

# INTERNATIONAL SMELTING AND REFINING CO.



GEOLOGICAL DEPARTMENT  
KEARNS BUILDING

TOM LYON

SALT LAKE CITY, UTAH

December 28, 1938

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

Dear Reno:

I have your letter of December 24th, regarding the Walker 1200. The 1200 level is 279 feet vertically below the 1000.

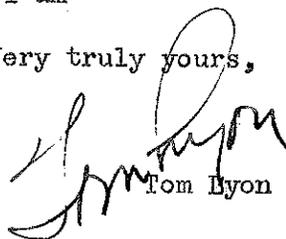
As stated in my previous letter it is 900 feet between the shaft and the vertical projection of the southern end of the north ore body.

The proposed hanging wall cross cut on the 1000 level is 379 feet. This, plus the station, plus several holes, will cost as much as a drift north on the 1200. The time element is an important factor as we are going to need some new stopes in a hurry. I wish to urge that no drilling be done from the 1000 and that the 1200 be pushed out beneath the north ore body. If ore is encountered on the 1200, then before any further shaft sinking is done, it would be well to drill first.

I hope you have recovered from your cold.

With kindest personal regards, I am

Very truly yours,



Tom Lyon

TL/S  
cc. Mr. Dugan

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New York, N. Y.  
December 24, 1938.

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

Dear Tom:

I have re-read your letter of December 8th on proposed Walker mine developments. Is it a fact that the 706 shaft is down to the 1200 level? I had the impression that the 1100 was the bottom. How far is the 1200 below the 1000?

If the shaft is to the 1200 and there can be any assurance that the level will be pushed rapidly to the north, your suggestion might be the best one.

As you know, I have two things definitely in mind for the Walker, one is the 900 drift north on the Piute, and the other the determination of the behaviour of the north orebody below the 1000 where it now shows to the best advantage in 1017 drift. As far as I am concerned, the important thing is speed but I want my ideas to be whatever will fit best with operating conditions.

Very truly yours,

RENO H. SALES

RHS:F

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 700 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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## 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, 1932.

Mr. Tom Lyon,  
620 Keams 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,

ERNEST H. SALDO

END:4  
CC: Mr. C. H. Wood.

## INTERNATIONAL SMELTING AND REFINING CO.

AIR MAIL



GEOLOGICAL DEPARTMENT  
KEARNS BUILDING

TOM LYON

SALT LAKE CITY, UTAH

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 <sup>North ore body</sup> 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

2- Mr. Reno H. Sales

December 8, 1938

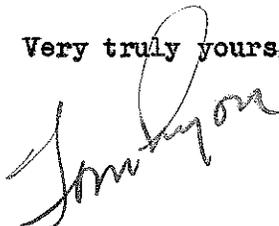
in addition to the expense. I believe that the time element is probably the most important in the operations at the Walker mine and that in order to keep the tonnage up to capacity, it will be necessary to develop ore very rapidly from now on. I am afraid that if drilling is done before the 1200 level 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 for this ore body and drive the 1200 level instead.

TL:P  
cc: Mr. Dugan  
Mr. Bayer

Very truly yours,



Salt Lake City, Utah

November 18, 1958

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

Walker

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 807 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

2- Mr. G. E. Wood

November 19, 1933

continued to completion.

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

Yours very truly,

RHS:R

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

Reno. H. Sales

*Walker*

Aug. 17, 1938.

Mr. C. E. Wood,  
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 836 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 stops.
- (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

Mr. C. E. Weed---2

Aug. 17, 1938.

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

Yours very truly,

RHS:KM  
cc:Mr. T. Lyon

RENO H. SALES

ANACONDA COPPER MINING Co.

C O P Y

Aug. 10, 1938.

Mr. Tom Lyon,  
830 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,

*Handwritten initials*

ANACONDA COPPER MINING Co.

Mr. Tom Lyon

C O P Y

Aug. 10, 1938.

