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QUEBEC DEPARTMENT OF MINES
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MINERAL DEPOSITS BRANCH
No G2-1483

East Sullivan Mines Limited, Gaspé Option
Lemieux Township
Gaspé North County

References

Mailhiot, A., 1) Geology of a Portion of the Projected Township of Lemieux, County of Gaspé, P.Q.. Min Op.'s in the Prov. of Quebec for 1917, pp. 117-147.

2) Same title. Same reference but for the year 1918, pp. 134-145.

Alcock, F.J., 1) Geology of Lemieux Township, Gaspé County, Quebec. Geol. Surv. Canada, Summ. Rep. 1921, Pt. D, pp. 71-96.

2) Mount Albert Map-area, Quebec. Geol. Surv. Canada, Memoir 144, 1926.

3) Zinc-Lead Field of Central Gaspé, Quebec. Geol. Surv. Canada, Summ. Rep. for 1927, Pt. C, pp. 27-46.

4) Recent Developments in Gaspé Peninsula. Can. Min. Met. Bull. No. 191, pp. 367-385, 1928.

Jones, I.W., The Berry Mountain Map-area, Gaspé. Quebec Bur. Mines, Ann. Rep. for 1929, Pt.D, Appendix, pp.31-40.

Bell, A.M., Federal Lead and Zinc and Beidelman Properties, Lemieux Township. Company report, 1938.

Gill, J.E., Report on Mining Properties controlled by Federal Zinc and Lead Company and by Lyall and Beidelman in Lemieux Township, County of Gaspé North, Quebec. MSS. 1941.

Gill, J.E. and Auger, P.E., Zinc Deposits of the Federal Area, Gaspé, Quebec. The Canadian Inst. of Min. and Met., Trans., Vol. XLVI, 1943, pp. 456-473.

Auger, P.E., Zinc and Lead Deposits in Lemieux Township, Gaspé North County. MSS. in files Quebec Dep't of Mines. (Results of surveys in 1942, 1943, 1944).

The Option

Late in 1950 East Sullivan Mines Limited acquired a two-thirds interest and Sullivan Consolidated Mines Limited a one-third interest in an option on some 7,000 acres of mining claims of which the Federal Zinc and Lead Company Limited held the largest part. These claims are in the central part of Lemieux Township, Gaspé North County. The property was visited by the undersigned September 12-13, 1951.

History of Development

Discovery of Zinc-lead mineralization in this area was made in 1909 on the eastern slope of Federal hill. The first stakings were done by James McKinley in the name of the New Richmond Prospecting and Mining Company, which later became the North America Mining Company. In 1915, Lyall, Maher, and Beidelman took an option on the property and immediately started mining operations under the name of the Federal Zinc and Lead Company Limited.

The early operations by the Federal Zinc and Lead Company were concentrated on the J.B. Caine claim, or Block H, on Federal hill, and by 1921 most of the development work now visible in that

part of the area was accomplished. This consisted of many trenches, the development of Shaft No. 1 (the Federal) to a depth of 257 feet with a level at 110 feet (1,126.1 feet of drifting, 423.3 feet of crosscutting, and an adit 126.8 feet long) and a second level at 250 feet (234 feet of crosscutting), and the development of Shaft No. 2 (the Gilker) to 18 feet and of Shaft No. 3 (the Bois) to 64 feet. Some work also was done in this period to the north on ground held by the North America Company by that Company itself and also by the Federal Company.

The period 1922-1925 was quiet. However, in 1926, a rush of activity began, instituted by the interest taken in the area by The National Smelting Company of London which acquired an option on the Federal holdings. The Pioneer Mining Corporation of Canada and Gaspé Mines Limited had entered the field in 1925. In 1926 the Huronian Belt Company took up a block of claims. The companies so far mentioned in this report were the most active in the area. But many others held claims and, by 1927, some 3840 square miles were staked by the above-mentioned companies and by Phelps-Dodge, Mining Corporation of Canada, Harvie Mining Company Limited, M.J. O'Brien Limited, Minerals Exploration Limited, Cascapedia Mines Limited, and others. Prospecting was carried out by all of those companies in 1927. During the period 1925-27 considerable work was done by the Federal and the Pioneer companies. In 1925 the Federal drilled six holes from the underground workings in Block H for a total of 2,802 feet. In 1926 this company explored veins by trenching in Block C and J and, in Block C, by one drill hole of 399 feet. In 1926 and 1927 the Federal company discovered the "Lead" vein and the "Big" vein. (The latter is the one now being .....

explored in adit and drifts by East Sullivan). Three diamond drill holes were drilled on the "Big" vein for a total of 1,299 feet. A fourth diamond drill hole (376 feet) tested a vein series some 500 feet to the southeast, and a fifth hole (399 feet) tested a vein 500 feet to the northwest. The "Lead" vein is one-half to three-quarter miles north of the "Big" vein and passes along the eastern valley side to the east of the present Brandy Brook camps. One diamond drill hole (549 feet) ~~was~~ drilled to test an iron-stained zone showing some copper in claim 961, some 7,000 feet to the north of the Federal camps.

