

Walker

New York, N. Y.
November 22, 1939.

Mr. S. K. Droubay,
Walker Mining Company,
Walkermine, California.

Dear Droubay:

I have received a letter from Lyon suggesting a down hole from 1055-B Crosscut. We think this a good suggestion. I think a hole should be put down directly in line with #32, which should be laid out to cut the vein at approximately 200 feet below the 1000 level. Should this down hole show favorable results, I think we should fan a couple of down holes from the same station.

Lyon suggests an up hole to hit the vein at the 900. We do not think this hole necessary, but at any rate, please defer it until the 600 sub-level holes are finished.

Yours very truly,

RENO H. SALES

HHS:F
CC: Mr. C. E. Weed.
Mr. J. F. Dugan.
Mr. Tom Lyon.

AIR MAIL

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WALKER MINING COMPANY**WALKERMINE****PLUMAS COUNTY, CALIFORNIA****H. M. HARTMANN, MANAGER**

December 1, 1939

Mr. Reno H. Sales, Chief Geologist
Anaconda Copper Mining Company
25 Broadway
New York City

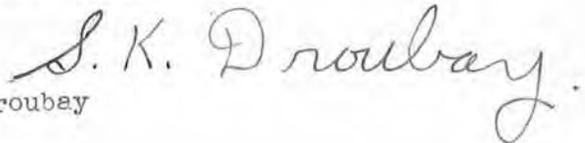
Dear Sir:

Diamond drill Hole No. 35 has been completed to a depth of 269 feet, but no ore was disclosed. This hole cut the 517 vein approximately 200 feet southeast of where Hole No. 32 cut it, but the quartz carried practically no sulphides. The hole was driven South 68 degrees east from a point twenty feet back from the face of the short 1049BxcW and cut the vein from 220 to 242 feet.

The drill was moved to Hole No. 29 which will be extended to a depth of 500 feet which should be ample to cut the 60 degree dipping fissure that carries the best looking vein material as exposed on the 600 sub-level. We exposed this fissure again by crosscutting from the extreme north end of the sub-level, as suggested in your latest development recommendations, and although we have cut no quartz to speak of there is considerable alteration of the schist and a dissemination of chalcopyrite and bornite in places.

We will move the drill to the sub-level just as soon as Hole No. 29 is completed.

Very truly yours,



S. K. Droubay

SKD:SW

cc - Mr. Lyon
Mr. Dugan

Walker

New York, N. Y.
December 6, 1939.

AIR MAIL

Mr. S. K. Droubay,
Walkerville, California.

Dear Droubay:

I have your letter of December 1st, and note that hole 35 was a blank and that you are moving to deepen #29. According to geological projections, it should not be necessary to extend 29 to a depth of 500 feet. But you can be guided by what is disclosed as the hole is deepened.

I am leaving here December 10th, for Tucson, Arizona, expecting to get back to Butte a few days before Christmas.

Yours very truly,

RENO H. SALES

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

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WALKER MINING COMPANY

WALKERMINE

PLUMAS COUNTY, CALIFORNIA

H. M. HARTMANN, MANAGER

December 19, 1939

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

Dear Tom:

The accompanying composite map of the 712 Orebody shows to date development of the footwall vein.

Holes No. 29, 30, 32, and 35 indicate fairly strong mineralization on the 1000 Level and from the looks of 471CDS and the barren quartz from Hole No. 35, it appears that Hole No. 36 has cut the vein near its southern fringe. Hole No. 37 is being driven to cut the vein 210 feet further south with the hopes that enough mineralization will be found to justify driving a main haulage level out this way so that the ore from this fissure will not have to be hand trammed. If hole No. 37 shows a fairly strong mineralization, then a third hole will be fanned from the end of 628C.

It appears as though we will have at least 90,000 tons of 1.25% plus available ore that could be produced through a haulage level that will involve about 200 feet of drifting in waste and the rest in vein material.

As our large 820 and 820A and 1090 Stopes will be finished in a very few months, it is of vital importance that we replace these places. The North Orebody pillars will furnish part of this, but Mr. Hartmann is anxious that some plan be gotten underway, wherein, we can prepare to produce this footwall ore both above and below the 700 Level. We would appreciate very much if you would talk this over with Mr. Sales and Mr. Dugan and advise us as to what may be done. We had thought that starting a 700 Level drift about 200 feet south of the 712 Hoist room and extending 1055ExcW would be logical procedure.

The 692C has cut about thirty feet of nice looking rock and I think we can start a stope on this from the footwall of 705B Stope. It should be better than 1.50% rock. It looks as though we should crosscut from the face of 690C and if nothing is opened up we should stop it.

In projecting the footwall mineralization south of 706A Winze to the 1200 Level, 1202DS will not have to be turned west to hit it. The fault steepens below the 1000 Level and the footwall vein should be almost straight ahead.

Very truly yours,

S. K. Droubay

S. K. Droubay

SKD:SW

Encl.

cc - Mr. Dugan, Mr. Sales

COPY OF TELEGRAM

December 20, 1939

NIGHT LETTER

S. K. Droubay
Walker Mining Company
Walkermine, California

Walker

After consideration by Sales, Dugan and myself have decided that except for the down hole from the 1000 level no further prospect drilling is planned after the completion of hole number 37. If down hole from 1000 encounters materially higher grade ore at least one more down hole should be drilled from end of 1017 drift north. Crosscut for new ore body from 1055 B and from 700 level approved. Crosscut from 690 C not approved.

