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REPORT  
OF  
PRELIMINARY EXAMINATION  
OF THE  
MOLLY MACK MINE  
FERGUSON, B.C.

To Goldfield Cons. Mines. Expl. Co.

By Chas. C. Starr,  
August 15, 1928.

*See also  
Molloy - 2nd & 3rd  
pages for letters etc*

**INTRODUCTION:** About six hours were spent on the property, accompanied by a miner who was familiar with the work. No survey was made of the workings.

**LOCATION:** The property is situated on Gainer Creek, in the Trout Lake Mining Division, about nine miles easterly from Ferguson, and thirteen miles easterly from Trout Lake.

**PROPERTY:** There are two claims in the group, the Molly Mack No. 1 and Molly Mack No. 2, neither of which are Crown Granted. The east extension, across Gainer Creek, comprising the White Quail Group, is under bond to a small syndicate who are now developing. The west extension crosses the divide and is owned by H. B. Morrison and G. O. Woodrow of Nelson. The Molly Mack claims belong to the Cameron Estate and an option on them is held by Mr. G. S. McCarter of Revelstoke from the Public Administrator.

**WOOD, WATER & POWER:** A considerable part of the claims is covered with a heavy growth of timber which is suitable for all purposes. Water is scarce on the hillside near the workings, but there is probably enough for domestic use; below, in Gainer Creek, there is a considerable flow. Several hundred horse-power can be developed within four miles of the mine, and it is probable that suitable sites for the development of power in smaller amounts can be found quite close.

**TOPOGRAPHY:** Gainer Creek is a "U" shaped glacial valley with steep mountains on either side. The mineralized

belt crosses the valley nearly at right angles over slopes varying from 30° at the bottom, to more than 45° at the top, and with an average of nearly 40°. The lower slopes are timbered and smooth, while near the top they are largely bare rock and very rough. Approximate elevations are as follows:- Trout Lake 2000 ft.; Gainer Creek below the mine 3800 ft.; Tunnel and cabin 4250; upper work 4750 ft; highest outcrop 5400 ft.

**TRANSPORTATION:** The usual route for passengers and freight, in, is: Transfer from Canadian Pacific steamer at Arrowhead to daily boat six miles to Beaton; transfer to stage or truck sixteen miles to Ferguson (up grade) or to Ten Mile Camp, six miles above Ferguson; thence by trail three miles to the mine.

An alternative route which would be cheaper if a large tonnage were assured, enabling proper equipment to be installed, would be, starting from the mine, as follows: Aerial tram from the mine to Gainer Creek below; road thirteen miles down grade to the head of Trout Lake where ore could be loaded direct on railway cars. The Canadian Pacific at present have no facilities for handling cars on Trout Lake but a branch railroad ends at the other end of the Lake and they would probably install barges etc. if sufficient tonnage were assured. Trucking can be contracted at 50¢ per ton mile, or less.

**CLIMATE:** The snowfall at Ferguson averages about four feet but the roads are kept open all winter. At the mine the snowfall will be considerably greater. There are frequent snowslides down both sides of Gainer Creek which would make

communications precarious during the winter.

**EQUIPMENT:** There is no equipment on the property except a small, poor cabin.

**DEVELOPMENT:** Development is quite limited and consists of a 160 foot tunnel at elevation 4250, two open cuts a short distance below, several open cuts between the tunnel and elevation 4750, four open cuts in the next 50 feet of height, two small cuts at elevation 5350. In many of the open cuts the soil has fallen in so that only the broken rock removed is now to be seen.

**GEOLOGY:** The country rocks are interbedded successions of blue, gray, and white limestones and calcareous schists in a wide belt many miles in length. They strike N 45° to 50° W and dip very steeply to the southwest; there is considerable regional metamorphism and some shearing parallel to the bedding. Viewed broadly the belt is remarkably straight and undisturbed; locally there are frequent minor folds.

**MINERALIZATION:** There are two zones of mineralization, both in the limestones and separated by perhaps two hundred feet of schist and limestone; the south zone has a width of about forty feet, and the north one about 75 feet. On the White Quail group on the opposite side of the Creek these same belts are said to be nine feet and a hundred feet wide, respectively, and to be a hundred feet apart.

All but one of the cuts on the Molly Mack ground are on the south zone which is exposed by them at intervals over a vertical distance of 650 feet and horizontal distance of 800 feet. The tunnel is near, but apparently not on, this zone.

The hanging wall is schist and the footwall dark impure limestone. Mineralization occurs in irregular spots in the limestone but the size of these spots is not evident, except that they are not over four feet in width, since development has not progressed far enough. One such area of mineralization is about twenty feet long. The mineralization in these spots quits abruptly both on and across the strike and the remainder of the limestone is entirely unaltered. These spots occur here and there throughout the width of the zone. At the surface they appear as soft areas of limonite and hematite; at a depth of two or three feet they change to finely divided grains of galena and pyrite impregnating silicified limestone and forming good ore over widths of from one to four feet. A general sample was taken by chips from a number of cuts at the upper end of this zone which assayed .02 Oz. gold, 4.1 Oz. silver, 24.7% lead, 0.3% zinc. This represents the best ore and on the average the cuts, across the width of mineralization, will show perhaps 25% of the above metal content.

A "composite grab sample of broken ore" taken by the Government Engineer, Mr. O'Grady, assayed .03 Oz. gold, 6.0 Oz. silver, 30.1% lead, 2.2% zinc.

On the north ore-zone no work has been done except a small cut outside of the zone proper; it shows a little galena. Between elevations of 5150 to 5400 feet the north zone is exposed on a 50° slope of bare rock, and no work has been done on it, nor has it been traced in the timber above or below. All that is visible is four bands of limestone heavily stained by iron oxide, which extend

from top to bottom of the exposed rock. These bands are from three to eight feet in width, have some mineralization between them, and are continuous for more than 350 feet - how much more can not be told. Considerable local distortion of the strata has taken place along this zone, and is especially evident at the lower end where the dips of the enclosing limestone are strongly divergent. Quartz veinlets, generally striking across the bands of mineralization and ending at their walls, are a marked feature and recur at intervals of a few feet, sometimes with a stockwerk of quartz between.

**CONCLUSION:** The property is badly situated for winter communication on account of slides but its surface is fairly safe. Transportation is expensive at present, but if a large tonnage can be assured transportation costs can probably be reduced to a reasonable figure.

In the south ore-zone the ore occurs in bunches, and conditions do not appear good for considerable bodies of commercial ore.

The north ore-zone is an entirely unknown quantity; the conditions in it are favorable to the probability that large bodies of galena ore of milling grade can be developed with a small footage of work, underneath the present oxidised outcrops. This ore-zone is said to be tracable on the far side of the divide to the westward, and what is probably the same zone is now being developed nearly a mile to the eastward, indicating very interesting possibilities.

Under proper conditions of price and terms, I would

recommend that the outcrop of this zone be trenched to the unaltered sulphides (perhaps three feet deep) and carefully sampled; also that open cuts be made to trace the vein lower down; - this to be followed by tunneling if the results are satisfactory.

Respectfully submitted,

*Chas. C. Starr*