



093 A 013

July 14, 1988

File Number: 7678

TRIFCO MINERALS LTD. 751 Clark Road Suite 308 Coquitlam, B.C. V3J 3Y3

Attention: Mr. Rene Trifaux

Dear Sir,

As you requested, I have prepared an outline of the tasks required to evaluate the technical and financial feasibility of constructing and operating a talc plant in the Quesnel area. The estimated costs for performing these various tasks are itemized and based on our basic charge of 600 per day. Any direct expenses are extra and are charged at cost plus a 10% handling fee.

With respect to our most recent telephone conversation regarding the possibility of minimizing the cost of such a feasibility study, I am indicating those areas that may be possible to approach in lesser detail at this time in order to reduce the initial cost of this study. However, many of the areas we may be able to leave for later study or examine only superficially at this time will likely be required at some point by the banks and/or the government before they will give final approvals.

Nevertheless, Bacon Donaldson & Associates (BDA) is capable and willing to proceed with a more limited feasibility. It must be clearly understood that it is our professional obligation to clearly identify within such a feasibility report those areas that require additional information or are subject to uncertainty due to lack of investigation.



Specifically, the areas that I believe may be limited or not addressed for the purposes of this preliminary feasibility include:

- 1. Environmental Issues (Item 1.0)
- 2. Detailed Mine Plan (Item 2.3, 2.4)
- 3. Sulphide Recovery (Item 3.2, 3.3.2)
- 4. Other Talc Products (Item 3.3.1.2)

Environmental issues are not likely to be a serious issue in a talc facility and therefore may be reviewed at a later time. The government will eventually require this information when a mining permit is applied for. The mine plan need only be developed to the extent necessary to determine the cost of mining for the tonnage required. The production of a sulphide concentrate or other talc products can be covered in a limited manner; we will only consider the grade of talc required for pitch control as the main product.

As you can see the outline of tasks to be performed is broad. There are a number of issues that must be addressed with respect to the mill. As I have discussed with you, it may be more economical to locate the mill near Quesnel, closer to established utilities, than to place the mill at the mine site where no services are available. The information in the Ontario Research Foundation (ORF) report is well documented, however there is additional design data required to fully evaluate the requirements for equipment. For example, all the data required to estimate the power needed to grind the ore is not present; this usually requires special tests which may not have been done. Mr. C. A. Booth at ORF will need to be consulted.

The fine grinding equipment has not been addressed up to this point. Thos. W. MacKay and Sons may be able to provide only a rough estimate of equipment sizes and costs without performing testwork. They seem to indicate they are very willing to do this at their expense if we provide the samples.

There is also the question of equipment for dewatering and drying of the talc after the wet milling and magnetic separation stages. The ORF report does not include any information on the settling and filtering characteristics of the talc product. This is required to size and cost a thickener and filter.



It should also be noted that the ORF report "...strongly recommended that further samples should be taken from the unweathered zone..." and "...recommended that a pilot plant study be undertaken on a continuous basis...". I am not recommending that we must follow these recommendations in order to complete this feasibility study, but I believe that the bank and/or the government may not be willing to accept an evaluation based alone on the present ORF study considering these statements are included in the report. After reviewing the ORF data BDA may be obligated to make the same recommendations.

Bacon Donaldson & Associates appreciate the expenses of developing a mineral deposit and the strain it may cause for smaller companies. However, as your consultant and representative in these matters I mention the above points with your best interests in mind so that TRIFCO understands what the bank and/or government may expect now or in the future.

For the moment, I see that the cost of performing this feasibility can potentially be reduced from the enclosed \$26,200 program by an amount of up to \$7,900. This would mean eliminating the environmental review (\$4,000), some of the mine planning (\$1,200), the review of the Sherritt report (\$300), the flowsheet development for other talc products (\$600) and a process development producing sulphide concentrates (\$1,800).

After you have had an opportunity to review our proposed program and cost estimates we can discuss it further.

Yours sincerely,

BACON, DONALDSON & ASSOCIATES LTD.

Kineta & De Grand

Kenneth B. DeGraaf, M.A.Sc, P.Eng.

KBD:jrh



OUTLINE OF PROPOSED BDA FEASIBILITY STUDY

TRIFCO MINERAL LTD. TALC FACILITY, QUESNEL, B.C.

1.	Site D	\$	1,500.00 4,000.00							
	1.2	Mill fac 1.2.1 1.2.2	processing 1.2.2 Utilities (water, electricity, fuel) sewers							
2.	Geolog 2.1 2.2 2.3 2.4	 Mineable ore reserve calculation by Mining Eng. Mine plan/production schedule 								
3.	Talc N 3.1 3.2 3.3	ith Booth, ORF re: flowsheet re: sulphide recovery ection Flowsheet Product for applications in Pitch Control Other possible talc products		300.00 300.00 1,800.00						
	3.4	Design 3.4.1 3.4.2 3.4.3	Criteria Mill/Mine capa Material baland filters, etc) Equipment sizi 3.4.3.1 3.4.3.2	ce calculations (crushing, grinding ing Crushing (run of mine feed size, grindability, power req'd) Grinding (feed size from crushing, product size reduction)		600.00 600.00 900.00 4,200.00				
			3.4.3.3 3.4.3.4 3.4.3.5 3.4.3.6 3.4.3.7 3.4.3.8	Flotation (talc and possibly sulphides from maj. sep) Magnetic separation: Wet/Dry) Thickening/Flotation Fine grinding (dry/wet) Size classification to produce final talc product Product transfer/storage/packaging						



1,200.00 Preliminary Equipment Layout Building for Mill 3.4.4.1 3.4.4.2 Utilities sized (water, sewer, tailings, power) 2,400.00 4. Capital and Operating Costs Capital Costs of Mill Facility 4.1 Major Equipment cost quotes 4.1.1 Building Construction cost/offices 4.1.2 Equipment Installation costs 4.1.3 Site Development costs 4.1.4 Capital Costs of Mine Development 4.2 Mine Equipment (if necessary) 4.2.1 4.2.2 Road construction 4.2.3 Stockpile construction 4.2.4 Tailings construction 4.2.5 Site Development costs/site office if Mill not on site Operating Costs of Mill 4.3 Consumables (power, fuel, electricity, 4.3.1 reagents, etc) 4.3.2 Labour 4.3.3 Maintenance 4.3.4 Supervision/Engineering 4.3.5 Administration Transportation/Packaging 4.3.6 Operating Costs of Mine 4.4 Contract Mining 4.4.1 Equipment for Mining 4.4.2 Consumables (fuel, power, blasting supplies, etc) 4.4.3 Transportation/Handling 4.4.4 1,200.00 Financial Analysis 5. Cash Flow over Mine Mill life 5.1 Discounted Cash Flow Analysis of Return on Investment 5.2 5.3 Sensitivity Analysis \$23,200.00 3,000.00 6. Final Report Preparation \$26,200.00

NOTE: Expenses and direct costs incurred are not included in the above cost estimate. These are charged at cost plus 10%.

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IST CL CONC		1.31		0.196	40.119	38.952	1	34.54	40.36	14.49	91.77	1
1st Sulphide Cl Tail		1.46		0.017	8.040	1.290	1	4.20	3.92	3.24	3.39	•
SULPHIDE RO CONC		2.76		0.101	23.197	19.085	1	38.74	44.27	17.73	95.16	1
Sulphide Ro Tails		22.75		0.005	5.090	0.065		15.43	17.99	32.04	2.67	
Talc Scavenger		3.79		0.007	4.630	0.299	1	₹ 3.85 -	∠ 4.19	4.85	2.04	1
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