offers 5 day per week service from Anchorage. This is with twin-engine aircraft, but requires VFR weather at Valdez.

Lehfeltd says the Highway Department does an excellent job of keeping Thompson Pass open. He says that since he has been there (2 years) the pass was closed only once for about a day but this was the first time in years.

4. Housing. Mr. Lehfeldt says the present population of Valdez is just over 1000. He anticipates 6500 at the peak of construction and about 3000 after construction is completed. There is unused land within the City which could be served with sewer and water, however, most is in private hands. He thinks it may not become available because of speculation. I think most of this land is in the business district, and if not used, may slow business development.

There is a definite problem as to the location of mobile homes, trailers or temporary housing.

There is not much land available which can be served with City services. There is some held by B.L.M. and the University of Alaska. The University land probably could be leased for temporary housing.

Lehfeltd believes that zoning could be a problem despite adequate laws.

Lehfeltd knows of no Federal housing programs that are available, except loans. Most federal programs are for low income groups. Farmers Home has a loan program, but funds have historically been very limited.

There are few federal programs that would aid community in building community facilities. The Better Community Act might have small amounts available but the community to qualify must have received federal assistance in the past. (Valdez qualifies) He thinks that perhaps as much as 50,000 to 60,000 dollars might be available to Valdez, although no application has been made. It is questionable if the receipt of such funds could be timely. Within the Valdez city area there is presently little vacant housing available. There are about three small motels in town and some small over-night tourist quarters which presumably could and would be made available for single or married workers, especially during the off-season. There are two trailer parks in town, but they

appeared to be almost fully occupied. Trailer parks out of town would need to be served by wells and cesspools.

5. Government. Mr. Lehfeltdt believes most laws presently exist that will be needed during the construction period. There is one concern in Valdez. Presently only 30 day residency is necessary to run for city government office. With such a high percentage of new residents there is the feeling that all new Council members could be elected, thereby affecting stability and continuity of city government. Worse, undesirables could control the government and perhaps allowing lawlessness in a community that until now is a peaceful, family community. There is thought being given to law changes which would provide lesser numbers of council members to be elected at one time and maintain better continuity of government.

Valdez is concerned with what will happen after the construction period. All previous plans were for reasonable growth. They do not desire to become a depressed area afterward, but hope the City can meet the temporary needs without inebting themselves (at least not beyond the ability of safely meeting the obligations following the construction).

The city must exist afterwards and the hope is that it can return to a family type community.

Mr. Lehfeltdt believes the State revenue-sharing formula is equitable. He says there are inequities but that he knows of no better way to allocate.

6. Utilities. Mr. Lehfeltdt says he knows of no plans to increase the electrical generating capacity for Valdez. (See interview with Jim Palin of Copper Valley Electric Coop.)

There is no TV in Valdez and no AM or FM radio signals can be normally received from Anchorage or elsewhere. The City operates the Armed Forces Radio Station in Valdez and broadcasts programs coming in by overland telephone circuits from Anchorage. This station can be received only in the Valdez Bay region.

7. Health. There is only one doctor living in Valdez. There are no dentists in residence, but a couple of times a year one or more dentists visit Valdez and set up shop for local residents. Emergency dental work must be done in Anchorage (or elsewhere). It is Mr. Lehfeltdt's understanding that Alyeska has contracted with Fairbanks physicians for emergencies along the pipeline.

The hospital and medical facilities in Valdez are very limited as to the severity of cases that can be handled. They must be transported to Anchorage or Fairbanks. Often this is not possible by air. Mr. Lehfeltdt believes better facilities are needed there, particularly for emergencies and severe injuries.

Valdez does have a new ambulance. They also have 7 emergency medical trainees in residence who have passed the Sitka training program(I understand these people are not as highly trained as paramedics)

8. Community Facilities. Valdez has a sewage collection and trunk system which Mr. Lehfeldt describes as being adequate for the construction impact. They have a primary sewage treatment plant which will need to be expanded. The effluent from the treatment plant empties into the Bay in the neighborhood of the Old Town site. Although the Bay is deep and there is a 13' tide at least one person has said there is a pollution hazard. Lehfeldt says the flushing action is good.

Mr. Lehfeldt says they do not have sufficient road equipment.

9. Courts. There is a magistrate at Valdez. Mr. Lehfeldt says the court cannot handle their load now and that conditions will get worse. He expects the majority of violations will be misdemeanors and therefore can be handled by a magistrate.

10. Inflationary Pressures. Mr. Lehfeldt is much concerned with the problem of the City government (and local business & industry) competing with the construction industry for workers. He expects to lose some male workers (even possibly policemen, who now make \$900 per mo). Even if they don't lose people, the expected high wage settlements will almost certainly force all wages up. Valdez locked in on budgets will have difficulty keeping or recruiting help. He expects insurance rates to rise, also. He wondered about wage ceilings.

He believes the State needs to take a hard position on excessive Alyeska costs and that audits be made and maybe penalties be assessed or threatened in cases of excessive costs. He believes the only way is to control or set the maximum price per barrel that the oil can be sold for (would probably require Federal legislation).

An increase in cost of living will remain high after the boom period.

11. Planning. The Capital Improvements part of the comprehensive Valdez Plan is completed. (will attempt to get copy)

12. Banking. At least one more bank (maybe 2) will open a branch in Valdez.

13. Postal Services. Postal services believed to be adequate. Mail is brought daily by truck from Anchorage. Airmail service is also available. If the service is cancelled, out-going airmail goes by truck. However, incoming airmail to Valdez awaits the airplane departure, even if delayed or cancelled. Service could be improved if airmail were trucked on days when flights are cancelled or delayed.

The incoming mail is not delivered but placed in post office boxes. An additional tier of boxes could be installed, if needed. Also, a second floor could be added to the building.

14. Schools. Mr. Lehfeldt believes the school system can handle the expected need with double shifting and more teachers, providing Alyeska does not permit pipeline workers to bring their families.