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 stop 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 stop.

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, a 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 704-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

ANACONDA COPPER MINING Co.

C O P Y

Mr. Tom Lyon---5

Aug. 10, 1938.

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

EIGHTH LEVEL.

I agree that S13-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

ANACONDA COPPER MINING Co.

C O P Y

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. Wood  
Gidel  
Dugan

RENO H. SALES

MEMORANDUM

The following recommendations are for the proposed short-range development program at the Walker mine. They are listed according to levels.

It is proposed that the recommendations concerning development of the Flute vein on the 8th level be given the preference.

THIRD LEVEL

Continue 365 B Drift northwesterly on the Main vein (North Ore Body) and crosscut to footwall and hangingwall of structure as required.

Object - To prospect the possible northerly extension of the North Ore Body above 400 stops.

Approximate Work -

400' or more of drift  
150' or more of crosscuts

SIXTH LEVEL

Continue 613 Drift southwest on projection of ore-bearing vein exposed in 517 B drift southwest.

Object - To develop the downward projection of 517 ore body. There is approximately 300 feet length of vein in 517 B drift which averages about two per cent copper.

Approximate Work

250' of drift or more.

SEVENTH LEVEL

Extend 738 crosscut due east a distance of 60 feet beyond present face at 10 feet east of 703 drift south. Drift both ways on any ore thus exposed.

Object - To cut northerly projection of vein (course N 7° E) exposed in 743 crosscut east (180' S. of 738 crosscut).

Vein in 743 crosscut is three feet wide containing bands of sulphide with some chalcopyrite. Car Sample 1.21 per cent copper.

Approximate Work

Total new crosscut 60'

SEVENTH LEVEL

Drive crosscut N 60° E from offset in 712 drift northwest at point 280 feet southeast of 706 A. Winze.

Object - To cut one or more probable veins lying on the hangingwall of the Main vein opposite the Central ore body. These probable structures are indicated in 709 B. drift and in D. D. Hole No. 8.

First vein cut in D. D. Hole No. 8 contained two feet of quartz assaying two per cent copper.

Approximate Work

Total new crosscut 150' or more.

Drive crosscut N 60° E from 712 Haulage drift starting at a point 400 feet northwest of 706 A. Winze. Drift on any ore thus found.

Object - To explore probable hangingwall splits of vein shown in 712 drift, and in D. D. Hole No. 8, lying in block of ground between northeast faults.

Approximate Work

150' or more crosscut plus drifting.

Continue 725 A. drift southeast on the east split of the Pine vein.

Object - To further prospect this vein.

Approximate work

100' or more.

Drive crosscut S 75° W from 712 D. N. starting at a point 250 feet northwest of 725 A crosscut.

Object - To prospect for possible extension of 712 vein structure north-westerly beyond a north-south fault.

Approximate Work

100 to 150' of crosscut.

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-2-

EIGHTH LEVEL

Continue 818 A drift northerly on Piute vein and crosscut as required to determine footwall and hangingwall of structure. Upon exposing the north-east fault which terminates the north end of the Piute ore shoot on 700, plan further work from the proposed 800 drift to recover the faulted vein.

Object - To complete the development of the Piute ore body to the northeast fault, and to generally prospect for its further extension to the north or northeast beneath the basalt caprock. This development will enable us to locate better sites for future diamond drill prospecting in this area.

Approximate Work 140' to cover ore projection beneath 700 level  
500' or more additional general development.

2  
Continue 826 drift south on Piute vein.

Object - To develop projection of southerly portion of Piute ore shoot beneath ore exposed in 705 A drift. It may ultimately be desirable to continue this drift to the projection of 712 ore body.

Approximate Work - to south end of Piute ore body - 500'  
additional work to 712 ore zone 1200'

NINTH LEVEL

Continue 972 B crosscut an additional 200 feet due west beneath Piute Incline shaft. This crosscut is now in 65 feet.

