

CANADIAN JAVELIN LIMITED
AND SUBSIDIARY COMPANIES

693



INTER OFFICE MEMORANDUM

File No: 307-002.2 JA

Mr. J.C. Doyle
Mr. W.M. Wismer

FROM Mr. W.S. Hegler

DATE: May 1st, 1970.

SUBJECT:

Re: Slurry Pipeline.

Labrador (417)

Attached maps illustrate the possible location of a slurry pipeline right of way also described in some detail.

The right of way, 300 feet wide, is required to locate:

- A) Two slurry pipelines each capable of delivering 6,000,000 tons of concentrates per year from Julian, Labrador (9,000,000 tons per year) and Star-O'Keefe, Quebec, (3,000,000 tons per year) to pelletizing and ocean shipping facilities on the St. Lawrence System.
- B) A service road of a character suitable to move construction equipment, materials, and operational maintenance supplies in all seasons.
- C) Power lines or other energy sources to service the slurry pumping and heating stations located at about 40-mile intervals.

The right of way selection is of a preliminary nature but has been based upon studies of aerial photos on our files for the Labrador portion, topographic maps of the National Topo Service, and Canadian Hydrographic Service. Photo coverage is available over the entire area.

It is recommended that the route data be incorporated in a legal fashion for formal presentation to the Governments of Newfoundland and Labrador, Quebec, and the Canadian Transport Commission.

WSH:gjt

Attachments

W. S. Hegler

W. S. Hegler

DESCRIPTION of PROPOSED RIGHT of WAY

for

IRON ORE PIPELINE

from the LABRADOR - QUEBEC

IRON FIELDS to the ST. LAWRENCE RIVER

CANADIAN JAVELIN LIMITED
Engineering Department
May 1st, 1970.

Introduction

The following describes the location of a route to be utilized as a right of way for a pipeline and ancillary facilities such as service roads, power lines for stage pumping stations to carry iron ore concentrates from the Julian iron ore deposit in Labrador, and the Star-O'Keefe iron ore deposits in Quebec, to ore processing and ocean transportation facilities on the North shore of the St. Lawrence River in the vicinity of Sept. Iles, Quebec.

The right of way will consist of a strip of land (water when necessary) 300 feet wide, being 150 feet on either side of a center line, following the route generally described below.

Julian Section

Starting from (J), the Julian plant site area near the confluence of Wabush and Julienne Lakes, the right of way will run south, along the east shore of Wabush Lake to the mouth of Silver River, then around the east side of Wabush Mountain, then south across the area midway between the town of Wabush and Flora Lake, thence south passing northwest of the northwest arm of Wahnahnish Lake, thence generally south following the low ground to the Newfoundland-Quebec boundary, (B), a distance of approximately 32 miles from the point of beginning, (J), thence south-southeast to the east side of Lac Gentilhomme, thence generally south-southeast of the upper reaches of the Moisie River, 3 miles west of Lac Felix. The route would then generally follow the west side of the Moisie River for a distance of approximately 10 miles, whereupon it would turn to the southwest, to cross the Pekans

River, then continue to the southwest across Riviere LaRonde to the Ste. Marguerite River, at the southeast corner of Lac aux Cedres, approximately 1.25 miles north of 52° North Latitude, a total distance of approximately 80 miles from the point of beginning, (J), to a point of union (U) with a joining pipeline route from the Star-O'Keefe deposits.

Star-O'Keefe Section

The right of way, located entirely within Quebec for this portion, would commence at a point, (S), approximately midway between Tuttle and O'Keefe Lakes, and then run generally south-southeast adjacent and parallel to the Pepler River to a point approximately midway between Pepler Lake and Lac Jean, thence continuing south-southeast across the Manicouagan River, thence following the low ground in a southeast and east-southeasterly direction to the headwaters of the Ste. Marguerite River northeast of Lac aux Cedres, thence south-southeasterly a distance of approximately 9 miles to the junction with the Julian section, southeast of Lac aux Cedres, approximately 1.25 miles north of the 52° North Latitude, for a total distance of approximately 50 miles from the Star-O'Keefe deposits, (S), to the point of union (U), with the pipeline route from the Julian deposit.

