

"C-A-N-O-L !"

Now, as the walls of inner-fortress Europe crumble beneath the weight of mighty Allied armies, and Japan bleeds internally from the sting of the B-29, the war story of the north can be told.

The writers are the U. S. Engineers, Quartermaster Corps, Ordnance Corps and Transportation Corps; the kid next door, the freckle-faced paper boy, the tall, gangling, young fellow from the corner service station. All, America's sons who pushed, in record time, more than two thousand miles of rolling, twisting highways through forests and swamps, over towering mountains and raging rivers. These were the men who wrestled pipe and timber in the heat of summer and the cold of hellish winter -- from ninety above to seventy below!

It is penned with the sweat, brawn and courage of the men who rode the bucking, sliding bull-dozers over one of the most rugged portions of the earth to bring into being, the mighty Canal Project!

It is the story of the Northwest Service Command -- creator of the ninth wonder of the world -- who accomplished the seemingly impossible by daring courage, skill, ingenuity, tenacity and just plain guts! It is the story and the future of Whitehorse, Y.T., Canada, keystone to one of the greatest projects of man!

It all began early in 1942, when the ruthless invaders from Nippon raped and ravaged the islands of the Pacific. The tentacles of barbarism groped northward, clutched at the Aleutian Chain. Kiska and Attu fell prey to the Japanese hordes. Dutch Harbor was bombed. Alaska felt the breath of invasion.

The Aleutian Islands were the stepping stones to the very heart of America. They were the pathway that led to the open back door of the home of democracy, through which, these little yellow men could sow their spawn of death, vomit their gruel of barbaric inhumanities.

With the northern sea lanes threatened, the need for an alternate land route to Alaska became a military necessity. There was dire need for strategic airbases throughout the northern stretches of the continent; for the precious oil that lay, untouched, within the Arctic Circle.

Oil, that was guarded by the vastness of the wilderness. And, so it was, that the dreams of far sighted men came to pass.

At this time, Whitehorse, located just above the sixty-first parallel, and lying at a hundred and thirty five degrees longitude, was a village of approximately six hundred inhabitants. The town had been, for years, the middle man in the bucket brigade of the breadline to the far north.

Supplies destined for the northern reaches of the Territories were forwarded from Vancouver and Seattle, by steamer, to Skagway, Alaska. From this point they were transported over the narrow gauge railway of the White Pass and Yukon Route to Whitehorse, and thence, by the old stern-wheelers that plied the Yukon River, to the northern outposts.

This was the land of the Golden Klondike; land which gave birth to two gold rushes. It was the land of Robert Service and his Dan McGrew and Sam McGee and ice-worm cocktails! It was a land that was rugged, largely unmapped and unexplored, difficult to traverse, cruel to the newcomer.

Here, air routes were pioneered by those rough and tough bush-pilots who flew, by the seat of their pants, through the rain and snow, fog and sleet, to bring badly needed medical supplies and rations to the outlying posts. They dropped their aircraft into tiny valleys, took off from front yard puddles!

It was these bush pilots who mapped the vast northern wilderness. They were instrumental in picking the route of the "Glory Road", the pipeline and access roads from Norman Wells to Whitehorse. They flew endless hours, brushing the mountain peaks, skimming the tree tops, flirting with death and the devil. They were married to a whirling propellor, slept with a coughing carburetor!

The prologue to the story of the north begins with the tales of the trappers and prospectors, men fresh from the Arctic wilds, who repeated the tales of Indians finding mud that would burn. This stirred the imaginations of the geological dreamers and oil became the question mark of the Arctic Circle. Oil, within sight of the Polar Ice Cap! Though the doubting laughed and scoffed, these men clung to their beliefs and thereby began an era of new pioneers.

Early in 1920, barges landed men, supplies, oxen and drilling equipment along the shores of the tawny Mackenzie River. These were the first "wildcatters" to venture into the far north.

The small party fought the mud and muskog, literally pushed their equipment northward foot by foot. They were continually bogging down and it was not long until the oxen were exhausted. At times, they would only cover a few yards in a single day. Finally, their advancement into the wilderness halted completely. At this point, they were still many miles from the site of planned operations. It was discouraging, heartbreaking.

In final desperation, they set up the rig to drill a "hope and prayer" hole. Thusly, "Discovery Well" was born. It was the discovery of new gold in the north. Black gold! This well is now located at the edge of the present Norman Wells field!