Tom Lyon

Copies sent to Mr. C. F. Kelley ✓
Mr. R. H. Sales ✓
Mr. C. E. Weed
Mr. J. F. Dugan

RECOMMENDATION FOR DEVELOPMENT WORK
Prosecution Team Exhibit 1 - Page 486
GEOLOGICAL DEPARTMENT

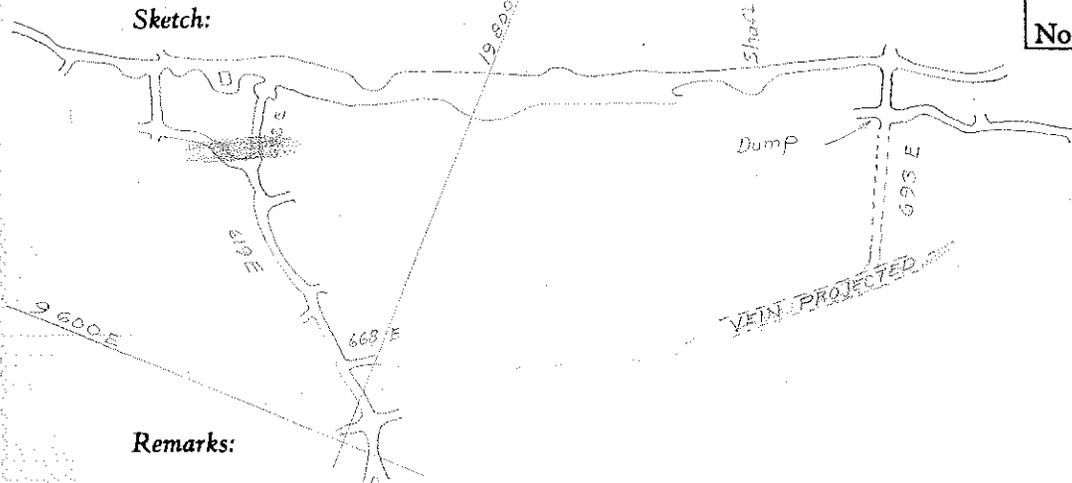
INTERNATIONAL SMELTING & REFINING CO.

Mine Walker

Level 600 Sub

Ore Body 712

No. 24



Remarks:

Develop footwall vein by extending 693E rather than 668E in order to mine ore through 692E and speed up the preparation of stopes.

Amount of work 150' waste 400' ore

Recommended by

A. K. Drenday

Date of recommendation

12-23-39

Date started

Approved by

Date completed

WALKER MINING COMPANY

WALKERMINE

PLUMAS COUNTY, CALIFORNIA

H. M. HARTMANN, MANAGER

December 22, 1939

Walker Mine

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

Dear Tom:

Since diamond drill Holes No. 36 and 37 have proven that the footwall vein exists as far south as the 712 main Orebody, it appears to be more logical to develop it on the 600 Level from 693ExcW than from 692E as Mr. Sales recommended a couple months ago. Either case would necessitate a certain amount of work in waste, but 692E affords a short tram and service directly from the shaft, while all work done from the other side necessitates climbing from the 700 Level. Also, we would like to open up the ore that was cut in 692E.

Very truly yours,

S. K. Droubay

SKD:SW

S. K. Droubay

cc - Mr. Sales ✓
Mr. Dugan

WALKER MINING COMPANYWALKERMINE
PLUMAS COUNTY, CALIFORNIA

H. M. HARTMANN, MANAGER

December 22, 1939

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

Dear Tom:

The accompanying tabulation represents diamond drill progress at Walker Mine during the first half of December.

Hole No. 29. This hole driven northwest from the face of 1017DM was finished at a depth of 496 feet. As previously stated, chloritized schist containing some mineralization was cut from 412 to 425 feet. From 425 to 447 feet solid quartz containing disseminated bornite and chalcopyrite was cut, then fissile schist extended to the end of the hole.

Hole No. 34 is being extended N 55 E from the face of 1056BxcE and was advanced from 423 to 573 feet. With the exception of a few scattered specks of chalcopyrite no mineralization has been encountered and the formation ranged from a solid speckeled schist to chloritized zones that contained considerable epidote.

Hole No. 36 was driven from the 712 sub-level to determine whether the footwall vein was strong enough to justify driving a haulage level from the south. The first seventy feet was altered schist containing a number of small veinlets of good mineralization. From 70 to 182 feet the formation was a solid, barren, speckeled schist. Beyond 182 feet the schist became green and altered with scattered mineralization and an occasional veinlet showing exceptionally heavy chalcopyrite. Low grade vein material was cut from 246 to 273 feet and although there were a few good looking streaks in it, the thing as a whole looked quite poor. Geological projections indicated that the vein should not be encountered until 300 feet, so the hole was extended to 354 feet through barren schist. Apparently this vein rolls the same as the main vein.

Respectfully submitted,

S. K. Droubay

SED:SW

S. K. Droubay

Encl.

cc - Mr. Dugan
Mr. Sales

DIAMOND DRILL REPORT

December 1 - 15, 1939, Incl.

<u>HOLE NO.</u>	<u>OREBODY</u>	<u>LEVEL</u>	<u>START</u>	<u>END</u>	<u>FEET</u>	<u>COST PER FOOT</u>	<u>PERIOD COST</u>	<u>MONTH TO DATE</u>
29	712	1000	407	496	89	\$1.25	\$ 111.25	\$ 111.25
34	712	1000	423	500	77	1.25	96.25	194.80
			500	573	73	1.35	98.55	
36	712	500 Sub	0	349	<u>349</u>	1.25	<u>436.25</u>	<u>436.25</u>
		Total			389		\$ 742.30	\$ 742.30

620A Stop Diamond Drill Holes:

Drilling was done on Holes No. 47 to 58, inclusive to the extent of 347 feet.

December 26, 1939

Mr. S. K. Droubay
Walker Mining Company
Walkermine, California

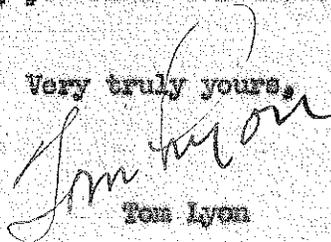
Dear Red:

I am in receipt of your letter of December 22 regarding development work on the 600 level.

On Mr. Dugan's copy of this letter there is a note by Mr. Hartmann in which he states that both he and Mr. Warren approve doing the work in the manner that you suggested. I have talked the matter over with Mr. Dugan and we both agree that for operating reasons it will probably be better to do the work as outlined in your recommendation No. 21.

If Mr. Sales has any reasons for asking you to do the work as he originally suggested, you will hear directly from him.

Very truly yours,



Tom Lyon

TL:P
CC: Mr. Sales
Mr. Dugan

CLASS OF SERVICE
 This is a full-rate Telegram or Cablegram unless its designated character is indicated by a suitable symbol above or preceding the address.

