CHAPTER XI

ENTERING THE NEW ERA

New Brunswick in 1917 presented quite a different basic economic picture than the New Brunswick of forty years earlier, when in 1877 Donald Fraser had purchased his first small sawmill at River de Chute. In addition to the fact that in 1917 the world was engaged in a war which affected every phase of industrial life from labor to production and prices, during the forty years Donald Fraser had spent in the lumber industry in the Province, he had seen innumerable significant changes occur. He had seen the transition from the early days when the regional economy was centered on long lumber and wooden ship production, supported by a large number of supply industries with a considerable number of small operators engaged in producing a varied assortment of goods in keeping with the horse-drawn economy.

Through the next twenty years, from 1877 to 1907, he had seen and participated in the great expansion in the production of long lumber to the unprecedented high point which reached its peak in 1915, due to the demands brought on it by World War I. He did not live to see lumber production reach its post war peak in 1920, the postwar price collapsed the following year, and the subsequent recovery in 1924. But the prosperous end of the twenties found the long lumber output at a lower level than it had been 20 years before. It was not revived to any great extent until 1941 when the requirements of World War II again stimulated activity.

The great offsetting factor to the decline of the heyday of long lumber in New Brunswick, was the development of the pulp and paper industry, the growth of which resulted in a marked shift from log and long lumber to pulpwood production in the Province as well as Canada as a whole.

Reports on the Provincial Crown Land Department records for New Brunswick, for that period, illustrate the decline of long lumber and the rise of pulpwood in both terms of footage and dollar value. While the production of timber and logs in New Brunswick in 1870 totaled 378,741 thousand fbm, and pulpwood production was nil, by 1941, pulpwood production had risen to 378,170 thousand fbm and timber and log production had declined to 250,546 thousand fbm. Or, translating this in terms of dollar value, while the lumber products for the entire Dominion of Canada in 1903 were $42,000,000, by March 1924 this had increased to $274,000,000.

That the beginning of the decline of the long lumber industry, from the point of view of "national" income coincided with the rapid development of the pulp and paper industry, was a fortunate factor for New Brunswick. During the twenty years between the two wars, the pulp and paper mills were to so far surpass the sawmills as New Brunswick's most important manufacturing industry that the sawmill sites, in many cases, were to survive to serve the role of divisional offices for the district woods operations connected with pulpwood.

In an interesting series which appeared in the St. John Telegraph Journal in 1937, titled "New Brunswick Lumber Kings" by Fred H. Phillips, this writer describes the activities of such traditionally great names in the early lumber industry as William Davidson, first to identify himself with the mast cutting industry; the "Main" John Glasier, perhaps the most renown of the early lumber kings; John A. Morrison, whose early mill properties later were the site of the Fraser Victoria mill at Fredericton; and "Boss" Gibson of Marysville and the Honorable J. B. Snowball, two lumber kings whose contributions to early railroad history were as important as their activities in the lumber industry. Mr. Phillips concludes the series with an article on The Frasers. Commenting that "Relatively speaking, the name of Fraser came late to the long lumber industry", he ends an interesting story of their activities with this summarization: "The fact that the Frasers came late in relation to the other "kings" of the lumber

industry of the Province doubtless was conducive to their survival. To them changing market demands and changing trends and changing products were not the threat they often were to the older companies. And foremost of all, the swing away from long lumber revealed Archibald Fraser as one New Brunswicker quick to the possibilities of black spruce - not as an export commodity but as a raw material suited to and waiting for home manufacture of paper. Though already ripe in experience by 1917, its President was young enough and flexible enough to adapt himself and his organization to the change".

Another changing trend which Donald Fraser had been farsighted enough to anticipate and to participate in, when Canada experienced it after 1890, was the powerful movement in the direction of concentrating industry in large productive units and mass-producing what had formerly been made in small shops. It was in operating in line with the early and changing phase that Donald Fraser had been able, by gradual and alert acquisition of small units, to build them into cornerstone of his success. Almost invariably, each of his successful ventures was started by the taking over of an old established sawmill or the purchase of an abandoned plant, or the acquisition of timber limits reputed to have been well operated or requiring better operation. As these ventures proved successful, earnings were steadily utilized in the acquisition of other timber holdings and the erection of additional sawmills. As early as 1905 this concentration of various activities was well illustrated by the forming of the F & M Lumber Company that year.

