092008

Box 969,
Whitehorse, Y.T.,
May 20, 1964.

Mr. John Lamb,
Chief Geologist,
Empire Development Company Ltd.,
1012 - 736 Granville St.,
Vancouver 2, B.C.

Dear Mr. Lamb,

In answer to your letter of May 15th, 1964 neither Mr. Oliver or I have visited the Giant Steel property north of Mayo, Yukon. However, I can give you some general information based on my mapping in the area.

I understand that the deposit consists of specular hematite occuring in Precambrian slate and quartzite immediately beneath the unconformity with the overlying Ordovician carbonate rocks. Other deposits of this type are relatively common along this contact in the area between Mayo and Dawson. Discovery of two similar deposits resulted in a staking rush to the Wind River area in the summer of 1958. I have no idea of the potential tonnage present at Mr. Jellinek's property but one of the deposits staked in 1958 was estimated to contain perhaps 25 million tons. The above estimate was made on the basis of a quick examination by an exploration geologist.

The deposits are completely different from the Crest Exploration deposit some 50 miles to the northeast. The latter occurs in Precambrian (or possibly Lower Cambrian) rocks and is a bedded sedimentary iron formation in contrast to the "hydrothermal" appearance of these deposits.

I trust the above information will be of some value to you.

Yours truly,

L.H. Green,
Resident Geologist.

LHG:ep

Giant Steel

EMPIRE DEVELOPMENT COMPANY LIMITED

1012 - 736 Granville Street
Vancouver 2, B. C.

May 15, 1964

Dr. L. H. Green,
Resident Geologist,
Geological Survey of Canada,
Government Bldg.,
Whitehorse, Yukon.

Dear Dr. Green: Re: Pacific Giant Steel Ores
45 Miles northeast of Mayo

At the suggestion of Mr. Tom Elliott of the Chamber of Mines, I am writing to you for any information you are free to give regarding this property, owned by Art Jellinek.

Mr. Elliott said he is sure either you or Mr. Oliver visited the property in 1963 and that a description of it will appear in the 1963 paper on the Yukon Mineral Industry.

Thanking you, I remain

Yours truly,

EMPIRE DEVELOPMENT COMPANY LIMITED

John Lamb

John Lamb, P.Eng.
Chief Geologist.

JL/ms

F.C. Confl Giant Steel Prospectors Art Jellinek Nov. 1962

HEMATITE IRON DEPOSIT
YUKON

OWNER: Giant Steel Prospectors Partnership, Box 2017, Whitehorse, Yukon Territory; registered sole agent and partner, Art Jellinek.
CLAIMS OWNED: Giant Steel Group of mineral claims, numbers 1 to 6 inclusive; recorded at the Mining Recorder's office, Mayo Mining District.
LOCATION: 100 miles northeast of Mayo, 50 miles southwest of Crest Exploration Co. (subsidiary of Standard Oil of California) sedimentary hematite iron deposit located this spring at the Snake River at latitude 65°, longitude 133°. The Snake river deposit is estimated to be one of the largest deposits of hematite in the world, containing an estimated 20 billion tons of hematite of ore grade. The Giant Steel deposit of intrusive hematite is on the Bear River, 14 miles from the Wind River; latitude 64°-50', longitude 134°-15'.
PRESENT TRANSPORTATION SYSTEM: The Wind River winter road passes within 15 miles of the Giant Steel deposit; this road can be turned into an all-weather road by gravelling the first thirty miles and building permanent log bridges across streams for the remainder of the road. The Wind River Road leads to Elsa, United Keno Hill Mines' operating mining camp, from where an all-weather road runs to Mayo for 30 miles. Mayo is connected to Whitehorse by 254 miles of highway, and Whitehorse to the Alaskan sea-port of Skagway by 99 miles of railroad. Cargo ships call regularly at Skagway, from where ore from the Yukon has been going to Vancouver and Japan.
PRESENT ACCESS: (1) Two-hour helicopter flight from Mayo, or (2) one hour fixed-wing flight to the nearest large lake 15 miles from the deposit, thence by helicopter to the property.
TOPOGRAPHY OF THE AREA: The deposit of hematite iron lies in the Wernecke Mountains, which consist of mountain chains averaging 7000 feet in height. Valleys are wide and "U" shaped because of former glacial erosion. Timberline is at about the 3500-foot level compared to sea level.
WATER POWER: A large river, the Bear River, flows within one mile of the deposit, at the head of which a large lake, Gillespie Lake, is located. This lake is 2 miles long and one-half-mile wide, deep. A small creek flows within a few hundred feet of the center line of the deposit, and in fact forms the eastern limit of the intrusive knoll constituting the deposit. A small, shallow lake is within one-half mile of the deposit.
TIMBER: Mining timber is within a few hundred feet of the deposit.
FUEL: 115 miles northwest of the deposit western Minerals has a gas well of 10,000,000 cubic feet per day proven capacity on the Eagle Plain. Coal is known to occur at a little over 50 miles north of the Giant Steel hematite iron deposit. Presently, drilling for further gas and oil reserves is being conducted within 50 miles of the deposit.
FLUX FOR STEEL MAKING: Large deposits of limestone, dolomite, and quartzite occur as mountain ranges around the hematite iron property.