Object - To prospect for possible footwall branches of the Piute vein. Small vein structures have been noted in the Piute shaft lying west of the main ore shoot.

Approximate Work - 200'

Drift N. 904 B instead of x.c. in ft wall.

TENTH LEVEL

6  
Continue 1017 lateral for 200 feet northwesterly on same course, then turn crosscut therefrom N 70° E for 100 to 150 feet through projection of 712 ore body.

Object - To develop downward projection of 712 ore body beneath 719 B drift.

Approximate Work

200' lateral  
100' - 150' crosscut.

Drive crosscut S 75° W from 1017 Drift northwest starting same at a point 250 feet south of 1008 B crosscut northeast.

Object - To prospect for possible northerly projection of North Ore body beyond a north-south fault zone.

Approximate Work

200' of crosscut.

M. H. Gidel

*Walker*

Aug. 5, 1938.

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

Dear Tom:

I have just received from your office a letter from Mr. Kildale and a roll of maps prepared by him, including the following:

1. 200 scale geological set of prints of the Walker Mine.
2. Geological map and two cross-sections (prints) of the Rico District in Colorado.
3. Pencil tracing, sketch map (100 scale) showing relation of new orebody found in the Mountain View, to the Yankee Tunnel workings.

I have reviewed with Mr. Sales the twelve recommendations for proposed development in the Walker Mine, which we discussed a week ago. He tentatively approves of same, expressing some doubt, however, as to what success may be had in finding ore in several of the prospects. In this conclusion I think we also agree but feel that we should not overlook any possibilities of finding some new ore. Mr. Sales agrees that the long distance drill prospecting should be done while the mine is operating in the future, and particularly favors testing the downward projection of the best looking, or the North orebody below the 1000 level. Mr. Weed expects to review with Mr. Kelley the proposed plan of prospecting in the Walker Mine, in which case we will probably receive instructions later.

Please tell Mr. Kildale to send to this office the several maps and list of development projects for Tintic now being prepared for Mr. Weed, so that we can incorporate same with other data we are getting together here.

Thanking you and Mr. Kildale for the above mentioned maps,  
I remain

Yours very truly,

MEG:KM

M. H. GIDEL

# INTERNATIONAL SMELTING AND REFINING CO.



GEOLOGICAL DEPARTMENT  
KEARNS BUILDING

SALT LAKE CITY, UTAH

August 3, 1938

J. M. LYON

Mr. M. H. Gidel, Asst. Chief Geologist  
Anaconda Copper Company  
P. O. Box 26  
Butte, Montana

Dear Sir:

As per your request, I am sending you to-day a complete set of prints of the 200 scale level maps of the Walker mine, together with prints of typical cross-sections through the various Walker ore bodies, a sketch map of the Yankee-Mountain View area at Tintic, and the Rico maps which you desired. Due to a rush of business in the office here we are a day late in getting these mailed but hope that the delay will not inconvenience you. You will note that among the Walker plan maps there is a surface sheet which we can use as a base map for the surface mapping.

I hope to be able by next week to finish mapping all the old workings now accessible in the May Day area of the Mountain View property and then will prepare a more complete and accurate map to show the development work which will be proposed for the exploration of the lower Pine Canyon ore bed in Yankee ground.

Mr. Weed's set of plan maps and the long section of the Walker mine will also be ready within a day or two. Do you know whether we should send these maps and my list of development projects for Tintic to him at Butte or to his New York office?

With Best regards,

Very truly yours,

MBK/S

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# INTERNATIONAL SMELTING AND REFINING CO.