VALDEZ - Interview John Kelsey  
Valdez Dock Co.  
September 5, 1973

Bill Johnson (Homer) has 8 pilots qualified to work in Valdez and Prince William Sound waters. He plans to station pilots in Valdez. Kelsey believes there will be sufficient pilots.

He says Coast Guard will bring in a 90' vessel and expand as required.

B. & B. Fisheries (Bix Bonney) are constructing a large freezer plant (Ready Nov. 1, 1973, for Tanner Crab season) 50% Japanese ownership. They will also meet Alaskan market demands directly (won't ship first to the State).

The Copper Valley Coop also provides telephone service in Valdez and to Glennallen. They need to expand but haven't found way to do it. (See RCA pipeline communications in Delta Junction interviews)

Sea Land transportation is planning some form of scheduled transportation into Valdez and have talked to John Kelsey.

Mr. Kelsey believes the legislature has passed legislation since the installation of the Valdez sewer system that could cut down the planned capacity (5000-6000 persons).

The Valdez State trooper believes if legislation were passed requiring restitution after conviction of stealing or destroying property, it would be a deterrent to committing such acts.

NOTE: Reference is made to the Impact Statement submitted by the Valdez City Manager, which I understand was sent to Committee members.

ALYESKA MSNW REPORT

1. Is forecast made on employment still valid?
2. Which alternative forecast now looks likely?
3. Is the construction camp policy for Valdez assumed in the study valid, or will some workers, or all, be based in town? How about other areas?
4. What will be the logistics plan for support of the construction camps?
5. Native training programs - what are they and which other agencies should, or could, supplement this program.
6. Are any problems anticipated because of conflicting union jurisdictions?
7. Consistency of ALYESKA wage policy with Alaska construction wages.
8. Are there any future construction plans which have not been mentioned in the MSNW report?
9. Was the drilling of production wells and the construction of the gathering system employment considered in the MSNW report?
10. Are there community or government services which may be used by ALYESKA along the pipeline route or elsewhere?
11. What transportation services will be used by ALYESKA during construction and after?
12. Will ALYESKA use any public utilities of communities along the pipeline route or, conversely, will ALYESKA be able to offer services to the public at any point?
13. Comments on potential inflationary pressures due to:
  - a. Lack of skilled labor.
  - b. Inadequate transportation.
  - c. Lack of warehousing.
  - d. Lack of competition.
  - e. Shortage of housing.
  - f. Labor piracy.
  - g. Other.
14. Adequacy of banking facilities.
15. Adequacy of postal services.
16. Availability of ALYESKA's report "Recruitment and Training Task Force Report".

(2)

17. The MSNW report doesn't anticipate any Federal increases in employment because of pipeline construction, nor decreases which may be caused by base cut-backs or closures. Was this because of lack of information?

18. What will be the specific location of the construction camps?

19. Have there been any changes in the assumptions listed on pages 19 to 25 in Vol. II of the MSNW report?

ADDITIONAL QUESTIONS FOR ALYESKA

1. Pipeline construction work-hours and time-off policy.
2. Specific routes of pipeline through communities and whether buried or above ground.
3. What are the plans for fire-fighting at the terminal and at pumping stations, if near communities?
4. Will the medical services provided at the camps be confined to first aid? What transportation will be provided for serious injuries or illness?
5. What are the plans for sewage and solid waste disposal at the camps?

Bob Sharp - Anchorage City Manager  
September 10 - 10-11:20 A.M.  
Manager's Office

1. Water problems. Water supply is expected to be adequate for the pipeline construction period for the area. Ship Creek was considered the main source for the water supply for the next several years. However, foundation problems for the required new dam necessitated a new study. A joint City-Central Alaska Utilities study led to the plan to determine if wells in the Eagle River valley could provide the needs of the next ten years. This will proceed.
2. Government capacity. The City, Borough, and Military bases now depend to a great extent on natural gas, both for heating fuel but for the generation of electric power. Although the well-head supply of gas is considered adequate, the transmission by way of the 12 inch pipeline of sufficient gas to meet the growing needs is questioned. It is believed serious consideration needs to be given to running another 12 inch line. (Two 12 inch lines already span Turnagain Arm). (This will be checked with the Gas Company).
3. Used State & Dept. of Interior employment and population figures. Same on employment/dependent ratio. (Based on judgment of employment expected).
4. Not yet sure what, or if, public works requires state aid. Further study needed.
5. If surface transportation exists, would be between Seward/Whittier and Anchorage. Dock improvements planned.
6. Can't see REA-group, proposal helping Anchorage at this time - could long-range.
7. City will make revenue projection created by pipeline impact. Believes City revenues would lag considerably behind both impacted city operational costs and increased needs of public works.
8. Doesn't believe there will be any substantial delay in other construction projects and there won't be much competition between pipeline construction skills and those needed in other construction, however, didn't deny all additional workers would add to impact. Some public works projects cannot wait, Anchorage Federal Building delay could jeopardize the appropriation.
9. Courts are now jammed. Only solution to add judges.
10. No postal service problems he knows.

11. Mr. Sharp believed surface transportation capacity probably adequate. The City lost their court action regarding certain tidelands south of the present City Port. Part of this land was to be used for additional POL docking and discharging facilities. Phase three of Dock additions is now being planned. The first construction project will be built in 1974. This will be used for general cargo and will almost double the capacity for general cargo. Sea Land will be moved to terminal 2 (which was completed in 1970) and Terminal 1 may be then used for additional POL facilities. Mr. Sharp felt if there were to be any surface transportation problem it might be between here and Seward and Whittier.

Mr. Sharp is yet to be questioned regarding land needs at Merrill Field and Campbell Field use.

12. Mr. Sharp believed there are definite dangers of another regional inflationary trend.

13. Mr. Sharps statement on police problems are in his impact statement. The City contracts with the Spenard Service Area for police protection in that area.