In 1917 this coordination of effort reached its peak when all of the former Fraser properties, except River de Chute which had been sold in 1909, were consolidated under one management with the incorporation of Fraser Companies, Limited under Dominion Charter, as successor to Donald Fraser & Sons, Limited, the F & M Lumber Company, Limited, the Fraser Lumber Company, Limited, and Fraser, Limited. Headquarters were at Plaster Rock, New Brunswick. Archibald Fraser, was President; Donald Fraser, Vice President; and

William Matheson, Secretary and Treasurer of Fraser Companies, Limited. Directors were Archibald Fraser, Donald Fraser, William Matheson, Thomas Matheson and Andrew Brebner. Capital stock for Fraser Companies, Limited was ten million dollars. Wide powers were given the new company. In addition to taking over the active business being carried on by the four aforementioned concerns, they were authorized to construct and operate pulp and paper mills, as well as to conduct general lumbering and woodworking undertakings. This consolidation and the commencement of participation in the sulphite pulp industry in 1917 marked the end of a period of 40 years during which Fraser interests were devoted exclusively to the manufacture of lumber and lumber products from 1877 to 1917.

That the Frasers were keenly aware of the changing economic picture, and alert enough to be ready for the transition well ahead of its actual occurence, is indicated by an item which appeared as early as 1913 in the October 15th issue of Pulp and Paper Magazine Canada: "Fraser & Company lumber operators in the Saint John River are talking of building a pulp mill ad Edmundston on the river St. John. Nothing definite however has yet been decided".

The November 23, 1916 issud of the Paper Trade Journal carried the following notice which indicated the the decision to build the sulphite mill was well formulated by this time and the factor of location was being given considerable thought. It was headed "$4 Million Pulp Mill for Fredericton", with a date line "St. John, N.B., November 20, 1916" and read "Fraser's Ltd. is considering the question of erecting a pulp mill at Fredericton in the county of Northumberland. If its plans are carried out the mill will be built and operated by a separate company with a capitalization of four million dollars and the plant will be one of the finest in Canada. Archibald Fraser informs the press that several sites for the mill are under consideration".

* * *

The town of Edmundston was selected as the site of the new sulphite pulp mill for many reasons, and construction was started on the mill there in the Spring of 1917.

First of all, located at the junction of the Madawaska and St. John Rivers, half a mile from the Edmundston mill site, was a hydro-electric power plant of 2,000 horse power which had been installed and developed, power rights having been obtained in 1911 at the time of the Murchie saw mill purchase in Edmundston. From this development and from an auxiliary steam plant, burning waste from nearby sawmills, power for operation of the new mill could be obtained at a small cost. Further, the town of Edmundston was the center of an excellent labor market and while its population was only 1500 and its area was but one and a half square miles, the selection of Edmundston as the site of the new Fraser sulphite pulp mill made it possible for the company to avoid the heavy ex penditures incidental to town building, in which many other Canadian pulp and paper companies had had to engage, in establishing their mills in new and undeveloped regions. At the same time, Edmundston, though long established, was unique in that large spruce forests are found within a few miles of the town, and Fraser Companies could enjoy the distinct advantage in the ease with which pulpwood could be brought to the mill either by river drives or short rail hauls. A further advantage in choosing Edmundston for the site of the new pulp manufacturing operations, and one by which the Company was soon to profit further, was its close proximity to the United States paper market - being separated only by the St. John River from Maine, the river at this point constituting the international boundary line. And further, and of major importance, Edmundston being a rail center could be served by three railroads, - the lines of the Canadian National Railway, the Canadian Pacific Railway and the Temiscouata Railway.

