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February 1st, 1937.

Dr. John F. Walker,
Acting Deputy Minister of Mines,
VICTORIA, B.C.

Sir,

re American Boy, near Hazelton.

I beg to enclose a statemtn which I have prepared concerning the American Boy mine, near here, which I think you may be glad to have for your files in view of the fact that statements concerning this property frequently occur in the press.

Although I have not myself inspected this property, if you glance at my "conclusions" first, it will perhaps facilitate your consideration of certain aspects of this property.

I am preparing similar statements for your files concerning the Fiddler group and Aurimont Mines Ltd., both of which have been recently mentioned in the press, and will send these forward as soon as possible.

I am, Sir,

Yours faithfully,

Resident Engineer.

AMERICAN BOY (near Hazelton).

Property: Originally apparently the property consisted of eight Crown-granted mineral claims, but it is not known to the Resident Engineer what claims are now in good standing, and by whom these are owned.

Location: The property is situated on the south-west slope of Nine-mile mountain, and is distant about 7 miles from either Hazelton or New Hazelton. It is reached by a motor-road, known as Nine-mile Mountain road, which branches from the main road at a point 2 miles from Hazelton. The character of the ground is that of well-timbered mountain slopes.

Type of deposit: There are a number of parallel veins striking approximately north 30 to 40 degrees east, and dipping 40 to 70 degrees south-east. They are offset to a small extent only by a series of small faults. The formation consists of tuffs of the Hazelton series intruded by dykes of granodiorite porphyry. Three of these veins have been developed and a fourth which may be an extension of one of these. The veins are fissure veins varying in width from 6 inches to 3 feet. The gangue is quartz, and mineralization consists of galena and sphalerite, with lesser amounts of jamesonite, arsenopyrite, tetrahedrite, and chalcopyrite and pyrite. Values are shown by assay of shipment given below.

History: The property was apparently originally discovered by the Harris Brothers of Hazelton. In 1912 Harris Mines Ltd. was incorporated for the operation of the property, and all important activity took place within the next two years. Subsequently beyond a short-lived resumption of operations in 1926 and extending

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into 1927, the property has lain dormant. In 1926, the shaft sunk on No.3 vein was deepened another 50 feet to the 300-foot level, and some crosscutting was carried out at the bottom of this shaft. (Save for this additional development, the detailed accounts of the property given by Galloway in the Annual Reports for 1914 and 1917, and by O'Neill in Memoir 110 of the Geological Survey of Canada, must presumably represent the position today. The property has not been examined by Lay). The total shipments of hand-sorted ore amount to 100 tons assaying (as stated in the Annual Report for 1914, page K171): Gold, 0.08 oz. per ton; silver, 112 oz. per ton; lead, 29 per cent; zinc, 12 per cent. This ore resulted mainly from No.3 vein, and was shipped prior to 1914. In 1918, apparently, 250 tons of ore was hauled to the Silver Standard mill, and milled that year, but the returns are not known to Lay.

(Refer to Annual Reports for the years 1910 to 1914, 1917, 1918, 1923, 1926, 1927, and to report by J.J. O'Neill in Memoir 110, of the Geological Survey of Canada, 1919. Note; Detailed accounts of the property appear in the Annual Reports for 1914 and 1917, and in Memoir 110 of the Geological Survey of Canada).

Surface showings: The veins on this property are numbered in order going up the hill, so that No.1 vein is the lowest.

No.1 vein is exposed on the surface by open cuts for "some distance" and an ore-shoot 90 feet long is disclosed. The width of the vein varies from a few inches up to 2 feet.

No.2 vein is 150 feet south-east of No.1, and is exposed on the surface by open-cuts and trenches at intervals for a distance of

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300 feet. The width of the vein is from 2 to 3 feet and "the quartz is sufficiently mineralized in some places to constitute ore".

No.3 vein is about 600 feet in an easterly direction from No.2. "It has been exposed at intervals for a considerable distance on the surface, and if what is sometimes called No.4 vein is the same as No.3, and this seems likely, then it has a length of ^{at least} ~~1500~~ ^{at least} 1500 feet". "The vein varies in width from 2 to 3 feet with an average of about 2 feet. A number of small, steeply-inclined faults, with planes of strike north and south, offset the vein for distances of a few feet. These faults had apparently a nearly horizontal movement, thereby simply causing displacements along the length of the vein". (On page K198 of the Annual Report for 1914. last line but one from the bottom of page, the word "vertical" should read "horizontal" according to a note in Galloways handwriting in the copy of the report on file in this office) No.4 vein, or the continuation of No.3 vein northwards, "where exposed on the surface, shows in places a little ore".

