November 28, 1962

Mr. Walter E. Jameson

The figure I used in the preliminary economics of Tin Cup, sent to you November 15th, 1962, was 5.5 tons of crude ore per ton of concentrate produced. This figure conforms with the listed final test results. Therefore, the costs calculated at that time are valid, based on present information.

Yours truly,

Robert J. McRae

cc HEL
Peter Joralemon
Mr. Steve McTimmonds  
Casa Blanca Motel  
Redding, California.

Dear Steve:

Enclosed are the pictures pertaining to the Tin Cup Iron prospect in Curry County, Oregon. I'm sorry that I don't have the complete report. As you know my report of July 1962 needs to be updated. Since the time of my original survey the ore body has been extended so as to indicate the possibility of 500,000,000 tons of iron bearing material. I think that it is wrong on the basis of the limited sampling to estimate the grade of the material contained within the mineralized zone. There is magnetometer survey data that indicates that within the mineralized area are anomalous areas that suggest concentrations of iron unlike anything seen in the outcrops.

If I can be of further assistance on this prospect, please feel free to call upon us.

Yours truly,

LLOYD E. FRIZZELL

November 6, 1968.
June 8, 1970

Mr. Steve McTimmonds
235 Lilac Lane
Grants Pass, Oregon 97526

Dear Steve:

By telephone you asked me to explain how I estimated reserves on your Tincup, southwest Oregon, titaniferous magnetite claims which I reconnoitered briefly August 12, 1969. As I told you verbally at that time, and later wrote you on October 7, 1969, from what I could observe I did not believe "... that the Tincup deposit alone appeared to have mineable tonnage potential to justify the type of operation we are seeking." At that time I recommended further reconnaissance of the area, including the nearby Billingslea zone, in the hopes that the comprehensive areal potential might be enough to justify our continued interest. Our Messrs. Phil Morey and Chris White reconnoitered this area later and, on November 26, 1969 reported their observations which further limited my geological projections, and judged Billingslea to have even less potential.

As you know, unless I were actually working for you as a consultant, it would not be customary for me to quote in writing interpretive data because these could be in turn quoted out of context, knowingly or unknowingly complicating the situation. Nevertheless, realizing that I spent only a few hours on Tincup claims and was trying to project an optimistic but realistic target for Marcona's requirements and restrictions, you may consider the following paragraph as a summary explanation on how I arrived at my decision that Tincup did not have sufficient mineable tonnage potential for our objective.

I used Mr. Lloyd Frizzel's 1962 map as a base, from which with minor modifications I estimated a surface area of 5,275,000 square feet of crude ore cropping out across a small saddle and down both north and south side slopes. A consultant's report dated November 2, 1962 had estimated only 3,520,000 square feet but I accepted further northerly extensions; however, I could not confirm ore in the northwest sector due to the observed waste in the area. I observed previously unmapped waste in place within the mapped orebody, however discounted
this as possibly minor, although this would have to be determined. From my observations, I could only interpret a roughly triangular vertical cross-section, north-south, peaking in the saddle at about 4,000 feet elevation and extending down slope on both sides to about 3,600 feet elevation, for a relief of 400 feet and thus an average height estimated to be 200 feet. Thus, at 10 cubic feet per ton of crude ore for five million square feet area times 200 feet average height, I estimated 100 million tons with probably minor side-stripping, assuming vertical or steep east and west contacts. As you will realize, this is a somewhat crude but very optimistic method of estimating mineable ore. Sure, the ore may continue down in depth, but with rapidly increasing strip ratio, because the east and west surface contacts clearly show waste rock, and erosion down the slopes does now reveal ore spreading out in depth. Possible extensions north and south, under light surface cover, are not strongly suggested, and in any case mineability would be limited by a strip ratio rapidly increasing at lower elevations.

Considering that it might take some 3 to 5+ tons of crude to make one ton of concentrate, and operations of this type and at an inland location for economic justification would require 5 to 10 million tons of product annually over a 20 year period, you can visualize that from our standpoint some 500 million tons of crude would be required as mineable reserve, but I cannot project this at a tolerable strip ratio, and the follow-up reconnaissance further limited mineable tonnage figures, and did not suggest enough tonnage at Billingslea Mountain, to make up the difference. As a matter of fact, we have considered several deposits of like (apparent) grade and concentration characteristics, better located and with 1,000+ million tons of mineable reserve potential, to be marginal. Therefore, I must regretfully conclude that the Tincup-Billingslea area deposits do not offer sufficient potential to justify our interest.

But we certainly appreciated your bringing to our attention this potential iron ore source, and wish you success in your endeavors to find a developer with possibly different objectives.

Under separate cover I am returning with thanks the Roxana mercury and other reports on properties not of present interest to Marcona.

Best wishes to you and Doc Cline, and feel free to write (in fact, please do write) if you come up with an iron ore proposition you believe may more closely fit the objectives I have outlined above.

