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Canada's Northern Empire Offers Unlimited Possibilities

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Canadian born Cyrus Eaton describes Canada's growing opportunities, finds capital for development and expansion the one serious limitation to Canadian material progress in mining, manufacturing, electric power and transportation, and suggests Canada continue to extend a cordial welcome to potential U. S. investors in view of forthcoming tremendous competition for capital in both countries and the ambitious U. S. expansion plans in the next five years, including: Class I railroads, $13 billion; electric power, $22.5 billion; and steel, $3.5 billion. Mr. Eaton observes "Russia has reached the status of a major industrial power in a remarkably short time . . . with obvious intention of outstripping the rest of the world," and that Canada occupies a position to influence constructive world peace. Steep Rock Iron Mines is cited to illustrate "the unlimited possibilities of the North."

Canada's vast unoccupied continent to the north constitutes both the fiercest challenge and the brightest promise that have ever fallen to one nation's lot in recorded history.

Cyrus S. Eaton

To occupy this now empty northern empire, master its rough terrain, conquer its stubborn climate, wrest its rich mineral resources, harness its mighty water powers, call for dynamic new pioneering. The leaders of this northward trek must not only be men of courage and vision, like the explorers and settlers of old, but must also command a broad knowledge of the miracles of modern science and a profound understanding of their practical applications.

Twentieth Century Belongs to Scientists and Engineers

Truly, the 20th Century is the age of the scientist and the engineer. And I am keenly aware that, in addressing this distinguished meeting of The Canadian Institute of Mining and Metallurgy, I have the privilege of speaking to a highly select group of the tech-

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nical experts whose thought and action are exercising a profound influence on the course of Canadian and world history.

Let us examine the role of men of science in these exciting times in which we are living. On the constructive side, I like this tribute that one of the large mining companies recently paid your profession:

"An engineer is a trained, productive scientist who works with his hands, head and heart to combine resources, materials and techniques for human well-being. The mining, metallurgical and geological engineers have pitted their skills, imagination and perseverance against the challenges of resources locked in the earth."

On the somber side, the scientists, pure and applied, have invented the instruments of total annihilation. Science has, in fact, reached the advanced point where we may use it to lay civilization in ruins or to enter into an era of unprecedented plenty.

Modern Scientific Miracles Demand New National and International Concepts

The scientist is trained to be objective in his work, and to seek and accept the truth, however it may conflict with preconceived hypotheses. In his dedication to his specialty, he perhaps holds himself more aloof than he should from the broader consequences and implications of his findings. I should like to see the physicist, the engineer, the metallurgist, the geologist, the astronomer, the biologist and the chemist also devote themselves, with their trained detachment, to discovering how we can overcome international and racial hatreds and move on to the life of peace and plenty for which all mankind yearns. While science has given us increasing power over our natural resources, we have made little progress in the arts of government and diplomacy. But the scientific miracles and technical advances of our times necessitate new thinking to arrive at new relationships between nations and within nations. The scientist should play a full part in the shaping of these fresh national and international concepts.

You can readily see from the broad responsibility I am suggesting you assume that I do not subscribe to the limited view that a witty Frenchman took when he described the main items of equipment of a geologist, for instance, as industry and a pair of legs. Scientific and technical training does not preclude knowledge and appreciation of art, literature, music, philosophy, religion and nature, any more than it closes the door to the practice of politics and diplomacy. The scientists bid fair to become the aristocrats of the future, in fact, if they so choose.

In a world where most nations are plagued by pressure of population and scarcity of basic raw materials, Canada presents a happy paradox. Her area of 3,800,000 square miles, extending from the Atlantic to the Pacific and from the Great Lakes to the North Pole, ranks her second only to Soviet Russia in continental size. Long a world leader in mining, she has barely scratched the surface of her limitless mineral resources. Her manufacturing industries are growing by leaps and bounds. Her electric power industry, upon which mining and manufacturing depend for their energy requirements, is capable of almost infinite expansion. The spirit of venture enterprise is increasingly capturing the imagination of her 15,500,000 able and vigorous people.