The Pioneer Mining Corporation of Canada did its development work in 1926 and 1927. This consisted of surface examination, mapping, trenching and tunneling and was concentrated near their main camp on North Brandy brook. Many mineral showings were located with most attention being given to the "Pioneer Big Vein" - traced for one-half mile. Two shafts were sunk on this vein, one to 73 feet (later deepened to 97 feet) ~~feet~~ and the other to 39 feet (later deepened to 46 feet). Both shafts were discontinued due to difficulties with water, although a 25-foot crosscut was driven from the bottom of the 39-foot shaft. Three tunnels were driven for distances of 80 feet (No. 1), 8 feet (No. 2), and 530 feet (No. 3). No. 3 tunnel had two drifts of 175 feet (extended in 1929 to 217 feet) and 80 feet respectively. This tunnel stopped about 1,000 feet short of the "Big" vein zone.

The North American Mining Company and Gaspé Mines Limited (J.H. Kelly) did some trenching in 1926 and 1927 and uncovered several veins.

In 1929, in addition to the extensions of Pioneer workings noted parenthetically above, the Brandy Brook tunnel (Federal) was started. Work stopped on this in 1930 at 1,118 feet. Also, on the Gaspé Mines property the Towagmac Exploration Company did some trenching and three diamond-drill holes were put down.

Little was done in the period 1929-1937. In 1937 the existing trenches were cleaned out on the Federal and associated properties and considerable trenching was done on the original Pioneer claims which now belonged to the Federal Company. Some diamond drilling was done in 1937.

Since 1937 little exploratory work was done, and a small crew varying from one to eight men was employed during the summer season in maintenance of buildings and roads and in cleaning out the trenches on the main showings. Mr. B.A. Woodman has been in charge of such operations, as well as of occasional prospecting, for some 30 years and the condition of the camps and of roads and trails on the property is a tribute to Mr. Woodman's ability and energy.

The Deposits

The known mineral deposits in Lemieux Township may be grouped geographically as follows:

Bell (1937) and Gill (1941)	Auger (1943-45 (1951))
1. The Berry Mountain Brook Group	1. Berry Mountain Brook Area 2. Federal Area 3. Gaspé Mines Area
2. The Brandy Brook Group	4. Brandy Brook Area 5. South Brandy Brook Area
3. The North Brandy Brook Group	6. Pioneer Area

In all groups or areas the deposits are in steeply dipping fissure veins and breccia bands which cut Lower Devonian sedimentaries

(Grande Grève and Cape Bon Ami) or, occasionally, intrusives. Most of the vein material is quartz, with varying amounts of sphalerite, galena, pyrite and, in some places, of copper minerals. The principal economic minerals are those of zinc and lead. These minerals are not continuous through the veins either vertically or laterally but vary in quantity from apparent total absence to disseminations and to lenses of massive sulphides. The spotty nature of the distribution and the prevalent surface leaching have been two of the main reasons why conclusive estimates as to the potentials of the area have not been reached in 40 years of exploring.

1. The Berry Mountain Brook Group

The area of particular interest in The Berry Mountain Brook group is that at the Company camps on Federal hill. Here the Federal, Porphyry and some lesser veins have been explored by underground workings. A shaft was sunk in the Federal vein to the 100-foot level where drifting north and south followed the vein for 562 feet. In this distance the vein varied from 2 to 13 feet wide. At the 250-foot level (total depth of the shaft) crosscuts were driven 166 feet westward and 68 feet eastward from the shaft without intersecting the vein, and a diamond drill hole from this lower level also failed to cut the vein. The Porphyry vein was traced 500 feet on the surface. On the 100-foot level of the Federal workings it was traced 290 feet in the North drift. Surface work has shown other veins with lengths up to 2,370 feet and widths up to 21 feet. Many veins are known in the Gaspé Mines area where much trenching and some diamond drilling (6 holes: 4 by Towagmac Exploration and 2 by Consolidated Mining and Smelting) has been done. This area includes the longest (2,370 feet) vein.

