New York, N. Y.
December 23, 1938.

AIR MAIL

Mr. Tom Lyon,
820 Kearns Building,
Salt Lake City, Utah.

Dear Tom:

From Dugan's letter to Weed I take it that it is not clear what I had in mind when I wrote that we approved the hanging wall crosscut on the 1000 ft. level of the Walker mine.

It seemed to us, after careful consideration, that Droubay's suggestion of diamond drilling downward from the 1000 ft. level was the quickest way to learn something of the behaviour of the north orebody in depth. It seemed to us too long a time to wait until the 1100 ft. level could be driven northerly to the position of the proposed crosscut on the 1000. It appeared best, therefore, to get the down drilling from the 1000 suggested by Droubay started as quickly as possible.

While I think the down drilling from the proposed 1100 level crosscut may be desirable later, I hesitate to load that much expense on the mine at this time, furthermore, if the holes proposed from the 1000 level do not find better ore conditions in that part of the mine, it is extremely doubtful if it will be worth while drilling in that low grade portion of the vein below 706 shaft.

Mr. Weed is writing Dugan with reference to buying a drill for the mine. Since we will have to contract the deep holes now being considered, I think it would be much better to lay out everything in the nature of short holes that we could possibly want done and turn such work over to the contractor. I am sure the Walker mine will never have enough current drilling work to justify the expense of its own drilling outfit.

Very truly yours,

RENO H. SALES

RHS:F
CC: Mr. C. E. Weed.

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FORM 396 5-38 2M

WALKER MINING COMPANY

WALKERMINE

PLUMAS COUNTY, CALIFORNIA

December 21, 1938

L. F. BAYER, MANAGER

Mr. Reno H. Sales
Chief Geologist, Anaconda Copper Mining Co
Butte, Montana

Dear Sir:

Please find enclosed a few geological sketches from the Walker Mine, also a slightly revised tabulation of its available ore reserves dated December 1, 1938.

At the request of Mr. Gidel, several development headings were run while I was away this summer. The 800 level sketch of Piute shows how the same condition that seems to terminate the ore-body above was encountered. The heading followed a heavy clay slip that came in from the northeast and as soon as I returned I had the 826A XCW driven to be sure of an extension of the main foot wall slip. 904B DN will soon be started, as you have recommended, and further prospecting north will be done from there.

Prospecting along the high grade stringer in the south ore body did not locate anything of importance. The first ten feet exposed a good deal of disseminated chalcopyrite, mostly along the joints of the crystalline wall rock, but structure beyond this point was so weak that the heading was stopped when driven 45 feet.

We are well under the 517 fissure zone of the 712 ore body with the 619E crosscut, but as yet no vein has been encountered. A five inch veinlet of quartz showing scattered chalcopyrite and bornite has been exposed with the last couple of rounds. We are within 100 feet of the end of the mineralization as exposed on the 500 level.

The available ore reserve tabulation has been slightly revised into a more convenient form that will show breakage and production from headings and sideswipes as well as from stopes. As the engineering department formerly kept an independent record of broken ore, I have made several small adjustments so that from now on there will be but one set of figures.

May I offer humble congratulations with those who have honored you with the Penrose Medal.

Respectfully yours,

S. K. Droubay.

S. K. Droubay

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AIR MAIL

New York, N. Y.
December 17, 1938.

Mr. Tom Lyon,

820 Kearns Building,

Salt Lake City, Utah.

Dear Tom:

We have considered the Walker Mine development proposals. For the present, we approve the hanging wall crosscut on the 1000 foot level to be driven from 1017 Drift at a point just to the north of coordinate 15800 and as indicated on Droubay's map in green color.

We think this work should be started immediately.

As to other development proposed by Droubay, this matter will be given further consideration. For the present, however, we do not approve of the work on or from the 1100 foot level as outlined by Droubay.

Very truly yours,

RENO H. SALES

RHS:F
CC: Mr. C. E. Wood.

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F. 512 1-15-37 2M

INTERNATIONAL SMELTING AND REFINING CO.

AIR MAIL

ANACONDA
from mine to consumer

GEOLOGICAL DEPARTMENT
KEARNS BUILDING

SALT LAKE CITY, UTAH

TOM LYON

December 8, 1938

Mr. Reno H. Sales
Room 1726
25 Broadway
New York City, N. Y.

Subject:

WALKER MINE

Dear Reno:

I am in receipt of a letter dated December 5 from Droubay at the Walker mine, a copy of which has been sent to both you and Mr. Dugan. Mr. Dugan is home sick with a severe cold and I haven't had a chance to discuss the situation with him.

In the first part of Mr. Droubay's letter he calls our attention to a number of facts of which we have been aware for a long time, and as you and I both know the chances of prolonging the life of the Walker mine lie in two places - first, at depth below the Central and North ore bodies, and second, the possible continuation of the vein zone north of the Piute.

Development below the 700 level in the Central and North ore bodies has always been the most difficult for this department to keep going as the operators always had some very good reason why this downward development should not be done. During the last period of operation both Mr. Elton and I used every effort to get the winze down below the 1000 level and finally succeeded in getting it deep enough so that development work could be done both to the north and south. The downward projection of the south end of the North ore body stopes on the 1000 level is approximately 600 feet south of the shaft and continues for a distance of from 600 to 700 feet.