WESTERN UNION

1201

(19)

R. B. WHITE
PRESIDENT

NEWCOMB CARLTON
CHAIRMAN OF THE BOARD

J. C. WILLEVER
FIRST VICE-PRESIDENT

SYMBOLS
 DL = Day Letter
 NL = Night Letter
 LC = Deferred Cable
 NLT = Cable Night Letter
 Ship Radiogram

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1940 JAN 1 PM 12 21

LA 80 48 DL=WALKERMINE CALIF 1 1050A

RENO H SALES=

CARE ANACONDA COPPER MINING CO BUTTE MONT=

DOWN HOLE FROM ONE THOUSAND LEVEL CUT FORTY FEET VERY POOR
 QUARTZ NO MORE ^HHOLES PLANNED STOP RECOMMEND HOLE FROM FOUR
 HUNDRED STATION TO CUT VEIN OVER HOLES 37 AND 38 STOP 471
 FT IS IN WASTE EIGHTY FEET BEYOND SECTION D FIVE JOINT

LYONS AND SALES=

DROUBAY.

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

CLASS OF SERVICE DESIRED	
DOMESTIC	CABLE
GRAM	ORDINARY
LETTER	URGENT RATE
SERIAL	DEFERRED
NIGHT LETTER	NIGHT LETTER
SPECIAL SERVICE	SHIP RADIOGRAM

Patrons should check class of service desired; otherwise the message will be transmitted as a telegram or ordinary cablegram.

Walker

COPY OF WESTERN UNION TELEGRAM

BUTTE, MONTANA. JAN. 2, 1940.

S. K. DROUBAY,
WALKERMINNE,
PLUMAS COUNTY, CALIF.

ANSWERING YOUR WIRE JANUARY FIRST NO OBJECTION TO SUGGESTED HOLE FROM
FOUR HUNDRED STATION STOP I THINK TWO DOWN HOLES UNDER NUMBER TWENTY-NINE
FROM FACE 1017 DRIFT SHOULD BE DRILLED TO CUT VEIN AT APPROXIMATELY TWELFTH
LEVEL STOP ONE TO BE DIRECTLY UNDER TWENTY-NINE THE OTHER PARALLEL TO
SECTION SIX STOP THE ABOVE PLAN HAS DUGAN'S APPROVAL

RENO H. SALES

cc: Messrs. Weed
Dugan *mailed*

(Chg. A. C. M. Co. Geological Dept.)

INTERNATIONAL SMELTING AND REFINING COMPANY

Kearns Building, Salt Lake City, Utah

*Walker
Cody*

TOM LYON
GEOLOGICAL DEPARTMENT



January 18, 1940

Mr. M. H. Gidel
P. O. Box 26
Butte, Montana

Dear Murl:

This is in answer to your letter of January 6 regarding Chamberlain. I note what you have to say regarding the salary we are paying him, and delayed answering your letter until after I had had an opportunity to talk with Reno regarding the matter.

The chief transit man at the Walker is receiving \$165.00 a month. If we should raise Chamberlain's salary it would necessarily mean we would have to raise the transit man's salary. This raise would then go down through the line and I do not know where it would stop.

The Walker, as you know, has been losing money right along, consequently it is very difficult to get a raise there for anyone. Reno and I discussed the mater with Dugan who is going to visit the Walker sometime during the month and will see what can be done while he is there.

Kindest personal regards,

Very truly yours,

Tom Lyon

TL:P

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New York, N. Y.
February 23, 1940.

AIR MAIL

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

Dear Tom:



I have Droubay's letter of February 20th and his sketch of 904-B crosscut east showing geology.

I have talked with Weed and we think the crosscut should be continued until definitely through the vein zone, then a lateral should be carried along on the footwall side of the vein zone with crosscuts through the vein every hundred feet.

Incidentally, is this strong footwall fault the same as the one we have been dealing with in the vicinity of our main inclined shaft below the seventh level, 706 I think it is. The point I have in mind is the indication that this fault may be mineralized in this north section, and if so, we may find it mineralized at deeper levels in the south end of the mine.

Yours very truly,

RENO H. SALES

RHS:F
CC: Mr. T. Lyon (2 extra)
Mr. C. E. Weed.

New York, N. Y.
February 24, 1940.

Mr. S. K. Droubay,
Walkermine, California.

Dear Droubay:



This will acknowledge your letter of February 13th, together with copies of cross sections D-3 and D-5, also a composite plan map showing workings and drill holes in 517 vein country. As I look over these maps and sections, I am impressed with the position of the 517 vein on the 400 level and believe it may be beyond the bottom of #40 drill hole. You will note that drill holes 36, 37, and 38, driven from 600 sub-level, demonstrate the strike of the vein to be uniform and not exhibiting any such a bend as is necessary to join the vein in 471-C drift with the poor vein showing near the bottom of hole #40. Your cross section D-5 indicates that there is a decided flattening of dip from the 600 sub-level to the 400.

It seems to me that in view of the possibility above suggested, we should deepen hole 40 to the extent of 50 feet or more. I realize you cannot do this unless a drill is available. If no drill is available, would it not be advisable to continue 471-C drift, veering it off to the right to make sure #40 hole hits all the vein there is.

Yours very truly,

RHS:F
CC: Mr. C. E. Weed.
Mr. J. F. Dugan.
Mr. T. Lyon.

RENO H. SALES

WALKER MINING COMPANY

WALKERMINE

PLUMAS COUNTY, CALIFORNIA

W. M. HARTMANN, MANAGER

March 13, 1940

Walker

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

Dear Tom:

According to recommendation No. 16 that was submitted quite a few months ago, 1202DS has advanced far enough south for crosscuts.

We were advised by Mr. Weed through Mr. Dugan to discontinue this heading for the time being. If permissible, I would like to substitute two short diamond drill holes for crosscuts and drill them now while we have machines available.

Although a normal projection of the glassy vein in Hole No. 33 would place it directly in front of the present 1202 face, the steepening of the heavy fault below the 1000 Level and the mineral showings in Hole No. 22 indicate that ore may exist in the footwall. See sketch.

The hanging wall hole need not be extended the full 100 feet unless prospecting beyond the fault is desired.

Very truly yours,

S. K. Droubay

SKD:SW

S. K. Droubay

cc - Mr. Sales
Mr. Dugan

March 15, 1940.

