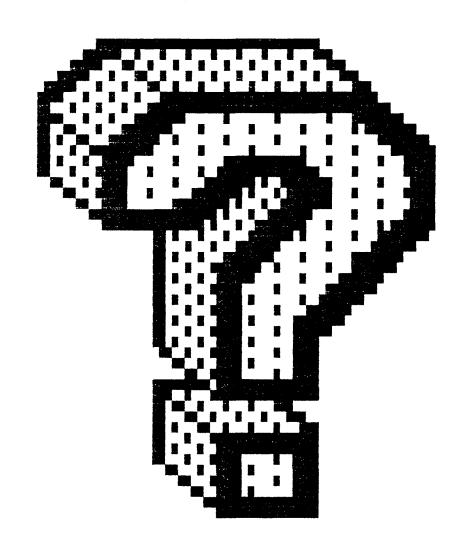
THE DALTON HIGHWAY



BY: W.T. REEVES 1987

Introduction

Although many books and papers have been written on the Dalton Highway (North Slope Haul Road), the large question still remains. When will the road be open to the public? Roads north of the Artic Circle are quite rare, especially those to the Artic Ocean. In fact there are only two major roads in North America that lead to the Artic Coast, the Dalton and the Dempster Highway. The Dalton Highway, a public road, is closed to the public north of Disaster Creek. This lack of public access to the last 205.2 miles of the road raises the most questions. The road, even though built by oil companies received federal funds and material. It belongs to the state of Alaska. It is maintained by the state, which receives federal funds. A special permit to drive the road does not make it any safer. The public does not need any more protection than the truckers.

DALTON HIGHWAY

The Dalton Highway, better known as the North Slope Haul Road to most Alaskans, winds it's way north across the tundra of Alaska like the Great China Wall.

The haul road was named after James Dalton, who was born in Seattle in 1913, and a key figure in oil exploration in the Arctic. Beginning in the early 1940s, he participated in studies and exploration projects in the region. He worked as an engineer for Arctic Contractors until completion of the Naval Petroleum Reserve No. 4 project in 1953. In the 1960s, Dalton worked with the North Commission to lay out a route for a railroad to the North Slope. Dalton died In May of 1977, just six weeks before the first oil flowed into the Trans-Alaska Pipeline. In 1981 Democratic Sen. Charlie Parr, sponsored the bill to name the haul road after Dalton.

The road was to be built within the transportation corridor, a narrow strip of land withdrawn by public land order 5150 in 1971. It became known as the Utility Corridor. It extended from Washington Creek in the south to about 60 miles south of Prudhoe Bay in the north. The 360 mile long Corridor varies in width from 12 to 24 miles wide and is managed by the Bureau of Land Management (hereafter refered to as BLM), except for a 200 foot wide right-of-way on which the 28 foot wide road was built. This right-of-way is owned by the state. The last 60 miles of the northern section of the road is on state land, with the last 2 miles under lease to the oil companies.

The most dramatic change in the nation's history concerning land ownership and status took place in 1974. The most graphic evidence of that change took place on September 29 with the completion of the 360-mile road from the Yukon River to Prudhoe Bay on the Arctic Ocean. The \$200 million road was built for the State of Alaska by Alyeska Pipeline Service Company. Involving workmen at 12 camps, the giant project was completed in just 154 days by more than 3,000 workers.

The state insisted that the road be built to conform with Federal Secondary Highway standards, with the further commitment that upon completion of pipeline construction the state would accept the road as part of the state highway system and be responsible for its maintenance and operation.

The road was built at no expense to the state. With the key to the Arctic Ocean being Alaska's first bridge across the Yukon River. The bridge was the largest contract awarded by the Department of Highways in 1974. It was awarded to Manson-Osberg-Grem at an estimated cost of \$20 million, and was to be completed by December 1975. One fourth of the \$80 million federal funding requested by the State of Alaska from the Office of Budget & Management, for highway and ferry construction, in 1975 would be used in building the bridge. The highest point of the bridge would be the equivalent to a 20-story building, with a grade of 6 percent making the north end 125 feet lower than the south end. More than 9.5 million pounds of special steel was to be used in the construction of the 2,290-foot bridge.

