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Mr. Clark Jenkins
71 Stratford Road
Asheville, NC 28804

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Dear Clark:

You requested that I study the attached map and drill hole sample evaluation results and Calculate the tonnage of Alaska tide and quartz on a weathered alaskite body known as the gusher nob deposit. The deposit is located in Avery County approximately 8 miles northeast of Spruce Pine, NC and 1/4 of a mile North of Hwy 194. The property is owned by Land and Mineral Company, Newport News, Virginia.

The deposit was drilled as a possible source of high purity quartz by Metall Mining Corporation. Samples were beneficiated by the North Carolina State University Minerals Research Laboratory in Asheville, NC. There is no record of what laboratory made chemical analysis on the samples. Chemical analysis was not made at the Minerals Research Laboratory.

Chemical analysis of beneficiated samples show Al values of from 6.3 to 11.8 PPM with most Al values in the 7 to 8 PPM range. Quartz containing 7 to 8 PPM Al is well within the range of Al specification for the majority of uses of ultra high purity quartz. (UHPQ) Specifications of combined CA, K, and Na in UHPQ is normally in the 3.0 to 3.5 PPM range. Fe values of the quartz is very good with only two samples above 1.0 PPM. Ti is slightly higher than desirable. Li and Mn values are very good. Additional beneficiation studies may improve the above values.

Samples were taken from 5 drill holes on the property. The drill holes range in depth from 75 feet to 140 feet. Drill hole GK-5 was on the west contact between alaskite and schist. Data from this drill hole means very little from the standpoint of alaskite tonnage calculations. The first 75 feet was principally schist with narrow stringers of alaskite. However, alaskite was encountered from 75 feet to 130 feet. Samples were evaluated from 75 feet to 110 feet.

Drill hole GK-1 is located quite some distance from the alaskite body as shown on the map. The area around GK-1 was a tailings disposal area for the kaolin processing plant which was located on the property. There are no outcrops of residual material in this area, therefore, we have nothing to go on to establish the boundaries of the alaskite deposit in this area, therefore, there is no way we can determine the tonnage of alaskite in the area near drillhole GK-1.

Drill holes GK- 2, GK- 3, and GK-4 are located in what is shown as the principal alaskite body on the map of Metall Mining Company. Tonnage calculations will be made from the alaskite body as outlined on the map.

The alaskite formation as outlined on the map is somewhat irregular. To get an accurate surface area of the alaskite formation, the area was divided into seven different sections with six of the sections having

a width of 50 feet, with varying lengths, as shown on the attached print. The area of the individual sections were calculated and put together to give the total area of the alaskite formation. The average total depth of soft alaskite and hard alaskite in drill holes was determined for tonnage calculations.

A previously determined bulk density of weathered (soft) alaskite of 115 pounds per cubic foot, 3,105 pounds per cubic yard, was used in tonnage calculations of soft alaskite. A bulk density of 162 pouds per cubic foot, 4,374 pounds per cubic yard, was used in tonnage calculations for hard alaskite. See attached calculations.

CONCLUSIONS

Proven Tons of Alaskite and Potential Tons of UHPQ in Alaskite

Based on data presented, map showing area of alaskite, drill holes showing footage of soft and hard alaskite, and laboratory test giving recovery of UHPQ in samples, calculations showing the following.

Tons of soft alaskite	231,111 Tons
Potential tons of UHPQ in soft alaskite	24,498 Tons
Tons of hard alaskite	69,741 Tons
Potential tons of UHPQ in hard alaskite	7,393 Tons
Total potential tons UHPQ in alaskite	31,891 Tons

Probable Tons of Alaskite and Quartz

We have calculated the tons of alaskite and quartz based on information available. We will now look at probable tons of alaskite and quartz at the Gusher Knob Mine. There is a distance of 200 feet between drillholes GK-1 and GK- 2 . In this area, the contact on the map between alaskite and interlayered alaskite and schist appears to be arbitrary. It is most probable that the alaskite extends a considerable distance further south than shown on the map. In the one drill hole in this area, GK- 1, alaskite was encountered to a depth of 70 feet. This would indicate alaskite extends much farther South than shown on the map. This area is covered with plant tailings, therefore, the underlying formation and contacts are obscure. There is no information that would justify showing this area as stringers of alaskite or alaskite interlayered with schist. The probable tonnage of soft alaskite in this area is 50 to 100 percent greater than that calculated from information as shown.

There is another weathered alaskite formation approximately 1500 feet west of the one shown on the map. This formation is a few 100 feet west of the road . The tonnage of soft alaskite there is probably greater than that of the alaskite shown on the map.

A determination of the tonnage of a hard alaskite in the Gusher Knob deposit depends entirely on one factor. That is, what depth of alaskite we want to use in our calculations. Alaskite is an intrusive rock formation. Alaskite in the spruce pine area extends several 100 feet in depth. Tonnage calculations for mining purposes depends entirely on to what death is it practical to mine the alaskite. Unweathered, or soft alaskite, is a near surface weathering product of hard alaskite. We can expect soft alaskite to turn to hard alaskite in the Gusher Knob area at a depth of from 40 to 60 feet . It is noteworthy that in the data supplied, we see very little difference in recovery or chemical analysis of UHPQ when going from soft to hard alaskite in drill holes.

The probable tonnage of minable alaskite in the Gusher Knob deposit will be in the range of three to five times that given for calculated tonnage . This will depend on the practical depth of mining.

Sincerely yours,

Lewis J. Hash