MEMO. Re: WALKER MINE

In connection with the Walker Mine, it is difficult to view that situation without full consideration of the relation of the Walker Mine to Smelter operations at Tocoale. In other words, before I could recommend the closing down of the Walker, I would want to know the effect on Tocoale. I can think of many good reasons why this feature should not be included, and that such a report should deal strictly with the mine operation standing alone.

For a number of years past there has been but little encouragement at the Walker, at the same time we are dealing with an unusually persistent mineral zone, which always holds the possibility of favorable ore developments in its unexplored portions at greater depths. I have felt that as a combined asset as to ore supply for Tocoale and the possibility of better ore discoveries in the mine itself the development of the property should continue as long as losses were not excessive, especially in view of the difficulty we are meeting in our endeavor to find additional copper ore reserves in this country. At the same time, the International cannot afford to finance the operation forever under a condition where the only real daylight visible is in a plan which will erase Walker's financial obligations to the Smelting Company.

(Sd.)RENO H. SALES

March 16, 1940

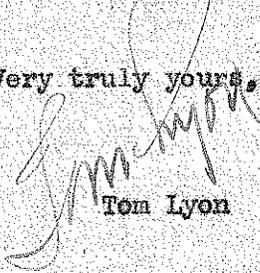
Mr. S. K. Droubay
Walker Mining Company
Walkermine, California

Dear Red:

I have your letter of March 13 regarding diamond drilling
from the face of 1202 drift south in the Walker Mine.

If Mr. Sales has no objection to your recommendation, I
believe this drilling should be done while the drills are available.

Very truly yours,


Tom Lyon

TL:P

CC: R. H. Sales
J. F. Dugan

WALKER MINING COMPANY

WALKERMINE

PLUMAS COUNTY, CALIFORNIA

J. M. HARTMANN, MANAGER

March 18, 1940

Mr. Reno H. Sales, Chief Geologist
Anaconda Copper Mining Company
25 Broadway
New York City

Dear Sir:

The enclosed tabulations of available ore reserves are for the Months of January and February, 1940. It was necessary to revise the sheet and make adjustments so that it conforms more closely to operating conditions at the present time so changes were made at the first of the year. They were due to failure of ore blocks to yield expected tonnages, ore lost when stopes caved, bad ground necessitating larger pillars, or breakage assays proving lower or higher than was estimated, etc. It was the result of accumulated errors over a long period of time. I will send you a copy each month if you wish.

The 400 Level diamond drill hole No. 40 was extended slightly over 100 feet. I have not seen the last sixty feet of core but am quite sure it was a blank. The first sixty feet were barren and the drillers told me the second part is the same.

The face of 903BDS in Piute came into ore. It has advanced over ten feet in good vein material running a little better than 1.50% copper. We started the north heading running north under the fault as you recommended and will crosscut every 100 feet. ✓

Very truly yours,

S. K. Droubay
S. K. Droubay

SKD:SW

*Noted
M.H.H.*

ANACONDA COPPER MINING COMPANY

25 Broadway, New York

New York, N. Y.
March 18, 1940.

AIRMAIL

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

Dear Tom:

I am in receipt of a copy of Droubay's letter and map dated March 13th.

I approve Droubay's suggestion of a diamond drill hole from the south face of 1202, to be extended in a southwesterly direction for 150 feet or as much distance as may be necessary to cut the entire vein zone width. This, on the assumption that 1202 is on the hangingwall side of the vein. But, from the fact that Droubay suggests holes both easterly and westerly, I take it that there may be parts of the vein on either side of 1202. And in this case, I agree that we would have to have both of these holes drilled.

Yours very truly,

RENO H. SALES

RHS:F

CC: Mr. J. F. Dugan.
Mr. S. K. Droubay.

Walker Mine

April 23, 1940.

Mr. S. K. Droubay,
Walkermine, Calif.

My dear Droubay:

I am in receipt of a copy of your letter of April 20th addressed to Tom Lyon, together with copy of your ore reserve data for March 1940, also a sketch map showing latest developments in the 517 section.

I believe Mr. Weed has instructed Dugan with reference to surface drilling north of the Piste. In conversation with him, we agreed that some more holes should be drilled north of the one drilled last summer.

I will be interested to learn results of the first cross-out into the vein from 923EN. I assume that if the vein has substantial copper and if it is reasonably good ground for drifting, you will extend the drift northerly on the vein rather than carrying on with the lateral. I think it better to find out what the vein is like, and incidentally save costs by getting some ore recovery from the drift.

Yours very truly,

RES:EM
cc: Messrs. Weed
Lyon
Dugan.

RENO H. SALES

WALKER MINING COMPANY

WALKERMINE

PLUMAS COUNTY, CALIFORNIA

W. M. HARTMANN, MANAGER

April 28, 1940

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

Dear Tom:

In referring to Mr. Sales' recommendation of February 23, 1940, with regards to the heading going north from the Piute 900 Level, Mr. Hartmann has asked if we may substitute diamond drilling for crosscutting. The 923C lateral has advanced far enough to cut the shear zone 100 feet north of where it was opened with 904B and the crosscut will be started right away.

Since the Piute compressor burned down we can advance only one round every other day, which would take about 35 days to complete the crosscut. If drilling will furnish us enough information, we could drive the crosscut in a couple of rounds and then drill it, giving the operators a little better chance to work in the south end. Air is available on graveyard shift only until the Piute compressor is fixed which may take a month or more.

This ground may be badly broken and difficult to drill, but so long as the hole is cased through the fault the core should be in good enough shape to give us fair information. We will keep driving the crosscut unless I hear that the drill hole will be satisfactory. Please wire.

The 1201DN met a fissure crossing over from the footwall side of the drift at a point 480 feet north of the shaft. There is hard glassy vein material on the footwall side of it, but as yet it is hard to tell just what happens. It may be a narrow strip associated with the fissure and the next round or two will pass through it. Around 100 gallons of water per minute flows out of the fissure. The quartz looks like fair ore.

Very truly yours,

S. K. Droubay
S. K. Droubay

SKD:SW

cc - Mr. Sales
Mr. Dugan

ANACONDA COPPER MINING COMPANY

25 BROADWAY

NEW YORK

OFFICE OF THE
GENERAL MANAGER OF MINES

April 25, 1940.