Sincerely,

William B. Nelson

WBN/1m

cc: R. R. Beebe
     P. Morey
Mr. Steve McTimmonds  
235 Lilac Lane  
Grants Pass, Oregon 97526

Dear Steve:

I am just returned from Alaska, and must apologize for not writing sooner, at least to thank you for your cooperation and companionship during our reconnaissance of Tincup titaniferous magnetite claims on August 12.

The Mines Experiment Station at the University of Minnesota on September 24 reported the following results on Davis Tube magnetic tests, all feed ground to pass 100 mesh:

<table>
<thead>
<tr>
<th>Sample</th>
<th>% Fe</th>
<th>% Mag Fe</th>
<th>% Wt.</th>
<th>% Fe</th>
<th>% TiO2</th>
<th>% Wt.</th>
<th>% Fe</th>
</tr>
</thead>
<tbody>
<tr>
<td>501</td>
<td>15.90</td>
<td>10.90</td>
<td>16.76</td>
<td>65.12</td>
<td>2.11</td>
<td>83.24</td>
<td>6.01</td>
</tr>
<tr>
<td>502</td>
<td>19.59</td>
<td>14.90</td>
<td>22.67</td>
<td>65.76</td>
<td>2.14</td>
<td>77.33</td>
<td>6.08</td>
</tr>
</tbody>
</table>

These results were mixed in with reports on other, unrelated samples, so I must quote them out of context.

Both samples were surface chip samples, 501 being more or less 2,250 roughly north-south near the westerly contact, while 502 was about 1,250 feet east-west along the saddle about 1,500 feet north from the mapped southerly contact. Because these are surface samples where some oxidation of iron minerals is apparent, probably magnetic iron content and consequently magnetic weight recovery might be expected to increase in depth. Iron unit recoveries were 69 and 76% of total iron, which are good going; the concentrate iron and titania contents are about normal for this type of material. Production methods, using magnetic separators, probably would make a lower grade concentrate at greater yield.
As I advised you I did not believe, from what I could see in one short day, that the Tincup deposit alone appeared to have sufficient mineable tonnage potential to justify the type of operation we are seeking. Nonetheless I would like to have more time to examine the deposit and the area around it. While I believe only core drilling would competently assess the reserves, I feel the first step would still be surface mapping to explore possible extensions, and to learn more about the geology in general. Right now I am pretty well tied up with other projects but perhaps in November I could arrange another, longer trip. What is your reaction to this, and how is the Tincup weather in November?

Again I want you to know that I enjoyed my short field trip, and please give my regards to Don Cline and all the girls in the drive-ins.

Sincerely,

W. B. Nelson
Senior Development Geologist

WBN/kb
cc: K. E. Merklin
    R. R. Beebe
January 2, 1974

Mr. Bruce Monley
P.O. Box 327
Brookings, Oregon 97415

Dear Bruce,

Enclosed is a copy of a preliminary nature on the Tincup Iron Deposit in Curry County.

You of course will note its location in the Kalmiopsis Wilderness Area and its isolation.

We do have other information about an economic study that was made by a prominent mining company in 1962. The file is marked confidential but in summarizing their findings they indicate that costs of mining, crushing, concentrating, and transportation to Portland (17% Fe in ore - 63% Fe in concentrates) would be in the neighborhood of $12 to $12.50 per ton which would not be economically competitive for a long time. The 1.5% to 2.6% titanium content would also act as a contaminant.

Hope this information will be what you want. Best regards and wishes for a good 1974.

Sincerely,

Norm Peterson

NVP rep
Encl: Tincup Iron Group report (2 pages - copy)
September 4, 1962

Mr. Robert J. McRae
The Bunker Hill Company
620 Market St., Rm. 320
San Francisco 4, California

Dear Mr. McRae:

Last Thursday shortly after you called, I received a call from Portland and at that time requested a Ti analysis of the pulps of P-230B8 and P-23089 providing the pulps were still on hand. I haven't received word from the assayer on this matter as yet.

Under separate cover I am sending the residue of samples from my trip to the deposit in 1958. You will note that the sample contains various rock fragments and some high-grade magnetite float. They aren't very good samples for analytical work but all that I have available.

Enclosed is another copy of my report to replace your fuzzy one. I will plan to give you a call while attending the Mining Show.

Sincerely,

Len Ramp
Geologist
August 30, 1962

Mr. Len Ramp, Geologist
Oregon Department of Geology and Minerals
Grants Pass, Oregon

Dear Mr. Ramp:

Subject: Tincup Iron Group

I wish to thank you for your comments on the above property.

This will confirm my request for a duplicate of pulps on your samples P-23088 and P-23089, if these are still available. These samples, as I understand, are magnetic concentrates from your two general samples off the subject property. It is my purpose to have these assayed for titanium. The results will be made available to your department.