Southern Section

The southern portion of the right of way will commence at (U), the union of the Star-O'Keefe and Julian sections southeast of Lac aux Cedres, thence follow the sinuosities of the Ste. Marguerite River in a generally southerly direction to its terminus on the north shore of the St. Lawrence River in the vicinity

of the hydro dam, north of Clarke City, thence in a southeasterly direction to the ore processing and transportation facilities, (O), to be located between the mouth of the Ste. Marguerite River, south of the Gulf Pulp and Paper Company Railway and west of the headland forming the western closure of Sept. Iles Bay, a total distance of approximately 152 miles from the union, (U).

Summary

The lengths of pipeline right of way would be:

Julian to point of union (J-U)	80 miles
Point of union to ocean (U-O)	152 miles
Star-O'Keefe to point of union (S-U)	<u>50 miles</u>
System Totals	<u>282 miles</u>

Part within Labrador (J-B)	32 miles
Part within Quebec (B-U), (S-O)	250 miles

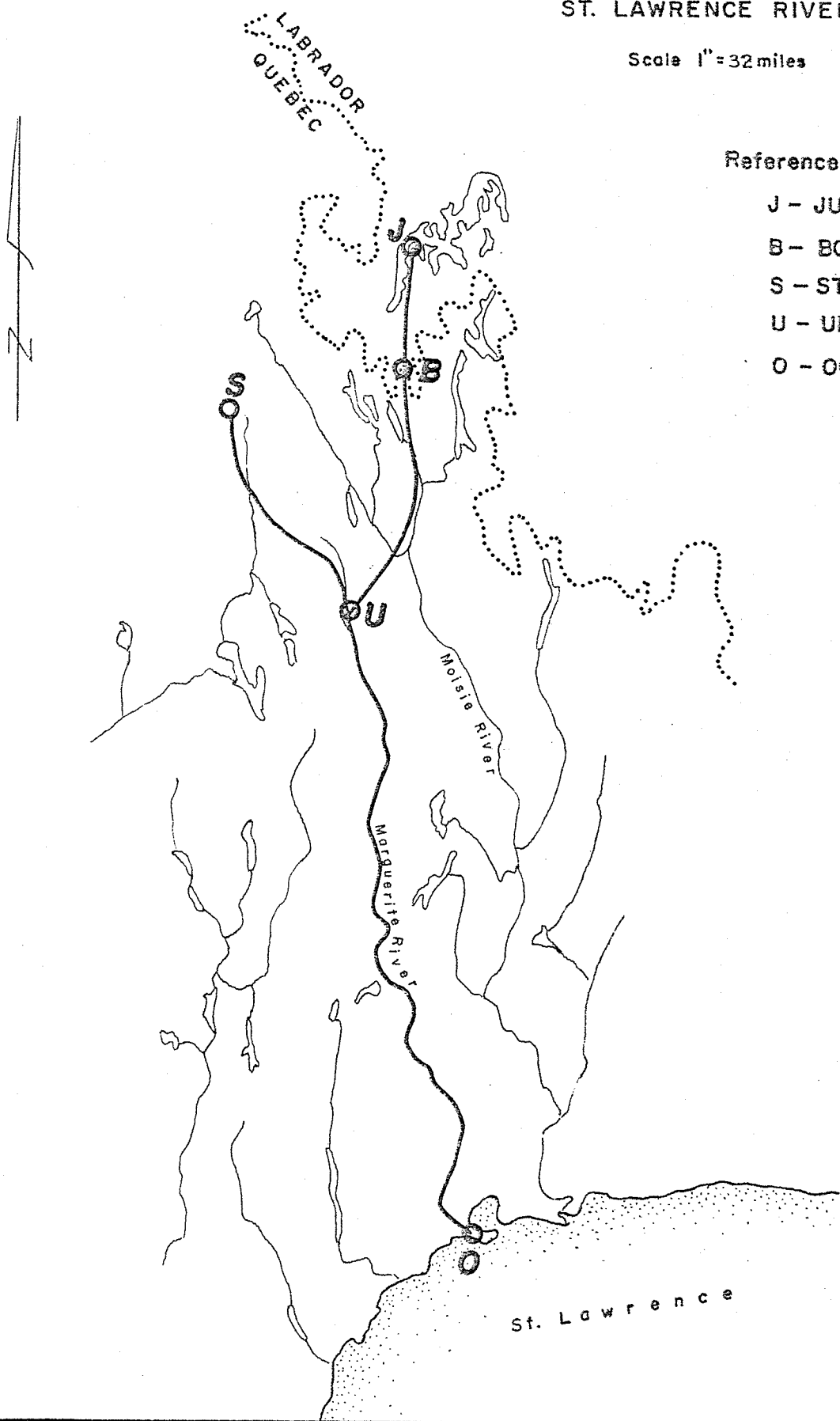
Julian to ocean	232 miles
Star-O'Keefe to ocean	202 miles

