

# H. A. VAGTBORG TELLS OF SOUTH AMERICA

May 9—Special to Technology News. Herein, Dr. Harold A. Vagtborg presents a vivid first-hand account of the industrial exploration tour which was undertaken by a number of nationally prominent industrial and engineering men on board a special clipper plane.

## I. Wings Over the Caribbean.

With the ease and grace of a bird, the South American Clipper moves swiftly southward over billowing clouds and the sea 8,000 feet below. The Clipper has just left Miami with the 21 members of the National Research Council Industrial Exploration Commission and a crew of five. Onward to a continent which the average American knows little about, but one which has so suddenly sprung to the limelight because of its importance in the economic readjustments brought about by the European war, the flight over the Caribbean gives each member of the commission time to reflect and consider the reasons which make a "good neighbor" policy mutually essential to both continents.

Since the days of colonization in the Americas (incidentally South America was first by over 100 years) almost all trade has been easterly and westerly over the Atlantic. This was natural, of course, because of relations with mother countries. Even after the breaking away from mother countries—the United States in 1776 and Mexico and South American republics around 1825—the trade routes changed but little. During the European war of 1914-1918 the United States paid scant attention to the problems of South America which suffered because of trade blockades. Now that history is repeating itself and Europe is again at war, but with changed economic conditions developed during the last twenty years, lack of co-operation between the United States and the Latin American countries could have extremely serious consequences.

## Unity Necessary for Defense

Strong unity in the Western Hemisphere would greatly assist the United States in its national defense program. However, several of the Latin-American countries are "on the fence" and have reasons of their own for debating on which side of the conflict they should throw their lot. In general it can be said that those countries which have raw materials that the United States can use, and has been using, look favorably toward the United States. On the other hand there are one or two countries, and important ones, that have not yet concluded that relations with the United States hold the solution to the problem. The South American countries are flooded with propagandists and it seems that day by day public opinion favors the victor—whether in a political or battlefield gain.

Secretary of State Cordell Hull has for years seen the advantage of developing good relations with South America and has championed the cause. He and President Roosevelt are extremely well liked throughout the Latin American countries. With the markets of Europe shut off, both to the United States and South America, it is essential for economic reasons (primarily of import to South America) and for national defense (primarily of import to the United States that the trade routes be changed from east-and-west to north-and-south. The Latin American countries appear to give every opportunity to the United States to bring about such a change. They seek United States capital and technological advice.

However, there are many problems to be worked out before a mutually satisfactory basis is reached.

## Purposes of Council

The National Research Council sponsored Industrial Exploration Commission has the following purposes:

First: To observe and study at first hand the industrial progress of South America.

Second: To exchange ideas between tour members and representative industrial executives and government officials in the countries visited.

Third: To give advice when requested by government officials, private industry and research workers in matters of research, engineering and technology.

Fourth: To establish an enduring association through this committee, by making available to South American governments and industries the services of the National Research Council on a basis similar to that given to our own government.

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The Clipper is on its first "leg" of the industrial exploration tour of South America. A total of 18,000 miles (from Chicago) will be covered including Colombia, Ecuador, Peru, Chile, Argentina, Uruguay, and Brazil.

In general, the geography of South America will surprise any one who will take the time to look at a globe. In the first place, the longitude of the east coast of United States is about the same as that of the west coast of South America. The clock in Santiago is one hour ahead of New York time. If the South American continent were creased at the equator and folded up into this hemisphere, the bulk of it would fall into the Atlantic ocean east of the United States sea coast. The population of South America is three-fourths that of our country. Half of these people live in Brazil, a country slightly larger than the United States in area.

But back to the Clipper which is now two hours out of Miami. Already it has passed the island of Cuba, far below with its many rectangular fields of sugar cane and other crops of varied hue discernable through random openings in the clouds. A stop is made at Kingston, Jamaica, only four and one-half hours from Miami. Here the group is in the tropics under the British flag, but not for long. The gas tanks are filled and the ship takes off in the direction pointed out by a sign which says astonishingly, "Barranquilla, Colombia, South America—4 hrs."

## II. Colombia

The four-hour "hop" from Jamaica to Colombia passes quickly for there is much that can be done in the roominess of the Clipper and the liberties allowed in moving around. It is like a large club car and various groups either play bridge, watch the scenery or discuss the coming experience on the South American continent. We are surprised when the copilot suddenly tells us that if we will look to the east we can make out Mount San Maria—snow covered and one hundred miles away. Yes—there it is, and the group prepares for the landing at Barranquilla.

South America is made up of ten republics, the three Guianas and the Falkland Islands, and has a total area of 7,047,000 square miles of which one-half belongs to Brazil. Colombia, with an area of 440,000 square miles, is fifth in size and has a population of about eight and one-half million people.

As is the case with other Latin American countries, a large proportion of the population consists of Indians, the true Colombian being considered a person born in



Dr. Harold A. Vagtborg

Colombia whose ancestors migrated from Spain.

## So. Americans Very Friendly

Barranquilla is only seven miles from the Caribbean on the Magdalena River, a very wide stream which makes a good landing area for the Clipper. In a few moments we are on the dock and impressed with the river's muddiness, the river boats identical with those seen on the Mississippi, and the Spanish architecture like that of our own southwest and Mexico. In a small neat building serving as a terminal and customs station we are met by a large group of Colombians and Americans representing American firms in South America. We feel for the first time something which we will find throughout the trip—a very warm, cordial welcome such as is exchanged between brothers. We are convinced that "good neighbor" relations are possible and look forward to a better understanding of the problems of the country. Our five pieces of baggage, weighing over sixteen hundred pounds, each carry a magic blue label marked "N. R. C."—hence all goes through without customs examination and we are whisked off to the beautiful Hotel Del Prado by the welcoming committee.