For years, Discovery Well supplied the needs of the trappers and prospectors who trekked the northern trails to Akklavik. Peacetime requirements of petroleum products were such that the field was never fully explored or developed. It was left as a storehouse for the future.

II

The Canol Project was first given life by the War Department of the United States, early in 1942. From Washington, the call went out for oil consultants, designers, topographical men, engineers, air force officers and they came from the length and breadth of the land. They conferred long into the nights and men's eyes became red-rimmed as they planned a permanent bulwark against aggression from the north. They plotted the ways and means of meeting the crisis of the day. They were the designers of national safety, of a bright tomorrow.

It was not long until ream after ream of engineering and other pertinent data were rolling across the planning boards of the future. The wheels of continental defense were beginning to turn.

In order that the Canol Project be completed with the greatest possible speed, it was originally divided into six separate assignments, one of which was later abandoned.

The completion of the Canol Project and the other northern defense installations was to be a race against time; against the unpredictable Jap who was already poised to strike at Alaska proper, or the northern Canadian coast.

The distribution of construction on the various assignments of the Canol program was to be allocated as follows:

Canol No. 1, was to be the largest individual assignment of the entire program. It was to include the exploration and development of the oil fields at Norman Wells, the construction of a refining plant at Whitehorse, and a connecting crude pipeline between the two points.

Canol No. 2, was to consist of a gasoline pipeline from Whitehorse to Shagway, Alaska. Tank farms were to be constructed at each location. Through the cooperation of the White Pass and Yukon Route, this line

was to parallel the railroad. This would provide an access to the pipeline and save precious time by eliminating the construction of an additional access road.

Canol Nos. 3 and 4, were to provide a gasoline pipeline from Carcross, Y. T., to Watson Lake, and from Whitehorse to Fairbanks, Alaska, respectively. This was to include all necessary pumping and storage facilities.

Canol No. 5, was to consist of a pipeline from Fairbanks to Tanana, Alaska. This assignment was later abandoned.

Canol No. 6, was the construction of a winter road from Grimshaw, Alberta, to Norman Wells. This road, stretching more than a thousand miles, was to be used for the transportation of supplies and equipment during the winter months.

Task Force 2600 invaded the mountainous wilderness of Mackenzie District in early May, 1942. They came into friendly Canada as allies -- two, young, freedom loving nations with a common cause. They came to wage battle with the wilderness and the elements: and, if their coming was too late, with the enemy!

These hardy, young soldiers ventured forth into one of the most rugged regions of Canada, and the world, to establish lines of communication and transportation -- the two greatest problems of the northland.

Mackenzie District was sprawled over a territory of more than half a million square miles, and populated by less than five thousand inhabitants.

The first route to Norman Wells began from Waterways, Alberta, where one travelled more than a thousand miles over a connecting series of wild running rivers and lakes. Waterways was to be the first beachhead of Task Force 2600; the first railhead of the Canol Project.

At Waterways, the soldiers constructed warehouses, loading platforms, docks and barges. The rough and narrow portages, which skirted the rapids on the water route to the Arctic, were improved. The freight coming in over the Northern Alberta Railways was unloaded almost before the boxcars stopped rolling. Cargo started to move, in an ever increasing quantity, to Norman Wells.

The long days of the summer months were filled with arduous and strenuous labor for all. Men learned to fight the black-flies, mosquitoes and bulldog flies without suffering any great hindrance to the speed with which they worked. They learned to comfort their empty stomachs and near exhausted bodies by their thoughts of the morrow, the courage and will to succeed in their efforts.

Vast quantities of supplies, pipe and equipment moved northward to Canol, and left behind, a trail of blistered hands and aching backs!

During the winter months, men fought the frigid temperatures, the blinding snow and biting winds to blast, with their bull-dozers, a trail of more than a thousand miles over the ice and snow. This was the completion of Canol No. 6, and for the first time in history, supplies moved to Norman Wells by an all land route!

It was a hard, severe winter on men and materials. Temperatures fell to seventy degrees below zero. Metals would tend to crystalize, become brittle, and then shatter at the least jar or sudden strain. Anti-freeze would freeze in the cans and men protected what little whiskey there was by packing it away in their sleeping bags! Soldiers, who were experiencing an Arctic winter for the first time, suffered, but continued working -- driving ahead.

That same winter, the Alaska Highway was pushed through to Whitehorse and northward to Fairbanks. This was the completion of the first land link between the United States and Alaska.