All veins have free walls, with, in places, development of gouge.
Underground workings:-

On No.1 vein, a shaft inclined at 60 degrees, has been sunk to a depth of 100 feet. At a depth of 27 feet, a level has been driven north for a distance of 12 feet; at a depth of 50 feet a level has been driven 5 feet south. Throughout these workings the vein is fairly well mineralized, and in many places minerals exhibit a well-defined banded structure. North of the shaft mentioned, but at a short distance from it only, another shaft

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has been sunk to a depth of 25 feet , but this was filled with water in 1914. It is noted that in places this vein is "split up somewhat.... at the surface it consists of two bands one on either side of the shaft (that sunk to a depth of 100 feet) separated by wall-rock, each of which is from 18 inches to 8 feet wide".

An adit-crosscut has been driven cutting No.2 vein at 310 feet from the portal, and has been continued 80 feet beyond the vein. "The vein was also drifted on for some distance". "The vein in this working consists mostly of quartz varying from a few inches up to 1 foot in width, but only very slightly mineralized, and with no pay-shoots of ore of much importance". It is not stated in the Annual Report for 1914, from which the account of the surface and underground workings is taken, how far horizontally the point of intersection by the adit lies from the surface showings on this vein, or at what vertical depth below the latter.

No.3 vein has been developed by an inclined shaft sunk to a depth of 300 feet.(Presumably the vein flattened in a downward direction causing the necessity of crosscutting at the bottom of the shaft). From this shaft short drifts have apparently been driven at depths of 100 and 150 feet . Reports do not apparently give any detailed accounts of this shaft and workings therefrom but as "the major portion of the ore shipped from the property was taken out of" this shaft, presumably distinctly encouraging results were obtained. This vein contains arsenical iron (presumably arsenopyrite)

"On the No.4 vein, or the continuation of the No.3 vein where

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it has been traced for some distance to the north, a tunnel has been started as a crosscut, this tunnel is in 50 feet and should strike the vein in another 10 feet, from where it will be carried on as a drift on the vein. It is estimated that this tunnel will give a depth of 700 feet when it reaches the shaft. The vein where exposed on the surface shows, in places, a little ore". The distance to be driven to reach a point immediately below the shaft on No.3 vein is not given.

Conclusions:- I wish to make clear that I have never inspected this property, owing to the lack of material activity thereat for so many years. My conclusions are based solely on the information gained by a close study of the reports of Mr John D. Galloway in the Annual Reports of the Minister of Mines, and of Dr. J.J. O'Neill in Memoir 110 of the Geological Survey of Canada, considered in the light of operating experience.

It seems clear that the authors of these reports are impressed with the possibilities of the property, but both point out that the ore is essentially of a character that requires milling.

From the description of the underground workings, it also seems clear that the underground development carried out consists largely of shaft-sinking. Apparently a very small amount of drifting from the shafts has taken place, and consequently a correspondingly small amount of information is available as to the behaviour of the veins along their strike in depth. That

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being the case, it is considered that the matter of installing milling plant is premature, and cannot advisedly be contemplated until warrant has been afforded for such by the necessary preliminary development in the form of drifts following the veins.

It is also most important to note in connection with the milling question, that owing to the presence of antimony, the ores of certain properties on Nine-mile mountain offer greater difficulties to flotation than even experienced milling operators might suppose. Such proved the case at the Silver Cup. Therefore it is quite essential that detailed testing of a representative sample of the ore of this property should be carried out before any milling plans are formulated.

There seems, however, ample justification for careful re-examination of all surface showings, systematic sampling of these, (preparation of an accurate map being ~~first~~ ~~first~~ step), with a view to secure an assay plan, and also a representative sampling of a thorough all-test. ~~The shafts will~~ ~~of course~~ be filled with water, but it hardly seems necessary to go to the expense of pumping these out for examination, in the first instance, as it may be taken for granted from the reports that these disclosed promise, but that no material amount of drifting was carried out from them.

Hazelton, February 1st, 1937.

Resident Engineer.