PROPOSED PIPELINE ROUTE FROM
JULIAN, STAR AND O'KEEFE
IRON DEPOSITS TO SHIPPING FACILITIES AT
ST. LAWRENCE RIVER

Scale 1"=32 miles

Reference Points:

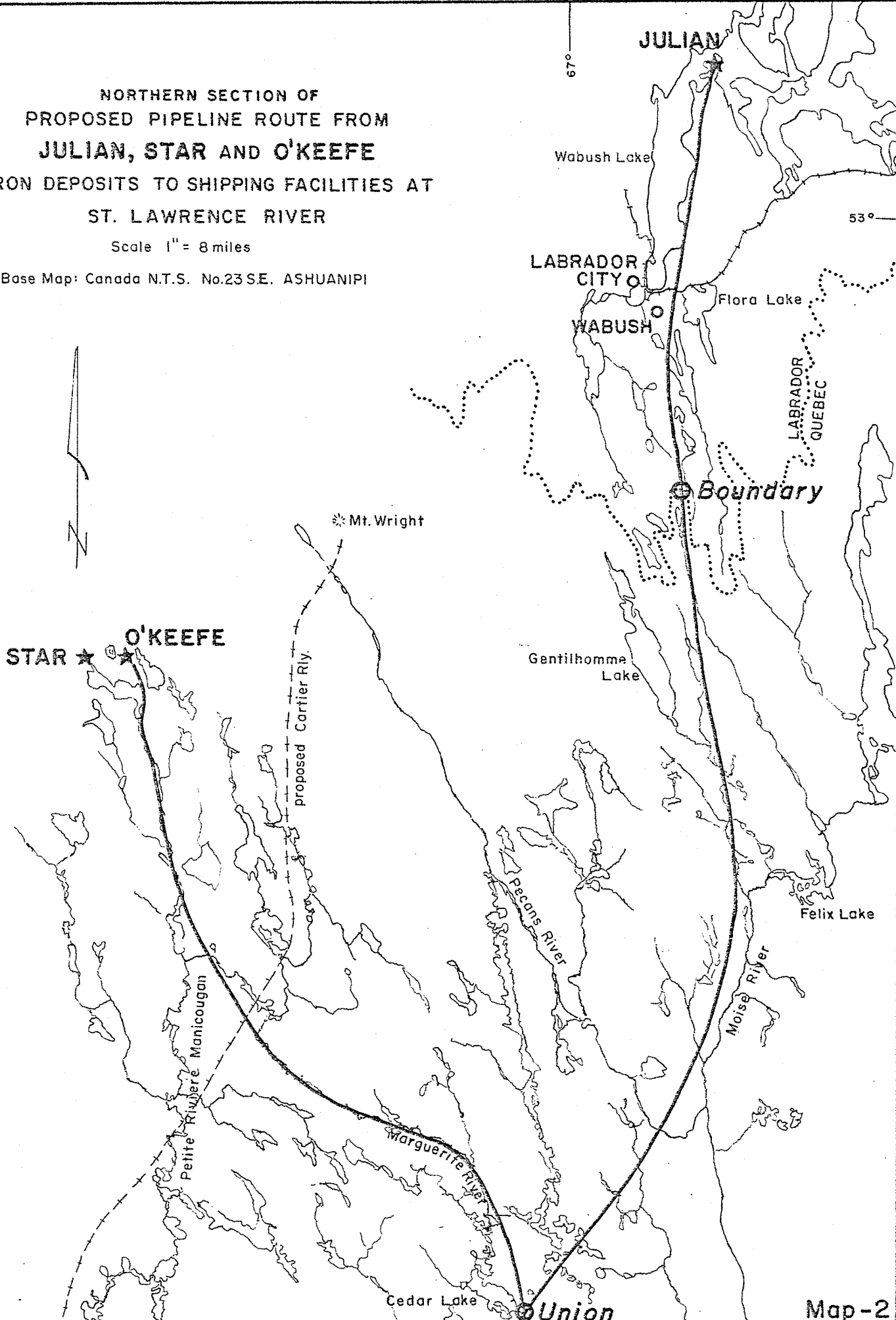
- J - JULIAN
- B - BOUNDARY
- S - STAR-O'KEEFE
- U - UNION
- O - OCEAN



