W.A. No. .....

NAME Geol Rpt.

SUBJECT

Bull River Iron.

PROPERTY FILE

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REPORT ON BULL RIVER IRON DEPOSITS

BY

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VANCOUVER, B.C.

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PROPERTY FILE

SUMMARY

The Bull River Iron Deposits held by W. H. HUDSON AND ASSOCIATES have a probable 20 to 30 million tons of up to 50% Iron Ore with a possible tonnage many times this amount. The deposits are ideally situated with regard to transportation, power and coal.

A program of diamond drilling is recommended to prove up tonnage and grade.

Estimated cost of this program is $198,000.00

BULL RIVER IRON DEPOSITS

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IN ENVELOPE IN BACK COVER

1) Paper by C. Hungerford-Pollen, F.G.S., M.A.I.M.E.

2) Report from P.117 N of ~~1921~~ 1920 B.C.Minister of Mines Annual Report

3) Bull River Iron Deposits Ideal Cross Section

4) Map showing Claims held by R. W. Hudson

5) Map showing Bull River Area and Transportation links

REPORT ON BULL RIVER IRON DEPOSITS

1. INTRODUCTION AND PURPOSE OF REPORT

The following report on the Bull River Iron Deposits is made for W. H. Hudson and Associates.

The examination for the report comprised of two days spent on the ground and was made with the view of confirming information from two sources, first a paper published in the Mining Record Issue of August 1902 by C. Hungerford-Pollen, F.C.S., M.A.I.M.E., entitled "The Bull River Iron Mines" and secondly, a report in the Annual Report of The Minister of Mines for British Columbia of 1921, Page N.117.

pp 117 ENP
no statement or data indicate known or probable

The two days spent on the property were used up making reconnaissance of the workings as shown on a plat accompanying Hungerford-Pollen's paper.

Two reports, two plans, one Cross Section and two photographs accompany this report and are more specifically described as follows:

1) The Bull River Iron Mine by C. Hungerford-Pollen, F.C.S., M.A.I.M.E. copies from The Mining Record, August 1902.

2) Report from Minister of Mines Annual Report of 1921 - Page N 117 - Bull River Deposits.

3) Map showing Bull River Area Transportation Links on a scale of one inch equal to 8 miles.

4) Map showing claims held by W. H. Hudson on Mount Fenwick, Bull River Area.

5) Ideal Cross Section of Bull River Iron Deposits showing ore zone on a scale of one inch equals 250 feet.

6) Photograph showing highgrade Hematite Ore on dump of old working.

7) Photo showing Dolomitic limestone bluff on Oveson Creek side of summit of Mount Fenwick.

HISTORY

The claims were first located about 1900 and early development was done by a Mr. J. T. Laidlaw, Mining Engineer of Fort Steele, B.C. Mr. Hungerford-Pollen's paper is the most complete record of early work on the deposits that have come to light.

The work performed by Mr. Laidlaw has now been nearly obliterated except for small dumps of ore.

AREA HELD

W. H. Hudson and Associates hold two crown granted mineral claims by lease from the Province of British Columbia. Ten full size mineral claims are held by location. The located claims overlap the Crown grants and, therefore, the area held comprises approximately 500 acres.

LIST OF CLAIMS HELD IS AS FOLLOWS:

CROWN GRANTS

Crown Grant No. 4346 - Goliath Claim

Crown Grant No. 4348 - Hematite Claim

LOCATED CLAIMS

BULL NO. 1	TAG NO.	401701
BULL NO. 2	"	401702
BULL NO. 3	"	401703
BULL NO. 4	"	401704
BULL NO. 5	"	401705
BULL NO. 6	"	401706
BULL NO. 7	"	401707
BULL NO. 8	"	401708
BULL NO. 9	"	401709
BULL NO. 10	"	401710

LOCATION

The Bull River iron deposits are on and near the summit of Mount Fenwick on the Bull River in the East Kootenay District of British Columbia. Mount Fenwick is 12 miles due West of Fernie, B.C. Latitude 49° 30' and Longitude 115° 18' pass through Mount Fenwick. Elevation of the iron exposures are from 6000 to 6800 feet above sea level. The base of Mount Fenwick on the Bull River is at 2500 ft. above sea level.

ACCESSIBILITY

The base of Mount Fenwick is easily accessible by a number of logging roads which lead in from a secondary gravel road that parallels the Bull River from Wardner 12 miles away. The southern Trans-Provincial highway passes through Cranbrook, Wardner and Fernie. Canadian Pacific Airlines have daily schedules calling at Cranbrook. The Canadian Pacific Railway, Southern B. C. Branch,

also passes through Wardner and a branch line passes through Bull River Village 6 miles from the property.

The old pack horse trail from the base of Mount Fenwick to the claims near the summit is obliterated and grown over so present access is by helicopter or hiking in on foot with no trail to follow. Slopes of the mountain are steep averaging 25° so that a road from the base to the claim area would be 8 to 9 miles long and require numerous switchbacks. Overburden in most places would be sufficient to allow road building without rock work.

TOPOGRAPHY AND GENERAL FEATURES

The claims and iron showings are located on top of Mount Fenwick and lie mainly on the Southwest flank of the topographically dominant ridge which trends Northwest and Southeast. The northern side of the ridge drop off in steep bluffs to Oveson Creek while the southern side has a uniform slope of near 25°. The uniformity and continuity of the slope is an outstanding feature of the topography. The claim area is covered by a light growth of Balsam and Jack Pine with some coarse grasses. Overburden seems to be uniform and average two to three foot thick. No merchantable timber is found on the claim area. A small creek flows out of a flat fissure, about 200 below the summit ridge, and is centrally located in the claim group. This creek would provide ample water for diamond drilling and camp use.

