



# PIPE LINE TECHNOLOGISTS INC.

Engineering Design - Economic Studies - Operations

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6 AUG 1955

July 19, 1956

CHIEF ENGINEER

*[Handwritten signatures and initials]*

District Engineer, Alaskan District  
Corps of Engineers  
Elmendorf AFB, Anchorage  
APO 942  
Seattle, Washington

M & R

Gentlemen:

Please refer to our letter to you yesterday concerning availability of our firm for resolving some of the design and operating difficulties on the Alaskan Petroleum Pipe Line System. It occurs to us that perhaps you might be interested in having a copy of our letter of May 31 to Lieutenant General Joseph H. Atkinson, USAF, which will supplement the data previously sent you.

In the next to the last paragraph of the letter you will note that we anticipated at that time having one of our operating experts in Alaska to advise the Army Quartermaster's staff on certain operating procedures. Unfortunately, this did not eventuate due to our inability to make an equitable contract with the Quartermaster's office in Washington. They wished to obtain one of our top operating experts, intimately acquainted with products pipe line operations, on an individual consulting basis at \$50 per day plus a fixed per diem allowance. Even after agreeing to such a low rate in order to help the Government out of its difficulties, the contract was held up for legal considerations.

If any appreciable amount of free and adsorbed water is still entering the line due to inadequate design of the filters and strainers or poor operating procedures, we frankly predict that the line will again be plugged up with ice and become inoperable when the cold winter weather sets in. Once free or precipitated water is injected into a pipe line, it is almost physically impossible to remove all of it to preclude ice formation when cold temperatures are encountered.

We had considerable experience with this same problem in operating a 700 mile large diameter products pipe line system through Illinois, Iowa and North central Minnesota where extremely cold temperatures were encountered. The answer to the problem lies principally in one of the two following procedures:

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- (1) Under no circumstances permit free water and only a minute quantity of adsorbed water to enter the pipe line through careful design of water separators and strainers.
- (2) Design and construct a dehydration plant to remove all free and adsorbed water from all products before entering the pipe line.

Obviously, in addition to the above, many good operating procedures must be strictly followed to preclude shut downs due to ice plugs. Unless these and all associated problems are resolved by competent experienced engineering and operating personnel, the Alaskan Petroleum Pipe Line System could well turn into a first class fiasco, which would be most unfortunate and indefensibly unnecessary.

Yours very truly,

PIPE LINE TECHNOLOGISTS, INC.

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President

HEFisher:ra

Attachment

RECEIVED JUL 23 1956

ALASKAN DISTRICT ENGINEER