NORTHERN SECTION OF
PROPOSED PIPELINE ROUTE FROM
JULIAN, STAR AND O'KEEFE
IRON DEPOSITS TO SHIPPING FACILITIES AT
ST. LAWRENCE RIVER

Scale 1" = 8 miles

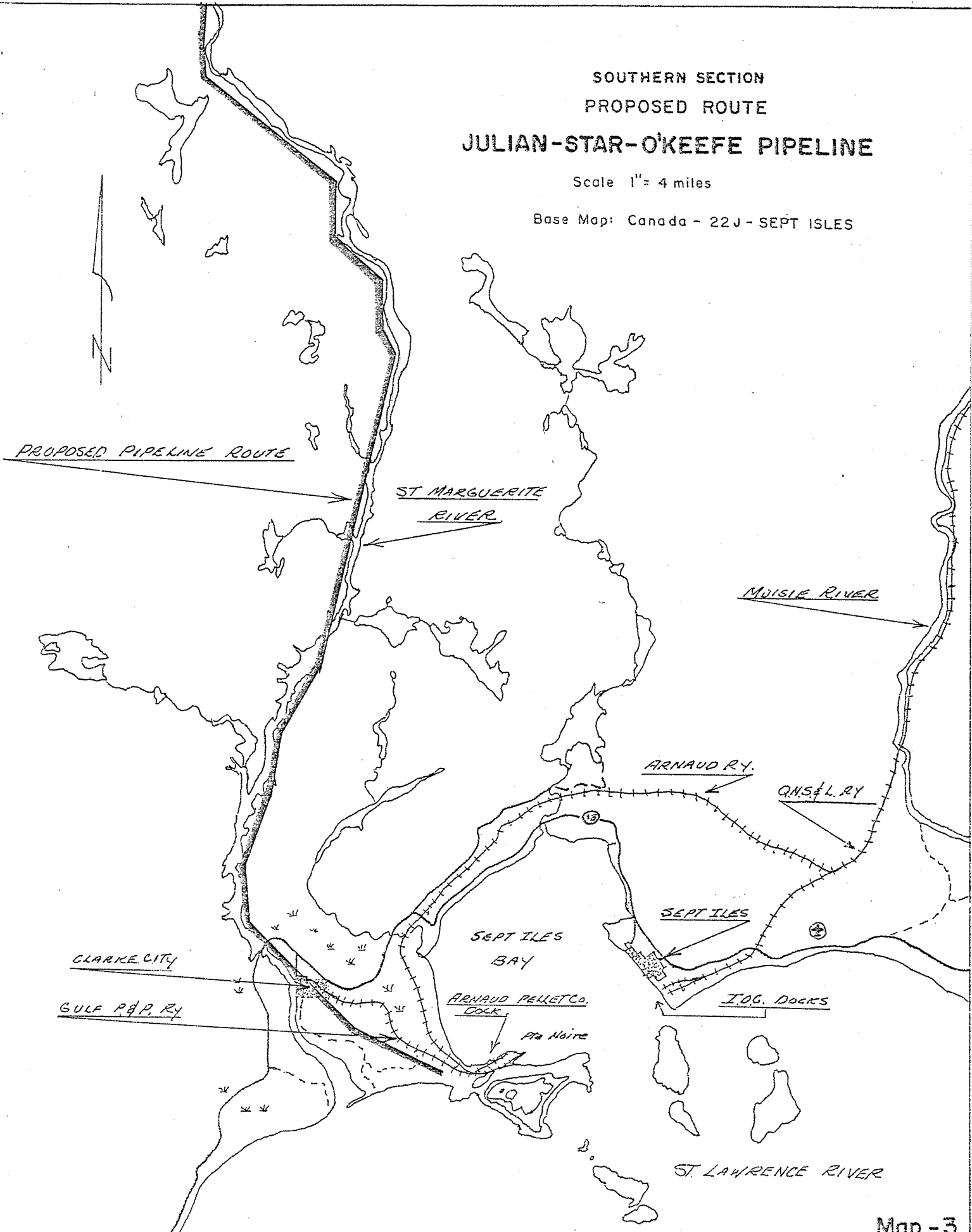
Base Map: Canada N.T.S. No.23 S.E. ASHUANIPI