MINERALIZATION OF THE DEPOSIT: The iron, in the form of hematite, occurs in a dome-shaped body intrusive into Precambrian quartzites and slates along a fault zone. The deposit forms a prominent knoll at the bottom of a gulch leading into a large cirque. Between tthe top and the bottom of the knoll there is a 500-foot elevation difference, and the lowest part of the knoll is at near valley-floor elevation and thus easily accessible.

The knoll, before disappearing under glacial overburden of till, has a length of 1600 feet and a width at its lower end of 1100 feet. The knoll forms a "V" shape in plan, i.e. widening out at the point where it disappears under overburden. In section, the knoll forms an inverted "V", i.e. it widens with depth.

A depth gradation, i.e. increase in grade of iron with decrease in elevation, is apparent on the deposit: At the top of the knoll, brecciated intrusive jasper is barren; further down, the same brecciated jasper is cemented by hematite; at somewhat lower elevation, veinlets of hematite occur and considerable cementation of brecciated intrusive jasper by hematite; lower downward, heavier veins of solid hematite appear, and the quartzite and slate host rock is partially replaced by hematite; toward the bottom of the knoll, the veins of hematite are numerous and form a zone several hundred feet wide, individual veins being often tens of feet wide and the host rock between the solid hematite veins is frequently highly replaced by hematite; at this lowest point of elevation before the knoll disappears under overburden, no more jasper is present, only hematite veins forming a wide zone across the bottom, widest part of the knoll. One section at the bottom of the knoll has an almost solid zone of hematite for about a 600-foot width.

POSSIBLE RELATIONSHIP TO SEDIMENTARY HEMATITE AT THE SNAKE RIVER: Crest Exploration's deposit extends over 150 square miles, and has a thickness averaging 200 feet. It is nearly flat lying, and it was deposited in Upper Cambrian time. The Giant Steel deposit has little areal extent compared to that of the Crest deposit, i.e. six claims well cover the areal extent possible, but being intrusive it may have very great depth, possibly to several thousand feet. In fact, if the hematite continues to go downward as an inverted "V" with the sides at a 45° angle, and if shortly below the present surface it spreads over an area of six claims, then at a depth of 5000 feet a possibility of about 25 billion tons may be had, i.e. in excess of that at the Crest. Naturally, this is not a probable estimate of tonnage of hematite but the tonnage which would be present if all conditions are at a favourable maximum. There is, though, evidence to support the fact that there is an increase in the width of the hematite intrusion with depth, as explained under "Mineralization of the Deposit."

Furthermore, the Geological Survey found that there was an unconformity (period of erosion) between the older Precambrian rocks--the oldest exposed anywhere are the quartzites and slates, such as in which the Giant Steel hematite is intruded--and the Cambrian rocks; the Crest sedimentary hematite occurs as an iron formation in Upper Cambrian rocks. Thus, it is conceivable that erosion of a number of intrusive hematite bodies similar to that of Giant Steel--which itself has been only slightly eroded--could have given source material for the deposition of such sedimentary hematite formations as that at the Snake River.

MINING: The deposit, being at valley floor level, can be readily mined by open-pit methods. A road or rail spur can be driven directly onto the top of the deposit from the existing Wind River winter road, the job being simple as the 15 miles' of connection to the Wind River would be driven along the Bear River xxkxxx valley, a wide, flat, gravelly valley.

