

A Chignecto Canal?

By Art Parks

It is unnecessary to emphasize the arguments advanced for the construction of a canal across the Isthmus of Chignecto. Within recent months the people of New Brunswick have been informed many times of the advantages which would accrue to our province if this canal became a reality. Industrial development, agricultural development, benefits to transportation, shorter distances have been stressed along with many other points. Indeed it has been claimed that the construction of a canal at Chignecto would be like digging an irrigation ditch through a dry field as far as Maritime economy is concerned. The discussion of the proposed project has been one-sided enough to cause the most unsuspecting of people to question its feasibility.

The Historical Aspect

The historical aspect of the canal has also been given considerable publicity. Mention has been given the Minette survey of 1822, the Hall survey of 1825, and Telfer survey of 1826, and the Crowley survey of 1843. General attention has been given to the report of the Sir Hugh Allen Commission of 1870. It was this Commission which divided Canadian canals into three classes—those which were imperative from the standpoint of economic development, those which were highly desirable but did not have to be undertaken at once, and those which had economic merit but could be shelved indefinitely. Chignecto was placed in the first group.

Early in 1875 "the Daily Telegraph" of Saint John carried a plan put forward by a civil engineer, H. G. C. Ketchum who was born in Fredericton, to build a ship railway across the isthmus. For several years this plan was given considerable attention. In 1881 Mr. Ketchum made a survey at his own expense and submitted his plans to the Dominion Parliament, seeking financial assistance. At the same time he undertook to form a company and to furnish private capital. Parliament passed a bill granting a subsidy of \$15,000 a year for 25 years, and a company was formed in London to carry out the project. Work began in 1888 and continued until July, 1891 when, owing to the failure of Baring Brothers in London, no more funds could be obtained. Three-fourths of the work was finished and another year would likely have seen the enterprise ready for operation. But failure of the company to raise money and the refusal of the Dominion Government to contribute led to the collapse of the whole project. Now only silted up terminal docks dismantled buildings and the right-of-way across the isthmus remain. The railway was 17 miles long, extending from the mouth of the Musquash to Tignish on Baie Verte. Vessels were to be admitted to the docks placed on cradles lowered into the water. Then they would be hoisted by hydraulic power, and placed on railway trucks to be hauled to the other terminal.

Not Economically Feasible

The most recent complete report on the proposed canal is that of the Chignecto Canal Commission of 1931, of which Arthur Surveyor was chairman. This Commission was assisted by the Department of Railways and Canals. Since the report has been given very little publicity in recent months it is wise to consider it in some detail. The 1931 Commission found the project feasible physically, but not economically. A canal with locks would have to be built, since the unusual tidal conditions at Chignecto would set up a current of scouring velocity and make an ordinary run of water canal impossible to navigate. This raised the question of water lockage purposes. The commission found there was a deficiency of water along the route declared by the engineers as most necessary to build a pumping plant at the Baie Verte end since the water of the Bay of Fundy could not be used because of the silt which it contained. In the absence of hydro-electric power, usually a by-product of modern canal construction, steam would have to be used to operate the pumping plant. The canal would necessarily be a full-tide project because of the loss of time caused by awaiting entrance to a half-tide canal. For coastal services and the smaller type of ocean going vessels a canal would have to be 18 feet deep, have a bottom width of 70

feet, and a lock 48 feet wide and 200 feet long, and in 1931 would have cost \$23,045,000. A somewhat larger canal to accommodate passenger and freight vessels engaged in the West Indies trade would have cost \$38,553,000. Annual charges on the canal, interest on capital stock at 5 percent, depreciation at one-half of one percent, maintenance, repair and operation would have been \$1,804,200 on the smaller project and \$2,762,400 on the larger. In arriving at these charges 10 percent was added to capital cost to cover interest during construction. In estimating the annual traffic which could be expected to pass through the canal, the Commission decided that to balance the annual charges the traffic would have to greatly exceed the maximum annual capacity of the canal. After considering the savings which would accrue to shipping as a result of the canal it was found that the annual savings would be above 15 percent on the smaller project and 30 percent on the larger of the annual charges on the two canals. Another estimate on savings, based on goods then going by water and probable increase, was much smaller, and amounted to \$127,490 on the larger and \$129,490 on the smaller project.

