

Copy to Mr. Campbell & Co.
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To file

December 22, 1942

Mr. Richard Simis, Sr.
320 Luhrs Building
Phoenix, Arizona

REPORT ON STORM CLOUD MINE

Dear Sir:

Persuant to your request I visited and examined on December 13th and 14th the Storm Cloud Mine which you are operating under a lease. In this report I have embodied my findings on that occasion together with other information previously obtained. I have been familiar with this property and the operations conducted thereon since 1924 and from that date until the end of 1941 I had occasion to visit the mine nearly every month as the representative of the owner and to check the work which was done by the various leasers.

LOCATION AND GEOLOGY

The fifteen (15) patented and one unpatented mining claims are shown on the claim map of which you have a copy. They are located along the Senator Highway, 12 miles by road south of the City of Prescott which is the nearest town and railway shipping point.

The elevation is from 6700 to 7600 feet and the surface is well timbered with pine, spruce and oak. In wet weather there is surface water in Jersey and Maple Gulches and a daily flow of some 7000 gallons in the Ten Spot shaft has proved satisfactory for industrial and sometimes for domestic purposes.

The formation in this area is locally known as the "Bradshaw Complex". It consists of pre-Cambrian sediments, mainly an amphibolite schist and in places conglomerate, with numerous and irregular intrusions of granite, diorite (quartz diorite and grano-diorite) and rhyolite. Both fault and fissure veins are noted and the primary metallic minerals,

X which were probably deposited from circulating solutions originating in a deep-seated magma, consist of sulphides of iron, copper, ~~and~~ lead and zinc with all of which quartz and some gold and silver are associated. The minable ore bodies occur in the form of lenses or sheets of comparatively limited length and width. At and near the surface the values have generally been leached and a short distance below there usually occurs a zone in which the sulphides have been largely or completely oxidized and the values increased by secondary enrichment which often extends for a considerable depth in association with an increasing proportion of primary ore. These last conditions, which apply to the Storm Cloud, are also characteristic of many other deposits in the Bradshaw Mountains.

The discovery of gold ore on the Storm Cloud Claim dates back to the 1870's and the main Storm Cloud vein was opened up as a copper producer sometime during the 80's.

Some production of ore from the Ten Spot shaft is said to have been made in about 1897 and additional development work in both sections of the property was carried on from 1904 to 1907 at which time the entire property was examined by Leo Von Rosenberg of New York whose report gives the earliest comprehensive description of the mine which has come into my possession. However subsequent development and operations contradicted some of his statements of fact and did not serve to confirm his optimism as to the grade and size of the ore bodies. Apparently there was little or no further activity until 1925 when the owner leased the mine to W. F. Grove and subsequently in 1927 to H. J. B. Balter and in 1936 for a short time to the Bradshaw Mining Company.

The records of production by Grove and Balter will be referred to in another section of this report. During Balter's operations reports on the mine were made by George A. Kirkbride, Superintendent, and F. A. Kennedy and Harry L. Seares, Consulting Engineers, of which copies were furnished you before you took the lease and may be consulted for a more complete description of geological conditions and operations which were being carried on at that time. The conclusions of these reports were all more favorable than my own.

TEN SPOT WORKINGS

This portion of the property is located nearly a mile away from the Storm Cloud proper and therefore will be described separately. The map covers workings from the Lion Adit and the Ten Spot shaft which between them have opened up the Ten Spot, Calena, Curtis and Lion Veins.

From the Lion-crosscut-adit drifting on the Calena Vein developed a shoot of ore about 1.5 to 2.00 feet in width and almost 100 feet in length. The value of this ore in gold, silver and copper was over \$25.00 per ton at present prices and a stope was carried up to the surface and also down about 10 feet below the level above which point all ore has been mined.

In the Curtis Vein the ore shoot had a similar width and value but a length of only 35 feet and this also was mined out above the level of the Lion adit and about 12 feet below. The tonnage produced from these stopes was obviously small and no complete record of same is available.

The small amount of underhand stoping was mostly done by the

Bredshaw Company and the last car shipped carried values as follows:

Au. 0.59 ozs.	Cu. 1.5%
Ag. 7.00 ozs.	Pb. 3.20%
Zn. 2.10%	

As to the Ten Spot Vein which outcropped below the portal of the Lion Adit, it was evident from surface showings and development on neighboring properties that this was the main fissure of the district from which the veins mentioned above and several others were merely branches.

The old reports of work done from the Ten Spot shaft indicated that this should be reopened in order to permit the development of all of these veins in depth. The report and assay map of Von Rosenberg stated that a sample cut from a 3 foot section from this vein on the 235 foot level from the shaft carried \$9.40 values in gold and silver (at 1907 prices) and 4.4% copper. Kirkbride confirmed the fact that there was good ore at this point although the samples which he had taken above on the 85 foot level had proved disappointing.

It was also the opinion of all of the Engineers who were familiar with the older workings of the district that this Ten Spot Vein was a most promising location in which to carry on exploration and accordingly you have recently unwatered the shaft and old workings at very considerable expense.

The actual conditions at these workings proved to be entirely different from those described in the old reports. On the 85 foot level the Ten Spot Vein or rather shear zone had a width of 30 feet but the filling was comprised entirely of crushed diorite wall rock

with only a few stringers of quartz. No commercial values could be found, the highest sample assaying only \$7.00 in gold and silver over a width of a few inches and with traces of copper and lead.

On the 235 foot level the crosscut to the Ten Spot revealed a similar condition when the vein was reached and the most promising section, six feet in width, was sampled in two sections and averaged 0.025 ozs. gold; 1.7 ozs. silver and 0.125% copper; say \$2.00 per ton. Three other samples taken in this vein all gave ~~even~~ lower values and even the picked specimens only assayed \$9.00 per ton.