## Climate Is Varied

Although Colombia is a tropical country, climate variations are surprising. The north coast where Barranquilla is located is tempered by the trade winds which blow so consistently from the same direction that the airports have only a single runway—in the direction of the trade winds. A hundred miles or so inland the benefits of these winds are lost—the country is hot and humid. But as one continues south closer to the equator, high chilly plateaus are reached—for example at Bogota, the capitol, the elevation is 8,500 feet and a topcoat is needed, especially in the evenings.

Colombia, like the other South American countries, wants to develop trade with the United States. She has forgiven the injustice done to her many years ago by the States. Few of us remember that the Panama Canal Zone belonged to Colombia years ago, that she had given a license to the French to build a canal which license was later transferred to the United States by the French without Colombian authorization and that when a rebellion broke out in the Panama region United States troops would not allow the Colombian army to come in and settle it, thereby creating a situation which led to the acquisition of

Panama by the United States. It was not until relatively recent years that this black stain on United States history was partly removed by a payment of \$25,000,000 to Colombia.

## Great Quantities of Raw Materials

Colombia has few industries and these are small. She seems to have vast quantities of raw materials of a character which she hopes can find a market in the States. She also wants to develop home industry and believes that this can only be done by the use of American capital. She is willing to give concessions to manufacturers who will invest here by tariff protections and other means. Her "peso" or dollar has a value of fifty-eight cents. It is interesting to see how carefully she maintains trade balances and so conducts her foreign trade as to keep this ratio. Many hours were to be spent in all the countries visited on the matter of foreign exchange and trade balance. Colombia, like all the other South American republics, is a land of the few very rich and the many, many poor. The homes of the rich are luxurious. The sons and daughters go to school in Europe or the States—until recently preferably Europe. Art and culture are invariably the subjects studied. Science and engineering have been disregarded, and thus a country with few people per square mile and tremendous unused agricultural areas and mineral and industrial possibilities finds it necessary to import even a large percentage of her food for which she gives in payment oil and emeralds. There is really no middle class, although recent and contemplated social reforms will bring one about in time. So the peons, who compose, with the Indians, the greatest percentage of the population, work very hard for very little in serving their masters. One person paralleled this situation with our own South, the great landowners and the slaves. As the South has changed and is now feeling the impetus of engineering and science, so will Colombia change. The peon will wear shoes and get more than thirty to fifty or sixty cents per day. Interestingly enough, Colombia wants the change for she realizes the problems past conditions have created. She wants technology, industry, foreign trade, schools and a higher standard of living. She wants to bring this about by putting her vast resources to work—but to do so she needs help.

## Orchids 50c a Dozen

The National Research Council Industrial Exploration Committee spent one week in Colombia attending numerous meetings with governmental officials and business men. Plans were made for putting into operation feasible working arrangements so that both the United States and Colombia would benefit.

Two days were spent in Barranquilla and then a three-hour plane trip to Medellin—the industrial center of Colombia and the beauty spot where orchids grow wild and beautiful varieties can be bought for fifty cents per dozen. Two local growers are shipping orchids by plane to the States. Medellin has a number of small industrial plants—more or less efficient. They represent a beginning, however. The cotton mill, consisting completely of United States equipment, is outstanding in good management and quality but frankly needs a good import tariff to be able to compete.

Bogota, the capital, is on a plateau with mountains all around. In the old days it took weeks of travel up the Magdalena river and by mule-back to reach it. Now it is reached in a few hours from any place in the country by plane. On leaving Bogota after four days of conferences and visits to industrial plants, in order to get out of the "dish pan" (the bottom of which has an elevation of 8,500 feet) the plane had to climb to an elevation of 16,400 feet.

## Child Labor at 28c a Day

Over the mountain to Cali, Colombia, where we wait overnight to take a plane for the 1800-mile trip to Lima, Peru. Lasting impressions of Colombia—the 9 and 11 year old boys in the pottery shop at Barranquilla modeling clay, who said that they earned twenty-eight cents per day (United States money) and got their education at night school; and the beautiful new university at Bogota which is now training people from the provinces who will later go back to teach. "Before you can teach, you must know the story yourself."

## III. Ecuador.

The flight from Cali, Colombia, to Lima, Peru, covers 1300 miles and is made in about 7 hours. On this "hop" the whole of Ecuador is covered and the equator is crossed. Although only one stop for about thirty minutes was made in Ecuador it is an interesting country and deserves some comment.

Ecuador, with 175,855 square miles, is eighth in size of the ten South American republics and has a population of somewhat less than 3,000,000 people making it one of the smallest, self-governed countries in the world. Quito, the capital, is within a few miles of the equator and is a regular stop on through airplane flights from North to South America. The flight through Colombia and on this flight to Lima were made in a new Douglas DC3 plane which had the exact seating accommodations for the NRC expedition of twenty-one members. Most of the important air routes in South America have been taken over from German companies in recent years by Americans. The pilots are American trained and the passenger sees nothing different on South American flight operations than he would in Chicago or New York. If anything, the South American companies seem to be more strict in their operations and this is undoubtedly the reason for the excellent safety records.

When the world traveler crosses the equator on shipboard, after much ceremony he is doused in water and becomes a member of the "Royal Order of Neptune." Traveling by plane this procedure is not possible, so the ceremony is less formal, but the sheepskin decree given each passenger is just as good evidence as the other.

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