

## Historique de la coupe de bois dans le future réservoir du lac Sainte-Anne

1955-1959

Au Centre d'archives d'Hydro-Québec nous avons trouvé, entre autres, des documents sur la coupe de bois dans le future réservoir du lac Sainte-Anne par la "Quebec North Shore Paper Company" (QNS) de Baie-Comeau, propriétaire des droits de coupe sur le territoire.

Ci-joint sont deux documents intéressants:

- "St. Anne Project", rapport d'étape, 1er octobre 1956;
- "Review of the proposal, price submission and execution of clearing of Lake St. Anne Storage by Woods department, Quebec North Shore Paper Company", 13 mai 1959.

Le premier fait état de la situation à peine deux mois après le commencement des travaux.

Le deuxième fut préparé bien après la fin des travaux dans le cadre du désagrément entre QNS et la "Quebec Hydro-electric Commission" (Hydro-Québec) quant à la véritable superficie coupée et conséquemment le paiement dû à QNS.

Sommairement QNS a coupé à la main, pendant l'hiver 1956-1957, près de 200 000 cordes (726 000 m<sup>3</sup>) de bois commercial sur 16 300 acres (6 600 ha), soit environ un tiers de la superficie qui serait inondée. À la pointe, 1 400 hommes et 280 chevaux travaillaient dans le bois par rapport à une pointe de 700 travailleurs au barrage.

Nous avons rien trouvé dans les archives spécifiquement sur les impacts environnementaux. Cependant, on peut glaner quelques informations de nature environnemental des documents:

- la longueur de la rive du réservoir et d'environ 290 miles (470 km);
- au début on planifiait que les débris de coupe soient brûlés, mais par la suite il fut décidé de les «confiner aux baies et autres endroits où ils ne nuiraient pas aux opérations de coupe de bois ultérieures» (traduction libre). Le succès de cette stratégie n'est pas commenté, mais il y a des photos d'amoncellements de débris flottants au barrage;
- les embouchures de tributaires furent bien déboisées par souci de favoriser le flottage de bois sur ces tributaires;
- la perte de bûches par enfoncement était plus que normale car certaines étaient resté dans le réservoir pendant deux ans.

Bien qu'il y a plusieurs photos de la construction du barrage et les autres ouvrages, les photos aériennes auxquelles les documents réfèrent ne sont pas disponibles, malheureusement, au Centre d'archives.

Par ailleurs, en examinant la photo aérienne déposée par Hydro-Québec (DA-51), on peut la localisée par le canal de dérivation au site du barrage Sainte Anne.

### Facteurs de conversion

$$1 \text{ m} = 3,28 \text{ feet}$$

$$1 \text{ foot} = 0,305 \text{ m}$$

$$1 \text{ km} = 0,622 \text{ mile}$$

$$1 \text{ mile} = 1,61 \text{ km}$$

$$1 \text{ ha} = 2,47 \text{ acres}$$

$$1 \text{ acre} = 0,405 \text{ ha}$$

$$1 \text{ km}^2 = 0,386 \text{ square mile}$$

$$1 \text{ square mile} = 2,59 \text{ km}^2$$

$$1 \text{ m}^3 = 35,3 \text{ cubic feet}$$

$$1 \text{ cubic foot} = 0,0283 \text{ m}^3$$

$$1 \text{ cord} = 8 \times 4 \times 4 = 128 \text{ cubic feet} = 3,63 \text{ m}^3$$

$$1 \text{ cord per acre} = 8,97 \text{ m}^3/\text{ha}$$

PAPER MILLS:  
BAIE COMEAU, QUE.

HEAD OFFICE:  
680 SHERBROOKE ST. WEST  
MONTREAL, QUE.

FOREST OPERATIONS:

FRANQUELIN, QUE.  
SHELTER BAY, QUE.  
BAIE COMEAU, QUE.

**QUEBEC NORTH SHORE PAPER COMPANY**

BAIE COMEAU, QUE. October 4, 1956.

Mr. François Rousseau,  
Quebec Hydro-Electric Commission,  
107 Craig St. West,  
MONTREAL, P.Q.

*CRP*

Dear Mr. Rousseau:

I was asked to make a progress report on the St. Anne Project recently for the Manicouagan Power Co. Before I did this I checked with Charlie Pigot concerning the status of the dam itself and he agreed that my remarks were reasonable.

I thought you might be interested in having a copy of this report for reference.

Yours very truly,

*T. B. Fraser*

T. B. Fraser,  
Woods Manager - Quebec Division.

TBF/MCD

**CENTRE D'ARCHIVES**  
**Hydro-Québec**

S T.    A N N E    P R O J E C T

In order to provide 14 B.C.F. of storage water for Manicouagan Power in the winter of 1958, and 90 B.C.F. of water in the winter of 1959 for Manicouagan and Hydro Plants, Quebec Hydro undertook the construction of a storage dam near Lake St. Anne on the Touloustock River. The dam is located 75 miles up river from Baie Comeau. The closest point of access to the site was from the end of the Godbout limit road which extends 62 miles north of Godbout to a point within 13 miles of the dam site.

Late last fall (1955) the Woods Department was commissioned by Hydro to widen and improve the Godbout road for heavy traffic over the whole 62 miles and to construct the 13 miles of new road to the dam site. The road also had to be maintained passable for heavy portage through the winter. We were also instructed to clear the site for the construction of the camps, an air strip, and to supply and construct initial camps for Perini to house 200 men. All of this work was completed by July 1956. In July we were requested to construct the air strip at the dam and this was completed in August. We also undertook to locate and blaze the 995 contour line which is a perimeter of 293 miles in the forest. The work was commenced in February and completed in September.

CENTRE D'ARCHIVES  
MUSÉE QUÉBÉCOIS

Perini Construction were given the contract to construct the dam and started rock excavation in April. They presently have more than half of the 350,000 cu. yards of rock excavated. Perini have started pouring concrete in the by-pass channel. The rock cofferdam is half completed and will be completed after concrete has been brought above water level in the channel. I was informed that the job is slightly behind schedule at this time. No work has been started to-date on the cut-off dam at the south end of Lake St. Anne.