The first material was moved to the bridge site in February 1974. By mid summer the construction of the temporary dock to be used in pouring the footing for the bridge was well under way. Foundation for each pier was to be keyed 7 feet into rock and then anchored additionally by 12 to 14 prestressed rock anchors. Each anchor consist of a cluster of seven one and one half inch diameter rods inserted into 60-foot holes in the rock. The structural steel sections of the bridge were welded and assembled in Japan then disassembled and shipped by barge to Seward Alaska. From Seward it was hauled by truck to the highest point, or the beginning of the South end of the bridge. On a hill better than 200 foot above the Yukon River the sections were reasembled on oak timbers. The top timbers were covered with strips of tin then greased with axle grease. A large crane was used to hold the sections back until they were ready, then, by letting out cable, gravity took over and the section literally slid out onto the pier where 170,000 bolts were used to couple the sections together.

Construction on the haul road began in August 1969 at 73.1 mile on the Elliott Highway, just west of Livengood. It was built in two sections, the first section to the Yukon River being completed in July 1970 and was known as the "Taps road". By the time both sections were finished, 25 million cubic yards of gravel had been used. At the low price of 25 cent per yard in 1974 for local gravel, it would have cost Alyeska Service Company over six million dollars for gravel, if it hadn't been furnished by the Federal Government.

The largest obstacle to the average person was the Yukon River, but to the men engineering the project it lay hiden underneath the tundra,

PERMAFROST. Perennially frozen ground, or permafrost, is defined as a thickness of soil or other superficial deposit (or even of bedrock) that has been colder than 0 degrees C for 2 or more years (Muller, 1947). Unlike most nightmares that you wish away, they went to great extent to keep the permafrost around, not to melt that is. In some sections there are thick sheets of plastic foam insulation, and gravel 6 feet thick, yet the permafrost melts. Once melting starts it's almost impossible to stop, it causes mud boils which makes the road sag or shift to one side.

Highway cuts to lessen grades often expose ice wedges that melt and the water eats away at the road foundation, then the bank collapses, sometimes burying the road under tons of rock and earth.

Like a rollercoaster track, the road heads north west, crossing places with names like, Lost Creek valley, Erickson Creek and Hess Creek. As the road descends to Erickson Valley at 10.8 mile it crosses a 20 foot thick clear ice lens, the top of which is 5 feet below the natural ground surface. Just 400 foot to the south a test hole was drilled, encountering 60 feet of clear ice beneath 6 feet of frozen silt. Each summer there was a problem at Hess Creek with floating logs hanging up on bridge piling in the center of the stream. The bridge would have to be reconstructed in 1981. The new bridge is a 120 foot long bulb-T-prestressed concrete girder.

At 51.2 miles an access road was built to the Yukon River, about 2 miles above the point where the bridge was to be constructed. It was here that Alyeska contractors built an ice bridge in December 1973 by pumping water onto the ice and letting it freeze. Thousands of pieces of equipment would

cross over at this point with only one major accident reported, a D-9 Cat broke through the ice and was never recovered. In the summer months two large air-cushion transporters (hovercraft) ferried supply trucks across the river, being towed with a cable while suspended on a cushion of air.

After completing the first section of road to the Yukon in July 1970 the second phase would wait until April 29,1974 before getting under way.

Meanwhile they would cross the river in the winter and build airstrips and center supply roads, eventualy linked up with the Hickel Highway, a winter trail that was built in 1968 from Livengood to Prudhoe Bay.

The Yukon River Bridge was completed and opened to truck traffic on October 11, 1975, two months ahead of schedule, but not for the \$20 million estimation. They found a fault gouge, or a shear zone of soft material underlaying the #4 center pier. After 26 test borings and 50 jet probes to define the problem area, they doubled the size of the foundation, placing one half on bedrock and one half on 61 H-pilings driven 45 feet into the fractured bedrock, then pulled and rebuilt the caisson. An extra cost of 4.5 million dollars. By the time the bridge was completed, more than 5,000 tons of structural steel, 700 tons of reinforcing steel and 8,000 yards of concrete was used costing the Federal Government \$35 million dollars. The bridge was named for Alyeska's President E.L Patton, after His death in 1982.