GREATER ANCHORAGE AREA BOROUGH  
Mayor John Roderick  
Paul Carr - Planning  
Wm. Beaty-Planning Director  
Harry Donahue-Mayors Staff Director  
September 12 - 2 - 4 P.M. at Borough offices

1. They have studied MSNW report pretty thoroughly and believe it to be quite thorough. They agree there are unanswered questions.
2. The police problem really is an area wide problem. Either people need to approve area-wide powers or Legislature needs to do so. State troopers don't feel they can provide necessary control, they don't have sufficient people to do so and their men are not trained for patrolman duties. The belief is that adequate law enforcement will not be made under present set-up. With area-wide powers, they could contract with the City for police protection.
3. The Borough now has fire-protection powers for specific areas and foresee no real problems with the exception of the provisions of new equipment on a timely basis, if it is needed. It may be difficult to anticipate the need of additional equipment. There is the belief that the fire protection services of the Borough should be integrated, however, no problems are anticipated because of the present separation.
4. Housing is expected to be a problem for the lower income group. It is believed housing will be available for those with higher incomes. There may be reluctance, as always, of private investors to build housing, especially rental property, for low income families. Emphasis will need to be made on trailer and mobile-home parks. The Borough will need to develop plans for providing water and especially sewer for expanded mobile-home and trailer parks. Funding such expansion on an accelerated basis may be a problem. Building codes are in effect in the Borough. Emphasis will be upon health potential problems which might be created by any temporary housing projects or expanded trailer parks.  
The Borough government will review the trunk road situation relative to expanded housing projects.  
An attempt will be made to get further information on the present population, the housing vacancies now existing with a break-down of availability for lower income families.  
It was suggested that if financing becomes difficult, that the State consider some financing or mortgage guarantee program, particularly for low income rentals or purchases. The Borough has a problem of insufficient inspectors.
5. It was believed that it would be difficult to anticipate additional school requirements but it was believed that projections made by the MSNW report could be accommodated. Further contact will be made with school authorities.

6. The Borough has area-wide health responsibilities. They plan close monitoring of new housing construction, especially in areas where sewers are not yet available. Some problems are anticipated with solid waste disposal.

7. Bob Smith of Central Alaska Utilities says he believes pipeline construction period water needs can be met, both from standpoint of capital investments and water source supply. Long run picture is not so good. Original plan was to further dam ship Creek to provide a larger impoundment, however, because of the depth of bed rock (some 170' below the surface at some points) foundation problems developed. This plan was dropped. They are now exploring feasibility of drilling wells in the Eagle River Valley for additional supply to meet the needs of the next ten years.

8. The Borough Government is concerned with rising wages caused by pipeline construction (and other unrelated construction) making it difficult to hire government workers who are qualified at wages within the budget limitations. It is the belief that as a very interested party, the State should sit in all pipeline contractors/workers wage negotiations in an attempt to avoid another regional inflationary spiral that would establish a new plateau of living costs in Alaska.

9. The Borough believes some State aid will be required. Further study is now being undertaken to attempt to quantify their impact needs, along with anticipated increased revenues and the expected lag of revenue increases behind money needs. I will hold a second meeting with the Borough staff about Oct 10. At this meeting items not covered in today's meeting, such as Transportation and Government Services will be covered. It is expected that a hearing will be held sometime late in October or early November at which local government agencies and community leaders can present their impact needs and statement.

ALASKA RAILROAD  
Walter Johnson - General Manager  
Sept. 12 - 9 A.M.

1. A.R.R. can double tonnage with present equipment. Plan is to replace a number of pieces of power equipment with larger powered units. Effect will be to have a lesser number but each higher powered.
2. Equipment can be leased from railroads in the States and brought up on Seatrain or Hydro-train.
3. If there is a need for special equipment they have not been advised. However, any such traffic will probably be put aboard needed special cars and sent to Alaska via sea-train and left on the special equipment.
4. Alyeska has not advised the A.R.R. as to their transportation needs.
5. A.R.R. is operated under an industrial fund basis. Therefore, expansion needs would be expected to be met from reserve funds generated by revenues.
6. Many of SeaLand vans are transported to Fairbanks by rail. More could be handled, however, Sea Land unions apparently will not permit increases but insist on moving them via highway.
7. Mr. Johnson believes the majority of A.R.R. employees will stay with them, particularly those that have 5 years or more employment (because of retirement benefits). It may be difficult to meet recruitment needs during the pipeline construction period. The A.R.R. would probably need to hire less qualified people and be faced with lower quality performance. Despite the desire to employ more natives, experience has been that many are not too dependable, however, efforts will be made to employ more.
8. Mr. Johnson doesn't believe there will be much success in postponing construction projects, although he agrees that the impact will be aggravated by additional employment and population.
9. The A.R.R. doesn't have much of their own warehousing. They are making small areas available which will be used for warehousing. He foresees a shortage of warehousing here as well as in Fairbanks. He believes at least two individuals will construct warehouses at Anchorage.
10. The recent court action decided in favor of the A.R.R. in the tideland ownership south of the City port area. The City apparently intended to provide more POL docking facilities, evidently needed. The A.R.R. will have no immediate use, but is considering partnership in an ocean van service that would come in here instead of Seward or Whittier. However, A.R.R. would prefer such service to operate into Seward or Whittier, because of the longer A.R.R. haul.

It would be expected, under these circumstances, that no immediate use would be made of the tidelands mentioned. Of course, there is no assurance that the City would make use of the land during the pipeline construction period, although a PCL facility could probably be built quicker than a dock capable of receiving vans.

11. The A.R.R. will make further projections when and if Alyeska makes its needs known.

Capt. H. G. Lyons  
U. S. Coast Guard  
Sept. 11 10 A.M. his office

1. His area of jurisdiction:

- a. Merchant Marine Safety-all area west of 134th(7) meridian (Alaska-Yukon border)
- b. Oil spills-Port Safety-more limited area which includes Cook Inlet and Prince William Sound.

