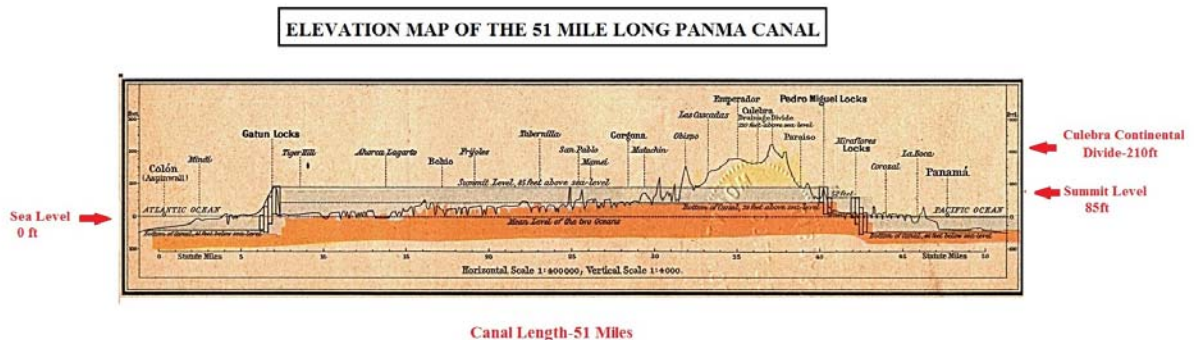


DOES BUILDING A NEW TRANS-NICARAGUAN CANAL MAKE ECONOMIC SENSE?

It was recently announced that the Nicaraguan National Assembly has come to an agreement with KHND of Hong Kong for the construction and a fifty year lease on a new canal to be built across Nicaragua to compete with the Panama Canal. We want here to look at the economics of such an undertaking. The idea of a canal across Nicaragua is nothing new going back to colonial Spanish times. In 1849 Cornelius Vanderbilt built a successful railroad and stagecoach route across the country for people headed for the California gold fields by the fastest route. He had the eventual aim of building a canal but this never came to fruition due to lack of modern machinery and environmental problems with volcanoes and earthquakes and health problems including yellow fever. By 1907 the US had made an extensive land survey and proposed a canal route across the southern part of Nicaragua. The proposed route was in direct competition with a shorter route through Panama. The Panama route won US approval and the Panama Canal was built and ready for business by 1914. Nothing more was heard about the alternate route through Nicaragua.

It was not until recent years that it has become clear that for the Panama Canal to stay in business it must be able to have locks exceeding the present size of 33.5 meter width 220 meter length and 26 meter draught. Larger oil tankers and other cargo ships and even large cruise ships will not fit. I remember several years ago taking the eight hour trip through the canal. Our Royal Caribbean cruise ship was clearing the sidewall of the locks with just a few inches to spare. The Panama Canal is 51 miles long and the water level at the top of the locks is 85 ft above sea-level. Here is a schematic-



One of the most difficult parts of the construction was cutting through the 210 ft high Culebra summit. Note that the locks are only near the entrance and exit to the canal. To modernize the canal will require replacement of the locks with larger locks and dredging and widening of the ship route. On our recent trip through the canal we saw that Panama was making some efforts in widening the water route but no progress was being made on modernizing the locks which are now nearly 100 years old.

It is for this reason that proposals for alternate canal routes through Nicaragua are being made. Specifically interested parties are asking-

“Is it better economically to modernize the locks of the Panama canal or to build a brand new longer canal across Nicaragua using modern machine technology?”

I realize that such a decision relies not only on economic and environmental considerations but also on political factors. We will concern ourselves here primarily with the economic and environmental aspects. We do so by first looking at the possible routes of a trans-Nicaraguan canal. By looking at an elevation contour map it becomes clear that there are just two canal routes which avoid requiring massive stone and dirt removal and also have a minimum number of required locks. A schematic of the routes is as shown-

POSSIBLE CANAL ROUTES ACROSS NICARAGUA



Both routes lie in the southern part of Nicaragua and make use of Lake Nicaragua as part of the route. The route shown in blue is essentially that proposed by the US in 1907. It crosses the Nicaraguan isthmus near the town of

Rivas to the Lake Nicaragua which lies at 107 ft above sea level. It will take some three locks to lift a ship to this height. Next the ship cruises along the lake to its southern end at San Carlos where it will enter a widened San Juan river and follow it for some 30 miles. Finally a straight line canal takes the ship to the Caribbean Sea near San Juan del Norte after traversing another three locks. The total land mileage will be about 100 miles and the highest elevation to be penetrated being about 200 ft. The major difficulty with this route is a political one between Nicaragua and Costa Rica concerning rights to the shifting position of the San Juan river which forms the border between the two countries. It is unlikely that this border dispute will be resolved anytime soon.

The second route comes the same way from the Pacific to Lake Nicaragua but then goes to San Miguelito and follows a widened Rio Punta Gorda to the town of Punta Gorda on the Caribbean Sea. It has about the same land length of 100 miles as the other route but will require considerably more digging and more locks as it passes through higher elevation lands.

Another factor one must take into account when considering a Nicaraguan canal is that two tectonic plates are in collision along a line passing through the length of Lake Nicaragua and the Nation's capital at Managua to the north. The plates can produce earthquakes and volcanic activity which could cause damage to locks on the Pacific side. Managua has been heavily damaged by earthquakes in 1844, 1931, and 1972 and is probably due for another quake soon.

In view of the above discussions it seems that it would make more economic sense to increase size of the locks at the Panama Canal instead of starting from scratch with a completely new canal in Nicaragua. It is, however, not likely that Panama, with its left leaning government (remember Noriega), has the funds to do this. The best approach would probably be for Panama to hire a worldwide consortium of companies to undertake the modernization of the canal. This would probably require a promise by Panama to share transit fee profits for a period of fifty years or so without the threat of nationalization/confiscation.

Finally, on a slightly different topic, it would be wise for Egypt to widen the Suez Canal in order to allow larger oil tankers to pass through for supplying Europe without the need for the tankers having to take the long route around South Africa. Also without canal modernization, oil pipeline competition is sure to reduce Suez Canal traffic more in the future. This is not what the Egypt needs during this time of economic and political instability and the concomitant precipitous drop in its tourism.