AIR MAIL

GEOLOGICAL DEPARTMENT  
KEARNS BUILDING

TOM LYON

SALT LAKE CITY, UTAH

*Walker*

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 Plute 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*  
Tom Lyon

TL:P

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*Walker  
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,

RES:KM

# 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 H. Driscoll*

SKD  
W

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 oxidation 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,

RHS:KM

cc: Messrs. Bayer  
Elton  
Lyon

RENO H. SALES

## WALKER MINING COMPANY

WALKERMINE

PLUMAS COUNTY, CALIFORNIA

Cody

L. F. BAYER, MANAGER

October 11, 1937

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

Walker mine

Dear Sir:

Please find enclosed the September 1st and October 1st tabulation of our Available Ore Reserve; also several Geological 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

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 XOW. 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

In ended. / 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

AIR MAIL

Salt Lake City, Utah  
March 5, 1937

Walker Mine

Mr. J. O. Elton  
Room 1801  
35 Broadway  
New York City, N. Y.

Dear Jim:

On my way here I studied Droubay's ore reserve report on the Walker computed as of February 1, 1937. This report gives the reserve also as of January 1, 1937.

This ore reserve set-up shows that on January 1 the ore reserve amounted to 844,156 tons, divided as follows:

Prepared ore	503,193 tons
Broken ore	120,763 "
Reserve, but not prepared for mining	<u>420,200 "</u>
<b>T o t a l</b>	<b>844,156 tons</b>

During January 36,623 tons were produced.

The February 1 ore reserve shows:

Prepared ore	267,174 tons
Broken ore	131,759 "
Reserve, but not prepared for mining	<u>420,200 "</u>
<b>T o t a l</b>	<b>819,113 tons</b>

These figures show that on a production of 36,623 tons in one month, the net ore reserve decreased 25,043 tons, in other words there was not sufficient development to maintain a ton for ton development program.

Droubay's table also shows that of the 36,623 tons mined during January, 23,801 tons came from above the main haulage tunnel level.

At this rate I am not sure that the figures given cover all possible

2- Mr. J. O. Elton

March 6, 1937

ore to be expected from above the tunnel, but it is my impression that they do include most of it. According to the above figures, there was available for mining slightly less than 300,000 tons of ore in reserve above the tunnel level. At the January rate of 28,000 tons per month there would be approximately enough ore there to last one year.

I have given this matter some thought in view of your statement that you were considering adding to the Walker concentrator to increase its daily capacity to 2,000 tons per day. If I am correct in this matter of ore reserve figures, it is apparent that the present mill will practically exhaust the ore above the tunnel within another year.

As I see the Walker situation I very seriously doubt the advisability of spending money to increase the capacity lest the mine find itself within a comparatively short period with a condition where it will be impossible to produce ore enough even to fill the present mill for, it is doubtful that without production from above the tunnel level, the mine could be made to produce more than a thousand tons a day through present hoisting facilities.

It is my opinion that the Walker mine is woefully behind in development in the matter of ore reserves. The operation is going to be up against a situation where it will be hard pressed for ore even with present mill capacity, certainly it will be in a precarious position when the upper level ore reserve is exhausted.

The greatest need at the Walker mine, in my opinion, is a central underground hoisting plant of adequate capacity to supply the mill. With the grade of ore the mine has I see no reasonable chance that the property can be made to continue successful<sup>ly</sup> without a hoisting capacity from below the tunnel level that will insure high speed operations at a maximum mill capacity. I think it vastly more important that we spend money, if we have it to spend, preparing this property for future operations. There is no question in my

3- Mr. J. C. Elton

March 5, 1937

mind that if we speed up our mill capacity now we will find ourselves without adequate ore reserves and in a possible position where development work will have to be carried on on an operation running less than at mill capacity.

It is a serious question whether the showing below the tunnel level is good enough to justify a new central shaft and hoisting installation. If it is no time should be lost in completing such a shaft, and certainly if the shaft is not warranted the greatest possible effort should be put forth in developing the mine to a point where it is justified. It seems to me that a more rapid depletion of our present ore reserve will only put the mine in a worse predicament. It is well within the range of probability that by the time the mill extension is completed and gotten under way, the mine will be unable to produce the necessary tonnage for more than a relatively short period.

Very truly yours,

HHS:P

cc:Mr.J.R.Hobbins  
3/12/37.