2. Coast Guard plans:

- a. Coast Guard station at Valdez-two men to start to monitor shipping and unloading of explosives and hazardous substances.
- b. Two boats to be stationed at Valdez with approximately 35 men and officers. \$3,000,000 plus to be expended for facilities.
- c. New navigational aids and communications facilities to be installed between Hinchinbrook entrance and Valdez to aid tanker operations. Method used will be monitoring movement of all vessels (except fishing boats), communications between Coast Guard and ships and bridge-to-bridge between ships; radar; traffic separation, with an IN route and an OUT route from Hinchinbrook entrance to area outside of Valdez Bay. From this point into and out of Valdez Bay, only one ship at a time will be allowed.
- d. Explosives and hazardous substance will be unloaded at locations away from other docks (possibly at Alyeska dock on south side of Bay). Explosives may also come to Whittier, Seward, Anchorage or Kodiak for trans-shipment. Also, methods will need be worked out for land transportation via highway or railroad (for explosives).

3. Pilots are required by State law on foreign vessels operating in Alaskan waters. Federal regulations require federal pilots on coastwise vessels (over 150 tons) operating in coastal waters. Thus, pilots will be on all ships entering Valdez Bay.

The Coast Guard believes many domestic ships will carry their own pilots and require only a docking pilot after entering Valdez Bay.

Otherwise, a pilot station at a convenient location, or a pilot boat, will be necessary. The location of the pilot station (or boat) should be as near as possible to Hinchinbrook Entrance (compromises on the location may be necessary). The costs of maintaining pilots at the right location will need to be born by the operating ships as a necessary cost of doing business.

4. Capt. Lyons believes the Traffic Separation method of controlling tankers (and other vessels) will be satisfactory and safe. This method gives the control at both ends of a trip, when approaching land, but allows the captain freedom to take his own course when at sea to avoid storms or inclement weather.

5. Capt. Lyons does not believe there is need for change in the State pilotage laws, since the combination State/Federal laws are now adequate.

Capt. Lyons.....Coast Guard.....cont'd.

6. Capt. Lyons says the Coast and Geodetic Survey has recently charted the waters in Valdez Bay and in Prince William Sound (?). New charts are expected to be available by next year.

September 17, 1973

SPECIAL PETROLEUM IMPACT COMMITTEE MEMBERS:

Enclosed are the following papers:

1. A summary of the potential problems which you may want to consider. These are taken from interviews made during my trip from Valdez to Fairbanks and in Anchorage. These subjects will require further study.

2. A study outline I prepared before arriving in Anchorage but after I learned I would be working on this project. It was completely subjective and covers only those impact factors I arbitrarily classed as Element I priority on the front sheet marked "Scope".

3. The highlights of the interviews conducted on the trip and so far in Anchorage. These interviews were not meant to be in-depth or very searching, but in the limited time to get only a perspective.

4. A list of questions that I submitted to Alyeska in August. I have others now to add to the list when I meet with them. They have called me to advise I will be contacted September 17 in regard to a meeting. At the same time they advised me they were considering seminar-type meetings at various locations to answer these and other questions.

5. Presentation by T. F. Bradshaw, President Atlantic Richfield Company before the Vancouver Rotary Club.

6. Partial budget.

In regard to my future activities, I have some 30 people on my list for interviews here in Anchorage to develop further information about the pipeline construction and the post-construction period.

It is my aim to further delineate problems and, with your approval, develop more specific information or research needed for you to determine what your course of action should be.

You will be holding hearings and meetings with others to learn first-hand what people are thinking and planning. I will arrange for such meetings and provide a record of them. Since recording such meetings completely can be very expensive, I will appreciate your advice on how fully you will want such meetings recorded and transcribed.

It is my belief that you will want legislative programs or budget proposals which you believe are necessary or desirable,

Special Petroleum Impact Committee Members  
Page Two  
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prior to the convening of the Legislature. Further, I would assume you may want your information in time to have draft legislation prepared.

I shall look for further guidance on this work-plan and more detail regarding your own ideas on the specific objectives of the Committee.

George Sharrock

### POTENTIAL PROBLEMS OF PIPELINE CONSTRUCTION

1. Occupational safety and health programs and budgets.
2. Question of opening the Yukon-Prudhoe road prior to completion of the pipeline.
3. Question of asking local governments for estimates of revenue increases generated by the pipeline impact, in addition to costs.
4. Question of encouraging government (all levels) to delay construction projects not urgently needed during the pipeline construction period.
5. Question of auditing pipeline construction cost by the State.
6. Borough-wide police powers (Anchorage and Fairbanks).
7. Borough-wide fire protection.
8. Availability of State, BLM or U. of A. land in urban areas for housing or mobile home use.
9. Financial aid, State loan programs or mortgage guarantee, for low income family housing or mobile home parks.
10. Aid for impacted area public services largely needed to serve transient workers or pipeline workers.
11. Aid for public works programs needed either on a crash basis or on an accelerated basis due to pipeline construction. Grant programs, loan programs, or if the community indebts itself, aid in early interest payments or debt service payments.
12. Aid for communities to provide recreational facilities needed during the pipeline construction period especially.
13. Legislative actions required in the unorganized borough area for expanded schools, extra police and other services needed to meet the pipeline construction problems.
14. Legislation that might be required for general health problems caused in impacted communities.
15. Consideration of ways to maximize long range benefits to the State by encouraging Alyeska to purchase their electric power requirements.

16. The funding of special road projects necessary (because of the pipeline project) in and around communities.
17. Should the State make an attempt to be a party to wage negotiations between pipeline contractors and the unions?
18. Problem of inadequacy of courts, jails and detention areas.
19. State Trooper strength requirements in impacted areas.
20. State Trooper communication needs which now appear to be inadequate.
21. Possible legislative action regarding the point at which pilots should board incoming ships and leave out-going ships.
22. Will the Legislature wish to protect our road system by a requirement to use the railroad more.
23. There have been recommendations for rent controls and wage ceilings, however, there are many problems associated with such programs.
24. Legislative review of the local-hire law.
25. Review of organized community taxing ability in communities not now taxing themselves.
26. The question of residency requirements for voting in local elections.
27. Emergency equipment for State Troopers.
28. Para-medic program funding.
29. Aid for school operation or construction costs caused by pipeline construction impact.
30. Committee position on Alyeska allowing families of pipeline workers to come to Alaska.
31. Restitution legislation to deter property crimes.
32. Liquor license issuance along pipeline.
33. Problem of electric power capacity in Valdez.
34. Consideration of more scattered State offices and services along the pipeline.