Canada Comes into Her Own

As Canada comes into her own, opportunities galore beckon to everyone willing to work. No longer is it necessary, as was so commonly the case in my Canadian boyhood, for young men to go to the United States for gainful employment. No longer is it necessary, moreover, for Canadians who have made their mark in business and industry to go to England to accept a title in order to belong to the aristocracy. In some quarters, I realize, there is a smoldering aversion to any concept of Canadians as "hewers of wood and drawers of water." I have always considered these and kindred occupations as stepping stones to higher places. In fact, I am proud to profess that my first paying job was as water boy for a construction crew when the old Inter-Colonial Railroad first pushed into our part of Nova Scotia, while my second employment for money was in the lumber woods of my native province.

A man's first moral obligation is to earn his living, and his second is to be intelligent. If, while he puts his back into his work, he keeps his mind alive and learns everything he can about the industry with which he is associated, he can almost certainly count on steady advancement to a well-paying position of importance and responsibility. The curse of today's big corporations, and big government bureaus as well, is the intellectual indolence that lets most employes content themselves with confining their perception to only what immediately concerns their own small department. Lack of broad knowledge of the business is often defended on the ground that a man does not want to encroach on a fellow worker's department, but this is merely a lame excuse for mental laziness.

Canadian North Offers Richest Rewards

For men who love to work, and who take supreme satisfaction in meeting and overcoming formidable obstacles, the Canadian North offers the richest rewards, spiritual and material. This is no playground for the easy-going and fun-loving folk who find their greatest happiness in the sultry pleasures of southern climes. But neither is it the barren and inaccessible wasteland, unfit for human habitation, that unimaginative and effete observers from a distance stamp it.

I have been fascinated by the northern tip of Quebec known by the romantic name of Ungava, with its mighty rivers and great mineral resources, especially its large tonnages of iron ore that roll right down to tidewater. Ungava means far away, and the Ungava country is tough as well as distant. The iron ore undertaking there will be a prodigious task. But I have been greatly encouraged by the forward-looking attitude of the Government of Quebec, by the cooperation of its Department of Mines and of the geologists, engineers and metallurgists of its great Laval and McGill Universities, and by the cordiality of the press.

Steep Rock Sets Pace for Northern Development

Let me illustrate the unlimited possibilities of the north by recalling the history of our Steep Rock Iron Mines. Steep Rock, of course, is not north in the same sense as the Yukon, the Northwest Territories, Ungava and Labrador, but, topographically and climatically, it provides a close parallel. Fifteen years ago Steep Rock was still a remote wilderness lake surrounded by moose pasture. Informed opinion in both Canada and the United States held it an engineering impossibility to uncover whatever iron ore lay buried deep beneath the bed of the lake. Jules Cross, the late Joe Errington, the late General Hogarth, Pop Fotheringham and I took a different view, for which, I might add, we were branded as impractical visionaries.

It is an old and forgotten legend, now that Steep Rock has become one of the world's major iron ore producers, possessing

high grade reserves recognized as ranking among the most extensive and valuable that are known. The success story started when Jules Cross supervised a handful of Indians in staking the original claims. Then Pop Fotheringham, a youthful graduate engineer with seven years' experience in the Canadian gold mining industry, took his young and pretty bride, also a university graduate, to live in a one-room log cabin on the shores of Steep Rock Lake. Snow shoes were their customary winter-time mode of transportation, and hungry bears and wolves were more frequent visitors than human beings. A dedicated all-Canadian team of geologists, engineers, chemists, metallurgists and miners was gradually gathered at Steep Rock and they, with their wives and children, have made of nearby Atikokan a bustling modern residential and business community. Such essentials as schools, water, sanitation, hospital, library and recreation facilities have been evolved as joint projects of the community and the Steep Rock company.

Recreation as Well as Work Stressed at Steep Rock

Let me say a particular word about recreation, which I believe is almost as important as work. For the manner in which people spend their spare time has an important bearing on the freshness and enthusiasm with which they tackle their work. Reading is a pastime that can be pursued with pleasure and profit year around regardless of the weather. Real winter weather, such as we enjoy at Steep Rock, brings ideal conditions for invigorating diversions like skating, curling, hockey and skiing. Fishing, hunting, baseball and swimming are among the popular sports of the warmer seasons.