Regarding the diamond drilling program, the drilling necessary to establish the ore bodies below the 1000 level will involve considerable time

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in addition to the expense. I believe that the time element is probably the most important in the operations at the Walker mine and that in order to keep the tonnage up to capacity, it will be necessary to develop ore very rapidly from now on. I am afraid that if drilling is done before the 1200 level is driven that a great deal of time will be lost. It appears to me that the ore body exposed on the 1000 should reach the 1200 level,although this is not an established fact. However, the 1200 drift can be driven to the north and reach the ore body probably in 600 feet. If the ore body exists on the 1200 and is drifted on, the material coming from the development work should be good enough for ore which would eliminate the necessity of handling waste from this level. As I see it, the first 600 feet will probably be the most costly and difficult to drive. This work should be started at once and pushed as rapidly as possible. The work to the north of the Piute should also be pushed as rapidly as possible. If drilling is contemplated, I believe that the 1200 level would be the level from which drilling to greater depth should be done.

Kildale and I have gone over the situation and we both feel that the 1200 level should be driven before any drilling campaign is started.

Regarding the extension of the 712 ore body to the 1000 level, I have always been very dubious about the existence of this ore body on the 1000 level; that is, I do not anticipate any ore of great importance at this location, and I believe that if necessary we should suspend operations on the 1000 level looking forthis ore body and drive the 1200 level instead.

Very truly yours,

TL:P
cc: Mr. Dugan
Mr. Bayer

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FORM 396 3-31-37 2M

WALKER MINING COMPANY

WALKERMINE

PLUMAS COUNTY, CALIFORNIA

L. F. BAYER, MANAGER

December 5, 1938

Walker

Mr. Tom Lyon
Chief Geologist, Intnl. Smelting & Refining Co.
818 Kearns Building
Salt Lake City, Utah

Dear Tom:

The question of future ore for the Walker Mine has been discussed a good many times by all who are directly or indirectly concerned with the company. Now that the Piute Orebody above the 700 haulage level is nearly exhausted of available ore it is important, especially from an operating viewpoint, that serious consideration be given to this problem.

Although we list over 4,000,000 tons gross ore in our reserve statement as of November 1, 1937, and over 1,000,000 tons available ore in the monthly statement of June 1, 1938, it is questionable how much of this can be produced fast enough to keep the mill up to a desirable capacity.

Mr. Bayer and myself have talked the situation over a good many times and have checked the physical properties of each ore block separately. Being more or less directly responsible here on the property, we have tried to get an estimate of how far ahead the mill can be kept running at a satisfactory tonnage. Unless we have a generous downward extension of the 712 Orebody and a decided rake south to our Piute Orebody with depth, it means that we can measure the life of the mine. It will also mean that daily production tonnages will gradually become more difficult to obtain.

In the past there were the numerous large stopes of the Central and North Orebodies from which tonnages could be kept up, and the richer ore from the South and 712 Orebodies to hold up the grade. As these were depleted above the 700 level, the choice spots below were mined out and, up until about 1931, mill heads could be kept above 1.5% copper. About this time there was a decided drop in the grade of production. However, cheap mining costs in the large stopes, especially in the upper levels of Piute, which came in later, made it possible to keep running at a profit. Piute produced at about 1% copper, and with a better grade ore distributed throughout the rest of the mine, an approximate 1.25% copper head was kept during the year 1937.

We are now, for the first time, faced with the problem of supplying the majority of our production from below the 700 haulage level. The lower levels of Piute contain large tonnages of ore, but the vein is so flat that a slower method of mining must be used. Hoisting facilities are such that it is questionable whether we can, with production from these lower levels, replace the 600 to 800 tons per day that formerly came from above.

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The Main Orebody becomes more narrow with depth, and the majority of the vein below the 800 level is messed up with the No. 1 hanging wall fault. With the exception of a few stopes that are being operated now, most of the more desirable blocks of ground have been produced.

This means that in the very near future all of our production will come from stopes that are not only lower in grade, but must be mined under more adverse conditions than was done in the past. Even by supplementing this with as much pillar robbing as possible, it will be expensive to maintain a desirable production figure. We are feeling the effects of this even now.

The only way to remedy the condition that is rapidly approaching is to be assured of enough ore below the 700 level to warrant spending money on adequate haulage and hoisting facilities. If this is not proven in the next few months with large tonnages under 712 Orebody and in the lower south end of the Piute Orebody, the next best chance will be to find it north of Piute, or below the 1000 level in the Main Orebody. If these prove unsuccessful we may be forced to lay out a plan whereby we take all that we can get from the mine and get out.

In talking over the question of exploration work below the 1000 foot level with Mr. Bayer we feel that, from a money viewpoint, as well as gathering advance information, a long hole diamond drill program, substituted for the near-future resumption of operations in sinking 1080A Winze and exploring along the 1200 foot level, would be much to the advantage of the company. To my knowledge this drilling can be contracted with holes up to 1200 feet in length at a total cost to us of less than $1.80 per foot, on a basis of a 5,000 foot minimum contract.

By spending about $17,000 on this drill program we could, within a few months' time, find out whether the vein exists on our 1200 and approximately 1600 foot levels. To gain this information by additional sinking of 1082A Winze and extending laterals north 1300 feet and south 300 feet along the 1200 and 1600 foot levels, and doing the necessary crosscutting, would cost us in the neighborhood of $190,000. The $17,000 would be worthwhile insurance on the larger amount.