AIR MAIL

Mr. J. F. Dugan, Gen Supt of Mines,
International Smelting & Refining Co.,
% Mr. H. M. Hartmann,
Walkermine, California.

Dear Jack:

I have been giving considerable thought to Walker, especially the development north in the Pinte section.

I think we should give some consideration to driving the 900 north to within about 50 feet of the drill hole, cross-cutting the section there to see if commercial mineralization is developed. I do not believe that it is necessary to drive the drift closer than 50 or 75 feet and our future course would depend on the mineralization found in the vein at this point. If it is decided to explore further north, this can be done by a few diamond drill holes from surface much cheaper than we can do it underground.

Please think this matter over and give me your reaction in regard to it.

Yours very truly,

G. E. Weed
G. E. WEED

CEW:F

CC: Mr. J. O. Elton.
Mr. R. H. Sales. ✓

AIR MAIL

April 27, 1940

Weed

Mr. S. K. Droubay
Walker Mining Company
Walkermine, California

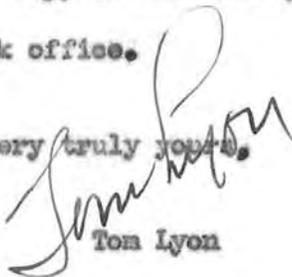
Dear Red:

I am in receipt of your air mail letter of April 25 regarding the 900 development work, and note what you have to say regarding diamond drilling.

I have talked with Mr. Sales regarding this matter. Mr. Sales and I both think that the work in the lateral north should be discontinued until after the diamond drilling is completed. If the drilling discloses ore, a crosscut should then be run and the drift north continued on ore. If not, then the lateral should be continued to the north until there is sufficient distance to either crosscut or diamond drill again.

In the future when you write regarding matters of this kind, in addition to sending a copy to Mr. Sales, please also send one to Mr. Weed at the New York office.

Very truly yours,


Tom Lyon

TL:P

CC: R. H. Sales ✓
C. E. Weed

Memorandum

On

Development At Walker Mine

Prospecting at the Walker Mine may be divided roughly, as follows:

1. Exploration work north and south on the 1200 level to locate the extension of the North and Central Orebodies at depth, designated as 1200 development.
2. Drifting north from the Piute to expose the mineralization indicated in surface diamond drill hole No. 21.
3. Develop ore in the footwall of the 712 Orebody above and below the 700 level.
4. Block out ore below the 700 level in the Piute Orebody.
5. Look for the extension of the 712 Main Orebody.
6. Diamond drill prospect holes.

1200 Development:

1. 1201-DN is being driven north toward the North Orebody to a point where the vein is expected to extend on the hangingwall side of the fault against which the main orebody pinched. This objective is 600 feet north of the shaft, of which 310 feet has been accomplished. Crosscuts or drill holes to the east, through the fault, may locate ore closer than the 600 foot mark.

1202-DS has been extended 225 feet south of the shaft and is in a position for two short diamond drill holes which will take the place of crosscuts. There is a possibility of ore existing in the footwall as indicated by disseminated mineralization cut with a hole just north of the shaft on the 1200 level, or it may be associated with the fault to the east, the same as on the 1000 level.

Neither heading has been in ore.

North Piute Development:

2. A surface diamond drill hole cut mineralization several hundred feet north of the Piute Orebody, and 904B Drift North was extended into this country. Since 904B was started for long range prospecting (the end of ore on the 900 level), it has advanced 420 feet north along the strike of the vein, and has cross cut 120 feet east across the structure. The heading cross cut a shear zone 400 feet south of the drill hole, but the ground was too badly broken to permit drifting north on what little mineralization was there as the shear zone is full of small faults and requires expensive timbering. So it was decided to drop back under the fault and drift due north toward the drill hole and cross cut the shear zone every 100 feet. This drift (9230) has advanced 90 feet and the face is just 400 feet south of the surface drill hole.

It is hoped that other orebodies exist under the lava that caps this country to the north.

3. The 517 fissure zone in the footwall of the 712 Orebody is being opened up on the 1000, 700, 600, 500 and 400 levels.

400 Level:

471C-DS has been driven to a point where the vein has pinched, and approximately 750 feet of ore has been opened up along the strike.

500 Level:

517B has approximately 300 feet more to go before the vein ends, at which point it will meet a raise which is being driven from the 600 level.

600 Level:

The vein has been cut on the 600 level with 693E-XC West which was driven from the south end of the 712 Orebody. The footwall and hangingwall were located and a drift north along the strike of the vein has been started. This drift is in ore averaging about 1.35% copper, and the vein is approximately 18 feet wide. It is from the footwall of this crosscut that a raise is being started which will be driven up the vein to meet the extension of the 517B-DS.

708E-XC N.W. is a main haulage level which is being driven from the south end of the orebody to produce ore from the 517 fissure zone. It is almost to the point where it should meet the vein, then it will be turned and driven along the strike of the ore. Although considerable ore running 1.38% copper has been blocked out above the 500 level by means of numerous raises and crosscuts, it is still

uncertain how much and of what grade exists below. The vein is cut by three diamond drill holes and by 693E XC, but it still must be listed as possible ore.

It is estimated that 800 feet of haulage level, 600 feet along the strike of the vein on the 600 level, 300 feet along the 500 level and 2000 feet of raising will be needed to complete the program to produce the 165,900 tons of 1.38% copper, .058 oz. Silver and .023 oz. gold blocked out, probable and possible ore which is listed as recoverable above the 700 level in this footwall area. A few short crosscuts to determine the width of the vein will also be needed. It is estimated this program will require six to nine months for completion.

There is one section of this fissure zone that is quite near the Main Orebody, and may be produced through the present haulage system by flattening a raise into the footwall from the bottom of 705B Stope. This country at present is being opened up and mined on the 400, 500 and 600 levels by silling out the ore and either slushing or hand tramming it a short distance. This is the recent work recommended by Mr. Sales in conjunction with opening up all of these footwall fissure splits. We are now assured of stopes from the 600 level to and above the 400 level on this particular swell with at least 17,000 tons of recoverable ore listed at 1.64% copper.