On a brisk day, September 29, 1974 just 40 miles north of the Arctic Circle, on the south fork of the Koyukuk River, history was made. Two bulldozers met blade to blade, completing the 360 mile gravel overlay road

from the Yukon River to Prudhoe Bay. Although they were 240 miles north of Fairbanks it wasn't man's first time to make history on the Koyukuk. 19 miles to the north on the middle fork of the Koyukuk, Gold had been discovered in 1899 at the mouth of Slater Creek. 1000 people flocked into the area and the town of Slater was born. In 1900 the name was changed to Coldfoot after a 'cheechako' or new comer got cold feet and went back. The town had 80 cabins, a post office, a probate judge, coroner and records, and also was the office of the U.S. commissioner. The well known Alaska Commercial Company had a store there but abandoned it in 1902. It was soon replaced with Stevens & Plummer. Like most gold towns it's life was short lived and by 1912 Coldfoot was past history. The road leaves behind silant graves of the past and heads for the pass 70 miles to the north.

At 234.1 mile the road enters the south boundary of the North Slope Borough, the world's largest municipal government 88,000 square miles. Just two miles inside their boundary the Chandalar Shelf is like a ramp, with a (9) degree grade it climbs toward the largest obstacle north of the Yukon, not counting permafrost, Atigun Pass. It's here that the road crosses over the Continental Divide at an altitude of 4,800 feet, and the beginning of Atigun Valley. From here it's 114 mile down hill to the sea with permafrost all the way. In fact if all the permafrost melted, Galbraith Lake at the mouth of the 30 mile long valley would most likely become a sea port.

The Galbrath Lake area was used by man thousands of year before the construction of the road according to archaeological finds in 1979. From here it's rolling hills to Franklin Bluffs, then flat land to Prudhoe Bay.

Once the road was completed and plotted on the map it looked like a giant boomerang, and like a boomerang it would keep coming back to haunt every government official from the very smallest right up to the Governor himself. For some the Public Land Order 5150, now called (PLO) was being compared with the PLO in the middle east and Governor Hammond was Arafat. Through public meetings and talking with individuals the BLM published their recommendations for use of the corridor in February 1974. Criticism of the initial planning centered on two major assumptions: first, that the haul road would be open to the public, and second, that the Yukon Crossing would become a service and recreation center. In 1975 the BLM Alaska State Director wrote to the Governor asking for cooperation and coordination in the planning of the Corridor. On October 18, 1977 the Secretary of the Interior urged the Governor to establish State policy that would keep the road closed north of the Yukon River. Somewhere in the shuffle the Governor took complete control of the haul road.

On January 17, 1978 Governor J Hamond announced that the road would be taken over by the state on October 15, 1978, but would only be open to the Yukon River for public use. Only private tour buses would be allowed north of the Yukon. People involved by now were Federal Highway Administration, U. S. Fish and Wildlife Service, Bureau of Indian Affairs, National Parks Service, Forest Service, Heritage Conservation and Recreation Service, Alaska Power Administration, and the Joint Federal-State Land Use Planning Commission for Alaska. With this many people fighting, it was impossible to get anything on record that all could agree on.

On October 15,1978 the state took control of the road, but only on paper. On November 3, 1978 a book was published with the title, The Utility Corridor, prepaired in coordination and cooperation with the State of Alaska, North Slope Borough and Fairbanks North Star Borough. The book contained proposals of land use in the corridor. A more fitting title for the book would have been, The Three Little Pigs, with the North Star Burror being the better of the three. Meanwhile in Barrow the North Slope Borough was claiming that their Legal Powers and Options Bill of November 1977 gave them power over B L M to control land inside their buoundaries. In December 1977 they had passed Resolution 23-77 and Zoning Ordinance 75-6-1 which in short said if you are not big business you have no right crossing the Yukon River.