35. Forty-Five to fifteen school attendance program -- year around school.
36. OSHA regulations that may increase costs substantially.
37. Resolutions asking for Federal aid in areas and functions for which the Federal Government should accept some responsibility. For example, in areas where native populations are high.

ARCO Tankers-  
A Commitment to Safety

T. F. Bradshaw  
President  
Atlantic Richfield Company

Presented to  
The Vancouver Rotary Club

Vancouver, B.C.  
July 24, 1973

Thank you for permitting me to be in your very beautiful city. As I flew in yesterday afternoon, I saw the beautiful mountains, and the city set against those mountains, and I saw lots and lots of very clean water. I am here really as a sailor. In a few minutes I will have to talk as an oil company president, but basically I am here to look over sailing opportunities. I have had the good fortune to be able to play around with small boats, as they say, and my hobby and my love is sailing. Until our company moved its headquarters from New York to Los Angeles about a year ago, I did all my sailing on the East Coast. Now I plan to do it on the West Coast. So I am really up here to just sort of "case the joint," to see if the waters are as pristine and as clean as they say they are.

I should say, having been driven out of Long Island Sound by garbage flotsam, jetson and oil, that I do not expect to be driven out by the same from Puget Sound. But now I have to talk as the president of an oil company, though I would love to go on talking as a sailor.

Some of you are familiar with Atlantic Richfield; others may not be. Atlantic Richfield is a rather large company with about four billion dollars in sales and about four billion dollars in assets. It operates in some 22 countries but is principally what we consider a domestic company operating in the United States. In the recent Federal Trade Commission blast at the major oil companies which attempts to prove

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once more that we are engaged in monopolistic practices, Atlantic Richfield made the list, but only as the last one of the eight.

Once again we are going to have to defend ourselves against being a so called monopoly. This has gone on for a long time, gentlemen, as you perhaps know. I have often said that if the petroleum industry is a monopoly it is the worst run monopoly I have ever seen. It has for years reminded me of a cartoon which showed a herd of elephants breaking through the jungle on a stampede. One old elephant turns to another and says, "Worst run stampede I've ever been on." Worst run monopoly I have ever been on.

I had hoped to be able to see your Premier, Mr. (David) Barrett, but I understand that he is at the Calgary Rodeo. But I do hope to see him when I come up here again.

Our company, in addition to finding oil and gas, refining it into products, marketing it, and transporting it in ships and pipelines, also has rather large interests in Canada.

We have been here for a long time searching for oil and gas and have found it. We are heavily involved in the tar sands situation in Alberta. We are very hopeful that our group will build the next tar sands plant. We hope we have been good citizens of Canada.

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Now, I wasn't really invited here. I sought this opportunity to come to talk to you because of the impending decision on the Alaskan pipeline. Being of an optimistic turn of mind, I thought that the Alaskan pipeline was inevitably going to go through and, therefore, this would then mean some tanker passage along your coast. I have heard that there is some opposition to that. So I did seek out this opportunity to talk to you, and I am very glad that you have permitted me to.

I did not realize the timing would be quite so apropos. As you know, the Senate of the United States passed a bill last week which not only corrects a technical deficiency in the building of the pipeline, but permits the pipeline to go ahead without any further litigation. A companion bill to this will shortly be taken up by the House of Representatives. So we are almost there, I would say, and my timing is somewhat more apropos than I had thought.

I would like to talk to you about this matter of the trans-Alaska pipeline and with quite specific attention being given to the implications of the tanker traffic which would arise from it. By way of background I would like to contrast very briefly the energy situation in the United States with the energy situation in Canada.

The United States is now a have-not nation in energy after many years of being a surplus nation with more energy than it could

use; with enough surplus so it could take care of Europe, for instance, in times of difficulty. All of a sudden it appears that the United States is a have-not nation.

As recently as 1967 the United States had surplus oil producing capacity. Alaska was opened up by the discovery of the North Slope in 1968; offshore California came through in 1968. Everything looked as though it was coming up very well in terms of providing the energy needs of the United States.

And now here it is three or four years later and we are really a have-not nation. For instance, in 1972 the United States used 17 million barrels of oil a day and produced 11 million barrels of oil, giving rise to the necessity for importing about one-third of its needs. That is a tremendous contrast to 1967.

This oil was imported at a cost of some four to five billion dollars, and you may recall that our balance of payments deficit in 1972 was about 4.5 billion dollars. That led to the first devaluation of the dollar and then a second devaluation of the dollar. Looking forward to 1985, we anticipate that the needs of the United States for energy will be some 27 million barrels a day and we will be producing about 12 million barrels a day meaning that more than half of our oil requirements will have to come from foreign nations, principally from the Middle East. The cost by 1985 will be something like 25 billion dollars a

year. That faces the United States with some very severe problems, problems to which we do not have the answers now.

The first problem is can we pay for it? What will we pay for it with? It must be paid for with increased trade. Certainly the Arab nations are not going to take pieces of paper, particularly when we devalue those pieces of paper quite regularly.

The second question is, will the Arab nations let us have the oil? After all, they will have their own problems as to what to do with all the money that will be pouring into those nations at that time. They will not only be getting 25 billion a year from the United States; they will be getting about the same amount from Europe and they will be getting some 15 billion a year from Japan.

So the total may be something like 50 to 60 billions of dollars pouring into a very few Middle Eastern nations which are largely undeveloped at this time. What will they do with that? Can you conceive of a monetary system that would endure that kind of a capital buildup in such a concentrated area? Can you conceive of a trade system that would support that? What would they do with it? They could build up balances, but that would certainly ruin any monetary system. They cannot spend it at home. They cannot spend that kind of money in a country like Saudi Arabia, for instance, which has a population of six million people and is largely underdeveloped.

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This dilemma poses very real questions. One of the things that they might do is not supply the oil because oil is a very finite resource. They might want to spread that resource over a 50 year period instead of a 25 year period and this might possibly be in the best interests of Saudi Arabia and Iraq and the other nations which have the oil.