GEOLOGY

The Bull River Iron Deposits lies within an area of Pre-Cambrian rocks. The base of Mount Fenwick is made up of argillaceous shales and quartzites which have been classified as of the Creston series of the lower Pre-Cambrian by G. M. Leech of the Geological Survey

of Canada on a map accompanying Paper 58 - 10, Fernie Map Area, West Half, 1948.

In the same paper the top of Mount Fenwick has been classified as being part of the Kitchener-Siyeh Formation, lower Pre-Cambrian and on the basis of outcrops examined by the writer it would appear that dolomitic limestones predominate. These rocks are bedded with a north-westerly striking dip of the beds and a low angle of dip to the north. Locally these strikes and dips vary.

Some evidence of shearing normal to the strike of the bedding was noted and evidence of a fault movement was noted on float but no evidence of this was found in place. It is the writer's opinion that the indicated shearing is post mineralization and may offset along bedding planes. The shear fissures were probably the channels along which the hematite mineralization took place.

MINERALIZATION

Hematite mineralization is found over most of the claim area. The ore zones as defined by Hungerford-Pollen have massive hematite mineralized beds. The hematite shows the original bedding planes of the replaced rock. Most outcrops observed have hematite from minor amounts to completely replacement of the country rock.

DISCUSSION OF C. HUNGERFORD-POLLEN'S PAPER

While many of the workings shown on the plat accompanying C.Hungerford-Pollen's paper are caved and the full widths of the mineralized faces. In a calculation of ore reserves on the property Mr.Hungerford-Pollen by his own admission has taken only the depth of the top bed while at the same time showing in a section that the beds lie one over the other with country rock or low grade partings between,this appears to be

the case. The writer saw no evidence to suggest the ground between the indicated zones had been investigated. The thickness or depth of the zones as shown on the plat and which are confirmed by inspection of the old workings are compared with the thickness or depths used by Mr. Hungerford-Pollen for making up his tonnage calculation.

No. of Deposit	Depth-Hungerford-Pollen Used, Feet	Estimated Depth from Plat and Observation Feet
A	10	60
B	6	110
C	6	135
D	4	45
E	2	30

Using these new depths with allowance for partings would give an ore reserve of between 20 and 30 million tons. No allowance has been made for the ground in between the zones as marked on the plat nor for widths greater than those observed by Mr. Hungerford-Pollen. Any extension of widths or hematite replacement of the beds between the zones shown would increase these tonnages many times.

ASSAYS AND GRADE OF ORE

Two samples of ore material were taken for assay by the writer and are compared with analyses made by former reports.

	Insol Residue	Silica	Sulphur	Phos	Fe
Average of 9 Analyses by Hungerford-Pollen	8.5	[illegible]	0.62	0.028	61.35
1 Analyses Reported in B.C. Minister of Mines 1921 Report		22.2	0.65	Trace	51.6
No. 16851B by V. B. Bjorkman		[illegible]	0.18	0.015	46.40
No. 16852B by V. B. Bjorkman		[illegible]	Trace	Trace	60.40

These analyses show the ore to be of premium grade suitable for Bessemer furnaces.

CONCLUSIONS

The writer submits the following conclusions:

1) That the paper presented by Mr. C. Hungerford-Pollen in the August 1902 issue of the Mining Record is factual with no allowance made for probabilities.

2) That the Bull River Iron Deposits have approximately 1 million tons of proven highgrade Hematite iron ore with probable ore amounting to 20 to 30 million tons and possible ore many times that much.

3) That the Bull River iron deposits are ideally located for exploitation with regard to transportation and close proximity to the Crows Nest coal fields and also the West Kootenay Power and Light Companies power development, on the Bull River Canyon at the base of Mount Fenwick.

4) That the 25° slope of the claim area makes it ideal for an open pit mining operation and combined with little or no stripping of overburden required should give below average mining costs.

5) That diamond drilling is the only feasable method that may be used to prove tonnage and grade.

RECOMMENDATIONS

The writer submits the following recommendations:

1) That a program of diamond drilling be started with the first 2 holes spotted in near the corner common to Bull Nos. 2, 3, 4 and 5 Mineral Claims and a third hole 1500 West on strike.

2) That depending on the results of the first three holes a road to the property be laid out suitable initially, for use by four-wheel drive vehicles, to service the follow up program of drilling.

3) That a study of the economics of a plant to produce pig iron using coal from the Crows Nest coalfields be instituted. This study to include such items as, possible markets, costs of production, best plant location, and sources of limestone flux if required.

COSTS

The initial drilling of three holes is expected to be serviced by Helicopter and estimated footage required would be 1500 ft. Follow up drilling on grid pattern would require approximately 30 holes of an average of 600' depth per hole. Costs are tabulated as follows:

Preliminary drilling AX size, including Helicopter	20,000.00
Follow up drilling 18,000 ft.	119,000.00
Road to Property	32,000.00
Camp expenses and transportation	15,000.00
Engineering studies of project	12,000.00
TOTAL	$198,000.00

RESPECTFULLY SUBMITTED

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