With all of these factors to contribute to the success of the new project, the next step was to construct a mill incorporating the most improved modern features

of plant layout, equipment and material to make it a well balanced unit for the economical manufacture of bleached sulphite pulp, from the preparation of the raw wood to the finished product. Designing engineer for the mill was Hardy S. Ferguson, founder and consulting engineer of the firm of Hardy S. Ferguson & Company in New York, whose reputation for sound installation and progressive operating principles were already attested to by prominent plants which he had constructed and which were in operation previous to that date. Now, 32 years later, it is interesting to note that he was recently accorded the signal honor of having been awarded the coveted Gold Medal of TAPPI, Technical Association of the Paper and Pulp Industry, at its annual meeting in New York in February 1949.
Mr. Ferguson was cited for his contribution to the technical progress of the pulp and paper industry and in making the presentation, it was pointed out that he possesses "the uncanny ability to see the final product in the shape of the finished plant, while it is still on paper."

Great interest was evidenced in the construction of the Edmundston sulphite pulp mill from the first. Because two news stories which appeared in the Paper Trade Journal in the fall of 1917 and the early spring of 1918 give a good idea of the scope of the new mill and the progress of the work on the project, they are reprinted here:

With the heading "Work on Fraser Plant Progression," the September 20, 1917 issue of the well known trade publication reports, "It is anticipated that the bleached sulphite mill which is being erected at Edmundston, New Brunswick, by Fraser Companies, Limited, will be ready for operation the 1st of April. The plant which will have a capacity of 120 tons a day, covers about six acres. It will consist of storage room, machine room, screen room, blow pit room, digester house and plant,

boiler room, turbine room, wood room, machine shop and hydraulic power plant. In the machine room there will be two drying machines; the digester house will contain four digesters each 17 feet in diameter and 56 feet high (the biggest of their kind at that time);in the acid plant, the tower system will be used, with two concrete acid towers 114 feet high; in the boiler room there will be six 500 h.p. boilers; in the turbine room there will be two 1,000 gw electric generators directly connected to steam turbines; and in the hydraulic power plant there will be two 1,000 k electric generators directly connected to vertical shaft water wheels. The present status of construction shows the foundation complete for the whole plant except the hydraulic power station. The birch work is completed on the storage building, machine room, screen room, digester house and acid plant. The investment represents $3,000,000."

The February 7, 1918 issue of the Paper Trade Journal carried a more extensive, if somewhat technical, report on the mill which is quoted, in part, as follows: Headed "Fraser Companies Sulphite Mill Almost Finished," the item comments on the desirability of Edmundston as a location, mentioning its excellent supply of city water, electric lights, and adequate sewerage system being installed, its good freight connections in all directions and its power development." Continuing the publication, it described the Edmundston Mill as beinga thoroughly modern plant of the ground floor type with engineering being done by Hardy S. Ferguson. "The construction," the article continues," is generally brick and reinforced concrete with some mill and some steel construction in the various buildings. The wood room is a separate building of brick; general equipment consists of two American barking drums, two disc barkers for emergency use, three slab chippers, one round wood chipper, two flat oscillating screen and two rechippers; the acid plant has a fireproof burner

and sulphur storage room, the burner equipment consists of two 4 x 12 feet rotary burners with separate combustion chambers. The gas cooler is of the combined submerged and spray type and the acid system is a two-tower Jenssen type system.

"The digester house contains four digesters 17 x 56 feet, arranged so as to blow straight into the pits. The relief coolers are built in on the various floors of the digester building and the blow pits are built of concrete and directly adjoin the digester house. The blow pits are lined with long leaf pine, and are provided with a perforated plank bottom of the same wood. They are provided with overhead white water and hot water tanks for flushing during washing.

"The screen room is approximately 200 x 226 feet and contains the brown stock tank, brown stock thickeners, riffler, brown stock flat screens, brown stock washers and screen reducing system. On the blank side it contains eight Belmar bleachers of five-ton capacity each, with stock chests of concrete below the bleachers, bleach pulp washers and thickeners and bleach pulp flat screens.