If they do indeed cut back on the oil, what then will happen to the developed nations of the world? What will happen to the United States if it cannot get the energy which it needs? So we face some very real problems. I do not know the answers to them.

How did we get into this mess in the United States? I will very briefly mention some of the things that I think caused us to get into this mess, only because it might help Canada avoid some of our mistakes. Basically what happened was that our government did not recognize what was going on until far too late and we did not have the appropriate kinds of energy policies in the United States which would have staved off this kind of a situation.

We now have the realization of this kind of a crisis, but it is far too late. It is too late to bring new sources of supply on stream; it is too late to build refineries in time. The United States is going to have to do with less energy and this is going to be a very difficult thing.

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Now how it happened: Demand increased beyond all expectation both because of our affluent society and our high per capita use of oil, and because of our profligate use of energy.

We have always had it, and we spent it. A friend of mine went to a hotel in Houston, Texas. Of course the hotel was air conditioned. When he went to bed he found that he had a heating blanket on his bed to keep him warm. This is all right if you have got it and can flaunt it. But we do not have it.

About 1969 or 1970 the environmental age dawned in the United States and none too soon as far as we are concerned. We hope it is not too late, as a matter of fact. We have an energy crisis in the United States but we also have an environmental crisis in the United States.

Ironically, legislation passed in early 1970 which required control of auto emissions, and the emission control devices already on our cars in the United States, increased the consumption of gasoline by some 15 per cent. By 1975 emission control devices will add another 10 per cent.

Supply has been decreased by some of the same environmental legislation. We can no longer use coal under our boilers to generate electricity because of the sulfur emission standards set by law. We have the North Slope frozen in because of

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environmental differences of opinion. We have offshore California locked in. We have slowed down on our offshore drillings.

So demand has increased enormously while supply has gone down and we find ourselves facing a large and widening energy gap. Against this background the North Slope find of 1968 is an extremely important factor. It is the largest single find ever in the history of North America -- about 10 billion barrels.

It is very essential to get this oil to market. Even more important, basically, than getting this oil to market is for the United States to find out how much more oil there is in Alaska. We do not know because oil exploratory efforts stopped when the pipeline was blocked.

We do not know if we have 30 billion barrels there, 15 billion barrels, or just 10 billion barrels. Our whole attitude towards the future, our relationships with other nations, could undergo a significant change if we knew that we had enough oil in Alaska to help take care of our needs.

What does all this mean to Canada? I would only quote a Canadian Minister who spoke to me a few months ago and said it is one thing for Canada to have a giant south of the border; Canadians have learned to live with that. But, he said, it would be quite another thing to have a sick giant south of the border. If the

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United States cannot get the energy it needs it will be the sick giant, indeed, and I think that may give Canada some thought.

By contrast, Canada is in an enviable position. I believe I am right if I say that Canada is the only industrialized, developed nation in the world which is self sufficient in energy. A very enviable position. It does not mean you do not use very much. The United States, for instance, uses the energy equivalent of 60 barrels of oil for each person each year. Canada uses 50. And the next nation I think is Great Britian with something like 25, or West Germany, perhaps.

And your reserve situation is not doing all that well. You have about eight billion barrels of conventional crude in reserve, but the reserves have been declining since 1966. Right here in British Columbia, for instance, your natural gas reserve life index has slipped to 26 years from 40 or 50 years which was the case in the early 60's. If you would continue to use gas at the rate of increase which you have been using it in British Columbia, and if you found no reserves in British Columbia, you would run out in six years.

So, I think you have a most enviable position at the moment but I think you have a very large need to look at your own reserve situation and your own possibility for finding oil and gas.

You have very large needs for far-sighted government policies in order to protect Canada to retain its reserve situation and its self-sufficiency. I think my basic conclusion would be that Canada does have the opportunity for continuing self-sufficiency, but there is very little opportunity for Canada to come to the help of the United States.

Against this very broad background, why do we find the trans-Alaska pipeline to be the preferable route? You might assume that we find it to be the preferable route because we bought a lot of pipe and have about four hundred million dollars invested in the Alaskan pipeline. Those of you who are in business know the time value of money, know that this is a very large incentive, and might well say that the pipeline has got to go through Alaska because we have that kind of money invested in Alaska.

We may have felt that way for awhile. But there is one factor that in my opinion is the lead factor, the important factor, in the comparison of the Canadian line and the trans-Alaskan line. That is the matter of time. We have run out of time in the United States. We have got to get the oil in as fast as we possibly can. We have got to get back to exploring in Alaska to find out how much more oil there is and whether there is enough to help alleviate our energy problem.

We can complete the trans-Alaska line in three years from the time of approval, and we would hope that approval would be sometime

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this summer. We do not know how long it would take to complete a Canadian line.

We know the actual building would take about five years; in other words, two years longer than the actual construction work of an Alaskan line. But we do not know how long it would take before we could start in Canada. We have not done the engineering work in Canada; we have not done the environmental studies - the millions and millions of dollars of environmental studies which we have done in Alaska. Those would still have to be done. We do not know the extent of the opposition of Canadian environmentalists and we do not know the kind of problems we would have with provincial government and with the Canadian government.

We think that this whole process might take two to three years, although that is anybody's guess. When you add that to the five-year building time, you come up with something like seven to nine years and we cannot wait that long.

I am not speaking for a company now; I am speaking for the United States. We cannot wait that long.

The other thing that this delay would do is, in turn, delay the delivery of gas from Northern Alaska. As you know, with the oil was found one of the largest gas pools in the United

States - some 26 trillion cubic feet. The obvious route for that gas is a pipeline through Canada merging with the Delta Gas Line and picking up Canadian gas and distributing it either in Canada or the United States in whatever proportions might be required at that time.

There is no possibility of building an oil line and a gas line at the same time in Canada. There just is not the available capital nor the available manpower -- the construction crews. It just could not be done.

But we can build a line through Alaska and then when we are partially through with that line we could start a line through Canada, if that is Canada's desire at that time. We then could have gas coming down through Canada two years after the completion of the oil line in Alaska.

