PA — 16-1/30-5-0

T E L E X

File No. 991/30-1-5
February 27, 1968

INDIAN AFFAIRS BRANCH
400 LAURIER AVENUE WEST
OTTAWA 4, ONTARIO

PLEASE ADVISE WHETHER KLUKSHU INDIAN RESERVE WAS EVER ESTABLISHED BY ORDER-IN-COUNCIL. SEE PLAN 42239, LOT 22, GROUP 803, DEC. 27/54, 200 ACRES. LAST LETTER OUR FILE FROM RESERVES & TRUSTS TO THIS OFFICE APRIL 6/54, FILE 30-5-0 (R8)

E.J. UNDERWOOD
SUPERINTENDENT
YUKON INDIAN AGENCY

SECTION I - PIPELINE (MULTIPRODUCT)
HAINES, ALASKA; THROUGH BRITISH COLUMBIA,
CANADA, THROUGH YUKON TERRITORY,
CANADA; TO FAIRBANKS, ALASKA.

1. GENERAL PROJECT DATA

1:1 Location of project: North of (Not available) parallel of latitude, from (Classified information) to (Not available to the public.)

1:2 Length: 626½ miles. Size: 8-in Nom., O.D.: 8.625 inch.

1:3 Product moved: Jet engine fuel grade JP-4, Diesel fuel oil Artic grade DF-A, Automotive gasoline, Type II, Aviation gasoline grade 115/145. Volume Delivered: (Classified information.)

1:4 Line classification: gathering: No.
Transmission: Yes. Distribution: Yes.

1:5 Code used as basis for design, construction and operations: ASA B31.1-1947; API 5L; API 6D 1949; ASA B16e - 1939.

1:6 When constructed? Year: Contract awarded 29 Oct. 1953, Construction completed 1 Sep 1955. Season 7 months Mid April-Mid Nov.

What economic or other factors formed the basis for the decision to construct the line in summer or winter? Early spring, summertime and late fall construction was dictated by considerations of access, efficiency of workmen and costs of construction.

1:7 What percent of the following types of terrain was encountered: permafrost 38%. non-permafrost 18%, combination areas 44%.

1:8 If permafrost was encountered:
(a) What was the average depth: From surface down to various depths.
(b) What was the depth of the active layer: Varies. In places 4 feet. Other places it varies down to depths where ground is permanently thawed.

1:9 Was extensive preliminary subsurface soil work undertaken prior to construction?
Explain: Boring equipment: Churn drill- Samplers: 2" and 2½" pipe. Borings to various depths, to 22 feet were made at stations at sites selected for buildings and tanks. Water wells were drilled to various depths down to 152 feet.

In permafrost areas where ditch for the pipeline was dug through frozen gravel, soft rock, or was drilled and blasted through frozen hard rock, where such permafrost materials were backfilled into and filled over the pipeline in the ditch, thawing of such kinds of materials resulted in residues which retained their approximate volume as existed when excavated. When backfilled and filled into and over the ditch they provided and retained the original depth of cover.

Liquid fuels shipped through the section of pipeline between Tok and Fairbanks, enter the pipeline at Tok at low winter temperatures that average approximately -10°F. They flow through an aboveground section of pipeline between Tok and Big Delta, and then through 100 miles of buried line with burial as described above. It is received at the Fairbanks terminal at the average, approximate temperature of +30°F. For example, in mid January 1968, when ambient temperatures at the Fairbanks terminal were recorded in the range of -34°F. to -42°F., the recorded temperatures of the incoming flows were approximately constant at +30°F.

(b) Ambient temperatures on an annual basis:

Mean daily: Haines +41.2°F, Northway (M.P.378) +25.2°F, Fairbanks +25.6°F.

Mean of daily maximum: Haines +47.6°F, Northway (M.P.378)+34.9°F, Fairbanks +36.0°F.

Mean of daily minimum: Haines +34.7°F, Northway (M.P.378)+15°F, Fairbanks +15.2.

Maximum recorded: Haines +84°F, Northway (M.P.378)+88° F. Fairbanks +99°F.

Minimum recorded: Haines +2°F, Northway (M.P.378)-72° F. Fairbanks -66°F.

(c) Ground temperatures: Has ground temperature data been compiled along the pipeline route? No.

Reference sources of ground temperature data available:

_____

_____

_____.

3:2 Required process specification limits in northern regions?

(a) Maximum water content Nil.

(b) Maximum hydrocarbon content _____.

(c) Other _____.

3:3 Mode of Operations:

(a) Is line isolated for long periods during the year? Access by motorized ground transport is available at all times from the Alaska Highway. Aerial surveillance is performed on a regular once a week round trip schedule.

(b) What equipment and personnel are required for line surveillance and maintenance: Aerial surveillance is performed by small airplanes. Helicopters are available for transport but normally are not used. One pilot operates the airplane. One observer makes and records the observations. Once each year, during warm weather, pipeline walkers traverse on foot, the entire 626½ miles of pipeline. Surface laid line is examined for condition with special attention to corrosion and to mechanical forms of damage.

The pipeline is laid on a right-of-way that is 50 feet wide. In areas where trees and brush grow, the right-of-way is cleared in the summertime, to a width of 40 feet. Bulldozers are used to perform the stripping.

Commencing with the 1968 summer season, the 286 miles from Fairbanks eastward, the right-of-way will be sprayed from a helicopter, with herbicide to a width of 40 feet. Liquid spray TORDON 101, manufactured by DuPont, will be used. It is effective on all vegetation, including the black spruce, fir and balsam. Fenucon 25% pellet, 75% inorganic material, applied in dry powder form, has been experimented with in prior years but was found not to be entirely satisfactory on all forms of vegetation. Liquid brush killer 2,4,D-2,4,5,T Estron, has also been experimented with but some species of trees were found to be resistant to it.

Two mobile maintenance crews are available on call. One crew is staged at Haines pipeline, Mile post 0 and another at Tok Mile Post 432. On most jobs the crews work separately. When the size of a job requires, the two crews work together. Each crew is composed of: 1- Foreman
1- Weldor
1- Pipe Repairman (Fitter)
1- Equipment Operator (Skilled in operating all kinds of equipment used on pipeline maintenance work.)

Each maintenance crew is equipped with following equipment and supplies:

1 ea Tractor-trailor lowboy, 25 ton.
1 ea Stake truck, 5 ton.
1 ea Pick-up truck, 3/4 ton, with crew cab.
1 ea Caterpillar D-7 tractor,with side boom and pipe bending shoes.
1 ea Caterpillar HD-11 tractor,with dozer blade.
1 ea Backhoe, 3/4 cubic yard.
1 ea Air Compressor, 250 CFM
1 ea Welder, 300 Amperes, with cables and clamps.
1 Set Oxygen-Acetylene cutting and welding equipment with cutting and welding torches, gauges, hoses, cylinders with oxygen gas, cylinders with acetylene gas, pipe cutting and beveling machine, pipe line-up clamps, air operated portable buffing unit for grinding, sanding and brushing pipe bevels and stringer beads.