In checking over the records of past diamond drilling carried out on properties of the Walker Mining Company, it is seen that this work has played an important part in the finding of ore, and has saved a great deal of expense by eliminating exploratory work that otherwise would have been done. In no case did a drill hole penetrate a later developed orebody without giving indications that the orebody existed. No holes have given inaccurate results.

The early surface holes Nos. 1 to 5 drilled through the upper part of the North Orebody and proved the extension of a known vein. Early tunnel holes Nos. 1 and 3 crosscut veins on which later work developed 750A stope and the stopes in the south end of the South Orebody. Surface hole G, drilled in 1926, located 17 feet of 4.12% copper ore, which resulted in the development of our 712 Orebody. Surface hole H cut the lower north end of the same orebody,

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showing mineralized quartz up to 1.5% copper (estimated). In 1928 underground holes Nos. 15 and 16 drilled from the 712 orebody were responsible for developing the 705A hanging wall streak and the 517 footwall vein.

It may be said that out of the 34 holes drilled, totaling 17,223 feet, eleven gave positive results wherein actual veins were located. In addition to this there were many slightly mineralized zones located that will help guide future development, and much negative information that has saved many feet of drifting. The records of this drilling serve as a permanent and valuable guide for the company.

In considering the two solutions to the question of future ore for Walkermine the following basic cost estimates were compiled and may be used in estimating costs of exploration along or below the 1000 foot level.

Sinking 1082A Winze	$100.00 per ft. (minimum)
Large-size x-cuts and laterals 7x9	20.00 " " "
Small x-cuts 5x7	15.00 " " "
Diamond drilling first 500 feet	1.50 " " "
" " 500 to 600 feet	1.60 " "
" " 600 to 700 feet	1.70 " "
" " 700 to 800 feet	1.80 " "
" " 800 to 900 feet	1.90 " "
" " 900 to 1000 feet	2.00 " "
Diamond drilling, air, water and misc.	0.20 " "
Head room for drilling	150.00 per station

As crosscutting into the hanging wall is rather expensive, the cheapest way of proving up our vein below the 1000 level in our Main Orebody, would be to drill 6000 feet of drill holes from two common stations, involving 450 feet of 5x7 crosscutting. There would be a 300 foot crosscut out from the middle of our North Orebody, with two very steep 1000 foot holes and two flatter 500 foot holes fanned. The other four holes would be the same, drilled from a 150 foot extension of 1101 XCE. This is indicated as Set-up C on the maps, and is shown with green crayon. The exact strike and dip of such holes would have to be determined by additional sections. Such a drilling program would cost:

400 ft. crosscuts at $15 per foot	$6750
4000 ft. hole under 501 feet at $1.50 ft.	6000
2000 ft. hole over 500 feet	3600
6000 ft. hole at 20¢ per ft. for air and misc.	1200
2 stations	300
	$17850

Of course, more satisfactory positions for collaring holes could be obtained by additional crosscutting, as indicated on the maps. The long, steep holes could be substituted for more numerous short holes, or vice versa.

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To drift along our 1200 level and obtain comparable information will cost:

Lateral north 1300 ft. at $20	$26000
Lateral south 300 ft. at $20	6000
Crosscuts north and south 900 ft. at $20	18000
Skip pockets on 1200 level	5000
	$55000

The same figure may be used for exploration on our 1600 foot level if 500 feet of shaft sinking at $100 per foot is added.

To explore 1200 foot level	$55000
To explore 1600 foot level	55000
Sinking 1082A Winze	50000
	$160000

The figures for drifting look rather high, but when waste disposal, pumping, and the congested condition of our hoisting facilities are taken into consideration they are not far off.

I trust that I have not been too presumptive in calling attention to a problem that should be solved.

Respectfully yours,

S. K. Droubay

cc-Mr. Sales
cc-Mr. Dugan
cc-Mr. Bayer

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Salt Lake City, Utah

November 18, 1938

Mr. C. R. Wood
Room 1726
25 Broadway
New York City, N. Y.

Dear Sir:

I have discussed the Walker mine development situation with Lyon and Kildale. The following program is recommended with individual projects listed in order of their importance.

1- Explore the Walker vein zone northerly on the 1100 foot level. It is proposed that this work will be followed later by diamond drilling to test the vein at deeper levels.

2- From the Piute shaft extend the 900 level northerly into unexplored territory beneath the basalt covering. This project may mean upwards of a thousand feet of work, depending upon geological disclosures.

3- Continue 1017 drift northerly, supplemented by crosscutting, to prospect the downward continuation of the 718 ore body.

4- Continue the 800 Piute drifts northerly and southerly as at present. Should the Piute vein be terminated by a fault in the face of the north drift, further consideration should be given before prospecting is undertaken to recover the faulted segment. The distance the 800 south drift is to be extended will naturally depend upon the behavior of the vein as to strength and mineral character.

5- Continue 607 drift southerly to prospect the footwall branch.

In my opinion it is extremely important that the suggested 1100 and 900 developments be pushed. What is most needed at the Walker is a demonstration of the downward continuation of the Walker vein ore, or the development of additional ore on the Piute vein to the north in unexplored territory. Unless one of these projects is successful, the Walker mine is going to be in a bad way in the not distant future. It is therefore of extreme importance that the 900 and 1100 projects be gotten under way at the earliest possible date and

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continued to completion.

I will discuss these matters further with you upon my arrival in New York.

Yours very truly,

RHS:P

Reno. H. Sales

cc: Mr. Kelley
Mr. Elton
Mr. Lyon
Mr. Dugan

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Walker

Aug. 17, 1938.