Community growth and improvement have been substantially fostered, I believe, by my insistence that the headquarters of the Steep Rock company be located at the mines. There were those who advanced persuasive arguments in favor of Toronto or Montreal or, indeed, Cleveland, which is the iron ore capital of the world. The location of top management at the scene of operations makes for greater efficiency and responsiveness and, at the same time, gives assurance of intelligent and sympathetic participation by these men and their families in community affairs. The telephone and the airplane have largely nullified distance, so that it is possible to keep in close and constant touch with metropolitan centers. Steep Rock's policy of on-the-job management can be adopted advantageously to create splendid new towns in the Canadian North.

Aid to Steep Rock Has Paid Off for Federal and Provincial Governments

The Federal government played a necessary part in the Steep Rock development by building a spur from the Canadian National Railways' main line to the mines and erecting an ore dock at the head of Lake Superior, and the CNR realizes a lucrative return from these facilities. The Ontario government made its first major contribution to Steep Rock's beginnings by bringing in electric power, on which the Ontario Hydro Electric Power Commission now makes a handsome profit. More recently the Provincial government has linked the once isolated area to the Lakehead by highway, and automobiles now abound in Atikokan.

Canada Needs Outside Capital for Development and Expansion

One serious limitation on Canada's material progress lies in the finding of the tremendous capital funds required to finance new and expanding mining and manufacturing projects, as well as provide the electric power and transportation facilities to serve these new ventures. Money is simply not available in adequate amounts from private and public sources in Canada to meet the Gargantuan demands of the many mines to open, factories to erect, oil wells to drill, roads to build, railroads to extend, airports to construct, harbors to improve, rivers to make navigable, telephone lines to string and water powers to harness. Certainly Canadian investors should be encouraged to put their funds in Canadian enterprises, and Canadian wage earners should be educated to the advantages of stock ownership in the companies in whose success they play a vital role. The Federal and provincial governments must also meet their full share of the cost of economic expansion. But outside capital will still be urgently needed to get the job done.

In the case of Steep Rock, the responsibility for financing not only the first mine but also most of the subsequent expansion has largely devolved upon American capital. A strict condition of the Canadian Government's initial cooperation with the Steep Rock project, in fact, prohibited the raising of any funds by the sale of securities to Canadian investors. Later, when this restriction no longer obtained, Canadian investors for some time displayed considerable reluctance to support the lusty Steep Rock infant.

Competition for New Capital Is Keen in U. S.

Money from across the border may not be so easy to come by in the years immediately ahead, unless it continues to receive a cordial welcome from Canada. American industry has its own ambitious plans for expansion, at a cost running well into the billions within the next five years. Take railroads, electric power and steel, three of the industries with which I am associated. The Class I ra roads of the United States contemplating capital expen tures and material purchases talling nearly $13,000,000,000 the years 1956 through 1960. own Chesapeake and Ohio Ra way alone anticipates an out of $561,000,000 during this fi year period. The U. S. elect power industry estimates its ca ital requirements for the next f years at more than $22,500,000,0 The American steel industry m raise $3,500,000,000 in the sa years to provide added annual pacity of 18,500,000 tons. Wh will all the money come from these and the many other gro ing industries of the Uni States, and for their Canadi counterparts? Obviously, in t tremendous competition for ca ital, Canada will find it in l own interest to maintain a friend attitude toward would-be Am ican investors.

Foreign Capital an Importa Factor in U. S. Economic Grow

When the United States was its earlier days of econon growth, foreign capital was sential, and flowed in genero amounts from Great Britain, H land, France, Germany and Sw zerland. Then London was financial capital of the world. T sponsors of a new or large ente prise, whether located in No or South America, Africa or As automatically looked to Lond for money. Two world wars ha practically impoverished Engla weakened her capitalistic syste and shifted the banking leade ship of the world to America. Fo tunate it was for the free natio that the new world had attain sufficient financial strength to able to carry on where the o world was forced to leave o Now that America has assum the mantle, there is this signi cant difference that deserves to weighed with care: however mu American money pours into C

nadian enterprises, the United States has neither the desire nor the power to reduce Canada to the status of a small and dependent crown colony that she unhappily occupied at the turn of the century.