Unfortunately by far the most difficult part of the whole project which should have been started last winter, has never been started till the month of August resulting in the loss of at least six months valuable time. I refer to the clearing of 37,000 acres of flooded lands along 92 miles of lake and river where there are no roads or access except by water. Hydro only took a decision to have the Woods Department do this clearing at the beginning of August. The work entails the construction of four and a half miles of road above the rapids to the site of our base, the construction of a base from which to operate 200,000 cords, the construction of special shallow draft boats and motor barges, the construction of twenty logging camps, sawing of lumber, communications, immediate transportation and the storing of food, gasoline, hay and oats for the winter operations. Work commenced Mid-August. We now have three and a half miles of road constructed to our operating base and expect to complete our road by October 15th. One 20-ton

motor landing barge is operating up river with supplies and two more being delivered. Two 6-ton motor barges are in operation and one under construction. Two alligators and twelve small craft are in operation. We have two "Beaver" aircraft and a "Canso" freighting. The main base at St. Anne is 80% complete and the small cache at Coatibi is also 80% complete. There are a total of 478 men on the project. Four logging camps are completed and five more are under construction. Cutting has just commenced - 1,000 cords cut to-date. Some 725 tons of provisions, supplies and equipment have been delivered to Godbout, 565 tons have been trucked to Lake St. Anne and 160 tons have been delivered up river.

Extremely wet weather has retarded the work more than anything. Men are difficult to find but we do believe they will come in when our camps are completed and ready to receive them.

Contracts have been given for 88,000 cords to-date and cutting, started in three camps. Our plan is to start cutting at the upper end of the area at Lac Caron and endeavour to cut all of the area down to the south end of Lake Fortin by next May. This involves some 70,000 cords. Only timber over 6 cords per acre will be operated and no clearing or burning will be carried out. Waste land, scattered timber and small trees of unmerchantable size will be left. If men are available we shall cut 50,000 cords by February 28th and another 50,000

cords during March and April. This will require some 800 choppers in our camps and a total force of 1,200 men. Most of this wood will have to be rafted through Lake Fortin in order to drive it through the dam next summer. In addition to booms and towing equipment certain booming, driving improvements must be carried out between the storage dam and our main boom on 75 miles of river.

The problems of supply, cutting, driving and sluicing the wood through the dam are difficult. Fortunately we have had high water in the river due to the continued heavy rainfall and this has helped in the rapids and shallows. Next spring however the water may rise to Elev. 920 as the discharge gate may not take the spring flow. This will drown a lot of timber in the lower area temporarily and we shall be obliged to cut this after the water recedes and before the dam is closed October 1st to store the 14 B.C.F. required for the winter of 1958. We may be left with but two months to cut this whole strip along both sides of the river extending for fifty miles. During October and November the water will rise again to Elev. 930 and our hauling operations will be seriously hampered before ice forms of sufficient thickness to haul upon to the river. When hauling does commence the water in the reservoir will be falling and the ice breaking under our haul roads. I assume that we will be able to deliver the wood into the original river channel on the ice, then we must

have a week or ten days at break-up time in the spring of 1958 in which to drive and sluice this wood through the dam. The problems would have been fewer, less complicated, and we could have done a proper job of clearing had the contract been awarded last January or February.

T. B. Fraser

Baie Comeau, Que.,  
October 1, 1956.  
/MCD

REVIEW OF THE PROPOSAL, PRICE SUBMISSION AND EXECUTION  
OF CLEARING OF LAKE ST. ANNE STORAGE BY WOODS DEPARTMENT,  
QUEBEC NORTH SHORE PAPER COMPANY

CENTRED'ARCHIVES  
Hydro-Québec

H. A. Sewell  
Vice-President - Woodlands

Baie Comeau, Que.,  
May 13th, 1959.

## C O N T E N T S

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- Appendix "B" - Additional Estimated Cost of Producing Wood per Acre of Timbered Land from Lake St. Anne Clearing and Actual Final Costs.
- Appendix "C" - Comparison Between 1956 Comeau Logging Costs, Estimated St. Anne Logging Costs and Actual St. Anne Costs.
- Appendix "D" - Comparison Between 1956 Comeau Operating Costs, Estimated St. Anne Costs and Actual St. Anne Costs.
- Appendix "E" - Comparison Between Amount Claimed by Q.N.S.P. Co. and Amount Allowed by Hydro. ←
- \* Appendix "F" - Letter from Mr. H. A. Sewell to Mr. J. A. Savoie, July 20, 1956.
- \* Appendix "G" - Réalisations au Lac Ste-Anne.
- \* Appendix "H" - Progress of St. Anne Clearing Contract.
- \* Appendix "I" - Letter from Mr. H. A. Sewell to Mr. François Rousseau, August 12, 1958.
- \* Appendix "J" - Proposal for Clearing of Quebec North Shore Paper Company Leased Land on Touloustock River.

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\* Documents inclus JB 26avr.01

REVIEW OF THE PROPOSAL, PRICE SUBMISSION AND EXECUTION  
OF CLEARING OF LAKE ST. ANNE STORAGE BY WOODS DEPARTMENT  
QUEBEC NORTH SHORE PAPER COMPANY

REVIEW

The St. Anne Clearing Project was first discussed between Mr. H. A. Sewell, of Quebec North Shore Paper Company, and Mr. François Rousseau, of Quebec Hydro, in October 1955. A preliminary estimate of the area to be flooded and the merchantable timber to be removed was immediately made by us. This estimate indicated 25,841 acres to be cleared and 255,650 cords of wood on the area. In December 1955 Quebec North Shore Paper Company submitted a preliminary report to Mr. Rousseau entitled "Proposal for Clearing of Quebec North Shore Paper Company leased Land on Toulouastook River", (Appendix "J"). The rough estimates for area and timber were taken from a small Mosaic prepared from aerial pictures furnished by H.G. Acres & Company.

In early January we were given authority to run in the flow line consisting of 293 miles at our estimated cost of \$100,000. This work was billed to Hydro at cost for a total amount of \$88,861.66.

On 14th February 1956 we were advised by Mr. Latreille that the Commission and the Minister had approved that Quebec North Shore Paper Company should carry out the work of clearing and we were requested to calculate a lump sum price. However, the approval was cancelled the following day.

In the meantime, a larger and more accurate scale map had been provided by H. G. Acres, and on February 10, 1956, the proposal was revised with more accurate figures for acreage and timber. At that time our estimate was 55,000 total acres to be flooded. There were 34,000 acres of timber and scrub land within our timber limits and 1,000 acres on Crown Lands. However, it was decided not to log above Lake Rond and not to log in areas with less than 6 cords per acre. We prepared on February 17, 1956, a lump sum price estimate based upon the extra cost of making 203,000 cords of wood on 22,000 acres in this remote flooded area over the regular cost of wood being made at Baie Comeau mill at that time.