Mr. C. E. Weed,
Manager of Mines,
Building.

Dear Sir:

The development recommendations for the Walker Mine decided upon yesterday in the conference at which you, Mr. Gidel and myself were present, are listed below in order of preference:

(1) Eighth Level - Continue 818A Drift northerly on Piute Vein

(2) Eighth Level - Continue 886 Drift south on Piute Vein.

(3) Sixth Level - Continue 619 Drift southwest.

(4) Third Level - Continue 363B Drift northwesterly on Main Vein. This recommendation is subject to a further study of details and to conditions in 460 stope.

(5) Seventh Level- Drift northerly on vein disclosed in 743 Crosscut.

(6) Tenth Level - Continue 1017 Lateral 200 feet northwesterly on present course, then crosscut north 70° east through projection of 712 orebody.

Of the other recommendation in Gidel's memorandum of July 22nd, we eliminated the proposal to crosscut north 60° east from 712 Drift at a point 380 feet southeast of 706A Winze.

As to the remaining recommendations covered by Mr. Gidel's memorandum, these are to be carried out in order of convenience to the mine operation.

It is further suggested that at such time as the Ninth Level of the Piute is unwatered, Drift 904B North be extended in preference to the

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proposed footwall crosscut, as given in Gidel's memorandum.

Yours very truly,

RHS:KM
cc:Mr.T. Lyon

RENO H. SALES

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ANACONDA COPPER MINING CO.

COPY

Aug. 10, 1938.

Mr. Tom Lyon,
820 Kearns Bldg.,
Salt Lake City, Utah.

Dear Tom:

Mr. Gidel has handed me a memorandum dated July 22nd, covering certain recommendations for development in the Walker Mine.

I have gone over this list carefully and wish to make the following suggestions as to this program. I will take up the recommendations in order:

THIRD LEVEL.

I doubt the advisability of extending Drift 363-B northerly. It should not be done in any case without a thorough review of the information we now have on the 460 stope operation and on 363-B Drift itself. Unless 460 stope caved, I see no reason why it should not have continued up to above the Third Level. We should be reasonably sure that the 300 is not at or near the oxidized zone, in which case there might be little or no tonnage above that level. If a careful study of the record seems to justify the work, I will certainly approve it.

SIXTH LEVEL.

The continuation of 619 Drift southwesterly on the vein disclosed in 517-B Drift, is probably good prospecting. I have mapped 517-B Drift carefully and I seriously doubt whether the extension of 619 Drift will block out any ore. I got a very poor impression of that vein on the 500,

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but there is a chance that the 600 will be better, and, if it does show up favorably, the workings should be continued out into new country as long as there is something worth while to follow.

In any case, should the 619 find ore, a raise will be necessary to the 500 before a stope can be started.

SEVENTH LEVEL.

As to that first recommendation, I do not see why it would not be better to drift northerly on the ore streak shown in the east crosscut. If the vein is worth anything, the ore recovered might help to pay the expense of development. From my knowledge of the geology, I do not have much hope that this piece of work will find enough ore for a stope.

I cannot approve the second recommendation, because a drill hole was run crosscutting this same ground at a point less than 150 feet north of the proposed crosscut location. It found no ore. Furthermore, 6 sub-level drift followed the ore from the south until it became too low grade to justify further drifting.

I cannot see much chance for success in the next recommendation, which is a crosscut easterly from 712, 400 feet north of 706-A Winze, but the reported ore showing in Drill Hole No. 8 may be better than I think it is.

I agree that 765-A Drift southeasterly on the east branch of the Piute Vein is good prospecting. A crosscut drill hole farther to the south did not show up anything worth while, but I think we should have a working out into that hangingwall country somewhere in the 765-A Drift, which will enable us to really learn what happens to the Piute zone going south.

I have little or no hope that your last recommendation for the Seventh Level will find anything worth drifting on, but it will settle for

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all time whether or not there is a continuing branch northerly under the Piute workings.

EIGHTH LEVEL.

I agree that 818-A Drift should be continued northerly on the Piute Vein until the supposed fault is reached, and that if a cut-off is found the working should be extended through the fault. Because of the nearness of the oxidized zone, I cannot subscribe to a further search for the faulted end of the Piute Vein, if there be one, at the elevation of the 800. This exploratory work should be left for the 900, at which level, should the vein be found to extend northerly, we would be able to develop some tonnage, assuming the oxidized zone does not go lower than we anticipate. I feel that whatever we may do on the 800 north of the fault, we will have to duplicate anyhow at the 900.

TENTH LEVEL.

We are naturally forced to continue 1017 Lateral northerly with crosscuts at intervals, as suggested in your first recommendation for this level. I must say that the Tenth Level country thus far opened up in this 712 area has been extremely disappointing.

Your recommendation No. 2 for the Tenth Level is probably all right, but I do not see why a crosscut should be for more than 100 feet as a maximum.

In addition to the above recommendations, I would like to suggest another, which perhaps comes more nearly under the head of general development. I think we should plan to either drill into the footwall

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Mr. Tom Lyon---4 Aug. 10, 1938.

country under the above-mentioned 517-A and 619 drifts at the Tenth Level, or preferably extend 1055-B crosscut. This with the hopes that the southwest striking zone may have strength and that it might develop more favorably at greater depths. No doubt, the extension of 1017 Lateral plus the crosscuts therefrom, will keep the 1000 busy, but in such a case we should plan to do the drilling just suggested at any time we happen to have a diamond drill crew on the ground.