Whitehorse became the centre of operations for the entire program. Not only was it the Headquarters of the Northwest Service Command, but it was also the jumping off point for all the defense activities of the north.

Thousands of civilian contractor personnel poured into Whitehorse and the progress of the great Canol Project gained pace daily. New buildings were springing up, almost overnight, and Whitehorse became a bustling boom town. The streets were always crowded. There were endless lines at the cafes, the one liquor store and theatre.

Whitehorse was, literally, a village of men -- clean shaven soldiers and bearded civilians. They would stand in line for hours in front of the theatre to sit on hard wooden seats and see pictures that were from three to five years old. New business establishments were opening daily. The novelty shops did a thriving business in souvenirs of the Yukon. There was a rush on furs. Whiskey sold for forty dollars a bottle on the black market! In many ways, this was the third gold rush to the Yukon Territory.

The scenic, narrow gauge White Pass and Yukon Railway, leased by the government of the United States, was operated by the 770th Railway Operating Battalion, under the jurisdiction of the Northwest Service Command.

The soldier railroaders, working under the most adverse weather conditions and enduring great hardships, transported thousands of tons of supplies and equipment into Whitehorse. The exploits of this unit will go down in all the sagas of the north.

Geologists estimated the Norman Wells field to have a potential reserve of from fifty to a hundred million barrels of crude, or more.

The oil was of such consistency that it would flow freely at temperatures as low as seventy degrees below zero. This was a tremendously important factor in initial construction. It meant that the pipeline could be laid across the top of the ground, thereby eliminating the installation of expansion joints. This would tend to prevent breakage due to frost heavage and general winter upheavals of the terrain. Thusly, many months of additional construction were saved.

It was found that the crude oil was of a particularly high grade. In many cases, the crude was poured directly into the fuel tanks of the giant caterpillar tractors. The machines operated with no apparent loss in efficiency, and when the engines were dismantled, they were found to be in perfect condition!

All through the year of 1943, there was great activity throughout the northland. The wilderness reluctantly yielded to man as he fashioned the works of progress across the face of the land.

The chain of strategic airbases leading to and across the top of the world were completed and in daily use. The Canol road and pipeline were nearing Whitehorse. The refinery was rising in the sky and would soon be ready to drink deeply of the crude oil flowing down from Norman Wells. The ninth wonder of the world was about to be born. The entire project would soon be an accomplished fact.

Tired men worked endless hours. Worked with the knowledge that their mission was nearly completed, that they stood on the threshold of success. Progress attained a new high in momentum. Weather, terrain and living conditions meant little for they were on the march to victory.

On April 16, 1944, the first crude oil from Norman Wells reached Whitehorse, and on the last day of that month, the refinery went into production! The entire program had been completed in record time, a truly amazing feat of engineering!

Brigadier General F. S. Strong, Commanding General of the Northwest Service Command, is proud of the accomplishments of his command. Through his direction came the completion of two great monuments of preparedness and peace; two symbols of a unity between nations, the United States and Canada, that may well serve as a pattern for all the world; two great contributions to the future, of our land, that will live forevermore -- the Alaska Highway, the Canol Project and all the facilities attached thereto!

He is proud of his officers and men who suffered great hardships, worked long and tedious hours, without regard of personal convenience or comfort, performing the initial work throughout the entire field of construction; of the civilians who answered their call to

country, left comfortable homes, sheltered lives, and ventured forth into the Arctic wilderness, worked so untiringly, under the greatest of privations, to complete this vast program; of the men who stared for endless hours at the blinding flame of a welder's torch to link hundreds of miles of pipe into a continuous chain; of the oil men, the "roustabouts and roughnecks", who developed the field at Norman Wells...men who knew what it was to freeze and starve and still be a hard, tough, two-fisted fighting American; of all the men and women who did not slack in their efforts even after the Japanese had been pushed from the Aleutians and publicity seekers scorned and derided the Canol Project as futile labor; of all who could look ahead, into the future, and visualize the purpose of their labors.

III

During the past months, there has been considerable publicity and discussion in regards to the situation occupied by the Standard Oil Company (Alaska) in operating the Whitehorse Refinery and the Canol pipeline system.

This has been clarified in a statement released by the Northwest Service Command. The army's statement follows:

"When the Canol Project was first planned by the United States War Department, early in 1942, the Standard Oil Company of California was requested by the War Department to act as design consultant and subsequently to operate and maintain the pipeline and refinery facilities.