"The machine room contains two 128 inch Rice Barton and Fales drying machines, driven by individual engines belted to the line shaft. Hydraulic presses are provided for baling the pulp, and a spacious storehouse and ample shed provide for handling the product to advantage. Modern Bleaching plant ... the bleach mixing plant is of modern design; all tanks are of concrete and pumping and settling systems provided for most economical operation. The repair shops constitute a separate group of buildings comprising store house, carpenter and pattern shop, machine and sheet metal shop, blacksmith shop and bronze foundry and switch engine shed."

Further, the Paper Trade Journal reported, "The boiler plant of brick, concrete and steel contains six 500 horsepower Geary water tube boilers, with space provided for two more overhead coal bunkers, chain grate stokers and super-beaters provide for economical operations at all loads. The boiler house power is designed of such capacity as to provide steam for all pwoer when necessary as well as high pressure steam for the digester house, and low pressure steam for heating and drying apparatus. The steam engine generating plant is equipped with two 1000 KVA General Electric turbines of the Bleeder type, from which the low pressure steam is taken. In addition to the steam plant, there is a hydraulic develop plant, consisting of reinforced concrete dam, brick and concrete power house, which is provided with two 1000 KVA umbrella type generators, generating three phase, 60 cyde current at 6,000 volts. The power developments are thus so met that it is expected that the mechanical power can be furnished either from the steam plant, entirely, or from the hydraulic plant entirely, or, as will normally be the case, from the two in conjunction. Within the mill proper the group system is being followed.

"The above equipment gives assurance of continuous operation and this in conjunction with the favorable freight situation and adequate wood supply assures a very desirable freedom from any of the causes that are responsible for so many mills losing production and making irregular shipments during certain seasons."

Futher news notice was given the Fraser Companies Edmundston Sulphite Mill in the Pulp and Paper Magazine of Canada. In their issue of June 20, 1918, they reported, "The large new pulp mill which is being erected by Fraser Companies, Limited at Edmundston, New Brunswick for the manufacture of bleached sulphite pulp is making good progress and it is expected the plant will be in operation about September 1st."

Actually, the Edmundston mill started operation in October 1918. In their November 14, 1918 issue, the Pulp and Paper Magazine of Canada reported, "The new pulp mill of Fraser Companies, Limited, which is erected at Edmundston, New Brunswick, has started operations and it is expected that the first shipments will commence in a few days. The company is completing a new traffic bridge over the Madawaska River, which is being built in connection with the new dam for the power house. The dam and bridge will be in readiness at the end of the month." Other points of progress reported by the same publication were: "June 15, 1919, the mill was shut down for a short time to change over the bleach system and to provide additional sewage facilities. The power development is nearly finished giving 3000 hp." ... and in the February 4, 1920 publication, "Fraser Companies, Limited has increased the pulp capacity of the mill at Edmundston by about five percent. They have four digesters in their plant now and plans are being made for the installation of three additional barking drums which will be put in shortly by the Canadian Barking Drum Company."

With the Edmundston Sulphite pulp mill in operation in October 1918, with a production of 120 tons a day; by 1920 it was necessary to construct two more digesters, number five and six, to meet the increasing demand for the product. These digesters went into operation in 1921 giving the mill a daily capacity of 150 tons of bleached sulphite stock. Other additional equipment at this time was: an additional cylinder put on each pulp machine with an extra row of dryers ... Number five and six blow pits with storage tanks over the pits were constructed. These tanks were never used as originally intended but at a later date were used as storage and fresh water tank for digester number three. At present they are used as fresh and white water tanks.

By 1929, the annual capacity of the Edmundston pulp mill was _____, and today, thirty years afters its initial operation commenced, it has an annual capacity of approximately 100,000 tons of sulphite wood pulp, 35,000 tons of groundwood pulp and 20,000 tons of paperboard.

Superintendent at the start was -- Van Alstyne, followed by R. Hayward. From 1920 to 1922, F.W. Brawn, former superintendent of the Cascade Mill, Berlin, New Hampshire, was superintendent of the Edmundston Sulphite pulp mill. He was replaced in 1922 by G.J. Armbruster who was later to collaborate with F.O.White, the company's chief engineer, and J.D. Jenssen when the Restigouche mill was built at Athol by the E.G.M. Cape Company.