This total estimated additional operating cost (Appendix "B") amounted to \$98.31 per acre based upon clearing 22,000 acres calculated from Acres' Maps supplied by Hydro. This figure was rounded out to \$100.00 per acre by agreement between Mr. Sewell and Mr. Rousseau. The total cost therefore became 22,000 acres at \$100.00 per acre or \$2,200,000. To this sum was added \$150,000 fee agreed upon by us. This is the background of Mr. Sewell's firm bid of \$2,350,000. later sent to Mr. Savoie in July 1956, (Appendix "F").

It was not until the latter part of July 1956 that approval was finally given for us to do the job and as much valuable time had been lost, we were authorized to proceed with the work pending the signing of a contract. Preliminary work, purchase of fuel, machines, camps, boats and equipment, and constructing of landing strips for aircraft was commenced in August 1956. A contract was

finally drafted and signed in January 1957. At the Commission's request a unit price per acre was specified instead of a lump sum.

The specifications accompanying the contract stated that the Commission would measure the area for payment purposes but nothing was specified concerning the method of measurement. However, it was verbally agreed between Messrs. Sewell and Rousseau that an aerial survey would be made before and after doing the work and that measurement would be made from the resulting map. In the meantime progress payments at \$100 per acre would be based on information given by us on progress cutting maps attached to our monthly estimates of work performed.

The work was completed ahead of schedule in the early fall 1957 (Appendix "H") allowing the water to be raised at that time. The actual cost was slightly less than our original lump sum price; however, we have never been paid in full for the work. The aerial survey made by Photo Air Laurentide resulted in a more accurate map than that available to us when our price was submitted; the total area measured from it being somewhat less than that measured from the original map, the amount due to us under the contract was estimated by your engineers to be less than the amount claimed by us (Appendix "E").

Nevertheless, we feel that we are entitled to the full amount claimed. We took this contract in good faith; did a good job, finished ahead of schedule, at an overall cost slightly less than that submitted. Furthermore, we removed a total amount

of wood (check-scaled by government scalers) approximating very closely the 200,000 cords upon which our lump sum price was based. If the more accurate map had been available when our price was submitted, the overall amount would have stayed the same but the unit price would have been somewhat higher because of the smaller area involved.

The reservoir can be seen or inspected by anyone interested; it compares well with any of the reservoirs completed within the Province in recent years.

This report has been prepared to comply with a request made by Mr. Prefontaine to substantiate our figures and claims for final payment.

Respectfully submitted,

H. A. Sewell,  
Vice-President - Woodlands.

Baie Comeau, Que.,  
May 13th, 1959.  
:md

July 20, 1956.

Mr. J. A. Savoie, Chairman,  
Quebec Hydro-Electric Commission,  
107 Craig Street,  
Montreal, P. Q.

Dear Mr. Savoie:

We are prepared to clear those sections of the area to be flooded by the Lac Ste. Anne Storage Dam which contain 6 or more cords per acre, the mouths of rivers falling into the Toulmoustook and lanes where towing of pulpwood and/or logs will be carried on in the future. Areas covered with scrub growth and other unmerchantable stands will only have tall trees removed. The terms and conditions of doing the work are shown in greater detail in our proposal dated December 2nd, 1955, left with your Mr. Latreille and discussed with him and Mr. François Rousseau at that time.

We would make mention of some exceptions to the proposal which have arisen in our discussions:

1. Clearing will be to elevation 995 and not 1000.
2. No slash will be burned. Instead it will be boomed off in bays and other areas where it will not interfere with future logging operations.
3. We will pay regular stumpage dues to the Department of Lands and Forests for all merchantable pulpwood which we remove from the area.
4. Merchantable wood removed during the course of the clearing will remain our property and it will be our responsibility to deliver it to the Baie Comeau mill.
5. We will supply or arrange to have supplied by our contractors whatever equipment, camps, etc., required to carry out the work.

REALISATIONS  
AU  
LAC STE - ANNE

mi-juillet, 1956 à date

~ juin 1957

JB 26 arr. 01

QUEBEC NORTH SHORE PAPER COMPANY

APPENDIX "G"

## PROGRAMME

*Départ de Baie Comeau..... 8.45 a.m.*  
*Arrivée "Coatibi" ..... 9.45 a.m.*  
*Départ en péniche de Coatibi..... 10.00 a.m.*  
*Rafraîchissements..... 11.00 a.m.*  
*Lunch..... 12.00 - 1.00 p.m.*  
*Goûter..... 3.00 p.m.*  
*Rafraîchissements..... 4.00 p.m.*  
*Arrivée "Cache Ste-Anne" ..... 5.30 p.m.*  
*Rafraîchissements*  
*Souper..... 6.15 p.m.*  
*Allocution de M. C.D. Sewell*  
*Départ pour l'aéroport..... 7.15 p.m.*  
*Départ du Lac Ste-Anne..... 7.45 p.m.*  
*Arrivée à Baie Comeau..... 8.15 p.m.*

\* \* \*

Il y a environ six mois, nous faisons ensemble le même voyage pour aller s'enquérir sur place de l'ampleur des travaux entrepris en vue du débarras des territoires qui seront submergés par le nouveau barrage.

Aujourd'hui nous y retournons, mais cette fois c'est pour y constater les réalisations.

Afin de vous rendre la tâche plus facile, nous avons cru faire oeuvre utile en vous présentant les statistiques qui vont suivre.

*A TOUS NOUS SOUHAITONS UNE AGREABLE JOURNEE!*

\* \* \*

MAIN-D'OEUVRE: -

Hommes embauchés.....	4,957
Règlements finals.....	6,939 (1)
Nombre total de jours ouvrés.....	237,805
Moyenne quotidienne de production pour les bûcherons.....	1.93 cds
Moyenne générale de production.....	1.08 cds
Nombre total d'accidents.....	281
Accident fatal.....	1
Nombre de jours par accident.....	929
Total des salaires payés(brut)	\$3,157,745.08
Moyenne mensuelle de salaires	\$ 315,774.51

(1) Certains employés avaient 2 ou 3 règlements.