SOUTHERN SECTION
PROPOSED ROUTE
JULIAN-STAR-O'KEEFE PIPELINE

Scale 1" = 4 miles

Base Map: Canada - 22J - SEPT ISLES



PIDDLEY PIPELINE PROBABLES

<u>Tons Per Year</u>	<u>Pipe Size</u>	<u>Density</u>	<u>Velocity</u>	<u>G.P.M</u>	<u>Cost Per Ton Per Mile</u>
6,000,000	14"	65% solids	5'/"	2500	\$.0042
9,000,000	16"	65% solids	5'/"	3200	.0038

30% of the cost has been allowed for environmental guesstimates.

Julian distance 232 miles
Star-O'Keefe 202 miles

CANADIAN JAVELIN LIMITED
AND SUBSIDIARY COMPANIES

INTER OFFICE MEMORANDUM File: 113-003.0 JL

J.C. Doyle
G.W. Brownrigg
W.S. Hegler ✓

FROM: W.B. Blakeman

DATE: May 19th, 1970.

SUBJECT:

Re: Property Ownership in Arnaud Township re Pipeline Proposal.

The writer visited the office of the Registrar of land titles in Sept Iles, Quebec, on May 12th and 13th, 1970, and determined the ownership of the blocks of property outlined on the attached map. All of the information was readily available except for the ownership of the cottage lots in block 16. This information is controlled by the Department of Lands and Forests office in Sept Iles and will not be released to the public by the No. 1 I.C. there. Perhaps a call or letter to the Department of Lands and Forests in Quebec City will be needed.

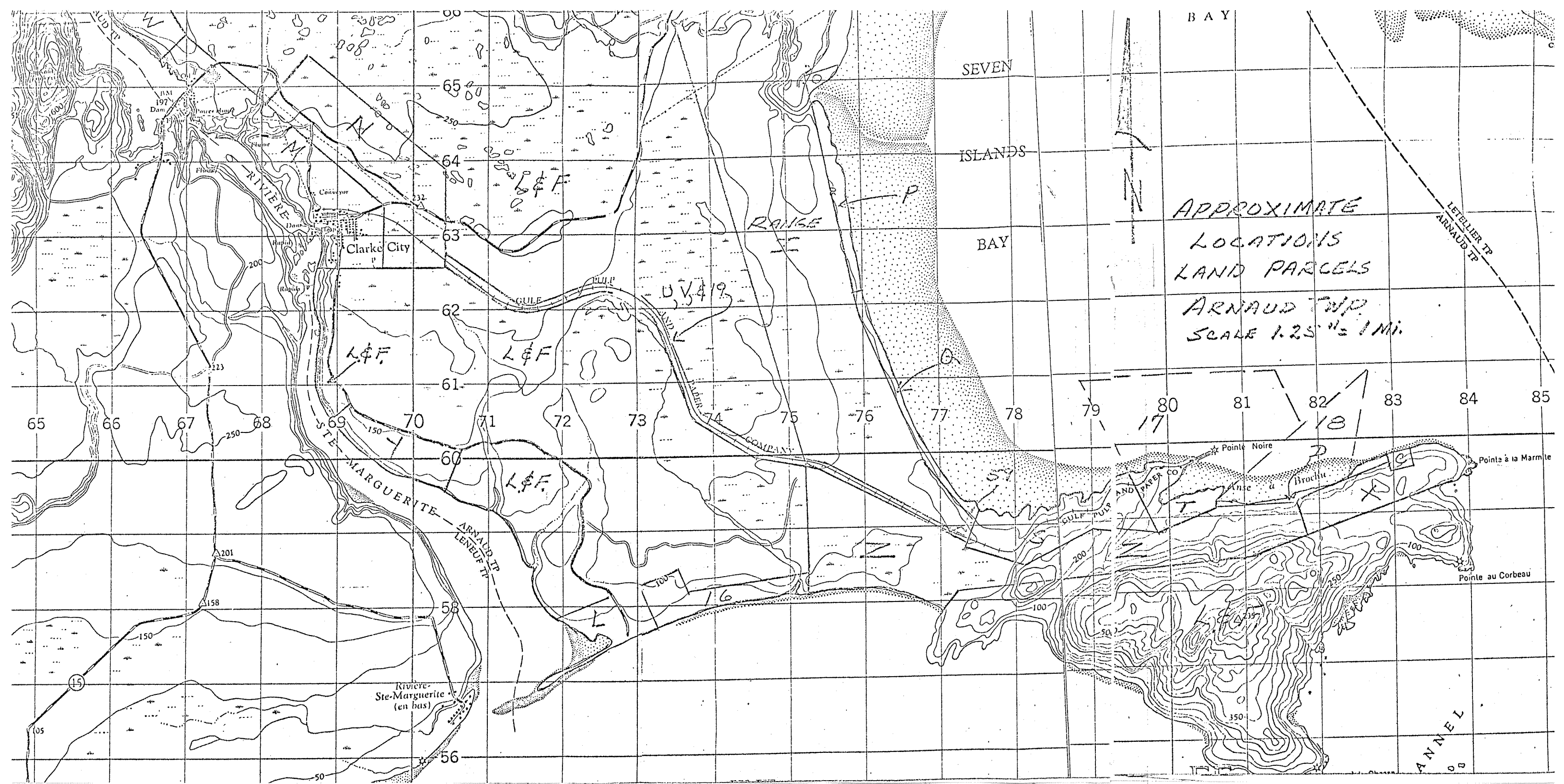
Data on the lots and blocks of ground west of the Ste. Marguerite River is maintained in Baie Comeau.