Because of the vital economic importance of Canada's fast growing pulp and paper industry, much stress was laid on it in the trade press of that time from 1916 on, when it began such rapid expansion. For example, in January 1921, the London Bureau of the Financial Times quoted Lord Beaverbrook on the subject. This was reprinted in the January 6, 1921 issue of the Pulp and Paper Magazine of Canada and since it not only gives a good idea of his predictions on the subject, but at the same time pays tribute to both Archibald Fraser and Angus Maclean, as two Canadians aware of the importance of New Brunswick's timber wealth in relation to the pulp and paper industry, it is quoted in part, here. "New Brunswick's wealth," says Lord Beaverbrook, "largely consists in its enormous timberland. Though the principal wood is spruce, the province has ~~developed~~ devoted itself to the timber industry, and has not taken up as it should the pulp and paper resources. This is accounted for, to some extent, by the lack of water power in the province, but when one thinks of the magnificent water power at Grand Falls left undeveloped, the defense of lack of water power seems insufficient to account for the neglect of an enter-

prise with such enormous possibilities as the manufacture of pulp and paper from the wealth of spruce possessed by the province. Besides the government timberlands, there are hundreds of thousands of acres of timbered railway lands in New Brunswick with no restrictions on the export, awaiting development....."
"Still," he concludes, after further comments, "there is much to hope for in New Brunswick while we have men like Archibald Fraser developing the pulp and paper industry at Edmundston, and on the Miramichi, and Angus McLean doing similar work on the Nepisgut."

The development of the pulp and paper industry on the Miramichi refers to Fraser's acquisition of the holdings of the Dominion Pulp Company near Chatham, New Brunswick, in the summer of 1920, adding this second pulp producing unit and a large area of timberland to their already successful and expanding plant for making bleached sulphite pulp at Edmundston.

The Chatham mill at Millbank had been in operation on that site since 1896, being one of the oldest sulphite pulp mills on the North American Continent. It had been gradually rebuilt and modern improvements had been made during the years.

Some idea of the importance of Chatham as a port town since the early days can be gathered from the Gazetteer of the Maritime Provinces, compiled by Charles D. McAlpine and printed by the St. John Printing Office in 1878. That year it describes the Northumberland county town as being one of the most thriving of the North Shore towns in the province. Its streets, The Gazetteer tells us, were lighted with gas; there were 112 stores, two sawmills, four hotels, one tannery, two founderies, one tobacco factory and one bank that year; and the

population was 3,600. Millions of feet of lumber and large quantities of fish were annually shipped from Chatham. The harbor, 173 miles from St. John, was capable of accommodating vessels of the largest tonnage and a branch railway connected the town with the Intercolonial Railway.

Incidentally, the Gazetteer also described Newcastle, later to be the scene of many major Fraser operations, in 1878 as a flourishing village with streets lighted with gas, 64 stores, one newspaper, the Union Advocate, two founderies, four hotels, one tannery, one branch Bank of Montreal; with a population of 2000 and a very large trade in both lumbering and shipbuilding. Those early days, the North Shore was booming, while Edmundston was a "post"village in Victoria county with a population of 460, settled mostly by French engaged chiefly in field and forest, raising crops and cutting timber; and Madawaska, a village with one store and eight sawmills.

Through its location at deep water on the Miramichi River, the Chatham mill was not only in a position to obtain delivery of the wood and coal required for manufacturing operations by water, but was also able to ship its finished product direct by inexpensive water routes, factors which gave it strong competitive advantages. Capacity of the mill in 1920, at the time Frasers purchased it, was 50 tons daily, soon to be increased to approximately 65 tons daily.

The Chatham mill continued to operate until 1932, when it was shut down permanently. By 1930, a third large pulp manufacturing venture, the Restigouche Sulphite pulp mill at Atholville, near Campbellton, was completed and today continues its successful operation.