4. Ore is being blocked out in the Piute Orebody by driving 903B-DS. This heading came into 1.5% copper ore 500 feet south of the shaft. If this extends as far south as the ore on the 800 level, then we will have 250 feet of ore ahead of the present face. Ore will now be produced from this heading instead of waste, which will help production.

Two large raises are being driven up the vein north of the shaft on the 900 level, and one is being driven south of the shaft. These will block out ore that is listed as probable and possible ore in the reserve sheets.

5. 1017-DN was stopped in favor of extending 1055B XC West to the foot wall vein (probably 517 fissure) which has been outlined with diamond drill holes. We will then drift along the vein, and from some point north possibly drill to locate any extension of the Main Orebody.

1055B has been extended 70 feet and has 110 feet more before the vein is reached. We will then drift north and south along it.

6. During 1939, 8201 feet of diamond drill prospect work was completed, and since the first of the year we have drilled 1340 feet. With the exception of approximately 100 feet on a difficult long hole to finish in the hangingwall on the 1000 level and occasional short holes to replace crosscuts, the drill program has been completed.

In the footwall vein of 712 Orebody 297,000 tons of possible ore was blocked out between the 600 sub-level and the 1000 level, with diamond drill holes. At least half of this should prove recoverable, but it may be too low grade for mining at present market.

Numerous zones of mineralization have been located with drill holes, and are a valuable guide for directing future development.

The total cost of this drilling has averaged \$1.57 per foot.

In Conclusion:

Development work during the next six to nine months will have an important bearing on the future of the Walker mine, as it will be determined whether or not another ore body exists north of the present Piute vein; also if the Main Orebody extends to the 1200 level. The 517 fissure will also be fully developed.

John F. Dugan.

JFD:H
4-27-40

INTERNATIONAL SMELTING AND REFINING COMPANY
Kearns Building, Salt Lake City, Utah

TOM LYON
GEOLOGICAL DEPARTMENT



April 27, 1940

Walker

Mr. Reno H. Sales
P. O. Box 457
Butte, Montana

Dear Reno:

Enclosed you will find copy of the latest notes on development at the Walker.

I am sending these notes to Butte so that you may have an opportunity to see them before they go to the New York office. If you would rather have me forward these notes direct to the New York office in the future, please let me know.

Very truly yours,

Tom Lyon

TL:P
Encl.

April 27, 1940.

Re: Walker Mine,
Plumas County, Calif.

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

Dear Tom:

Referring to Drubay's letter of April 25th. Apparently, he had not received my letter of April 23rd before writing you.

My suggestion is that we first find out whether the vein at the position of this crosscut contains ore. If it does, we should drift on it. Whether the crosscut is continued to the vein or a drill hole is driven, is an operating matter for the management to decide.

If it is found that the vein is barren, then the lateral should be continued to the next crosscut point.

Yours very truly,

REB:MM

cc: C.E.W.
S.K.D.

RENO H. SALES

April 27, 1949.

Mr. C. E. Weed, Gen. Mgr. of Mines,
Anaconda Copper Mining Company,
25 Broadway, Room 1726,
New York City, New York.

Re: Walker Mine,
Plumas Co., Calif.

Dear Clyde:

Tom Lyon will send you copy of a letter from Droubay, relative to the north development on the 900 Plute level. Lyon advises me that he is instructing Droubay along the lines I suggested in my letter of April 23rd, of which you have a copy.

It seems to me most advisable to get that north drift on ore, if there is any there. The lateral could be driven later for mining purposes, in case the vein proves to be worth mining.

I received, this morning, a copy of your letter of April 21st, relative to drilling from the surface to cut the vein north of the former drill hole. I recall that we decided on this plan before you left Butte.

Yours very truly,

HHS:HM

cc: T.L.

HENRY H. SALES

ANACONDA COPPER MINING COMPANY

25 BROADWAY

NEW YORK

OFFICE OF THE
GENERAL MANAGER OF MINES

May 8, 1940.

AIR MAIL

Mr. J. O. Elton, Manager
International Smelting & Refining Co.,
Kearns Building,
Salt Lake City, Utah.

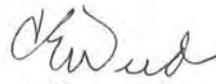
Dear Jim:

For some time past, Mr. Sales and I have been considering the possibility of further exploration work at the Walker Mine. We feel that most of the possibilities of underground drilling have been exhausted, and that further exploration drilling underground is of very little value. While in Butte, Mr. Sales and I discussed this matter, and we feel that the only exploration work left at Walker is some surface diamond drilling to explore the Walker vein north of the Piute ore body. I have suggested that these holes be drilled approximately 1000 feet apart, and, if any of them develop values, that closer drilling should be done around the holes showing the values. This is the cheapest way that this exploration can be accomplished.

In discussing this matter with Messrs. Kelley and Hobbins, they have agreed to allow us to drill two or three of these holes at this time. I would suggest that you get in touch with Mr. Sales and, if this meets his approval, go ahead with the surface drilling north of the Piute. He will pass on the location of the holes.

Will you please advise me when Mr. Sales has approved this work, and send me a sketch showing the location of the holes.

Yours very truly,



CEW:F
CC: Mr. J. R. Hobbins.
Mr. R. H. Sales.
Mr. J. F. Dugan.
Mr. Tom Lyon.

Salt Lake City, Utah

May 10, 1910

Mr. J. O. Elton, Manager
International Smelting and Refining Company
O f f i c e s

Dear Jim:

I am in receipt of copy of Mr. Weed's letter dated May 8 relative to surface drilling at the Walker.

I am today writing to Droubay to lay out surface holes spaced 500 feet apart in the general direction of the vein structure, and to send us copies of his sketch map.

In view of the uncertainty as to the position of the Walker vein beneath the basalt covering, these surface holes should not be spaced more than 500 feet.

Yours very truly,

RES:P

CC: Mr. J. R. Hobbins
Mr. C. E. Weed
Mr. J. P. Dugan
Mr. Tom Lyon

Reno H. Sales

Salt Lake City, Utah

May 10, 1940

Walker

Mr. S. K. Droubay
Walker Mining Company
Walkermine, California

Dear Droubay:

It has been decided to continue surface drilling at the north end of the Plute. Will you please lay out three holes spaced 500 feet apart, north of the previous hole, in the general direction of the outcrop. Upon the completion of the first hole, we will then decide the location of the next one north.