If the above samples are not available and you have several pounds of general specimens, I would appreciate having them and we will make a concentrate and check for titanium.

If you are here for the convention, I should be happy to have you drop up to the office for a visit.

Yours truly,

cc HEL

Robert J. McRae

RJMcR:ET
September 10, 1962

Mr. Len Ramp, Geologist
State of Oregon Department of Geology
P. O. Box 417
Grants Pass, Oregon

Dear Mr. Ramp:

This will acknowledge receipt of the bag of specimens of Tin Cup ore. I appreciate receiving these.

I am looking forward with interest to the TiO₂ assays on the two pulps of concentrate.

Further, I am looking forward to a visit with you during the Mining Congress meeting. Our office is just across Market Street from the Sheraton-Palace Hotel where most of the papers will be read.

Yours truly,

cc HEL

Robert J. McRae

RJMcR:ET
June 19, 1958

Mr. H. M. Dole
1069 State Office Building
Portland 1, Oregon

Dear Hollis:

I just got back from a trip into Gold Basin to look at an iron prospect near Tin Cup Peak. It is located mostly in the NW 4 of Sec. 32, T. 37 S., R. 10 W. It consists of coarse-grained magnetite disseminated in diorite.

I am sending up 2 samples for assay (see 30-175 & 176). I am interested particularly in the percentage of magnetite and its impurities. Would it be possible to make some kind of concentrate (magnetic or gravity) of the magnetite determining its percentage in the rock and then running an analysis of the concentrate? If so the unprocessed sample would need to be run for Fe and Ni only. Analysis of the magnetite concentrate should be for Fe, P, S, and insol.

I am pretty sure that the deposit is too low a grade to be commercial at the present time. It is however, apparently quite large. I made only a brief examination and did not cover its entire extent. I took several readings with the dip needle but at no place did it indicate any massive magnetite.

The claim owners are interested in either selling or leasing the claims to some big iron company. I told McTimmonds I doubted that any company would be interested in material of this grade regardless of its size. He has already contacted Hanna at Riddle and Walt Foster intended to visit the deposit.

In light of this occurrence it might be worth while to examine some of the other pyroxenites which have been mapped in the Kerby quadrangle and especially to examine the air borne magnetometer survey (when published) for magnetic anomalies in the area.

Sincerely,

Len

LR:amj
cc:LLH
June 23, 1958

Mr. Len Ramp
State Assay Laboratory
Grants Pass, Oregon

Dear Len:

This is in reply to your letter of June 19.

I am going to be looking forward to the results of the two samples you had sent up for iron and nickel assay. This is the material in the pyroxenites from Tin Cup Peak.

If this material will analyze 25 percent magnetite and there is any tonnage involved, it should be of more than ordinary interest. I would like very much to examine this with you with the idea of preparing an ORE-BIN article. In the meantime I think it behooves you to make some preliminary examinations of the other pyroxenites and determine if they have any interest regarding magnetite but if this interferes in any way with your chrome manuscript, don't do it. Keep your eye on the development of this material.

Regards.

Sincerely yours,

[Signature]

Director
August 20, 1958

Mr. Ernest R. McTimmonds
28031 E. 10th St.
Hayward, Calif.

Dear Ernest:

I am sending a copy of the assays of the samples we took on your Tincup Iron claims and a preliminary report.

The results of the assays are, I think, quite encouraging. I would advise going ahead and recording the claims and attempting to interest possible buyers.

Steve requested that I send a copy of the assays to Walt Foster, which I will do.

It would be advisable also to contact other companies such as:

Columbia-Geneva Steel Div.
120 Montgomery
San Francisco, Calif.

Colorado Fuel & Iron
Mining Dept. Box 316
Pueblo, Colorado

Kaiser Steel Corp.
P.C. Box 217
Fontana, Calif.

and others.

Mr. Warren E. Ove, Exploration Manager of the Western Engineering Corp., P.O. Box 8, Douglas, Wyoming (Phone 71) was in the office today and suggested that the Colorado Fuel & Iron Corp. were very likely to be interested in a deposit such
as yours. He also mentioned that his company may be interested in financing an exploration project on such an occurrence. I didn't give him the location but promised to give you his address. They are a small oil company interested in mining investments.

If you are able to contact any Japanese iron buyers in that area they may also be interested.

Sincerely yours,

Len Ramp
Geologist
August 21, 1958

Mr. Walt A. Foster
Hanna Coal & Ore Corp.
Riddle, Oregon

Dear Walt:

The owners requested that I send the enclosed information on their deposit of disseminated magnetite. They plan to contact several other companies who may be interested in such a deposit. The deposit looks interesting to me but it may not be worth much at the present time due to its low grade and inaccessibility. If you have any questions about the report or assays let me know.

How did your last rush on house finishing go? Hope you finished up on time.

Best regards,

Len

incl.