On February 18, 1918, the Fredericton Gleaner carried the story of the removal of the office force of Fraser Companies to Edmundston about March 1, and told of the new building about ready for occupancy there. Because it reflects in a measure the importance of the company to the community, which had been the birthplace of many Fraser activities and indicates the high esteem with which Fraser was regarded, it is quoted verbatim:

"The business interests of Fredericton are soon to suffer considerable loss by the removal of Fraser Companies, Limited office force from this city to Edmundston. It was reported early last fall, that the management had under consideration the advisability of removal of the general offices from here. No definite information was obtainable at that time.

"That the office force will be transferred from here to Edmundston has been confirmed by Mr. Archie Fraser. It is expected the new office buildings at Edmundston will be ready for occupancy at the time specified, March 1, or very soon thereafter. While the Fraser Companies, Limited regret they have to leave this city and hesitated some time before deciding to make this change, their extensive interests now centered at Edmundston makes the move imperative that that town becomes the controlling point for an investment totalling nearly $5 million and it is quite essential that administration of its large affairs should be done at closer range. One of the most convenient and complete office buildings in the Province, if not in Canada, has been built for their occupancy. Its arrangements are most complete as to modern conveniences, comfort and economy in utiility of space. Each office department has its up-to-date suite with all the necessary equipment for the comfort of the employees. An inter-communicating telephone system has been installed, connecting all its departments. Hot and cold running water, etc., are part of the equipment of each suite. In order to carry on the business in the future, a larger office force will be required at the up river town...

"The city regrets its departure from here and wishes them all possible success in their new home. Edmundston is to be congratulated on the new acquisition to its property and business life."

In talking to Walter Clarke, who was one of those who came to the new Edmundston office, as that was the year he started working for Fraser's, he mentioned some of those who started in the Edmundston office; Messrs. Archibald Fraser, William Matheson, C.M. Matheson, Jim Reith, .. McLaughlin, .. Morrison, W.W. Duncan, I. Duncan, J.W. Bernier, Henry Dubie, F.X. Belanger, E.W. Ross, Lee Seely, A.R. Sargent and the Misses Marie Anne Daigle, and Annie Pelltier. The next year, in

1919, following his return from four years' service overseas in World War I, Hubert H. Henderson, today an officer of the company, joined Fraser's as an accountant. In 1919, too, another one of the principals came to Edmundston: Andrew Brebner, coming from Cabano, to become General Manager of the Edmundston pulp mill, and later when the new Madawaska Mill was constructed in 1925, in a similar capacity at the Madawaska mill. In 1929, he was to go to the newly constructed Restigouche mill in the same capacity, and remain, as such until his death in 1948.

Going back to Mr. Henderson, who is today Treasurer and Credit Manager, in 1919 he left Edmundston to go to Campbellton as office manager of the lumber and shingle mills which had been built there in 1917 and which were being operated under the direction of Roy Saunders, who had for two years previously been manager of the Nelson Mill at Newcastle.

Among those who came to Edmundston in 1918, too, was L.M. Sherwood. Today, Mr. Sherwood is Vice President and Controller of Fraser Companies, Limited and subsidiaries, as well as a member of the Board of Directors. He had worked for Donald Fraser & Sons in Fredericton, in 1913, previous to serving in World War I, and following his rejoining the company after his war service had filled increasingly responsible executive positions from 1919 on.

.....

During the years from 1916 to 1923, several destructive fires occurred at Cabano. In 1916, the boarding house burned, and although completely destroyed, fortunately no loss of life resulted. In 1918, a fire which represented a $40,000. to $50,000. loss occurred, when the shingle mill at Cabano burned. However, this was subsequently

rebuilt. In 1923, a fire occurred which destroyed 2,300,000 feet of lumber at Cabano, representing a loss of approximately $75,000. Today, the facilities for producing lumber continue to represent one of the most efficient sawmill and dressing mill manufacturing plants in Northeastern Canada, after nearly a half century of continuous operation. Too, Cabano serves as a divisional office for district woods operations. The sawmill and dressing mill at Plaster Rock, which has operated for many a year, is today another divisional office for district woods operations. Other offices for this purpose are at Edmundston, Newcastle, Fredericton and Notre Dame du Lac.