Yours very truly,

RHS:KM
cc:Messrs.Weed
Gidel
Dugan

RENO H. SALES

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FORM 396 5-38 2M

WALKER MINING COMPANY

WALKERMINE

PLUMAS COUNTY, CALIFORNIA

L. F. BAYER, MANAGER

May 24, 1938

Mr. Reno H. Sales, Chief Geologist
Anaconda Copper Mining Company
Butte, Montana

Dear Sir:

Please find enclosed two Available Ore Reserve sheets, also sketches showing the North end of the Piute Orebody that may interest you.

The Reserve Sheets cover the six month period that we have operated on a curtailed basis, up to May 1, 1938. It was necessary to drop all tonnages that were listed above the 600 level South of the Piute Shaft, due to the stopes caving through to the surface. Also, it is questionable just how many of the 55,103 tons of 745 to 765 Recoverable Pillars will be available now that the country above has caved. It may be necessary to leave this rock to steady the ground while mining between the 700 and 800 levels if the 700-600 Sub-level Pillar is not considered strong enough.

The 600 level North of the Piute Shaft has been reopened and three sections of ground in the extreme North end are being mined. We have done a little exploratory work North from 683D Drift on the 600 level, to guide the stoping, and exposed the condition that seems to cut off the vein, or offset it to the East, which ever the case may be. The vein is light colored and quite chalky where not oxidized, and contains an abundance of Magnetite. It is very broken and oxidized where cut with 659E Drift but is more solid and shows little oxidation in the faces of 662E and 666E Drifts. It seems to show very little of the recrystalizing effect of the post mineral granite that is so pronounced

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farther South, especially in the South and Central Orebodies.

I examined the Diamond Drill Core from the holes drilled North of Piute, which give the location of the old surface under the lava. In making sections through these holes and considering an easterly trend of the vein, it appears that the lowest point of the sub-surface where the vein may out-crop would be near the 700 level rather than just above the 800 level as shown on the map I sent you last November 1st. Also, before any long range exploration work is carried out to the North, it may be wise to locate additional claims to the East where there is a possibility of an easterly trend causing the sub-surface out-crop to pass out of company property.

Respectfully yours,

Seth K Dorcbay.

SKD
W

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FORM 396 6-37 2M

WALKER MINING COMPANY

WALKERMINE

PLUMAS COUNTY, CALIFORNIA

L. F. BAYER, MANAGER

November 29,1937

Walker Mine

Mr. Reno H. Sales, Chief Geologist
Anaconda Copper Company
Butte, Montana

Dear Sir:

I have submitted the Annual Ore Reserves for Walker Mine dated Nov. 1, 1937, and you will no doubt receive a copy in the near future. I took into consideration the use of the term,"Available Ore", that has been misused in the last few tabulations and changed the headings so that they are not so misleading. I had hoped to talk over the whole set-up with Mr. Lyon and make more changes than I did, but the closing of the mine made rather a rushed job of out of it, and I had no chance to rebuild the thing as I would have liked to.

There are still several bad features about the Reserve that I hope to see corrected next time. The extraction figures do not include all ore from headings, and do not add up to the total tons delivered to the mill. Also, any dilution from wall rock through caving or poorly directed mining is credited to breakage and production, causing the block to over produce which makes it necessary to credit additional ore as developed. Also, ore that is lost in nonrecoverable pillars must be shown as written off, while any ore recovered above that which is estimated as recoverable must be placed in the column for developed ore. I suppose these headings should read,"Written Off or Lost in Pillars", and,"Developed or Pillars Recovered above Estimate".

The assay correction factors remain unchanged. Although you told me that assay results should not be adjusted to figures that are subject to a yearly change, the results worked out so well that I decided to leave them go and make all the changes at once.

They are milling about 300 tons per day from the upper Piute country. This ground is getting heavy so it is a case of getting all the ore possible before it caves.

I am enclosing the last tabulation af the Available Ore Reserve. The figures taken from this and shown at the bottom of the Annual Ore Reserve do not include broken ore.

Respectfully yours,

Seth K Droubay.

S. K. Droubay

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F. 512 1-15-37 2M

INTERNATIONAL SMELTING AND REFINING CO.

AIR MAIL

ANACONDA
from mine to consumer

Walker

TOM LYON

GEOLOGICAL DEPARTMENT
KEARNS BUILDING

SALT LAKE CITY, UTAH

November 18, 1937

Mr. Reno H. Sales
The Biltmore Hotel
Los Angeles, California

Dear Reno:

We have been authorized to keep the Walker going on a break-even basis, mining about 300 tons a day from the upper portion of the Piute ore body. We also have authorization to continue leasing operations at the Delaware on a break-even basis. This is all the news that amounts to anything.

Very truly yours,

Tom Lyon

TL:P

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Walkermine Calif.

Nov. 4,1937.

Mr. Seth K. Droubay,
Walkermine,
Plumas County, Calif.

Dear Droubay:

I thank you for your letter of Nov. 1st, also the very interesting geological map covering the territory north of the Piute.

There is no doubt in my mind that this north country is well worth prospecting, and from your section it appears that the 900 would be a good level to extend for general exploration purposes.

I regret very much that Walker may be closed down in the near future.