There have been many other difficulties with thinking about building this first oil line through Canada. I did visit a number of years ago with various Canadian ministers at their request. We discussed this matter and at that time the kinds of conditions they discussed with me -- and this was not a government to government contact by any means -- would have made it impossible for a private company or a group of private companies in the United States to finance the line through Canada.

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This may have changed since then, but I have not had further conversations. In any event, it begins to look as though the line through Alaska is rapidly becoming a reality. Therefore, I think the thing to do is to turn to the problems of what we call the "tanker-leg."

As you all know, the oil will come down to a port in Southern Alaska, Valdez, and there it will be picked up by tankers and delivered some 1200 miles to various ports along the West Coast of the United States.

I should spend a few minutes talking about what I am sure is your concern about the possibilities of oil spills. I would suggest that you remember, and I am sure you do, that oil has been coming down the coast from the Cook Inlet for about ten years and we have had no oil spills in that particular traffic.

I would point out that the addition of the Prudhoe Bay Field production of two million barrels a day will not really result in very much increase in Puget Sound traffic, by almost any measure, because, after all, this oil will be coming to several ports in the United States, not just to Puget Sound.

We estimate that there will be some six tankers a month coming into Puget Sound with this North Alaskan oil, or about 80 a year. Our own refinery at Cherry Point, Washington, will take one tanker every nine days. In order to put this in perspective,

you might compare this with the total of 2,460 ship departures from Puget Sound in 1971. So it is basically 80 tankers in addition to the normal traffic of 2,460 ships of all kinds. I would say this is a rather insignificant addition.

I will not say Puget Sound is an under-utilized port because perhaps you do not want it utilized very much more. But by comparison with the major ports in the United States, which are vastly inferior to Puget Sound as a port, the figures are rather startling. For instance, Portland, Maine - and this is tanker traffic only - has 1,635 tankers a year. New Orleans - 1,270. Boston - 1,511 tankers. Puget Sound - 460.

But then you begin to look at the kind of a port that you have here in Puget Sound. I think you will find it to be a sailor's delight. It is a remarkable port. The width of the entrance, for instance, is very important as is the depth. My own sailing boat has a 6-foot draft so depth does not mean all that much. But some of these rather large tankers like to have a lot of water under them.

Boston, for instance, has a 900-foot channel coming into the harbor with a 40-foot depth. Portland has a 700-foot width for the channel coming in with a 45-foot depth. New Orleans is 600 feet wide with a 36-foot depth. Puget Sound - the Rosario Channel - is one mile in width - 108 feet in depth.

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The Juan de Fuca Strait is 12 to 15 miles in width and 600 feet in depth. Furthermore, a very remarkable thing for any channel in the world, I am told, is that the sides of this channel are absolutely straight so you have got the entire width of the 12 to 15 miles at 600 feet. And, of course, these are very sheltered waters. So this port, I say, is a sailor's delight.

How will the tankers come; what is the route they will follow for the 1200 miles from Valdez to Puget Sound? Most of that time they will be far outside of Canadian waters - several hundred miles off the coast. They will come south about 35 miles off Vancouver Island to a point off Cape Flattery, so they will avoid the lee shore of the Island. From that point on they will be coming up to the Juan de Fuca Strait.

How safe are tankers? Well, someone, I am told, in some responsible organization has estimated that two per cent of the oil found in the oceans is a result of tanker collisions, tanker mishaps. I do not have the faintest idea how you would get a statistic like that and I cannot really believe it.

In any event, whether two per cent is right or not, we did analyze the 730 oil spill complaints in Puget Sound in 1970. Of those, 520 were less than five gallons. Another 133 were traceable to freighters and tugs and barges which were not carrying oil and had nothing to do with oil traffic. When we finally come down to

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the spills directly attributable to oil tankers and barges we find then 28 out of the 730 and they were all small.

For this run from Valdez to Puget Sound, our company is building five new ships -- three 120,000 - deadweight - ton tankers, two 70,000 - deadweight - ton tankers. The other companies are also building new ships and these are American flag ships. They have to be built in American yards and they have to be operated by American seamen and they come under the control of the United States Coast Guard.

Let me talk a few minutes about the specifications -- safety, and so forth -- which are under our control when they are American built ships, but not under our control when they are foreign ships.

We know that the larger the ship the less chance for oil spillage because there is less traffic. The ships are all compartmentalized so if a ship is stove in, it is just a compartment that leaks out, not the whole ship. So the total size is not all that important. However, we are not building super tankers for this run; we are building 120,000 ton tankers. A super tanker is 200,000 tons up to 500,000 tons. Ours are not super tankers. They are larger than the normal ships that come into the United States because you have got a better port here. But they are not super tankers.

They are equipped with all the kinds of navigation and anti-collision equipment that would make any sailor's heart beat a little faster. Each ship has two completely separate radar systems, where most ships have only one. Each ship has a long range navigational system, the LORAN system, for navigation at night and bad weather. They have radio direction finders. My boat has that too, for short range homing in. They have fathometers, echo sounders, for determining the depth. They have radio telegraph systems, medium and high frequency transmitters, plus total emergency receivers. They have bridge to bridge radio telephones, something that our company pioneered about 15 years ago. The Captain can pick up the phone and talk from his bridge over to the bridge of another ship.

These ships have the most modern ballast equipment that we know about. There are two kinds of ballast handling; one is if your ship gets in trouble if you are in a storm. You may have to take on water in order to stabilize your ship. For this purpose there are special tanks provided which never contain oil so sea water is then put into clean tanks. When the storm has abated that sea water is pumped out again. The second kind of ballast handling concerns empty ships. When the ship returns empty she has to have water in her tanks in order to maintain her stability and, of course, that means putting sea water into tanks which have contained oil. One of the largest causes

for spillage of oil in the oceans has been the flushing out of these tanks underway.

This is not permitted in any of our ships. At Valdez we plan to build a receiving tank, at a cost of over 10 million dollars, which will receive the dirty water that is impregnated with oil. We will have a skimming device which will skim that oil off the water. Then, after the water reaches a certain degree of purity, it will be pumped back into the sea.