We now have large scale maps of blocks L & M, and have ordered a copy of the base map from the Department of Lands and Forests in Quebec City.


W. B. Blakeman

WBB:gjt

Attachments



APPROXIMATE
LOCATIONS
LAND PARCELS
ARNAUD TWP.
SCALE 1.25" = 1 MI.

17 18

Riviere
Ste-Marguerite
(en bas)

ANNE L

OWNERSHIP OF PROPERTY IN ARNAUD TOWNSHIP

Block C	Wabush Iron and Associates
Block D	" " " "
Block O	" " " "
Block P	" " " "
Block Q	" " " "
Block S	" " " "
Block T	" " " "
Blocks U and V	" " " "
Block W	Gulf Pulp and Paper
Block X	" " " "
Block Z	" " " "
Block 17	Wabush Iron and Associates
Block 18	Wabush Iron and Associates
Block 19	Wabush Iron and Associates

NOTE:

Blocks U, V and 19 constitute the right of way of the former Gulf Pulp and Paper Railway from Clarke City to Pointe Noire.

Range I	Wabush Iron and Associates
Block Y	Lands & Forests-Crown - Golf course

Block L

L	(Portion not subdivided) Gulf Paper
L-1,2,3,4,5	Streets

L-6	R.A. Preston
L-7	Charles Bourque
L-8	Alphonse LaPierre
L-9	Phillippe Boudreault
L-10	R.A. Preston
L-11	Gulf Pulp and Paper
L-12	Geo. Talbot W/½ - Geo. Vigeault E/½
L-13	Gulf Pulp and Paper
L-14	" " " "
L-15	" " " "
L-16	" " " "
L-17	" " " "
L-18	" " " "
L-19	" " " "
L-20	" " " "
L-21	" " " "
L-22	" " " "
L-23	R. Bilodeau
L-24	George Bussieres
L-25	R. Boudreault
L-26	Gulf Pulp and Paper
L-27	Robert Gallienne
L-28	Gulf Pulp and Paper
L-29	Walter H. Boudreault
L-30	Maurice Toutant
L-31	Gulf Pulp and Paper

L-32	Gulf Pulp and Paper
L-33	Real Vigeault
L-34	Gulf Pulp and Paper
L-35	Albert Boudreault
L-36	Gulf Pulp and Paper
L-37	Gulf Pulp and Paper
L-38	Yves Masin
L-39	Lorenzo Boudreault
L-40	Gulf Pulp and Paper
L-41	Gerard Galienne
L-42	Fernand Bourque
L-43	Gulf Pulp and Paper
L-44	" " " "
L-45	" " " "

Block M

M-1	City street
M-2	City street, now Sept Iles.
M-3	City street, now Sept Iles.
M-4	City services, now Sept Iles.
M-5	Not Transferred -- Gulf
M-6	" " "
M-7	" " "
M-8	City services, now Sept Iles.
M-9	Not Transferred -- Gulf
M-10	" " "