OUTILLAGE

<u>Genre</u>	<u>Compagnie</u>	<u>Contracteurs</u>
Autos-neige	5	30
Classes neige	2	
Tracteurs J 5 & Remorques	12	11
Tracteurs John Deere	1	3
International	1	
Tracteur D 6	1	1
Camions	4	12
Wagonnette (Sedan)	1	
Autobus	1	
TD H		3
Chevaux	46	238

Embarcations de diave et autres

Embarcations de 44	3
" 36	1
" 31	1
" (Quessy) 20	1
" en Fiberglass	6
" en contre plaqué	10

Moteurs marins

Hors bord Johnson 15 c.v.	2
" 22 c.v.	1
" 30 c.v.	17
Engins marins	10

\* \* \*

APPROVISIONNEMENTS: -Nourriture:-

Farine.....	204,750	lbs.
Beurre.....	47,750	"
Boeuf.....	146,100	"
Porc.....	124,200	"
Patates.....	517,500	"
Sucre.....	118,500	"
Oeufs.....	37,290	doz.

Fourrage:-

Foin.....	1,859,400	lbs.
Avoine.....	754,800	"

Carburants:-

Gasoline "Aviation".....	44,415	gal.
Gasoline.....	237,985	"
Huile crue.....	82,946	"

Autres:-

Dynamite.....	200	btes
Bois (Planche).....	345,536	pi.

\* \* \*

Achat de matériaux et autres.....\$464,383.57

TRANSPORT: -Passagers:-Services réguliers:-

Nombre de passagers enregistrés à l'aéroport.....	21,022
Nombre d'atterrissages réguliers.....	1,855

Services par nolisement:-Nombre d'heures de vol:-

Beaver de la compagnie.....	659.30
Beaver Northern Wings.....	161.30
Beaver Gagnon Air.....	84.05
Cessna.....	78.15
<b>Total</b>	<b><u>963.20</u></b>

Helicoptères:-

Dominion Helicopter.....	288.10
Northern Wings Helicopter.....	35.30
<b>Total</b>	<b><u>323.40</u></b>

Marchandises:-

Camions - Godbout à Ste-Anne.....	8,082	tonnes
Autos-neige - Ste-Anne aux camps.....	836	"
Cansos - Ste-Anne à Coatibi.....	393	"
Bateaux - Ste-Anne aux camps.....	641	"
DC -3 - Ste-Anne à Coatibi.....	645	"
Beaver & Norseman Ste-A. à Coatibi.....	212	"
Helicoptère - Ste-Anne aux camps.....	32	"
<b>Total</b>	<b><u>10,841</u></b>	<b>"</b>

ORGANISATION: -Constructions de camps:-

Camps de compagnie & des contracteurs	32
Constructions à la Cache Ste-Anne	15
Constructions à la Cache Coatibi	6
Constructions à l'aéroport Ste Anne	3

Divers:-

Chemins de portage construits	50 miles
Chemins de glace pour charroyage	100 "

\* \* \*

SERVICES

Total des repas servis à la cache Ste Anne	111,824
Total des repas servis sur les opérations	769,739

\* \* \*

DUREE DES OPERATIONS

De la mi juillet 1956 à date, soit environ  
320 jours

\* \* \*

PRODUCTION: -

Bois coupé.....	195,172 cordes.
Bois dravé.....	168,000 "
Bois mesuré.....	195,032 "
Bois charroyé.....	187,040 "

A cela s'ajoute 658,048 pieds de bois d'oeuvre pour la consommation locale.

\* \* \*

CONSERVONS NOTRE PATRIMOINE NATIONAL EN  
PREVENANT LES FEUX DE FORET!

PROGRESS OF ST. ANNECLEARING CONTRACT

	<u>CORDS CUT TO-DATE</u>	<u>ACRES CLEARED TO-DATE</u>	<u>LABOUR FORCE</u>
Nov. 12, <sup>1956 *</sup> <del>1957</del>	9,815	982	443
Nov. 30	37,925	3,585	815
Dec. 21	50,235	5,487	614
Jan. 17, <sup>1957 *</sup> <del>1958</del>	67,420	8,025	1,283
Feb. 20	103,986	12,924	1,307
Mar. 20	136,690	16,707	1,413
Apr. 24	177,698	19,637	809
May 25	192,041	20,801	191
July 25	194,926	21,805	119
Aug. 27	195,814	22,141	23

Baie Comeau, Que.,  
May 13, 1959.  
smd

\* en conformité avec les autres documents.  
JB 26 avr. 01

August 12, 1958.

Mr. François Rousseau, C.E.,  
Chief Engineer,  
Division of Planning and Development  
Quebec Hydro-Electric Commission,  
Craig Street,  
Montreal, P. Q.

Dear Mr. Rousseau:

RE Clearing - Lac Ste. Anne  
Development

In discussing the settlement of our account for performing the clearing of the Lac Ste. Anne Reservoir, question has arisen as to the total amount that should be paid to us.

The lump sum price of \$2,350,000.00 submitted in our letter of July 20th, 1956, copy of which is attached, was based upon the additional cost to us of producing and delivering 200,000 cords of merchantable timber from the cleared areas to our Main Boom on the Manicouagan as against the cost of delivering wood from our regular operating areas to the same point. Also included in the lump sum was an amount of \$150,000.00 as a fee.

The lump sum price was converted at the Commission's request, to a unit price of \$100.00 per acre based upon a total area of 22,000 acres, calculated from maps prepared for your Commission by H.G. Acres and Company and supplied to us by your Engineers.

Subsequently, a new and more accurate map was prepared by Photo Air Laurentide from aerial photographs, and it now appears that the total area as measured from this map, is somewhat less than that measured from the original maps, with the result that the total amount due to us under the Contract is estimated by your Engineers to be considerably less than the amount claimed by us.

August 12, 1958.

Mr. François Rousseau, C.E.,  
Montreal, P.Q.

Obviously, if the more accurate map had been available when our price was submitted, the overall amount would have stayed the same but the unit price would have been somewhat higher because of the smaller area involved.

We would point out that actually we removed 195,836 cords as check-scaled by Government Scalers, and on which stumpage was paid by the Commission and charged to us. This quantity agrees very closely with the 200,000 cords upon which our lump sum price was based.

The work was carried out with despatch, and completed within the prescribed time limit at a cost slightly less than our original lump sum price. Therefore, we feel that we have done the work in accordance with the terms and intent of our contract and trust that the Commission will see fit to reimburse us the full amount involved.