Navigation Conditions

Navigation condition in the Bay of Fundy is not subject to any particular difficulty. A study of fog conditions indicated that Bay of Fundy waters experienced rather less fog than is to be found on the Atlantic shore of Nova Scotia. The Bay does have unusually strong tides but these should present no great difficulty. The tidal conditions present difficulties such as the necessity to enter and leave a port at certain stages of the tide, and make it necessary to be aground at dock between tides. However a full-tide canal at Chignecto would not meet these difficulties as far as the canal itself was concerned. The upper waters of the Bay of Fundy are not likely to prove attractive as an ocean liner route.

The report of the 1931 Commission points out to those who stress shorter distances by sea as an argument for the canal, that distance alone is not an absolute criterion. The time consumed in navigation is of equal importance. It is only when time of navigation is reduced to terms of equivalent distances that a correct estimate of relative advantages is possible. The necessity of approaching carefully and traversing a canal with locks and a restricted channel consumes time which could be utilized on the sea by sailing full steam ahead. Considering this in certain cases the canal would offer little advantage, in some none whatever in point of time. However to reach northern United States ports from Prince Edward Island and mainland ports adjacent to the canal there is an advantage in both time and distance.

The St. Lawrence Waterway

Another important fact brought forward by this Commission was in answer to those who advocate construction of the canal because of Canada's great outlay and annual charge for canals, very little of it in the Maritime Provinces. There is no alternative to the St. Lawrence waterway. The Welland and the Sault Ste. Marie Canals are part of the only navigation route leading to the heart of the continent. These canals benefit all Canada, including the Maritimes. The country could not prosper without this improved waterway connecting the Great Lakes and the Atlantic Ocean. The situation at Chignecto is quite different. All points on the Gulf of St. Lawrence and the Bay of Fundy have access to the sea, the question being one of shorter distances. As a through maritime highway it would not likely be attractive to shipping, considering the preferable navigation conditions in more open waters.

There is no possibility of developing water power along the route proposed by the engineers who assisted the Commission. There is an insufficient supply of water for lockage purposes. It would be possible, however, to instigate a combined navigation and power project, by harnessing the water of the Bay of Fundy. The estimated total cost of the combined project at the time was given as \$72,185,000. This figure would be about \$8,000,000 more than the navigation project

alone along the Missiguash route, plus the total cost of a tidal power project. There would be no economy in combining a navigation and power project. But subject to the approval of the Dominion, which exercises jurisdiction in tidal waters, and subject also to the safeguarding of navigation rights, it would be possible to proceed with a tidal power project independently of the canal, should the development of tidal power on a commercial scale become a practical proposition for the provinces concerned, or for private industry.

Iron Ore Concessions

During recent months the Hollinger-Hana iron ore concessions in Quebec and Labrador have come into prominence. Advocates of the Chignecto Canal use the expected development in this area as an argument for undertaking the project. By some unfamiliar economic analysis a number of these people have concluded that this ore would pass through the Chignecto Canal, some of it would be diverted and steel mills would be set up in the Maritime Provinces. This argument completely overlooks several basic facts. First it is not guaranteed that the ore will go to the Atlantic seaboard of the United States, if development takes place on the scale hoped for. It could go up the St. Lawrence to the industrial centres in the interior. A short time ago an announcement of the discovery of very high grade ore near the sea-coast of Venezuela, which would enjoy all year water transport to United States centres, complicated the picture still further. These people overlook too, navigation conditions in the Gulf of St. Lawrence and Northumberland Strait during the winter months. They disregard the lack of power, particularly in New Brunswick. They do not consider markets or transportation costs for the finished product. Certainly there is an opportunity for development in these provinces, but it does not seem this can be in the field of heavy industry.

