

(editor's note: This paper was transcribed from a handwritten cursive copy with various difficulties. For a perfect rendition, the reader might wish to consult the original, itself a copy, in the volume entitled *Literary Club Papers I*, 1885 – 1886 Oct 3, '85 to May 29, '86) The original is very badly faded.

Budget
Kemper Editor
Nov 28th, 1885

The Panama Canal

Mr. Editor:

Before the collapse of the Panama South Sea Bubble, a short account of the enterprise may be of interest.

In 1878 some Frenchmen, headed by Lieutenant Bonaparte Wyse, obtained from the United States of Columbia a 99 year grant to construct and operate an Interoceanic Ship Canal any where within its territory. By the terms of the grant, the Canal is to be finished by 1890, and with the ports at either end Indeclared neutral for all time.

By way of compensation, Columbia is to receive, of the tolls collected by the grantees a percentage increasing from 5% during the first to 8% during the fourth and last 25 years of the grant; the grantees guaranteeing that this percentage shall never be less than two hundred and fifty thousand dollars per animal.

At that time, the various examinations by the United States of America were the only instrumental surveys that had ever been made for a canal across the Isthmus, and these surveys, proved, in the opinion of a Commission composed of the Chief of Army Engineers, the Superintendent of the Coast Survey, and the Chief of the Bureau of Navigation.

1st that a sea level canal at Panama was impracticable, and
2nd that a canal with locks could be more economically and advantageously constructed elsewhere.

In spite of these facts an exploration of 14 days was deemed sufficient by Lieut. Wyse to warrant the location of the sea level canal at Panama within the limits of his grant and to afford data for two estimates of cost; one for a canal with a tunnel and the other for an open cutting.

Returning to Paris, Lieut. Wyse introduced Mons. Ferdinand De Lesseps, recently rendered famous by his successful efforts in behalf of the Suez Canal, to lend the prestige of his name to the enterprise.

To inspire confidence in the results of the fortnight's exploration an "International Congress" was called, and met in Paris in May of 1879. A majority of its members were Frenchmen and personal friends or employees of De Lesseps.

Thus packed, the Congress declared in favor of the Panama route, and a sea-level, open cut canal, but decided that the data accessible were insufficient to enable it to approximate closely to the cost. Assuming the accuracy of Lieut. Wyse's estimate of 46 million cubic meters of excavation, the Congress affirmed that the cost of the canal would reach 205 million dollars of which 150 million were allowed for the construction of the canal, including 25% for contingencies; and the remaining 55 million were allowed for interest, banking, and administration.

Immediately upon the adjournment of the Congress, De Lesseps contracted definitely for the grant, promising in payment two million dollars, one half in cash upon the formation of a company, and one half in paid up stock.

De Lesseps now appealed for money, but the French people were doubtful of the integrity of the Congress, and of the goodwill of the United States of America, and did not respond. De Lesseps then declared that he would go to the Isthmus with a "Technical Commission of engineers, to verify Wyse's (14 day) survey. He landed at Aspinwall on the last day of 1879, and spent six weeks in the verification.

The "Commission" reported 75 instead of 46 million cubic meters of excavation, and a cost of 170 million dollars including a 10% contingency fund, but excluding cost of administration, banking, and interest. In comparison with the estimate of the Congress, the Commission, while increasing the amount of excavation 63%, increased the cost but 13%; at the same time cutting down the contingency fund from 25 to 10%. This report, however, did not satisfy De Lesseps, for, on the homeward voyage he arbitrarily cut down the estimate of cost to 132 million dollars. After visiting New York and Washington, De Lesseps returned to Paris in triumph.

The French press at the time teemed with his praises, and were never tired of

contrasting be gigantic difficulties he had overcome at Suez, with the “bagatelle of the American Isthmus.” The key to this advertising may perhaps be found in the first report of the financial committee to the shareholders of the company soon afterwards formed, in which 1/2 million dollars and some odd cents are charged to “expenses which Mons. De Lesseps has been forced to incur in order to arrive at the formation of your company.”