2. The Brandy Brook Group

The veins of most interest in the Brandy Brook Group are the "Lead" (or A4-B4) vein and the "Big" (No. 1) vein. The "Lead" vein has been traced for 3,770 along a general north-south strike. Its dip averages 50° to the east. This vein was explored by numerous trenches, by an adit 1,118 feet long which intersected the vein at 825 feet from the portal, by drifts 40 feet north and 19 feet south, and by several diamond drill holes. The "Big"or No. 1 vein has been followed for 680 feet. Its width varies from 6 to 30 feet. Three diamond drill holes were drilled into the footwall of this vein. This is the vein now being explored by East Sullivan underground workings and drills. Two other veins, each about 500 feet from the "Big" vein but on opposite sides, also have been explored in part by trenching and by one diamond drill intersection in each case.

3. The Pioneer (or North Brandy Brook) Group

The workings in the Pioneer group include numerous trenches, two shafts of 97 feet and 46 feet depth respectively, 285 feet of tunneling (drifting) and 610 feet of crosscutting. Many veins have been discovered in this group. The most spectacular of these is the "Pioneer Big Vein" which has been traced for 2,860 feet with an average width of 23.5 feet - this width includes vein, breccia, and leached zones. The two shafts mentioned above were sunk to explore this vein. In both shafts only leached and crumbling material was found. One adit was started with the intention of intersecting the "Pioneer Big Vein" at 1,730 feet (estimated) from the portal. However, the adit was stopped at 530 feet. Several smaller veins, some of which were well mineralized locally, were intersected by this adit. Two other adits, one of 75 feet and the other of 39 feet, were driven to explore other veins.

East Sullivan Operations

The development work under the present option has included an extensive program of diamond drilling during the first half of 1951 on the Berry Mountain Brook and Brandy Brook Groups of veins. One rig was drilling at the time of the writer's visit, September 13, 1951. Also, in the late spring of 1951 a tunnel was started in the southern part of the Brandy Brook area and directed to intersect the "Big" vein. This intersection was made in early September, 1951, at 950 feet and drifting along the vein was commenced. Tunneling and drifting were going forward when the writer examined the workings September 13, 1951. Both drifts, north and south, had been driven about 25 feet. Mineralization was weak in the vein at the end of the north drift. However, at the end of the south drift vein material 5 to 7 feet wide carried lenses of massive sphalerite with some galena. The average assay of channel samples over vein width here was stated to be 12% per cent, with the ratio of zinc to lead as 4:1. The main vein here dips 65°-70° to the west. The outer 382 feet of the tunnel or adit are timbered in overburden. The rocks to about 500 feet are of Grande Grève type while those from this footage to 950 feet suggested the Cape Bon Ami formation. The bedding dips averaged 15° to the west.

General Conclusions

When Bell examined these deposits in 1937 he recognized a rough zoning of the sulphides in the area going from zinc to lead to copper from south to north. Gill, in 1941, also recognized such zoning not only laterally but also vertically, with, in the latter case, copper at the lower levels. Auger, in his work of 1943-45, does not mention such zoning. In fact, it is doubtful that the deposits are

sufficiently well known to demonstrate that the zoning suggested by Bell and Gill does actually exist. It was the distribution of minerals on the "Lead" vein (No. 3) of the Brandy Brook Group which led Gill to the theory of vertical zoning, with zinc and lead giving place to pyrite, chalcopyrite, and specularite at, roughly, 1,300 feet elevation. However, as pointed out by Auger, one of the veins close to the "Big" vein (South Brandy Group) is still "strong and rich" at an elevation of 1,000 feet. If this theory of zoning could be resolved one way or the other it could have considerable economic significance in the development of this area.

Some significance may attach also to the writer's observation that rock characteristic of the Cape Bon Ami formation is present in the East Sullivan adit in the South Brandy Brook area. If the rock between 500 feet and 950 feet in the adit actually is Cape Bon Ami it means that the formation is much closer to the overlying volcanic here than is the case elsewhere. This, in turn, points to the probability of a major fault in the vicinity. The geology of this part of the area should be reviewed carefully in the hope of locating such a fault, if present, or of proving its absence.

As already stated the ore potential of the area as a whole is difficult to assess owing to prevalent leaching (surface to 100 feet or more) and to the irregular or lensey occurrence of the ore. Neither Bell (1937) nor Gill (1941) ventured to estimate the ore potential beyond that which was readily available. Gill and Auger (1943) and Auger (MSS on 1943-45 work) referred to the probable presence of "some hundreds of tons of material averaging around 5 per cent zinc and 1 per cent lead" in the area within 450 feet of the surface.

Mr. J.C. Lyons is the resident engineer in charge.

Mr. Maurice Scott is the consulting geologist.

H.W. McGerrigle.

Quebec, October 19, 1951.

Note: With the consent of Mr. Pierre Beauchemin, President of East Sullivan Mines Limited, who was present on the property at the time of the writer's visit, Mr. J.C. Lyons was to forward to the Department in some weeks time a set of plans showing the work done on the property.

H. W. M.