I think I will at this point quote David Anderson, member of your legislature here. He is not often quotable by me, but he did say, "ARCO tankers are probably the best ships that any one could put in water. In fact I'd say, if we have to have oil tankers, I'd say thank God they'll be American-built, American-owned and American-manned. I have no doubt they will be the safest ships available."

We certainly thank David Anderson very much for that. I am sure that was in return for a favor we did him. And the favor was the timing of our oil spill at our Cherry Point refinery. One or two days after the oil spill at Cherry Point, Mr. Anderson was scheduled to appear before a Senate committee and he strolled into the committee room with an armful of your newspapers with very large headlines and he had something to talk about.

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Now that I mentioned that spill I should say it was caused by a faulty fitting on a foreign ship over which we had no control. It was a cast iron fitting that broke under pressure on a Liberian flag ship that was delivering Persian Gulf oil. Had it been one of our ships, had it been a U. S. flag ship, the fitting would have been steel and it would not have broken.

We also have a large number of safety devices at the dock itself at Cherry Point, which is close enough I know for you to be interested in. The dock is concrete on steel pilings, with shock absorbing fenders. It has loading arms on swivel joints which go up and down with the motion of the ship. The arms have quick closing valves that can be shut off in a moment's time.

There is a heavy floating boom which is laid around each ship as it comes in and in case there is a spill it will be contained within that boom. You might ask what happened in the Cherry Point oil spill of last year. The boom was too low, it was too small, and we had not had experience with it. We have since replaced that boom with a very heavy, high boom that we think can handle any spill that might occur at the dock.

On the dock we have work boats and skimmers and we can get them into the water right away if there is a spill.

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I would say just in passing, not relating perhaps to the tanker passage, that the Cherry Point oil refinery cost about 200 million dollars and it has 17 million dollars of equipment relating to pollution control on it.

It was visited by a delegation from the United States Congress a few months ago. In the official report which was delivered to the Congress, Congressman Silvio O. Conte of Massachusetts said, "I had to ask whether the refinery was operating," and we are very glad that he was in the position where he had to ask.

We have put every safety feature into our ships that we know about. In addition we are, of course, cooperating with Clean Sound, the clean-up group in Puget Sound, in case there is a spill. And we are, of course, bound to obey the U. S. Coast Guard's Oil and Hazardous Substances Control Plan.

We support very much an international organization for the control of ships comparable to our Federal Aviation Agency.

Safety is paramount, first and foremost, but there will be human error. There is no way we can go through this life without human error. There is no way we can go through this life without accident. And part of the price of our industrial society is that we do have to make compromises. I am not standing up before

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you and saying there will be no spills. All I am saying is that we have made every possible plan to insure that there will not be spills. And - if there are spills, we stand ready to clean up.

Now what are the alternatives? One has been suggested, and peculiarly enough by Canadians, that no Alaskan oil come into Puget Sound. Mr. Donald S. MacDonald has suggested, as you know, that Canada might be prepared to insure that the Puget Sound refineries are supplied with Canadian oil.

As of today, I understand a deputation from your Parliament has gone down to Washington to talk to some representatives from our Congress about this kind of a possible deal.

I think that all I can say on that score is that the appropriate place for such discussions is at a government to government level. I do not think it is appropriate for this kind of discussion to take place between the Canadian government and Atlantic Richfield Company, for instance. We operate an enterprise in a profit making environment and our job as managers, within the rules of our society, is to direct our investments in those directions which return the most to our shareholders. The Cherry Point refinery was built for Alaskan oil; we cannot bring it up to capacity with Canadian oil. It cannot operate at its

optimum economic output with Canadian oil. It is most appropriate, then, that this become a government to government matter. I can see that certainly on the minds of the Canadian delegation must be this matter which I began with: How much oil does Canada have and can Canada afford to set aside enough oil to supply four refineries in the Puget Sound area for 25 years in view of its own depleting reserves?

This is something the Canadian delegation, I am sure, had to face up to in the Canadian government. And our government, I am sure, will have to face up to the fact that if Canada cannot supply this oil without decreasing exports to the United States, what part of the United States will those exports be drained from. Presumably, of course, from the Mid-Western states. Our government will have to look at it from the point of view of can we afford to take this oil that comes from Canada out of the Mid-Western states and have it go to the Western states.

Those are, thankfully, matters for governmental deliberation, outside of my scope.

Another alternative which we have looked at is the matter of unloading outside the Juan de Fuca Strait. We found this is utterly impossible; the weather conditions are impossible; we just couldn't possibly unload tankers at sea and pipe oil to shore. There is no way to hold the tankers.

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In conclusion, then, I know you are very apprehensive about this movement of oil along your coast, even though it is a very small matter as compared with the total traffic in Puget Sound. I think that part of your apprehension arises from the fact you cannot quite see what the quid pro quo is.

What is in it for Canada? What do you in British Columbia get from this transmitting of oil from Alaska to feed the voracious appetite of the United States? Well, I cannot answer that because I do not think there is anything particularly in it for British Columbia.

But I do think there is something in it for Canada because on the other side of Canada, as you well know, there are tankers moving along the East Coast of the United States, foreign flag tankers, carrying foreign oil to Portland, Maine, where the oil is then piped to Montreal. In 1970 this accounted for 150 million barrels of oil and about 800 tankers were used. This compares with the 80 tankers which we anticipate will supply oil to the Puget Sound refineries.

This, of course, is not quid pro quo; it is something which is already there. It is part of our normal relationship with Canada and I hope will continue to be a normal relationship with Canada.

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We do think that the early building of a pipeline will benefit Canada because we are quite sure that you will want to get together with us on the building of a gas line in order to utilize your own gas.

And we do feel that the building of the Alaskan pipeline at this time does insure that the ships which carry the oil are American flag ships and subject to all of the controls and safety devices which I have mentioned. And, finally, I will come back to what I said at the start: Energy to the United States is very, very vital, and if you are not to have a sick giant to the south, the United States must get its energy supply.

Thank you.