Employment Situation

The construction of the canal has been urged as a means of improving our employment situation. The project would provide work for a number of persons during the construction, but what would happen to them on its completion? We do not want a make-work project which will provide employment for a time. We want economic development which will provide permanent employment for our people. The New Brunswick Committee on Reconstruction along this line. It recommended federal projects as emergency work projects to ease unemployment while private industry adjusted itself to peace time conditions. However it was stressed that these projects must be no mere series of make-work projects. They should be designated to increase the capital assets of the province and lay the groundwork for future development. In connection with a canal at Chignecto the committee presented this recommendation—"It is recommended that the Provincial Government request the Dominion Government to make a comprehensive investigation of the engineering and economic aspects involved in the construction of a canal through the Isthmus of Chignecto"

Improvements

The report of the House of Commons Committee on Reconstruction of 1943, states on Maritime development, "Improvement can be brought about through a proper development of the fishing industry; through assistance to the farming community by the applications of the provisions of the Prairie Farm Rehabilitation Act, by the installation of rural electrification facilities; and the extension of cold storage facilities; through proper forest conservation and extended utilization of forest products; through the introduction of additional secondary industries, where the development of such industry is economically sound by reason of proper markets and of primary production within the Maritime Provinces or in neighbouring lands, such as Newfoundland."

The New Brunswick Committee on Reconstruction made similar recommendations. The most important step to be taken with long term planning toward improving New Brunswick's economy is the further development of existing industry, and the creation of new industry. Primary industries should be developed about these primary industries, so that some of the processing of raw materials now done

STUDENT FORUM

This Column is open to any student who wishes to express his views on any controversial subject.

Last Wednesday night at the S.R.C. meeting, Canadian and Rugby football came up again. The majority of those present felt that next years S.R.C. cannot finance both games at the present rate of expenditure, because the finances will be down by at least \$4000.00. It was decided to refer the matter to the students, to see whether the big step should be taken, and Rugby be deleted from the athletic line up here. Looking on the record of Canadian Football, one must say that the game seems to be far more popular than Rugby, both as far as numbers participating and numbers of spectators. Rugby last fall was a complete farce. The only game which drew a large crowd was the Mt. A. one, and that simply because of the long standing rivalry with that institution. But has Canadian football caught on? It was a novelty last year, most Maritimers had never seen the game before, and may have come out of curiosity. Because Canadian football is the fall game in Upper Canada does not mean the same will happen here. I personally feel Canadian football is one of the best if not the best sport to watch, but then I am not a Maritimer and not brought up to look through their eyes. What I would like to point out is that we should not be too hasty and give Rugby football one more year if it is at all possible. There are ways by which this can be done. One is to raise the levy to \$20. A lot of fellows agree with me, and I think all the students will if they gave the matter thought. Some say they don't get enough for their levy, that is their own fault. Looking through this year, on the student pass, one could have seen 3 Rugby games, 2 Soccer games, 4 Canadian football games, 8 basketball games, 2 boxing meets, a track meet, which adds up to \$9.50. The three formal at say \$1.00 a couple, the

Year Book at \$2.50 and the Brunswickian at \$2.00. The sum total is \$17.00. That is just the value of the student pass without participating in any sport. Also if one looks at the other Canadian Universities, it will be found that the students do not get as much for their levy which is higher in all Universities than ours. But even with a raise in levy about \$2000.00 has to be found. This can be done by reducing finances. Most of the time this is left to the council, I would like to suggest that this is a student matter, and the students could help the Council by giving their ideas. I have some ideas myself, one is that in future any team that goes on the road will pay for their own meals. I am sure that before good times came to this university, participants in various activities used to bear some of the brunt of expenditures. Another one is that trips be shortened so that it would entail a minimum of overnight stops. Look at the Canadian football team, they payed for their own meals, and when they had away games they would leave in the morning and return in the morning, no pullman for them. The same could be done in other sports. They seem to be the only ones who played a game for the sake of the game, and not for what they could get out of it. I would like to see the student body give these ideas some thought, and to get some ideas of their own, and tell some Council Representatives what they feel.