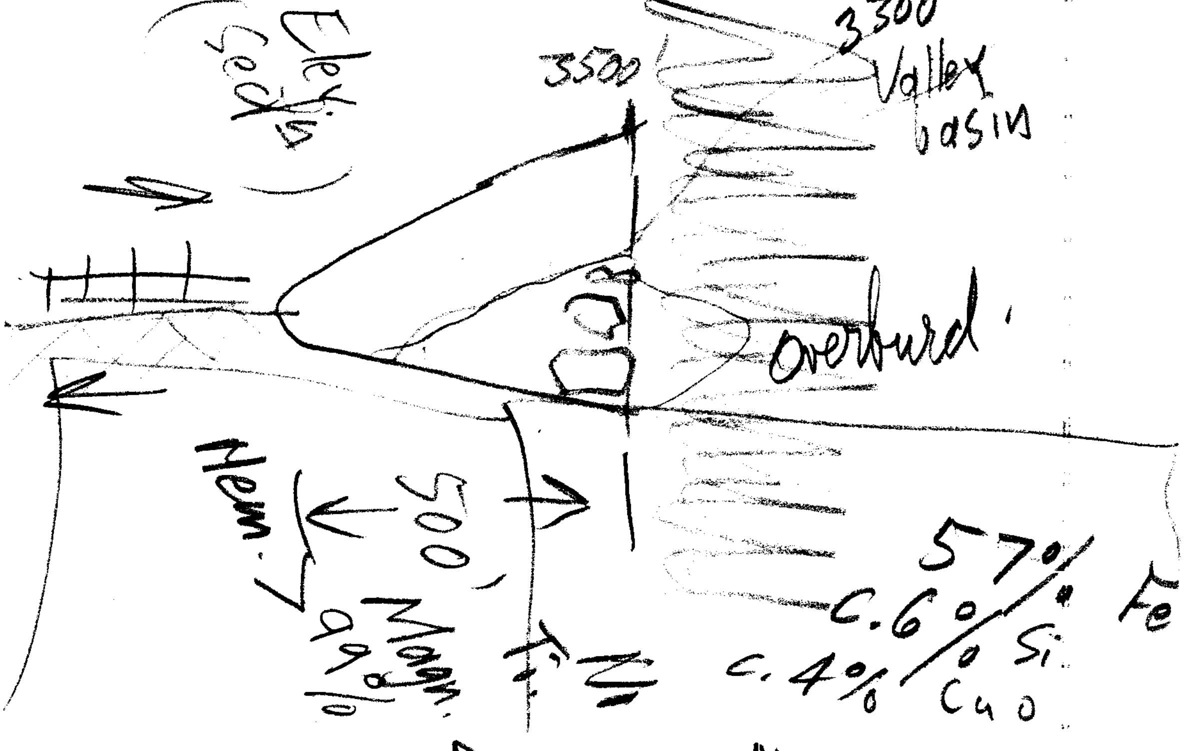
FUTURE ORE TRANSPORTATION: A railroad can be driven from the existing terminal at Whitehorse to Mayo along the present highway--no rock cuts would be involved, as the highway follows major valleys. Presently, Crest Explorations is conducting a feasibility survey for a railroad from Mayo to the Snake River, and it has found so far that such is physically possible. Since the railroad would again go through major valleys to reach the Snake River, little to no rock cuts would be required, and therefore the cost of building the railroad would likely be far less than that built into northern Quebec-Labrador, the latter being cut through rock all the way for 400 miles. A spur line could be put in from the Snake River railroad to the Giant Steel property, and such would be within 50 miles. It is considered now possible that if railroad transportation be used the hematite from the Snake River could be economically taken to tidewater at Skagway, particularly if the cost per ton mile could be kept similar to that of the railroad hauling iron ore from northern Quebec-Labrador.

PIG IRON XXXXX PLANT: Since a proven gas well of 10 million cubic feet per day capacity is within 115 miles to the northwest, transportation costs may be further reduced by smelting pig iron, which has a higher unit value than the ore. There is now a method of reducing iron ore to metallic iron by direct reduction with natural gas only. Further finds of oil and gas are also considered likely in the area to the north, the Peel Plateau, where drilling is being carried on within about 50 miles of Giant Steel property.

MARKETS: The Japanese ferrous-metal industry is engaged in a large, long-range program of acquiring reserves of iron ore, as well as other metallic ores, for the next 25 years to feed its smelters. New smelters are now being built in Japan, which is reclaiming coastal lands for smelter sites. The west coast of North America, particularly the industrial complex of California, is also using largely increasing amounts of iron ore for its steel industry.

RECOMMENDED PRIMARY EXPLORATION OF THE GIANT STEEL HEMATITE DEPOSIT:

1. Drill holes to prove the depth extent of the intrusive, primarily; length extension, secondarily.
2. Possible stripping at the lower end of the hematite knoll where it disappears under overburden.



57% Fe
c. 6% Si
c. 4% CaO
No Ti
> 19. Magnetite