M-11	Not Transferred -- Gulf?
M-12	" " "
M-13	City street and services
M-14 to M-39 (Inc.)	Not Transferred -- Gulf?
M-40	City street, now Sept Iles.
M-41	" " " " "
M-42	City services, now Sept Iles.
M-43	" " " " "
M-44	" " " " "
M-45	" " " " "
M-46	" " " " "
M-47	" " " " "
M-48 to M-59 (Inc.)	" " " " "
M-60 to M-72 (Inc.)	Gulf Pulp and Paper
M-73	City services, now Sept Iles.
M-74	Gulf Pulp and Paper
M-75	" " " "
M-76	" " " "
M-77	City services, now Sept Iles.
M-78	" " " " "
M-79	Raoul Bilodeau
M-80	Phileas Chournard - Immeubles Arnaud.
M-81	" " " "
M-82	Eliza Inglis

M-83	City services, now Sept Iles.
M-84	" " " " "
M-85 to M-90 (Inc.)	Gulf Pulp and Paper
M-91	City street, now Sept Iles.
M-92	City services, now Sept Iles.
M-93	" " " " "
M-94	Adrien Caron - Immuebles Arnaud.
M-95	Leo Miousse - Immuebles Arnaud.
M-96	City services
M-97	" "
M-98	" "
M-99	Benoit Pelletier
M-100	City services
M-101	" "
M-102	Gulf Pulp and Paper
M-103	City services
M-104	" "
M-105	City
M-106 M-109 (Inc.)	City services
M-110	Auriel Chouinard - Immeubles Arnaud.
M-111	Ernest Dumais - Immuebles Arnaud.
M-112	Arthur Bouchard - Immuebles Arnaud.
M-113 to M-120 (Inc.)	City services
M-121	City streets and services

M-122	Henri Hamilton - Immuebles Arnaud
M-123	Joseph Poirier - Immuebles Sept Iles.
M-124	Rene Theriault - Immuebles Arnaud.
M-125	City services
M-126	Phillipe Baudreault
M-127	Howard Tham
M-128	Edwin Bourgeois
M-129 to M-131 (Inc.)	City services
M-132	City streets and services
M-133	Laval Dorion
M-134	Laval Dorion
M-135	City services
M-136	Hospital
M-137	Rodrique Bourque
M-138	Marius Poirier - Immuebles Arnaud
M-139	" " " "
M-140	Marcel Deschenes and Ghislain Degrace- Immuebles Arnaud.
M-141	Lionel LaPierre - Immuebles Arnaud
M-142	" " " "
M-143	Wiellie St. Pierre - Immuebles Arnaud
M-144	" " " " "
M-145	Thomas Inglis - Immuebles Arnaud.
M-146	" " " "
M-147	City street
M-148	Antonio Reis - Immuebles Arnaud.

M-149	Gerald Grace - Immuebles Arnaud
M-150	Laurie Robichaud - Immuebles Arnaud
M-151	" " " "
M-152	Napolean Bourque - Immuebles Arnaud Domingas Fesseirs
M-153	Real Vigneault - Immuebles Arnaud
M-154	Paul Emile LaPierre - Immuebles Arnaud
M-155	Arthur Bauchard - Gulf Pulp and Paper
M-156	Raoul Bilodeau - Immuebles Arnaud
M-157	James Shuglo - Immuebles Arnaud
M-158	" " " "
M-159	Jacques Le Jeune - Immuebles Arnaud
M-160	Francais and Jacques Le Jeune - Immuebles Arnaud
M-161	Eudore Boudreault - Immuebles Arnaud.
M-162	City
M-163	City services
M-164	Street - Gulf Pulp and Paper
M-165	" " " " "
M-166 to M-168 (Inc.)	City services
M-169	City street and services
M-170	Ernest Therriault
M-171	City services
M-172	Emmanuel Poulin - Immuebles Arnaud
M-173	" " " "
M-174	Heliodore Dionne - Immuebles Arnaud