Please prepare these maps and forward same as early as possible with copies to Messrs. Weed, Dugan and Lyon.

I expect to be in Butte for the next two weeks.

Yours very truly,

RHS:P

Reno H. Sales

C O P Y

May 15, 1940.

Mr. C. E. Weed, General Manager of Mines,
Anaconda Copper Mining Company,
25 Broadway, Room 1726,
New York City, New York.

Re: Walker Mine,
Plumas Co., Calif.

Dear Clyde:

I am in receipt of your letter of May 9th, relative to the Walker Mine, also the preliminary draft of a report.

I think you have covered the situation very well. I am suggesting a few changes and additions. As already indicated in a previous letter, I think we should not space the Walker surface drill holes more than 500 feet, because of the uncertainties of vein projection in a situation like that. Incidentally, it should be noted that any ore found in this north country will, of necessity, be below the tunnel level.

I am wondering if we should use the January 1, 1940, recoverable ore reserve figure of 1,869,000 tons in our report, rather than a revised estimate figured on the basis of what we think the mine would actually recover during its period of operation. Much of the ore included in that 1,869,000 figure is probable or possible, which might not be reached and developed for mining once we started on a plan of cleaning up the property. I have in mind that if we took the January figure and later, at the end of operations, found that we actually mined only 75% of it, the stockholders might seize upon this as a basis for complaint. I think our estimate should be on the conservative

92

C O P Y

Mr. C. E. Weed---2

May 15, 1940.

side. If it happens that we mine more than our estimate, all well and good. Wouldn't it be better to start with our March 4th reserve of 989,190 tons, and have the mine management add to that whatever additional tonnage they felt they could produce during a two or three years operation.

I am returning herewith one copy of the report, with certain indicated changes and additions.

Yours very truly,

Encl.
RHS:KM

RENO H. SALES

Report Covering Present Conditions At

The Walker Mine

The Walker Mine is located in Plumas County, California, about 70 miles northwest of Reno, Nevada, at an elevation of 6500 feet. The country is heavily wooded, with ample water available for all uses. Heavy snows make the camp difficult of access in winter, otherwise, operating conditions are good.

The mine is equipped with a fairly modern flotation concentrator, capable of handling approximately 1300 tons of ore per day. The concentrates produced are carried over an 3-mile aerial tramway which connects with the railway at Spring Garden, California. During the past summer, the concentrates were trucked to a railway siding near Portola, at some additional cost per ton compared to delivery by the aerial tramway. The concentrates are then shipped to Tooele for treatment at the International smelter.

The mine is operated through a tunnel which delivers the ore into the mill bins. The tunnel level is the 7th level of the mine. This level is connected to surface through the Piute shaft, the Central shaft, and a number of raises and stopes which have broken through to surface. The ore below the 7th level has been developed by underground incline shafts which follow the vein at an angle of about 70° from the horizontal.

The mineralization occurs along a N20°W striking shear zone which has been developed for a length of 8,000 feet. This is not continuous ore, the ore bodies usually being separated by waste areas. Starting from the south, there are five ore bodies, called the South, Central, North, "712", and Piute. The first ore body found, and the one for which the mine was opened, was the Central ore body, which, above the 7th level, averaged 3% to 4% copper and carried considerable gold values. The other ore bodies were of much lower grade averaging around 1.50% copper or less. All of them have gold and silver values. About \$1.35 per ton is being recovered from current production. The lowest precious metal values occur in the Piute ore body, which is the farthest north. Mining costs are comparatively high on account of the hardness of the ore.

Below the 7th level, the ore in general has become narrower and of lower average grade. The one exception is the North Ore body, which has shown a slight increase in grade at the 10th level. There are two main hoisting shafts below the 7th level, with several auxiliary winzes for ventilation and supplies. The shafts are small and of limited hoisting capacity. For this reason, hoisting costs on ore from below the 7th level are high and production low.

Up to comparatively recent years, most of the production has come from reserves above the 7th level, but, as these are now nearly exhausted, increasing proportions of a lower grade ore will have to come from the underground shafts, and at an increased cost. This eventuality was recognized some time ago, and in 1938, with the approval of the local staff, we recommended certain underground development and diamond drilling to determine if there was a possibility

The Walker Mine - 2.

of discovering other large ore bodies of the same grade, or, if there was a possibility of finding higher grade ore. If enough ore could be developed below the 7th level, a suitable hoisting shaft would be installed to lower hoisting costs and provide sufficient capacity to operate the mill. This exploration work was approved, and carried on during the fall of 1938 and in 1939.

In general, the results were disappointing. A surface hole to the north of the Piute ore body showed the vein to continue, but it is doubtful if the mineralization will prove to be as good as in the Piute. This work is now being checked underground by crosscutting on the 900 Piute level, and no final comment can be made until these developments are completed. This should be within the next two months. The balance of the diamond drilling and development was negative except for demonstrating the downward continuation of the "517" ore body located in the footwall of the "712" ore body, and adding some small extensions of present known ore.

The diamond drilling carried on during the past year showed that there was no commercial structure parallel to the Walker vein within the limits of the drilling. If one exists, it must be a great distance from the present workings.

There exists the possibility of ore coming in again below the lowest mine levels. However, this is a very "long" chance as the ore bodies, with a single exception, have gradually dropped in grade with depth, and this certainly does not make this an attractive prospect. At present, a drift on the 1200 level is being advanced under this North ore body, which showed some slight increase in grade on the 10th level as compared with higher levels. The results obtained in this work should determine whether any deeper prospecting by diamond drilling or shaft sinking is justified.

The Walker vein north of the Piute should be explored by surface drilling. There is about two miles of unexplored territory which should be tested by diamond drill holes located at strategic intervals. If commercial ore is indicated in any of the holes, this preliminary work should be followed by closer drilling. Owing to the depth of oxidation in this north area, any ore found will lie below the 7th or tunnel level, and, therefore, be subject to the comparatively higher mining costs incident to hoisting, pumping, etc.