Yours very truly,

H. A. Sewell  
Vice-President - Woodlands

HAS: LW  
Attachment

PROPOSAL FOR CLEARING OF QUEBEC NORTH SHORE PAPER COMPANY

LEASED LAND ON TOULNOUSTOOK RIVER

CENTRE d'ARCHIVES  
Hydro-Québec.

T. B. Fraser

Baie Combeau, Que.,  
~~December~~ 2, 1955.

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\* Documents inclus JB 26 apr 01

PROPOSAL FOR CLEARING OF QUEBEC NORTH SHORE PAPER COMPANY

LEASED LAND ON TOULNOUSTOOK RIVER

Hydro of Quebec propose to construct a storage dam on the Toulnooustook Branch of the Manicouagan River north from Baie Comeau some seventy miles and at a point four miles downstream from the outlet of Lake St. Anne (See Appendix "A"). It is proposed to raise the water level approximately one hundred feet to Elevation 1,000. Work on the dam will commence in the winter of 1956. It is planned to impound some 10,000,000 to 15,000,000 cubic feet of water in the summer of 1957 which would raise the water to approximately Elevation 930. Total surface of the flooded area will be 55,000 acres.

The flowage area will include within it some 30,000 acres of timberlands presently leased by the Quebec North Shore Paper Company from the Department of Lands and Forests. These lands have been under lease by Quebec North Shore Paper Company since 1922. In addition, approximately 1,000 acres of unleased Crown Lands will be flooded.

LOCATION OF CLEARING

The flooded area extends up river from the dam-site to the south end of Lake St. Anne, a distance of  $18\frac{1}{2}$  miles, and also from the outlet of Lake St. Anne north along the Toulnooustook river through Lakes Fortin, Lake Rond, Lake Bouffard and Lake Bardoux, a distance of 92 miles. The total length of river

and lake systems flooded is 110 miles. Clearing operations must be carried out for a distance varying from a few hundred feet to one mile on either side of the Touloustook River or its lake system.

A large detailed map on a scale of 4 inches to the mile (Appendix <sup>D JB</sup> "2") accompanies this report. Contours 960 and 1,000 are shown as determined by aerial photographs. Timber types are also indicated as determined from typical ground sample plots and aerial photographs.

#### ACCESSIBILITY

The damsite itself is reached through the Godbout limits of the St. Regis Paper Company on a limit road constructed by that Company from Godbout to the head of their limits, a distance of 62 miles. This road is presently being improved for heavy traffic by Quebec North Shore Paper Company forces working under contract to Hydro of Quebec. The road is also being extended from Mile 62 at Lake Hall, a distance of 13 miles to the damsite. This work <sup>is JB</sup> also being carried out by Quebec North Shore Paper Company on behalf of Hydro of Quebec. It is expected that a winter tractor road will be open to the site by the end of January. In the meantime communication between Lake Hall and the damsite will be maintained by a J-5 Bombardier. The Godbout road is the only available road by which the damsite and the south end of the clearing

operation can be reached. By referring to map Appendix "A" it can be readily seen that one of the most difficult problems as far as clearing operations are concerned is the problem of transportation. The cost of roads along 110 miles of watercourse and lakes would be prohibitive and time would not permit their construction. The river route must be used but this presents serious difficulty due to the fact that there are many shallow sand bars at the outlet of Lake St. Anne and also on the river itself where it is impossible to pass with a loaded 18-foot canoe during the summer. There is no doubt that a certain amount of seaplane transportation will be required in order to carry out the clearing work in the upper reaches of the river.

#### EXTENT AND VALUE OF MERCHANTABLE TIMBER

The greater part of the flooded land area, in fact 26,000 acres, sustains a merchantable stand of timber consisting of spruce, balsam and jackpine from 60 years to 120 years of age, and varying from 6 inches to 15 inches diameter on the stump. It is estimated that this 26,000 acres of land area supports merchantable timber averaging 11.2 cords per acre. The volume of timber on the total 26,000 acres is estimated at 290,000 apparent cords (See Appendix "B"). The timber has been under lease from the government for a period of thirty-two years and to-date the Company has paid .97 per acre on land and water in ground rent and fire protection (See Appendix "C"). On an average stand of 11.2 cords per acre on the land area this represents an investment in this timber of .116 per apparent cord. Regular government stumpage

on this wood is at the rate of \$3.00 per apparent cord. The land and the timber must be removed from Quebec North Shore Paper Company limits for Hydro development and the question of remuneration to Quebec North Shore Paper Company on the timber itself must be considered. Our proposal would be, that the land area flooded by the Hydro water storage should be extracted from our limits and become Crown Lands and that a lump sum remuneration for the Company's investment in the actual timber be paid by Hydro. A contract can then be given by Hydro to Quebec North Shore Paper Company or other contractor for the clearing of the area and the salvage of the merchantable timber, as directed by them. The Hydro would make their own arrangement with their Department of Lands and Forests for stumpage and charge the recipient of the salvaged merchantable wood with stumpage on it.

The largest concentrations of merchantable timber within the flooded area are around La Platte River and the outlet of Lake St. Anne and in the vicinity of Lake Caron and Lake Rond. ?? JB  
*maintenant rivière Fontmarais JB*

These two areas contain approximately 70% of the total timbered area supporting merchantable forest. The balance of the timber is scattered along 92 miles of waterway.

In addition to the above there is 5,500 acres of waste land consisting of alders, young reproduction and scrub. Where the stand does not interfere with future rafting and towing operations it can be left uncleared.

WOOD REMOVAL

The speed with which the clearing must be carried out calls for definite planning scheduling and operating. In order to be prepared for the rising water in the spring of 1957 the area must be cleared up to Elevation 930 during the summer and fall of 1956. However, if only this work were carried out in 1956 there would remain 21,000 acres to be cleared in 1957. It is therefore proposed to clear approximately 10,000 acres in 1956 and 16,000 acres in 1957. Materials for camps together with provisions and supplies must be put in on the snow during the winter of 1956 to a base camp in the vicinity of the dam for distribution to the camp up river. This means that lumber and provisions for this work must be delivered to Godbout before the close of navigation in December 1955, or failing this by winter navigation in 1956. Time is therefore a most essential element in this clearing problem.