A second effort to organize a company was now successful. Six hundred thousand shares of \$100 each, bearing a guaranteed interest of 5% were quickly taken up by 104 thousand subscribers, 96% of whom were Frenchmen. Fifty dollars a share was paid in, producing a sum of 30 million dollars. One third of this sum was required to pay the “cessionaires” and other expenses incident to the definite organization of the company in March 1881. Since then there have been three loans effected, bearing interest at 5, 3, & 4% respectively, for a gross sum of 123 millions.

The discount of issue caused this sum to net 86 millions, which, with the original 50% on the share capital aggregates 116 millions of cash so far raised by the Company. In addition to this, De Lesseps applied to the French Govt. last September for authority to float another loan of 120 millions in a lottery plan which have been successfully employed to attract capital to the Suez Canal. This sum he said would, in addition to that already raised, be sufficient to complete the canal. The authority to make this loan has not as yet been given to him.

The work originally to be accomplished in piercing the American Isthmus to a depth of 26 feet below sea level, may be briefly summarized thus: Starting at Aspinwall, on the Atlantic coast where the depths of cutting is 26 feet, the canal practically follows the bed of the Chagres River for 28 miles to Gamboa, where the depth of cutting has increased to 69 feet. Leaving the river, the canal crosses the dividing ridge in the next 7 miles, the depth of cutting throughout that distance varying from 200 to 300 feet. Thence it is 10 miles to the Pacific at Panama, the depth of cutting averaging upwards of 50 feet.

The careful surveys since the organization of the company revealed the fact that the amount of excavation instead of the 46 millions of the Congress, or the 75 millions of the Commission, will reach 125 million cubic meters.

The vast magnitude of the excavation and the possible obstacles which may be encountered in carrying this enormous trench to a depth of 26 feet below sea level are, however, regarded by engineers as not presenting such serious difficulties as the disposition of the surface drainage, and particularly of the Charges River. This stream is insignificant in the dry season, but during the seven wet months it becomes with inconceivable rapidity an impetuous river forty feet deep. To receive this torrent into the canal is out of the question and De Lesseps proposes to construct a new channel for the River parallel with the canal and 30 miles long to the Atlantic.

To direct the river into this channel, a damn, a mile long and 200 feet high, is to be constructed across the old channel of the river at Gamboa.

In July last, the company had 21 million dollars on hand, which subtracted from the net sum raised leaves 95 million dollars as the total expenditure to that date. With this sum, De Lesseps has bought the Panama Railroad and a quantity of machinery and other plant; established an excellent organization, including workshops, hospitals etc. and excavated 13 million cubic of material, about 11% of the canal proper!

Nothing has been accomplished with the Charges problem; in fact, the surveys of the river basin are incomplete, and hence a definite plan for this most difficult and uncertain part of the work has not yet been adopted.

Such is in brief the story of the inception and progress of the Panama Canal. The cost of completing the work is as problematical as ever since most of the original elements of uncertainty still remain. At the low estimate of one dollar per cubic meter the remaining excavation will cost 112 million, and the Charges deflection and the harbor improvements, according to De Lesseps's estimate will cost 40 millions more, or a total of 152 million dollars. To this must be added the interest during construction, which, at the best rate of excavation heretofore attained will require 9 years. This at 5% amounts to 68 millions and the interest on the present indebtedness to 59 millions more. The annual expense in salaries etc. now amounts to upwards of 2 millions, so a further amount of 25 millions should be added to our estimate for administration, producing an aggregate of 304 millions in addition to the 95 millions already expended, and bringing the total cost of the canal to 400 million dollars.

Even if De Lesseps succeeds in borrowing the remaining capital at the same

rate of interest he pays for that already raised, and opens the canal nine years hence, it is extremely doubtful whether the traffic would pay operating expenses and interest on invested capital.

Six million tons represent the traffic of the Suez Canal last year; the tolls amounted to twelve million dollars, or two dollars per ton. If an equal tonnage uses the American Canal which is not likely, and pays toll 50% greater than that which has been protested against at Suez, it would just pay the interest account and leave nothing for maintenance and operating expenses. Expenses which amount to 4 million dollars at Suez.

In speaking of the enterprise a fortnight since, the Nation says "it is by far the greatest undertaking ever set on foot by a private corporation, and its probable bankruptcy will be the most terrible and wide-reaching private disaster that ever visited any nation."

Russell Hinman