M-175	Heliodore Dionne - Immuebles Arnaud
M-176	Charles Bourque
M-177	City services
M-178	Alfred Bernier
M-179	Ovila Gagne
M-180	Paul Emile Therriault - Immuebles Arnaud
M-181	" " " " "
M-182	Charles Perasse
M-183	Rosaire LaVoie - Immuebles Arnaud
M-184	" " " "
M-185	Mauric Kermelley - Immuebles Arnaud
M-186	Wellie Boudreault - Immuebles Arnaud
M-187	City services
M-188	City street
M-189	" "
M-190	Real Blais - Immuebles Arnaud
M-191	City services
M-192	Honore Michaud - Immuebles Arnaud
M-193	Jean Philippe Petitpas - Immuebles Arnaud
M-194	City services
M-195	Jos Gagnon - Immuebles Arnaud
M-196 to M-197 (Inc.)	Antonio Reis Clement Blais Albert Poulin
M-198	Guy Therriault - Immuebles Arnaud
M-199	Edmond La Pierre - Immuebles Arnaud

M-200	Aime Therriault - Immuebles Arnaud
M-201	Robert Cote
M-202	City services
M-203	City services
M-203-1	City services
M-204	City services
M-204-1	City services
M-204-1-1	Street - Gulf Pulp and Paper
M-204-2	City
M-204-3	Gulf Pulp and Paper
M-205	Gulf Pulp and Paper

Lot 16 - Administered by Lands & Forests

16-1	Crown
16-2	Crown Streets
16-3	Crown
16-4	Bruno Boisvert
16-5 to 16-28	Crown?
16-29	Cottage Lots

Canadian Javelin Limited

Javelin Pipelines Limited
Proposed Iron Ore Slurry Transport
Quebec - Labrador.

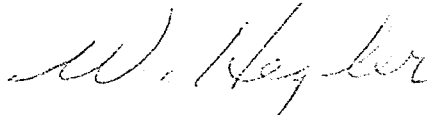
Javelin Pipelines Limited plans to construct a commodity pipeline, to transport about 12 million tons a year of iron ore slurry from Quebec and Labrador to the St. Lawrence River at the point near the west side of Seven Islands Bay. Nine million tons a year will originate from the Julian Iron Ore Deposit near Wabush, Labrador, and 3 million tons a year will also be transported as a slurry in a branchline commencing at the Star-O'Keefe area, southwest of Mt. Wright, Quebec. This project will be the first iron ore slurry pipeline operating with a branch system. It will also be the largest tonnage carrier and the longest iron ore slurry pipeline in the world. The total pipeline length is about 282 miles of which 50 miles would be 8 inches in diameter; 80 miles would be 16 inches in diameter and 152 miles would be 18 inches in diameter, all constructed to contend with the rugged environment and adverse climate conditions through totally undeveloped areas of Quebec and Labrador. The preliminary cost estimates indicate that about \$65,000,000 to \$75,000,000 would be the cost of the project, of which about \$10,000,000 might be expended for winterization. Engineers estimate that the construction time to establish this line in the Valley of the Ste. Marguerite River would be about 30 months and would be programmed to be available for the initial production from the Julian Iron Ore Deposit located 17 miles north of Wabush, Labrador.

Slurries are finely ground materials suspended in a liquid medium. Iron ore slurry solids would have a similarity in structure to extremely fine iron filings or flour so that they approach a flow characteristic of a near liquid, which when suspended in the medium, in this case water containing about 65% solids by weight, are called an iron ore slurry. This slurry will be prepared at the mine site from iron ore concentrates in a form whose grain size is immediately suitable for both the slurry specifications and ultimate formation into half inch diameter iron ore pellets in plants located near the discharge end of the slurry pipeline.

The right of way for the slurry line project is required to provide for the pipeline itself, an electrical power line carrying about 50,000 kws, and an all weather service road. There will be five pumping stations spaced about 45 to 55 miles apart in order to maintain the capacity. Some facilities will be required for aircraft support. When the line is in operation, it will be highly automated and it is expected that about 65 people would be continuously employed.

The \$65,000,000 slurry pipeline project forms a major economic element in the overall plan that will make available 12 million tons a year of iron ore pellets for Canadian export markets, which will require a capital expenditure of about \$400,000,000 over a 42 month period. The capital expenditure would provide for the establishing of two major iron ore mines producing 30 million tons of crude ore per year, two gravity type concentrators, the slurry pipeline, a pellet plant, two townsites and a special iron ore loading dock capable of handling 250,000 ton ships, amongst the world's largest.

CANADIAN JAVELIN LIMITED



W. S. Hegler
Vice President - Engineering

WSH:gjt