On November 7, 1978 North Slope Borough passed a resolution requiring B L M to have final use plans of the corridor approved by their planning commission. North Slope Mayor Eben Hopson struck out against any suggestion of opening the road to the public, and made it known that even a tour bus should be run and controlled by a local corporation like Arctic Slope Regional Corp. or a village corporation. He urged the B L M to follow guidance provided by the state, and Secretary of the Interior on use of the road. Other words let Gov. Jay Hammond run the show. The B L M held a public hearing on Monday night October 1978, and Roger Kaye was the only person to speak against opening the road to the public. Frank Moolin, president of Moolin & Associates spoke out for the miners and their rights to use of the road and the corridor. Carl Johnson, speaking for B L M said there needed to be restrictions to protect the gas line route.

The question was put point blank by W. T. Reeves,

"Sir, do you have the authority to open the road to the public?"

"No."

"Who has that authority?"

"The Governor."

After completion of the pipeline in 1977 the southern portion of the road was opened to the public, but only to the Yukon River. It was 1978 before the public could cross the bridge. Even then they could not park their trucks or boat trailors on the north side of the river while salmon fishing. Once again there was a privilege enjoyed only by big business, like movie producers filming, "To Catch The Wind." In 1978 Ken Mendes and his wife Roxanne opened the first gas station on the road just north of the bridge. In June 1979 the state was still dragging its feet on maintenance and opening the road to the public. June 25 1979 the Board Of Directors of the Great Fairbanks Chamber of Commerce wrote a letter to Mr. Fred Pratt, Editor of Fairbanks Daily News Miner blasting the state for the way it was handling the situation, and stated that the haul road had been directly responsible for over \$30 million dollars in goods and services supplied by Fairbanks firms and represents over 350 full teme jobs.

Tempers grew short on both sides of the issue, but one thing was plain. The haul road wasn here to stay. To add insult to injury in 1979 Canada completed and opened the Dempster Highway from Dawson City to Inuvik on the artic coast. It had taken Canada five year to build 417 mile of road, and Trafic would have to be ferryed across two rivers yet this road with only one service station mid way, and crosses a sensitive caribou range was open

not only to Canadains but to the world. At last Alaskans can drive to the Artic by driving the Taylor Highway to Dawson which is in no better shape than the haul road.

By 1980 the war was still raging. John Etalook, better known as Artic John would block the road occasionally and charge a toll to cross his property. Artic John was the only privite property owner that the road crossed his land. without his permission. Politicians were being called names that didn't come under the heading of Democrat or Republican. Oct. 5, 1980 the Legislature reached what was perceived as a compromise bill that would have permitted public travel north of the Yukon River as far as Dietrich between June 1 and Sept. 1. The Senate voted to open the road but in 1983. The House voted to open the road but failed to get a two thirds vote on the date 1983. Gov Jay Hammond returned the bill, saying the two chambers failed to pass the same bill. The Legislative Council sued Hammond, saying the bill became law when Hammond failed to sign.

By February 1981 staff writer Susan Fisher of the Daily News-Miner was fully occupied with public meetings and writing on the haul road. It was a blue Monday for some on February 9,1981 when something happened that only happens in the movies. Like a plot in the movies when the bride or groom fail to show up for the wedding, neither the plaintiff nor the defendant were present for the scheduled court hearing. Seems as though Pegus, the assistant attorney general representing Hammond, or Fairbanks attorney David Call representing the Legislative Council, had failed to file written notification with the court of their plans to extend the court date for 15 days. It would be looked on later as the only humor in the five year war

over the road. Superior Court Judge Gerald Van Hoomissen sat alone in a empty court room as he signed the order that says, "Plaintiff's motion for summary judgment is granted," and the Senate Committee Substitute for House Bill 207, amended, is the law of the land.

All fingers were pointing toward Van Hoomissen, but on Feb. 12th Patrick Aloia, area court administratar, set the record straight by pointing out the proper procedures for changing court dates, and it wasn't by phone. Aloia said somebody needs to take their lumps all right, which it sure as h--- isn't the judge.