As the merchantable wood is cut it must be hauled to the river and driven or rafted down to the damsite. Normally with the high spring run-off of 30,000 second feet above the damsite a strong enough current would be created in the river to take the wood down without rafting. However, an appreciable amount of wood will be cut and delivered by the

end of June 1956 and therefore the spring run-off will be lost for driving purposes and most of the 1956 wood will only come down in the fall. There will be no spring run-off in the river in 1957 as the dam will be storing water and therefore no current and, in consequence, the wood cut in 1957 must be rafted down to the dam. The question of the wood removal without roads does present a serious problem to the operator or contractor on the clearing.

#### LUMBER PRODUCTION

There is some suitable sawlog timber in the vicinity of the damsite and upstream from it. Quebec North Shore Paper Company can make arrangements for one of their contractors experienced in operating sawmills to erect a portable mill at the damsite and to commence producing lumber by April 1956.

#### CONTOUR LOCATION

The location and blazing of the flow line itself is no small job as the work must be done quickly in order to keep ahead of the contractors. The flow line is approximately 293 miles in length and at some points one mile from the river. It is not practical to make a land survey traverse due to cost and time element, and it is proposed that Hydro would arrange with the Department of Lands and Forests

to allow an aerial survey of the contour for land transfer purposes. The contour itself would have to be located on the ground and blazed for purposes of clearing. This work can be done with a combination of aneroids and hand levels running up from bench marks or known water levels along the river following along the contour and tying in again to the river. We would propose carrying out this work as required just ahead of the clearing job when camps and transportation will be available for the men doing this work.

#### FUTURE OPERATING PROBLEMS

Before laying down a detailed plan of the method of clearing and burning we must consider first the effect of the flooding and clearing on future operations for all time on the Toulnooustook River. There will be two main effects on future operations. The first and most important is that the spring flood upon which we count to drive our wood down the river, will disappear. The storage dam will empty during the winter to augment the low flow and will impound the spring flood to refill. We will be obliged to have some river flow through the dam during the spring and summer in order to drive our wood, but such a reduced flow will not create sufficient current in the greatly enlarged cross sectional area above the dam to bring wood down against the prevailing south west winds during the summer months. From the top of Lake Bardoux down

to the dam a distance of 92 miles, we must calculate on towing for the future (See Appendix "D"). This means that our shore line at rafting points and towing lanes must be well cleared so that we will have no trouble in the future in rafting and towing the 9,000,000 cords of wood presently on our limits above the damsite and, also, in handling future crops of wood. The additional cost of rafting and towing over driving on the river is estimated to be .01 per cord mile or .48 per cord over an average distance of 48 miles.

The second effect on our operations is the fact that with the raising of the water we lose our best limit road locations which follow the river valleys. Our North Shore limits are primarily in a country of rock and only the marine deposits along the river valleys provide any economical road locations where we find any sand and gravel with which to construct our roads. In order to by-pass the flooded area we must find a new location for our main road to serve this limit above Elevation 1,000, which puts us into the rocky hills well above the river flats. It may be argued that we will have water transportation in the flooded area. That is true, but due to the freeze-up and break-up periods we have found that a road system is necessary for permanent large scale operations such as we will have on the Toulnoustock. We anticipate that future road costs will be increased considerably by the proposed flooding of the Toulnoustock. Some remuneration to the paper company must be considered in view of the two additional

costs they will be obliged to bear during future operations as a result of the flooding.

#### METHOD FOR CLEARING OPERATION

Considering all of the above factors a general plan for the clearing operation has been worked out with a view to doing the work efficiently, economically and on time, and also doing the job in such a way that the area will be properly prepared for logging operations for the future. The plan is based upon the following assumptions:-

First of all, the principal should be established between Hydro and Department of Lands and Forests that only merchantable timber running 6 cords or more per acre on an average must be salvaged. If this is not done the clearing must stand very high additional expense for removal of timber which is not economical to log.

Secondly, clearing will not be undertaken on scrub lands, alders, young growth or in stands running less than 6 cords per acre except in such locations where these stands will interfere in towing lanes or rafting areas which will be determined on the ground. The areas to be left un-cleared to be at the discretion of the Hydro and Quebec North Shore Paper Company.

Thirdly, that a joint cruise be made of the merchantable timber which we propose clearing with the

Department of Lands and Forests and that this cruise be accepted by the Department for stumpage payment in order to eliminate scaling of small piles of logs and pulpwood scattered over a large area.

Fourthly, that no burning be carried out during the summer season but left until fall at a time when fire danger is greatly reduced, and then burning of brush on a large scale after the wood has been removed will be carried out.

#### TRANSPORTATION OF MEN AND SUPPLIES

The transportation of men, equipment and supplies is a vital problem to the clearing operation. In order to assure an adequate supply of men in an election season when men are liable to be scarce we propose to engage our labour on the South Shore - Rimouski and Matane - and transport them by air directly to the damsite where we would construct a landing strip in the vicinity of the dam along the Touloustook River. From this point men will proceed up river to the various camps by shallow draft flat bottomed boats. Two landing barges would be used during high water periods to place heavy supplies at the various camp sites. These barges are sectional with a capacity of fifteen tons, a draft of two and a half feet and a speed of ten miles per hour, and are capable of overcoming all rapids and currents up to Lake Bouffard during high water periods. During the summer, navigation on the river will be restricted

to large freight canoes and outboard motors or similar shallow draft craft constructed for this work.

### LOGGING

The actual removal of the wood from merchantable areas over 6 cords per acre would be carried out as a regular part of our logging operation, except that the work of cutting and hauling must be carried out on the ground. Hauling on the ground is more expensive than hauling on the snow. However, we must remove our wood before we burn and we must deliver it to the water for the fall freshet drive, therefore, summer hauling is imperative. The J-5 tractor will be an extremely useful piece of equipment for this work and some forty of these machines will be required. The use of horses is almost out of the question due to summer hauling and fodder transportation.

The problem of removing the merchantable timber salvaged from the clearing requires consideration and planning. The cut of the summer of 1956 can be probably driven during the summer and fall of 1956 and there should be some provision in the dam construction to by-pass this wood. Most of the wood cut during the summer of 1957 when the dam or cofferdam is closed to store water, should be towed down to the dam and sluiced in the fall of 1957. Clearing and rafting would be completed in the summer of 1958 and the final sweep of the river completed in the fall of 1958. A schedule for the

clearing operation is included in this proposal (See Appendix "E").