"The Company readily undertook the assignment on a non-profit basis as a contribution to the war effort. Because it was not set up to operate in Canada, Standard Oil of California utilized a wholly owned subsidiary, the Standard Oil Company (Alaska) for the job. Headquarters were set up in Whitehorse.

"The sole objective of Standard (Alaska) is to operate and maintain the Canol Refinery and pipeline system as a contractor to the United States War Department.

"It is not in any way engaged in commercial oil operation. It does not own the facilities, the crude or refined products. It does not have any control of the distribution of the refined products or prices.

"Standard has no connection with the Imperial Oil Company Limited, which produces the crude at the Norman Wells field. Standard takes the responsibility at the Camp Canol tank farm. Subsequent transportation, refining and distribution are wholly under the direction of the United States Army authorities.

"Standard has no connection with the construction and maintenance of the Alaska Military Highway. It will be responsible for the maintenance of the pipeline access road, when this road shall have been completed. The road is not a general transport highway, but is intended to be only for maintaining and supplying the pipeline and pumping stations.

"It is to be emphasized that Standard (Alaska) has no jurisdiction over retail prices or the availability of the road, fuel and diesel oils."

What is the record of Canol? What has this much disputed and controversial project accomplished? Has it been worthwhile? These are the questions of the day. Here are but a few of the answers.

There are some four thousand barrels of crude oil drilled and refined daily in the Whitehorse Refinery.

Local gasoline and oil products are distributed to all points along the Alaska Highway. They are being used in the camps and on the airbases; in cars, buses, trucks, caterpillar tractors, road machinery, lighting plants, refrigeration units and scores of other purposes.

Canol gasoline is being used in the transport planes that fly the northern routes; in the fighters and bombers that wing their way across the top of the world to Russia -- to strike at the Nazi stronghold.

Vital supply lines have been shortened by thousands of miles. Many precious days of transportation have been saved. Petroleum stocks which would normally be required for the vast northland have been diverted directly to the fighting fronts. Time and oil saved, that may have, perhaps, brought us that much closer to a final and ultimate victory.

Thusly, tankers have been released and subsequently are able to supply other theatres with the striking power for waging modern warfare; for winning decisive battles.

In all probabilities, at this very moment, aircraft are being pre-flighted on the parking strip of an Aleutian airbase, somewhere out there on the Chain. The propellers are flashing in the little sunlight that filters through a small break in the overcast. It is cold, damp, and the ground crews slap their hands together, stamp the ground, anything to keep warm.

The pilots and aircrews come out of the shack that is the combined briefing, intelligence and operations building. They sing a parody as they run across the frozen ground, of the barren island, to their parked aircraft. Their faces are young, eager, flushed with the excitement of going forth to battle. And, there is a nervous tension that seems to permeate the atmosphere for war is Death's own game. It is played with limbs and eyes and lives....and for keeps.

One by one, the airplanes move from the parking area on to the taxi strip, thence to the end of the runway. Here, they pause, the ships quiver and tremble as the engines are gunned. The pilot takes a last glancing check at the instruments, smiles, gives a thumbs-up signal to the co-pilot. Then, comes a flash from the blinker light in the tower and the huge planes move down the narrow concrete runway and lift slowly into the sky. The powerful, throaty roar of the engines is a song of triumph.

The planes circle the field, dip their wings in salute to the ground forces below. The men on the ground look up. They wave a farewell gesture. Their prayers are riding in the air this day. Their lips mutely form the words, "Kill the bastards!" Their eyes are steady, cold. Their hearts burn with hatred against a malignant enemy. They watch the planes slip into formation, swing southward and disappear into the Alcutian shroud. They will be waiting for the sound of their return....counting engines.....some may not come back.....

It is high octane gasoline, produced in the Whitehorse Refinery, that is powering these aircraft which will soon be dropping their lethal cargo of raining death and destruction on Paramashiru! Calling cards for Hirohito! Japan -- target for tonight!

They will strike the enemy again and again and again. They will go on hitting him until victory is ours; until we can write the final epitaph to Pearl Harbor!

Canol gas is dealing some of these body blows. Canol oil has closed, for all time, the once open back door to the home of democracy....

Now, I ask of you, "Is this worthwhile?"

* * *

Sgt. Ralph H. Browne