On Feb. 11, 1981 B L M District Manager Carl D. Johnson, alone with James Murry, sent a hand carried letter by David Wickstrom, to Alatna, Allakaket, Rarpart, Evansville, Bettles, and Stevens Village. The letter was to inform them of an environmental assessment that they were writing on making land available for leasing commercial facilities at Coldfoot and Yukon Crossing. One of their suggestions for anyone opening a station at these two locations were as follows:

- 1. Stock 36,000 gallon of fuel.
- One service bay for 18 wheeler trucks, Two for automobiles.
 Furnish emergency road service, wrecker and tire repair.
- 3. Lodging for 60 people.
- 4. Food for 60 people.
- 5. Camping for 30 vehicles.

All this invesment for just three months service each summer.

On wednesday Feb. 19, 1981 Hammond finally anounced that he would not appeal the judges decision. Hammond's decision brought more crys from the north. The North Slope Borough had a different mayor, but he sang the same tune as Eben Hopson. Their mayor, Jacob Adams, fired of a letter to Jay Hammond reiterating their long-standing on keeping the road closed, and warned that the state might have to pay back \$35 million in federal money used to build the Yukon River bridge.

Apparently Mr. Adams never herad the Supreme Court ruling in the 60s, when federal money is spent to build schools they must be open to the public. They didn't ask the south to repay the money, they ordered the schools opened.

For R-Sen. Don Bennett and D-Sen. Charlie Parr they had won a half victory. For R-Brian Rogers and R-Sally Smith it was a half loss that Mrs. Smith quickly took advandage of. On Wednesday Feb.18 just 9 days after the order, and one day before Hammond's decision, She introduced a bill for \$8 million to bring the road up to standards, but most of the money was for repairs north of the Brooks Range that wouldn't be opened. Hal Hume, interior region manager for the Department of Teansportation, said his agency's Yukon River checkpoint simply would be moved to Dietric this summer when the road is opened. This simple move asked for another \$600,000 for check points \$75,000 for pullouts and \$2.3 million for culverts. Most of these culverts were inside the North Spope Borough, and according to Ralph Anderson, special assistant to Mayor Adams, they were inhibiting the flow of fish. No one asked how opening the road to the public efected the fish's ability to get through culverts that had been in place for 6 year.

Ice moves culverts whether the public is around or not. Hammond asked for \$6 million for road maintenance, plus R-Sally Smith's bill being introduced in the House for \$8 million.

Use of firearms and recreational O R Vs (off-road vehicles) were to be prohibited five miles either side of the road. By March 26,1981 several loopholes were being pointed out. The state does not have jurisdiction over federal land.

Their mere 200 foot wide strip of land crossed old mining and trapping trails Plus the Hickel Highway which was covered by the old R S 2477 right of way bill, providing O R V acces. Jay Hammond made no boners about his authority and intentions to close the road when construction starts on the gas pipeline. The road was opened June 1st, 1981 until Sept 1st. In 1982 it was to be opened year around. By 1984 it took two pages to list all the different permits to travel to Prudhoe Bay.

Dennis O. Olson, Assisant Professor for Department of Economics,
University of Alaska-Fairbanks, prepared a manual for the Department of
Transportetion and Public Facilities January 1986. He gives some back
history on the Dalton Highway and assess the economic Feasibility of
various improvements alternatives. Maintenance cost for the road has
varried over the years from a low of \$8,000 per mile to \$27.000 per mile.

In 1985 it averaged \$18.000 per miles. To bring the road up to standard and
widen to 30 eeet would cost \$121 million. To upgrade and pave it would cost
\$ 207 million. The road could be paved to cut wear and tear on vehicles,
also saving on gas and oil, but the price of gas has dropped from \$1.86 per

gallon to under \$1.00 per galon sence the study was made. The average trucker can make a round trip in two and a half to three days, using 250 gallon of fuel and is payed \$2,100.00 if he owns the rig. There would be at least two to six weeks out of the year when load restrictons would be imposed during spring thaw and fall freeze up if it were paved. If load restrictions were 75% of axle weight it would increase trucking cost by 65%. Trucking could lose \$3 million in one year, equal to 20 to 40% of annual maintenance cost of the road.

There are materials that could be used to pave the road that would not call for load restrictons, but would up the cost by 30%. Paving would also reduce traction in the winter months, causing the truckers more danger, and more chaining up on steep grades. Chains would eat away on the road surface, calling for more maintenance.