Rafting, driving and sweeping in the fall instead of the spring is more difficult as water is never too plentiful for good driving at this time of the year on the larger rivers. The extensive sand bars are only partly covered. Labor for driving is difficult to obtain as our drivers are mostly choppers and driving interests them only in the early summer. Once cutting commences they migrate to the camps where they prefer to work on piecework.

#### BURNING AND FIRE PROTECTION

The plan for burning of slash would be to remove all wood from the area as it is cut during the summer. Then burn on a large scale during the late fall when there would be no extreme fire hazard to our limits. The slash must be burned otherwise it will be impossible to raft or drive wood in 1957 and 1958.

The fire regulations of the Province hold any construction project wholly responsible for the fire protection and the cost of any fires which may develop from the operations on the project. If Quebec North Shore Paper Company undertake this clearing work it is proposed that fire protection on the project be placed under the Laurentian Forest Protective Association who would be responsible to Hydro to see that the necessary fire protection equipment is placed on the job and that proper patrols and controls are maintained. Quebec North Shore Paper Company would fully co-operate with the Association in carrying out

regulations as we would be even more interested than Hydro in protecting our limits which contain our vital supply of raw material for our paper mill. We have had serious fires on all of our limits on the North Shore and have fought fire in collaboration with L.F.P.A. on many occasions and would anticipate no difficulty in working with their local organization here in the matter of protection. All of our foremen and contractors are given a special course on fire protection and each camp would be organized with a trained fire fighting group of workers who would have their equipment on the site. We would appoint an experienced chief fire ranger to direct our men and to consult with L.F.P.A. on all problems of protection and actual fire fighting.

#### CONSIDERATIONS IN CLEARING

The flooded area must be cleared with two objects in view,

- 1) to remove all merchantable timber which can be economically logged and salvaged;
- 2) to leave a cleared area which, when flooded, will form an enlarged channel or lake which will permit economic booming and towing operations.

We believe that due to inaccessibility with resulting higher cost of logging it is not economical either from the point of view of logging or clearing to salvage

timber running under 6 cords per acre. Logging cost would be prohibitive in such stands and any salvage of such timber will simply add materially to the cost of clearing. Therefore, wherever a stand of less than 6 cords per acre exists which will not interfere with future booming or rafting we propose that it be left untouched. Stands of 6 cords per acre and over would be salvaged in all areas, although reproduction and dead trees in such areas would not necessarily be cut when the area would not interfere with booming and rafting. Areas of scrub, alders and reproduction containing no merchantable timber would be left untouched except where there might be interference later to booming and rafting.

#### TOWING LANES AND SHORE LINES

In order to allow reasonable operations in the future to log the 9,000,000 cords of wood now standing above the dam and also for future forest crops to come from these limits, an adequate towing lane for the use of tugs and rafts must be provided. We estimate that such a lane should have a minimum width of 1,200 feet and not less than ten feet of water in the lane above the highest scrub, trees or land underlying the surface of the water. The water elevation to establish this height should be the lowest water anticipated in the storage dam between the month of June and freeze-up when towing operations must be carried out. Before clearing commences in

the spring of 1956 a schedule for the operation of the storage dam must be drawn up so that the minimum summer water elevation may be established. Having this, the unmerchantable areas which can be left uncleared or partially cleared can be blocked out.

In addition to the towing lane through the flooded area the shore line of the flowage must be cleanly cleared around the outlet of all rivers and streams and principal gullies where it will be necessary for future logging operations to deliver wood into booms placed on the ice and ready for rafting at break-up time. Along rocky and steep lake shores where wood cannot possibly be delivered the shore line clearing is of less importance and along such places the removal of scrub and small timber may be eliminated.

#### METHOD OF MEASUREMENT

If an accurate cruise of the merchantable timber can be accepted by the Department of Lands and Forests for stumpage purposes then we would propose giving out clearing contracts to our jobbers on the basis of payment per acre for removal of all merchantable timber and felling of dead trees where necessary. They in turn would give out the work to choppers on the same basis. The piling of wood and delay in scaling which adds to the cost and time factor, both would be eliminated. Trees close to the water's edge could be felled, limbed and delivered into booms with no delay. There will be a considerable speeding up of the whole job by this method

which is important in order to cover fifty square miles ahead of the water without a tremendous camping expense. This is the only economical method of carrying out the work we can visualize considering inaccessibility of the work and time. The cruising could be completed this winter with a joint party of government Hydro and Quebec North Shore Paper Company forces, so that at least one important and time consuming job would be done during the winter months.

#### METHOD OF INSPECTION

Quebec North Shore Paper Company would be responsible to Hydro to undertake the cruising, location of contour and to complete the clearing on time and in a manner satisfactory for future logging and towing operations.

Hydro would verify from time to time by their engineers that the merchantable timber was being salvaged, as undertaken, and that reasonably accurate contour location was being established. Quebec North Shore Paper Company would provide monthly suitable progress reports and maps showing the progress of the work to-date and its relation to the established time schedule. Hydro engineers would verify that adequate fire protection equipment and personnel were being employed and that no undue risks were being taken.

#### METHOD OF PAYMENT

Providing the above proposals can be accepted jointly by Hydro and Department of Lands and Forests for the