Yours very truly,

RHS:KM

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FORM 396 6-37 2M

WALKER MINING COMPANY

WALKERMINE

PLUMAS COUNTY, CALIFORNIA

L. F. BAYER, MANAGER

November 1, 1937

Mr. Reno H. Sales, Chief Geologist
Anaconda Copper Mining Co.
Butte, Montana

Dear Sir:

I am in receipt of your letter dated October 27th wherein you recommended prospecting north from the Piute Orebody. As it happened, I had just brought up to date a map showing the lava capping and drill holes so I am mailing you a print.

The map is interesting in that it shows how the drilling was done too far west to cut any extended Piute mineralization unless it turns sharply west.

We have received news that the mine is to be closed but no details are known. Several hundred men are getting their time today, and we are all more or less concerned over the outcome.

Respectfully yours,

Seth K Broadbent.

SKD
W

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Oct. 27, 1937

Mr. Seth K. Droubay,
Walkermine, Calif.

My dear Droubay:

I am in receipt of your letter and reserve report dated Oct. 11th.

In connection with the Piute developments, it seems to me that we should undertake an exploratory drift in the Piute Vein northerly from the present north face of either the 800 or 900 level. As I recall it, the upper levels ran into oxidized ore as we were approaching the old north slope under a basalt covered surface. We should explore this vein northerly whenever we feel we are deep enough to get under cover under the old surface. I think possibly the records of the drilling done to the north by J. R. Walker and associates, would show us the elevation of the old surface.

I suggest the above development because the vein is still big and strong the last we see of it on these levels and there is a chance of a zone of enrichment below the old surface oxidization to the north, furthermore there is a chance of better primary ore in the vein, or at least a chance of a continuation of the Piute type of ore.

I do not know the present status of the Walker Mine operation. The above suggested development is subject to present conditions prevailing at the property as to allowable expenditures for development.

Yours very truly,

RENO H. SALES

RHS:KM
cc:Messrs. Bayer
Elton
Lyon

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FORM 396 6-37 2M

WALKER MINING COMPANY

WALKERMINE

PLUMAS COUNTY, CALIFORNIA

L. F. BAYER, MANAGER

October 11, 1937

Walker Mines

Mr. Reno H. Sales, Chief Geologist
Anaconda Copper Mining Company
Butte, Montana

Dear Sir:

Please find enclosed the September 1st and October 1st tabulation of our Available Ore Reserve; also several Geoligical sketches that may be of interest to you.

In answer to your letter of October 7th, I will explain what the tabulated figures mean. The Reserve Sheets previous to March 1st did not include all of our Ore Blocks, but as copper advanced in price, I revised the Reserve to include all the reasonably assured ore that could be mined. The figures listed under "Prepared", represent the tonnages of Net Available Ore above our prepared stopes, that may be broken through the regular course of mining. Those listed under "Available" represent tonnages of Net Available Ore that are not prepared but are blocked out, each figure amounting to roughly one-half of the Gross Ore that would be listed in the corresponding block. The figures in the "Broken" column are tonnages of broken ore in the stopes.

Each month the breakage and the production of the stopes are taken from the Engineers reports and a new sheet is made up. Broken ore is subtracted from the "Prepared" figures, and the differences between breakage and production are added or subtracted from the broken ore. Newly developed ore is added and blocks that are prepared for mining are transferred. No attempt is made to account for the discrepancies that occur when a stope is finished. If more rock can be mined than I estimate, then additional tons are measured and added. If the estimate is too great, then any balance is dropped--to be included with pillars. The figures on the back of the

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sheet refer to those on the front side and briefly account for any changes that have been made during the month. Assuming that nothing was written off or no stopes over-produced, the grand total shown on any one sheet should equal the grand total on the previous sheet less the production plus the ore developed. The increase or decrease figure represents any change in the grand total from the preceding month. The "Total Tons To Mill" figure is the Engineers total of all ore delivered to the Mill, including that from headings, over production from stopes and any odd tonnages taken from places not listed in the reserve. The three assays are for comparison. The one taken in the Mill should be the most accurate; the Production Assay is a weighted assay from the daily samples of chute and headings taken from the Engineers report, while the Calculated Assay is weighted from the production tonnages and the corresponding Broken Ore assays that are shown on the sheet. Newly developed or transferred ore is also listed on the back. The Breakage and Production assays are the only ones that have not been corrected with factors that were worked out; namely.800 for Piute tonnages and .914 for tonnages in the rest of the mine. In other words, the sheet is an attempt to give a month to month picture of operations, showing if we are finding, preparing and breaking rock in the right proportions.

Although there is evidence of mineralization in 1043 and 1056 Crosscuts East as shown by the sketch of the North headings, as yet we have not encountered the extension of the 712 Orebody. The Crosscuts were driven in hopes that the ore would have a southerly rake or, that enough of the mineralization would be found to follow. We will continue driving 1043 XCE and 1017 DN and have stopped 1055 XCW. The lower levels of Piute are looking about the same. Both the 800 and 900 North Headings are out of ore, but neither have gone far enough to be sure we are to the end of the orebody. The rotten grey sheared schist in the end of the 800 level may be the same formation that is under the footwall fault on the 700, and may be a clue as to why the ore seems to have been ended. / In Immediate association with this light grey sheared formation is a smooth, fine grained rock, resembling the dikes of the south end and the footwall of upper Piute, yet

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it may be an unsheared portion of the grey member. The south end of the 800 still looks good while the south 900 is still poor.