Canadian - U. S. Relations Characterized by Commerce, Not Conquest

Canada and the United States have for more than a hundred years enjoyed the unique distinction, among neighbor nations of the world, of peacefully sharing an unfortified boundary of almost 4,000 miles. What they need from each other in raw materials or finished products, they obtain by commerce, not conquest. The two countries are the chief custodians of democracy and capitalism. In the postwar world, they stand out as the young and rapidly growing economic and political giants of the free world.

On the other side of the curtain, Soviet Russia has also emerged as a modern economic and political colossus determined to drive forward as rapidly as her 216,000,000 people can be inspired and persuaded to develop and utilize the immense and varied resources of her 8,500,000 square miles stretching across two continents from the North Pacific Ocean to the Gulf of Finland and from the Arctic to the Black Sea. Through the quickest and biggest economic effort in human history, under the communistic system of complete state ownership, Russia has reached the status of a major industrial power in a remarkably short time. Now she is relentlessly continuing to raise her production sights with the obvious intention of outstripping the rest of the world.

By 1960, Russia aims to increase her 1955 coal output of 390,000,000 tons by better than 50% to 593,000,000 tons, her 1955 steel output of 45,000,000 tons by better than 50% to 68,000,000 tons and her 1955 electricity output of 170,000,000,000 kilowatt hours almost 90% to 320,000,000,000 kilowatt hours. To grasp the full significance of these figures, compare them with 1955 American production of 470,000,000 tons of coal, 117,000,000 tons of steel and 546,000,000,000 kilowatt hours of electricity. The Russians are also engaged in a concerted effort to educate and train industrial and technical experts. By 1960, the goal is 1,000,000 graduates from universities and secondary technical schools. Russia now has 890,000 engineers and scientists compared with 760,000 in the United States. While the United States graduated 53,500 of them in 1954, Russia graduated 104,000.

Russia's Mammoth Industrial Expansion Must Be Viewed Dispassionately

My purpose in citing these statistics is not to arouse hostility toward Russia, because I fervently believe that the most dangerous of sentiments is international hatred. War has never provided a satisfactory solution for international problems. The almost 40 years that have passed since World War I have given us sufficient perspective to appreciate the utter folly and futility of armed conflict among nations. The United States, believe it or not, entered into World War I on the side of France and Great Britain with high idealism. In the words of Woodrow Wilson, America felt that this was "a war to end wars" and fought "to make the world safe for democracy." The Allies were completely victorious in 1918. Yet, within a short time, there arose three of the most conspicuous dictatorships the world has ever known—Hitler, Mussolini and Stalin, and within 21 years, the world was plunged into another war more destructive and devastating than any catastrophe that had previously occurred in history. Again the Allies were victorious, and again the world is experiencing uneasy semi-peace, punctuated constantly by small "hot" wars here and big "cold" wars there.

The nations of the world, and the peoples within them, have always differed widely in their economic, political and religious beliefs. We know from bitter experience that the irrationality of war cannot settle these differences. We must further recognize that, in this atomic age, warfare will more likely than not lead to the annihilation of both aggressor and defender. Mankind's survival rests upon the frank exchange of ideas and the sincere respect for one another's convictions.

Canada Best Qualified Nation to Promote World Peace

Canada is probably in a better position than any other nation to exercise a profound influence for constructive world peace. She is admired and well liked throughout the world. With the United States, she has given a century-long demonstration that two nations can live side by side in amity. Within her own borders, she has long peacefully embraced two major races, representing two languages and two religions—both, of course, accidents of birth. This Canadian example of living in admiration and respect at home and abroad holds tremendous hope for the whole family of mankind, whose choice has narrowed down to coexistence or extinction.