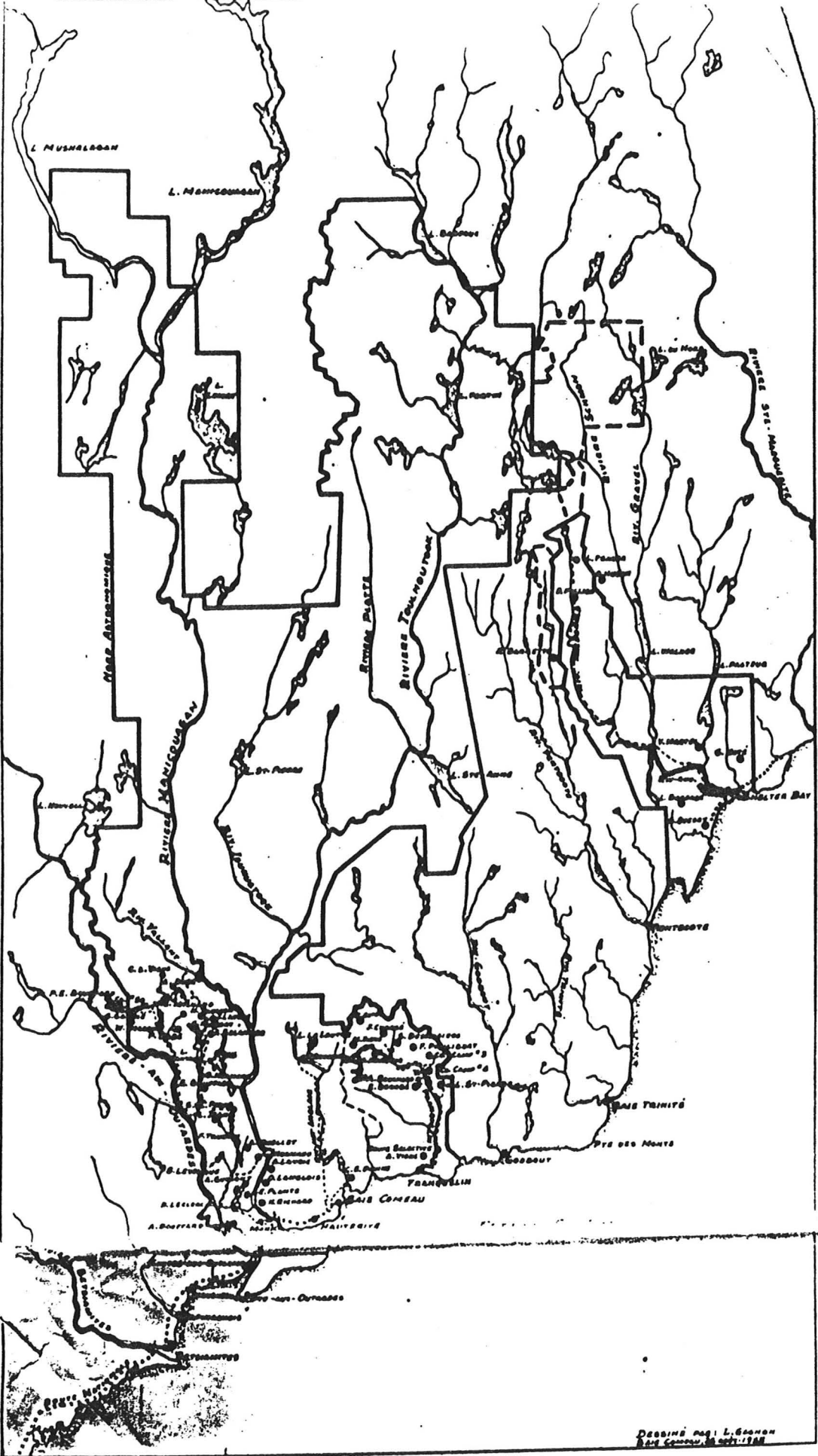
carrying out of the work Quebec North Shore Paper Company would estimate and submit to Hydro,

- 1) The total value to Quebec North Shore Paper Company of the present merchantable timber standing on the area to be flooded.
- 2) A lump sum price to carry out the cruising and to establish the contour line.
- 3) A lump sum price to carry out the clearing of the area as per the above proposal and up to Elevation 1,000.
- 4) An alternative bid to carry out the cruising, establishment of the flow line and the clearing on a cost plus fee basis.
- 5) A lump sum price to cover increased logging costs for future operations due to the necessity for rafting and towing.

T. B. FRASER

Baie Comeau, Que.,  
December 2, 1955.  
/MCD

APPENDIX  
"A"



TIMBER ESTIMATES  
LAKE ST. ANNE FLOODED AREA

<u>TYPES</u>	<u>ACRES</u>	<u>CDS/ACRE</u>	<u>CORDS SPRUCE &amp; BALSAM</u>	<u>CORDS JACK PINE</u>	<u>TOTAL CORDS</u>
Merchantable Timber	25,841	11.2	255,650	33,400	289,050
Waste Land	<u>5,494</u>				
	31,335				

Note: Outside Limit  
included in figures - 890 gross acres - 2,736 cords - spruce and balsam.

FORESTRY DEPARTMENT

Baie Comeau, Que.,  
December 2nd, 1955.

APPENDIX "B"

APPENDIX "C"

FIRE PROTECTION AND

OF RIVER MANICOUAGUE

Year	Area Per License Square Miles	Fir
1922	1,770	
1923	1,770	
1924	1,770	
1925	1,770	
1926	1,770	10
1927	1,770	11
1928	1,770	11
1929	1,770	11
1930	1,770	11
1931	1,770	
1932	2,000	
1933	2,000	
1934	2,000	
1935	2,000	
1936	2,000	1
1937	2,000	1
1938	2,000	1
1939	2,000	1
1940	2,000	1
1941	2,000	1
1942	2,000	1
1943	2,000	1
1944	2,000	2
1945	2,000	3
1946	2,000	2
1947	2,000	4
1948	2,000	3
1949	2,000	3
1950	2,000	3
1951	2,000	4
1952	2,000	5
1953	2,000	5
1954	2,000	5
1955	2,000	5
		—
	TOTAL	72
	Total Cost	1
	Total Cost	1

Baie Comeau, Que.,  
December 2nd, 1955.

SCHEDULE FOR CLEARING OPERATION

APPENDIX "E"

TOULNOUSTOOK RIVER

ITEM	1956					1957					1958				
	J	F	M	A	M	J	F	M	A	M	J	F	M	A	M
TRANSPORTATION OF CAMPS MATERIALS, EQUIPMENT, SUPPLIES															
ERECTION OF PORTABLE MILL															
LUMBER PRODUCTION															
CLEARING AT AND AROUND DAMSITE															
DEPOT AND CAMP CONSTRUCTION - 1956 CLEARING															
CONSTRUCTION OF LANDING STRIP AT DAMSITE															
CLEARING LA PLATTE ST-ANNE AREA TO ELEV. 930															
BURNING ABOVE AREA															
CLEARING UP RIVER TO LAKE FORTIN TO ELEV. 930															
BURNING ABOVE AREA															
CAMP CONSTRUCTION FOR 1957															
CLEARING LA PLATTE ST-ANNE AREA FROM ELEV. 930 TO 1000															
BURNING ABOVE AREA															
CLEARING UP RIVER TO LAKE BARDOUX FROM ELEV. 930 TO 1000															
BURNING ABOVE AREA															
DRIVING AND SLUICING 1956 WOOD															
BOOMING AND RAFTING 50% OF 1957 WOOD															
BOOMING AND RAFTING 50% OF 1957 WOOD															
FINAL SWEEP FROM DAMSITE TO HARTICOLAOWN BOOM															