Studies to justify widening the road showed that traffic peaked in march 1977, with an average daily count of 465 vehicles per day. By 1983 it had droped to 103 vehicles per day. If the road was ever widned, 36 foot would seem to be the most economical. Treating the road with Calcium Chlorid would probable be better than paving. Both could be accomplished for \$174 million. There was still 19.8 million cubic yards of gravel left in the 41 pits throughout the Corridor for maintenance in Nov. of 78. With cutbacks in Fedral funding Alaska could lose most of their \$150 million annually suport for roads. This loss of funds would force the state to leave the road as is except for maintenance. As funds were available it could be widned to 36 foot one section at a time, with the 20 remaining 24 foot wide bridges being replaced over a period of years. 60% of all the

accidents took place south of the Yukon, meaning this portion should be improved first.

As usual our hindsight shows us our mistakes, and we realize that the Dalton Highway is just what it was designed for, a haul road. If the state would have made the road a joint venture with Alyeska pipeline Service Company, and built it for the future, they wouldn't be faced now with nail soup. All bridges should have been at least 30 foot wide, instead of 24 foot wide. They also should have been designed for heavier loads. The Yukon River bridge is a one and only, and should have been 36 foot wide instead of 30 foot, and should have had a center girder.

The road is a jugular vein for Alaska, and to let it deteriorate would be economical suicide, and to close it would be like cutting off the hand that feeds you. The road is the oil company's ace in the hole. This was proven in 1975 when their 18 barges could not get through the artic ice.

4,000 truckloads, a total of 60,000 tons was hauled up the road. Without the road the pipeline would have been set back two years. The oil companies are Alaska's future, without them Alaska would be 25 years behind the rest of the states.

At the Artic Circle the road reaches it's farthest point west. From here it's only 225 miles to Selawik on a bay off Kotzebue Sound. 115 miles along this route, or midway, there or significant known mineral deposits, the Smucker, Arctic, Sun, and Bornite. The Artic being the largest of the four, this reserve deposit could be 40 million tons, with ore averaging 4% copper, 5.5% zink, 1% lead, 1.6 ounces of silver per ton. On the middle

fork of the Koyukuk near Tramway Bar a 10 foot thick bed of nearly pure coal has been reported. From Coldtoot to Wiseman are high deposits of gold, silver, copper, lead, zink and antimon. The road makes it possible to open commercial fishing in some of the richest Cod and Artic Char fishing in the world. With refrigerator trailers it would give some of the trucks a return load to Anchorage. Even coal could be trucked back from Coldfoot and stock piled at the Yukon River, to be barged to Stevens Village, Rampart and Fort Yukon. Any surplus could be hauled to Livingood, Fox and Fairbanks.

What is now considered the end of the road at Prudhoe Bay is merely a fork in the road, with one leg going west alone the coast. It has already crossed the Kuparuk River, leaving the Colville River the only major obstacle between Prudhoe and Point Barrow 170 miles west. The other leg heads east toward the Arctic Refuge where one day the Coastal Plain will be developed. As Canada moves westward with their oil fields, their Dempster Highway will eventuality link up with the Dalton, and will become a major tourist route. By the year of 2010 in the Prospect Creek area a road or railroad will leave the Dalton heading west alone the south foothills of the Brooks Range to Dall Creek. From here it will continue to Nome, then to \frac{3\pi_1 \pi_2 \pi_2 \pi_3 \pi_4 \

By June 1986, Policys and Procedure covered 9 pages, yet the road remains closed to the purlic. As was stated in the Daily News-Miner's

editorial opinion and comments on Sept. 4, 1979, "If we could build a road with excuses, the North Slope haul road would be a four-lane superhighway." As 1986 comes to a close, the paper work on on the Dalton Highway continues to grow. A paper roadblock as tall as Atigun Pass waits for the new Governor. The question is not, and should have never been, should the road be opened to the public? The question is, will the new Governor Steve Cowper work for the people or will he be another Jay Hammond or Bill Sheffield, and cater to Big business? If he is for the people he will be on the right road, and we the people of Alaska will be on OUR road, The Dalton Highway.

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