With the Edmundston Pulp Mill completed and in production and expanding as needs required, between the period of 1918 and 1925, Fraser's were to acquire further properties to enhance their round dozen of already well established mills for lumber production. In some instances, these became an important part of future operations; in others, they were operated for a short time only and disposed of profitably for further development and modernizatios of Fraser's interest.

In September 1917 Fraser acquired the Government grant to the shingle mill properties of the Baker Brook Manufacturing Company at Edmundston. In 1917 two further acquisitions were made in the Plaster Rock district - when Fraser acquired the property of the McNair Lumber Company in December of that year, known as the Otello Mill Site; and when the Arbuckle Mill site lease was acquired from the Canadian Pacific Railway in July. As an instance of further use of early acquired mills, this property is now used as a loading plant for handling pulpwood for shipment by rail to Edmundston.

In 1918, too, the Mowat interests on the Restigouche River watershed were acquired and a sawmill and shingle mill were constructed in 1920 at Athol, now known as Atholville, two miles west of Campbellton. The mill started operation in August sawing about 140,000,000 bmf per day for laths, lumber, and shingles, and operated until 1930 when it was dismantled. At this time Roy Saunders went to Cabano as mill manager where he remained until 1941. Today he and Ernest Ross, who was mill manager of Cabano from 1916 to 1930, are headquartered in Edmundston where they have charge of lumber sales for the company.

This purchase of the Atholville sawmill marked the initial establishment of the Fraser interests in this section which today is the site of the large modern Restigouche bleached sulphite mill with its extensive facilities for all stages of pulp production from wood to pulp for conversion into rayon, cellophane, and products of paper, with world distribution and facilities for research of outstanding calibre.

In 1919 the property of the Notre Dame Shingle Mill was acquired from the Notre Dame Lumber Company and the Temiscouata Lumber Company in the Province of Quebec. Today this Notre Dame Du Lac property serves as a divisional office for Fraser woods operations. In 1919 the Fraser Pulp and Lumber Company was incorporated to take over the assets of the Halifax Lumber Company and Tucket Lumber Company, which consisted of extensive timber

holdings in the Province of Nova Scotia. These properties and assets were subsequently sold in 1924, making possible further expansion in New Brunswick and Maine. Fraser Pulp and Lumber Company went out of existence [as an operating company.] ?

In 1920 mill property at the mouth of the Odell River was purchased and additional sawmills were constructed at Magaguadavic in York County. About 1922 Fraser Companies, Limited acquired timber rights on the Eaton Limits which front on the International boundary line between Estcourt and St. Pamphile, P.Qu. and here was constructed a sawmill on Lake de L'Est. The mill operated for a short time under the management of Thomas Matheson, but it was dismantled in 1928 and the limits were relinquished. In 1923 the Quisibis Saw Mill properties, about 18 miles below Edmundston on the St. John River, were developed. Tom Matheson describes Quisibis Mill as a 200 man mill logs out were from Maine. 52 carloads were taken out of the river per day and shipped to the Edmundston pulp mill.

In 1924 the Seigas Sawmill property was acquired from Frank Murchie subject to certain rights for driving, booming and loading pulpwood. In 1924, too, additional Crown Timber Limits were obtained on the Nouvelle River in the Gaspe' Pennisula, P.Qu. These limits, with a sawmill which was constructed in 1925, were operated by a subsidiary, Fraser-Gaspe' Limited, with a capital of $100,000, until the property was sold in 1928. The last of the long line of sawmills was built in 1928 below Baker Brook on the St. John River to take care of logs produced on watersheds of the St. John River in the State of Maine and P.Qu. It commenced operations in 1930 and suspended operations in

.....

. . . . . .