Before I finish, I'd like to mention that the U-Y club has been given the go ahead sign to run the March of Dimes Campaign on this campus. This is a worthy cause, it may be able to help you one of these days, let's hope not. Anyway, they only ask for a dime, let us all give our dimes and any other money that we can spare, and let's see this campaign a big success.

elsewhere could be accomplished in the province. The committee considered that such development is vital not only to the future welfare of the province, but perhaps to its economic survival. The report goes on to state that "the development of manufacturing industries in New Brunswick is in direct opposition to the long term trend of concentrating manufacturing in the central provinces—a trend fostered by the monopolies and by national government policy. Through the instrument of government policy the tendency toward monopolistic control of industry can be offset. The care for such a policy can be stated simply in terms of general social and economic welfare of the nation. The continuation of a vast hinterland paying title to a small and wealthy industrial area does not lead to national unity or to general economic and social welfare".

In its submission to the House of Commons Special Committee on Reconstruction, the New Brunswick committee stated the approach to the problem appears to involve—

- (1) Compiling an index of New Brunswick's resources and analyzing the existing methods of utilization.
- (2) Compiling information regarding processing and utilization techniques in use and being developed outside the country.
- (3) Preparing a program making use of the best available in-

formation concerning the various fields of enterprise suited to New Brunswick's natural resources.

A New Commission

It is only in the broader field of Maritime economic development that the Chignecto Canal can be considered. If it can be proven to be of value in a comprehensive plan for such development let us continue to strive for it. If it cannot let us forget it and divert the capital more profitably elsewhere. If necessary let us ask for a new Commission to investigate the problem as recommended by the New Brunswick Committee on Reconstruction. If such a commission should decide against the project the propaganda in its favor and the mysterious interests behind that propaganda would be effectively quieted.

PINK FOR GIRLS!

Paul Keleher, captain and leading scorer on U.N.B. football line-ups, has scored again. That man who hobbled around the campus on a pair of crutches most of the fall is the proud papa of a baby girl. Felicitations "Pop."

Necking is a form of davenports

The stork is charged with a lot of things which should really be blamed on a lark.

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ter directed to the Co-Ed on the publication Brunswickian. The mat-ellent except for the fear that some little an away with them. Underestimate" I am life, for the average d be sad at U.N.B. if had the Editors' eg- in constant fear of "hero or a snake", a umb".

our "little" Editors with this "Clever fey without foundation, e rest of the Co-Eds his balderdash. Per-Co-Ed looked at me, aiting to be milked, e a pain in the neck. Co-Eds are even now their own importance almost impossible. is a good paper.

Yours Truly, J. R. R. O.

THE SHOW

February 1, 1950

ng the Co-Ed Bruns-ould suggest that in should be no issues of can put out by partic- on the campus unless a much more mature ast week's exhibition produced by the Co- they certainly are not elated on publishing a Y paper which was H SCHOOL in com- y even go so far to say schools in this coun- duce a much more of journalism. The swickanne was just e of evidence proving here only to get a didn't show that they anything in their col- far at any rate.

spectfully yours, UNIFIED ARTSMAN.

ates This Week

sity of New Bruns- team next week will in the Maritime Inter-ating Championship B. last year. All of iled Maritime Inter-ating League con- year will be staged

ay evening a team llison University will ton and will defend of the resolution, "Re- the Canadian Broad-ration operates in the of the people of Can-'s lineup for this de-Julian Guntensperger y and Miss Jaquel- of Fredericton. The ce place in the Forest-ting underway at

evening, two U.N.B. ctive in Nova Scotia. h, Ronald Stevenson on and Robert Allan John will debate the f "Resolved, that the arty should be out-ada", against a Saint er University team. time John Hildebrand ay, both of Frederic- siting Dalhousie Uni- lifax and will oppose t, "Resolved that a compulsory military established in Canada

ger, Stevenson and ere members of last ionship team. The s of that team were oy of Hartland and ord of Fredericton, ying at the University swick Law School in and Hugh Whalen who using post-graduate e University of Al-