Respectfully yours,

Seth K Droubay.

SKD
W

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FORM 396 6-37 2M

WALKER MINING COMPANY

WALKERMINE

PLUMAS COUNTY, CALIFORNIA

L. F. BAYER, MANAGER

August 19, 1937

Mr. Reno H. Sales, Chief Geologist
Anaconda Copper Mining Company
Butte, Montana

Dear Sir:

I understand that you have returned from your trip abroad and thought you may be interested in seeing a sketch of develoment progress in our lower North Orebody, especially the extension of 1017 DN toward 712 Orebody. The last four monthly tabulations of our Available Ore Reserve are also enclosed to bring up to date the set I started sending you several months back.

1017 DN is still in the dark formation that contains an abundance of large epidote blotches, but is nearing the zone where mineralization should start in. Although we have done very little crosscutting along the way, it has been the main concern to get under 712 where we can crosscut both the footwall and the hanging wall and locate a position to start a raise to the 700 level. The last few rounds in 1043B XCE was in a slightly sheared formation that looks more favorable, but it may be the fact that it is nearing the faults.

966B and 944B Crosscuts have assured us a nice block of ore between them and the 700 level where the vein was followed with 761 DN. The copper contents is not so high, but the gold should run at least 0.06 Oz per ton. 920 and 920A Stopes are producing from this block.

The 900 level and 800 level drifts of Piute are being extended north and south. The 800 level looks good and is holding up to grade, especially north of the winze, where the ore is about 30 feet thick. The 900 level is not so encouraging, but looks best in the North heading. Here the last 50 feet indicates

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a fair block of ground up to the 800 level.

The Shaft is about 120 feet below the 1100 level and is in the dark crystaline schist. The last 25 feet has shown stringers of fair ore along the hanging wall, that appear to be the edge of the mineralization that follows the faulting from the 1000 level on through the 1100 level.

The Diamond Drill question has not been agreed on as yet but I still have hope of seeing one purchased.

Respectfully yours,

Seth K Dranbay.

SKD
W

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FORM 396 12-36 2M

WALKER MINING COMPANY

WALKERMINE

PLUMAS COUNTY, CALIFORNIA

L. F. BAYER, MANAGER

April 12, 1937

Mr. Reno H. Sales, Chief Geologist
Anaconda Copper Company
Butte, Montana

Dear Mr. Sales:

I am enclosing several geological sketches that may interest you, also a revised list of our available Ore Reserve.

The composite map and sections show some interesting developments in the south extension of the North Orebody, and I thought perhaps you may wish to make a suggestion or two for farther prospecting. This block is being slowly proven up, but my main concern is having the ground fully prospected in time to place mill holes and finger raises far enough in the footwall to get all of the ore. Part of 1020 Stope is finished and mill holes are complete to the 900 level, so it will not be long before we are producing ore here. The 942 Drifts (70 feet above the 900 sill) have crosscut almost 100 feet of 1.48% Cu Ore, and they are not to the footwall yet. Although they need muck badly I wonder if it is not unwise to put stope preparatory work ahead of prospecting, especially where such a large block of ground is concerned. The original 920 Stope was stopped and mill holes from 1020 Stope are being placed so they can mine farther in the foot, but it is doubtful whether the one at 5 + 30 will be quite far enough. This footwall ore seems to rake to the south with depth. The south part of 1020 Stope will no doubt be flattened off and completed to the 900 level far enough into the footwall to allow for well placed mill holes, and all ore

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left below the 900 level will be recovered with a stope above the 100 footwall dirft. An intermediate level will no doubt be driven south from 915 Raise, and crosscuts will be driven at intervals south, along 904 Drift to prospect the downward projection of the ore in 761 Drift. Perhaps a crosscut or two into the footwall of the 1000 level near section C #3 would be worth while.

1017 DN and 1008 Crosscut East are still in waste, but the face of 1008 C Crosscut shows shearing with an occasional chalcopyrite or garnet nodule in the broken seams. The slip near the face of 1017 DN is barren of sulphides although one assay of 0.12 Oz Au is listed when the slip was first broken.

The crosscut east from the 1100 Station shows 15 feet of dense fine grained schist with irregular blotches of epedote on the hanging wall side of the fault. Pump trouble has made progress slow.

The Operating, or Available Ore Reserve, has been revised to include all reasonably assured ore blocks. Tonnages have been recalculated and the correction factors that were worked out for the Annual Ore Estimate have been applied to the assays. Breakage and Production assays are not corrected. The tabulation of available ore above the 700 level that I sent you two weeks ago was taken from this sheet. I hardly know how to handle discrepancies between breakage and production that accumulate in the broken Ore Reserve, but when a stope starts over producing I stop listing it, and when a stope gets empty I just drop the balance. All future additions to this reserve will be newly developed ore or pillars that the manager decides to rob.

I would appreciate any suggestions you may care to make.

Respectfully submitted,

Seth K. Dronbay.

SKD/w

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March 21, 1937

Mr. Tom Lyon, Chief Geologist
International Smelting
& Refining Company
818 Kearns Building
Salt Lake City, Utah

Copy to Mr Sales.

Dear Sir:

Please find enclosed a copy of the proposed development program, a sheet showing ore available for mining above the 700 level, and two letters from owners of mining properties. I answered the letters stating that I had sent them on to the Salt Lake office and that they would hear from there in case the company was interested.