At present, it is costing about 12¢ per pound to produce copper at the Walker Mine, exclusive of depreciation. Operating improvements which can now be foreseen are expected to improve costs, but later they will be offset to a large degree because of higher average costs on ore mined in increasing proportions of ore production from below the tunnel level. Development costs on deeper levels will also be relatively higher, because of water and ventilation problems.

For a limited time, with the diamond drilling program completed, and under a condition of a minimum amount of development work, the 12¢ copper pound cost will be lowered. However, looking forward to a normal operation, with a large proportion of the ore coming from below the tunnel, from ore bodies of such low grade and size as are known to exist, there is small chance of the Walker making an appreciable profit with copper at 12¢ or under.

The Walker Mine - 3.

The gross ore reserve of the Walker as of January 1st, 1940, is estimated at about 4,000,000 tons. Of this, 1,859,000 tons is listed by the Geological Department as probable recoverable ore. The balance is in pillars, or in such a position in the mine that its commercial extraction is not possible. Its average grade is estimated at 1.31% copper, .76 oz silver, and .038 oz gold per ton. The developed recoverable ore on January 1st, 1940, was 1,006,100 tons with a grade of 1.36% copper, .80 oz silver, and .042 oz gold. The total ore which should be recovered from the known ore reserve would probably be somewhere between these two estimates. At a normal rate of production, this gives the property a life of three to four years, provided, no further ore is developed.

The capacity of present shafts below the 7th level is limited. It is, therefore, necessary to produce some ore from above the 7th level to furnish enough tonnage to keep the mill operating. There are probably 400,000 tons of this ore which can be recovered from old pillars left from former mining. This work is now in progress, and these pillars are systematically being recovered. This phase of the operation appears to be successful, and will be continued along with mine operation.

With all of the above in mind, we wish to make the following recommendations:

1st. Continue present stopes development and work in "517" ore body.

2nd. Diamond drill the Walker vein north of the Piute workings, beginning with a hole located on the surface 500 feet north of hole #21.

3rd. Continue 1201 drift north to explore the North ore body beneath the better grade portion disclosed on the 10th level.

4th. If and when completed recommendations #2 and #3 do not offer encouragement to the hope that the ore bodies will improve in value at deeper levels or to the north, all development and prospect work other than that incidental to mining should be stopped and the remaining reserve mined as rapidly as possible.

Respectfully submitted,

Clarence

Paul H. Sales

New York, N. Y.
June 15, 1940.

WALKER MINING COMPANY

WALKERMINE

PLUMAS COUNTY, CALIFORNIA

H. M. HARTMANN, MANAGER

August 12, 1940

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

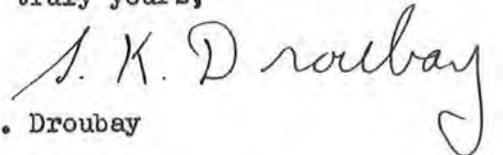
Dear Sir:

The enclosed sketches show the present positions of 923CDN and 1201DN.

The 1201 heading has been driven along a narrow glassy vein that assays about 1% copper. The vein pinched just before it met No. 3 footwall slip. The drift is now in a position to turn on a fifty foot radius curve which will place the crosscut through No. 1 Fault in a position to locate any ore that may extend from the good showings on the 1000 Level. Where shall we direct further exploration if nothing is located with the crosscut?

The 923C has been stopped about seventy feet from surface diamond drill hole No. 21 and it is planned to start drilling Hole No. 49 immediately. Exceptionally bad ground made it necessary to turn toward the footwall, so Mr. Dugan and Mr. Hartmann want to get an idea of the ground before a crosscut is attempted. If nothing worth drifting toward is located with the drilling, then work in this area will cease pending surface drill results as Mr. Weed suggested.

Very truly yours,



S. K. Droubay

SKD:SW

Encl.

cc - Mr. Weed
Lyon
Dugan

Walker

August 20, 1940.

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

Dear Tom:-

I have a copy of Droubay's letter to you dated August 10th. Also a letter from Droubay showing proposed developments at the north end of 1201 drift and 9230 drift north.

I approve the proposed crosscut easterly from 1201 drift north end suggest that we take another shot at the vein by continuing 1201 northerly from this proposed new crosscut. If the vein has the strike indicated on Droubay's sketch, 1201 should be turned slightly to the right before extending it further. I should say that the next crosscut to the vein should be at approximately 100 feet, depending upon what was disclosed in the first one cutting the vein zone.

You will recall the presence of the wide quartz vein which lies considerably to the west of 9230 drift. Might it not be a good plan to give this footwall vein another try with a drill hole opposite the proposed location of #49? Generally it appears to me that this 900 north development has been of a most disappointing nature. Unless the proposed drilling from the surface shows something considerably better than anything we have found, this north end will have to be written off as a failure.

Yours very truly,

HEE:MBS

RENO H. SALES

cc-C.E.W.
J.F.D.
S.K.D.

WALKER MINING COMPANY**WALKERMINE****PLUMAS COUNTY, CALIFORNIA****H. M. HARTMANN, MANAGER**

September 3, 1940

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

Dear Sir:

Please find enclosed geological sketches of the 1200 Level of the North Orebody and the 900 Level of the Piute Orebody, vertical section C-3 through the 900, 1000 and 1200 of the North Orebody and a twenty scale assay plan of the Piute 900 Level.

The 1200 has acted rather strangely as the section shows. We intend drifting north along the footwall of the ore, but I am afraid that the two faults will come together and pinch out the vein as they did on the 1000 Level. We may get ore on the hanging wall of the fault farther north. What do you think of extending 1206 or possibly a crosscut further north, far enough to cut the vein at a greater depth with diamond drill holes?

The twenty scale assay plan was made to see if we could segregate the different grades of ore with the possibility of mining the block selectively. Mr. Perry and I roughed the map from broken muck samples and I am now having five foot channel samples taken along all the crosscuts to try and get a more accurate picture. This orebody has grown to quite a size and it is important to know all about it before a mining method is chosen.

Mr. Perry was here for almost a week and I enjoyed going over the Walker Geology with him. We made as thorough a study of the underground and surface geology as the limited time would let us and I am sure Mr. Perry obtained quite a good picture of the Walker Mine.

Very truly yours,

S. K. Droubay
S. K. Droubay

SKD:SW

cc- Mr. Lyon
Mr. Weed
Mr. Dugan