With the Edmundston sulphite mill commencing operations in October 1918, a glance at the status of the Canadian bleached sulphite export picture during the years of 1920 to 1924 are interesting to consider at this point. They reveal that while Canada exported

a total of 98,924 tons in 1920, by 1924 this figure had increased to 146,705. By 1924, it had reached a total of 165,868 tons. In the seven years from 1917 to 1924 Canada's export of chemical pulp had increased 117 per cent, indicative of the growing importance of this product due to the greatly increased per capita consumption of fine papers, principally made from sulphite wood pulp.

Another aspect of the status of the industry of the day, and the alertness of Fraser Companies to the necessity of a policy of product control is indicated by the fact that from the very start of the Edmundston operation, such a policy was established and has been adhered to throughout the year in all Fraser operations. First head of laboratory facilities was Robert B. Wolf, well known in the industry as were later Technical Directors. Starting operation at a time when the pulp was converted into paper to be printed on the then new high speed presses just being developed, a rigid technical control to assure the quality of the pulp and the performance of the paper on these presses was necessary for best end results. It was Robert B. Wolf, who in 1946 retired from Weyerhaeuser Lumber Company, who developed and put into operation a very effective system of Chart Control for mill operations that was subsequently adopted by other mills. During the years which have intervened, Fraser superintendents, and other technical men who have attained great prominence in the industry; among them Van Alanstyne, first Superintendent, who was followed by such well known men as R. Hayward; G. J. Armbruster; C. R. Van de Carr, who invented a control used quite extensively on newspaper machines; Gosta P. Genberg, who came to Fraser's as plant chemist for the sulphite mill and who was responsible for many early standardization practices in connection with pulp testing methods. The latter was also well known for his early work in the development work of pulp for use in rayon. It is also interesting to note that the master mechanic of the Edmundston mill from 1917 to 1923 was Alex Dunbar, son of the inventor of the Dunbar Cardboard and Shingle Machines, first used in early Fraser operations.

Returning for a moment to the alertness of Fraser to the necessity of product control, an article which appeared in the Paper Trade Journal, in 1929, four years after the construction of the Madawaska paper mill, entitled "Fraser Companies Developments Progressing Rapidly" had the following to say in regard to this Fraser policy; and its part in establishing many later accepted methods adopted by others in the industry: "Although relatively new in the paper industry the Fraser Companies, Limited has given considerable thought and spend much money on technical control of its products. The operation is checked and controlled right through from the chip to the finished paper, and not a pound of paper is allowed to leave the mill without being inspected for quality. Besides seven testing stations around the various plants the company maintains two well equipped laboratories, one in Edmundston, and one in Madawaska, The staff of the control department consists at present of thirty members. Both laboratories are equipped with constant humidity room for both pulp and paper testing. Test Methods Developed ....Many original testing methods have been developed in the companies laboratories, among which might be mentioned the now well-known chlorine number method for control of cooking and bleaching and for the determination of lignin and sulphite content of catalog and newsprint paper. The tentative standard method for determining initial strength of pulp at present adopted by the industry was partly originated in the companies laboratories and is used as check and control of the pulp and the various steps in the paper manufacturing process. The groundwood is controlled for freeness, drainage, strength, etc., and kept within very specific limits to insure a uniform sheet of catalog paper. The paper and board are controlled and inspected for properties required in the different products. Finish, opacity, density, sizing formation, etc., are properties which are essential in catalog paper and which are checked and controlled twenty four hours a day. Bond is tested for fold, bursting, tearing, sizing, finish, etc., and the waxing is checked for all these qualities and in addition for special properties such as bulk, wax absorption, etc. All board products are checked

for weights, caliper, moisture, water proofness, and other properties. All paper and board made is inspected before shipping and compared with standard and order specifications for the various grades, and any paper below standard and not up to specification in any respect is culled out. In this way only, the company can be certain that they are supplying the trade with a product satisfactory in all cases". While the entire staff of the Product Control Department consisted of thirty members in 1939, it is interesting today to consider the scope of activities of the Product Control Department, and the number of the staff headed by Chief Chemist W. A. Ketchen, with divisional chemists at laboratories in Madawaska, Edmundston, and Campbellton, and this is backed by words "Products Control". Without doubt Fraser were well up in front in early technical control pioneering.