The development program was drawn up during Mr. Dugans recent visit, and I have tried to make it self explanatory if reference is made to the 1937 Ore Reserve long sections. Work necessary to prepare reasonably assured ore blocks for mining is tabulated under the heading of Mining Development, and general prospecting is listed as Prospecting Development. Most of the mining development would be run in ore so a good portion of the cost would be returned from the values of the muck.

The sheet listing ore available for stoping above the 700 level, is a tabulation of our proven, recoverable rock that does not have to be hoisted. It does not include pillars except in the cases of a small tonnage that is now being recovered in the North Orebody, and those that will be taken from the Piute Orebody above the 700 sorting level south of the shaft. Very little ore north of the Piute Shaft is listed because it is uncertain how much of this blocky, caving ore can be recovered. An additional large tonnage of ore may be developed in blocks 720A and 610A of the North Orebody.

I have included this list because it may be useful in considering any additional capacity for our mill. We are using this rock at the rate of over 20,000 tons a month, and our mining costs will be higher when it is gone.

Very truly yours,

SETH K. DROUBAY

SKD/w

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Outline of Proposed Development

Development Proposals		Prospecting Development			Mining Development				
	Notes	Raises	X-Cuts	Drifts	Raises	X-Cuts	Drifts	Tons Dev'd	% Cu
South Orebody									
1. Continue 768 Raise to the 500 level and explore upper projection of 775 Block to 300 level; also drive raise in N end of 775 Block for development of upper areas.	768D N end Above 500 level	260'		200'	150' 240'		80' 150'	84,500	1.00
2. Develop blocks 810A, 850, 910A, and 950. (To be accomplished by drifting south from Central Orebody on 800 and 900 levels.)	800 level 900 level				345' 410'	300' 300'	670' 500'	48,600 45,000	1.46 1.32
3. Raise from 800 to 700, South of 810 Stope (in 810 Stope block).					150'		100'	4,000	1.40
4. Explore S extension of 1010 Stope by extending 1021 Drift South and raising to 900 level.					170'		180'	5,000	1.50
5. Explore upper extension of 750A by drifting N from 602B Raise (to be accomplished after 768D Raise has been completed, to make 500 level accessible.)					140'		200'	8,500	1.36
6. Explore West Vein (footwall) for lower projection of 775 Block.		1050'		2000'					
Totals		1310'		2200'	2655'	600'	3880'	135,600	1.23
Central Orebody									
7. Explore downward projection of Central Orebody and North Orebody, on 1100 level by drifting and cross-cutting N. and S.	North South		600' 400'	1400' 700'					
8. Explore hanging wall side of fault by cross-cutting on 1000 level by 706 Winze and intervals North.			230'						
9. Develop Block 580. (480) small block North of the Central O.B. Raise.					100'			3,500	2.87
Totals			1230'	2100'	100'			3,500	2.87
North Orebody									
10. Extend 1017 DN and cross-cut hanging wall (see Project #3).			800'	1500'					
11. Extend 904 DN and also drift N on 800 level (see project #4). (Drift from Raise)	800 900				500' 500'		500' 500'	189,000	1.35
12. Extend 761 Drift North and prepare 720A and 610A blocks for mining; explore southerly extension of these blocks, especially above the 600 level; run development raise at 0 : 00 to prepare 780B Block for mining.	610A) 720A) 780 South Ext.		800'	600'	1060' 225'	300'	1000' 100'	200,000 12,500	1.10 1.05

Development Proposals	Notes	Prospecting Development			Mining Development				
North Orebody Contd.		Raises	X-Cuts	Drifts	Raises	X-Cuts	Drifts	Tons Dev'd	% Cu
13. Explore hanging wall vein in 340 Block by raising from 300 to 200 levels (at 12 : 00).					140'		200'	8,000	1.50
14. Explore hanging wall vein exposed on 600 level in 666 XCE.					50'		100'	2,000	1.40
15. Explore footwall of 920 Block by cross-cutting from 900 sill(at 915 St.) 1067A Raise, and 915B Raise to prove up added width of vein to include with 920 Stope. (Assay may be higher. +- 1.3%)						400'	200'	75,000	1.00
Total			1600'	2100'	2475'	700'	2600'	486,500	1.21
710 and 712 Orebodies									
16. Explore 710 Orebody above 700 level.			400'	1000'					
17. Drift North on 300 level over 405 and 405B Blocks.			250'	400'					
18. Drift North on 400 level over 505B Block.						200'	300'	15,000	1.03
19. 517 Footwall split (see Project # 10). a. Extend raises above 500 level at points along fissure. b. Prospect fissure on 600 level from 620E XCW.	Above 500 600 Prospect		150'	300'	300'		300'	9,000	2.24
20. Explore hanging wall vein in 605C Block above and below 600 level (small high grade vein).					50'		100'	2,000	1.90
Total			800'	1700'	350'	200'	700'	26,000	1.51
Piute Orebody									
21. Drift North and South on 800 level.	North South				500' 1000'	150' 300'	500' 800'	80,000 230,000	1.50 1.14
22. Drift North and South on 900 level and cross-cut footwall. {to explore 150' west of Piute shaft.}	North South X-Cut) Vein)		200'	300'	1000'	400' 150'	800'	100,000	1.12
23. Drift South on 1000			300'	600'					
Total			500'	900'	2500'	1000'	2100'	410,000	1.21
Grand Total		250'	4130'	7000'	8080'	2500'	9280'	1,121,600	1.22

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