From all the above it is evident that no commercial ore ever had been found in this section of the Ten Spot Vein and while it is quite possible that pay shoots may exist at either side of the crosscuts there are no indications which encourage a search for them.

On the 235 foot level the opposite crosscut running S. 60 deg. E. was opened for a length of 200 feet at which point it had evidently cut the Galena Vein and the drift was filled with caved material. The story very recently obtained from one old miner is to the effect that this work was done in or about 1897 when some ore was shipped and milled. The character of the caved material, consisting of large fragments and fine muck,--as well as other evidence--would seem to indicate that this stope was of substantial size and it may be that at this point the Curtis and Galena Veins had so closely approached that they were worked together.

Any attempt to splice through this cave and explore these old workings would be an expensive and unwarranted procedure but this discovery

would seem to encourage a belief that the shoot of good ore found near the surface of the Galena Vein had extended downward from the Lion Adit and at some future time I hope that it may be possible to extend the short crosscut on the 85 foot level from the shaft which should intersect this ore shoot about 130 feet from its present breast. Such work is not recommended under present conditions and I must regretfully advise you to discontinue all activity at this location and to concentrate your efforts on the Storm Cloud Copper Vein where ore is actually available for mining and shipping and further development promises a more certain reward.

STORM CLOUD WORKINGS AND ONE RESERVE

During the past six months you have cleaned out and made accessible the greater portion of the workings on this vein between the surface and the main adit which is also referred to as the 200 foot level. The clearest understanding of these workings is obtained from a study of the accompanying assay map which has been revised from older maps and simplified to show only the essential openings and stopes on the vein.

The Storm Cloud is a fissure vein whose outcrop can be traced from Maple Gulch for well over 1000 feet. The strike is N. 15 deg. E with a dip of about 80 deg. to the East. The mineralized fissure is often from 10 to 20 feet in width; with walls of diabase, schist, rhyolite and conglomerate but the pay ore is confined to a narrow seam lying sometimes along the hanging and sometimes along the foot wall and the width of the ore, consisting essentially of chalcopyrite associated with iron pyrites and quartz, varies from 1 to 6 feet. The values also

are erratic as may be noted from the assay map.

Above the 100 foot level the average width of the vein was less than 2 feet but in places,--especially close to the portal,--there was substantial secondary enrichment. Most of the ore mined and shipped by Grove during '25 and '26 came from these upper workings and the average value of the 1830 tons which he shipped to the smelter was:

Au. 0.065 ozs.	Ag. 4.50 ozs.	Cu. 8.50%
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In some cases it was possible to break this high grade ore separately from the wall rock but often ore and waste had to be broken together and careful sorting was required in order to keep the shipments up to the desired value.

X The 100 foot level was never extended beyond (i.e. south ½ of) the old shaft although both surface outcrops and conditions in the stopes extending upwards from the 200' level make it reasonably certain that there is good ore in this section of the vein as far as the cross fault and dike but this part of the probable reserve will be included in the estimate of the reserves above the 200 foot level.

Northeast of the shaft and between the 100 foot level and the surface no substantial blocks of ore have been left in the vein but above the stopes and between them it may be conservatively estimated that 1200 tons with average grade of about \$5.00 in gold and silver and 3.5% copper can still be mined with advantage. All of this ore is easily accessible for stoping but can best be sent down the ore passes to the 200 foot level rather than trammed out on the 100.

The first stope above the 200 foot after entering from the portal was worked prior to 1907 and has since been caved. No record of its

production has been preserved but it is reliably reported that good ore was left in the back. The next two stopes were started by the old timers and worked to a small extent by Grove but most of the mining there and further to the south and all stoping below that level was done by Balter who shipped to his mill or direct to smelters a total of over 12,000 tons with average values of:

Au. 0.05 ozs. Ag. 2.0 ozs. Cu. 3.00%

The greater part of Balter's production was not carefully sorted since his mill capacity was too large for the mine and from a financial standpoint he would have done better to have shipped a somewhat smaller tonnage of higher grade material.

X Between the 200 and 100 foot levels the remaining ore ^{is} as shown in shading on the print. The grade of this, as determined by the assay map, will average close to \$2.50 in gold and silver and very close to 3.5% copper and here again it is almost all accessible and the mining can be started as soon as a little more preparatory work is done. The stopes have remained in surprisingly good condition during the last 13 years and in part have been well reconditioned since you took over the property.

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A conservative estimate of the tonnage remaining ~~north of the old shaft and~~ between the 200 and 100 foot levels is ^{north of the shaft} 2500 ~~and 2000~~ tons _{100 ft 3500} south of the shaft. I have felt justified in assuming that the values will extend upwards from the back of the north stopes to the first level and for another 50 feet on the south side of the shaft although this last mentioned ore can obviously be classed only as probable.

Below the 200 foot level the winzes have not yet been unwatered

X
but a fairly complete and accurate record of the ore which they developed has been preserved and is recorded on the assay map which shows the samples that were taken in the winzes and lower drifts and along the back of the drifts on the 200 foot level where it may logically be assumed that a similar width and grade of ore extends downward, ~~from the 200~~ for at least 100 feet. The ore in the blocks which have been sampled both at the top and bottom may be considered as highly probable and in the case of the shoots which have been exposed and sampled only on the 200 and above I have estimated that probable ore will extend for 50 feet below that level. The reserve of highly probable and probable ore developed or partly developed below this 200 foot level is estimated at 3500 tons and, while the average grade has not been so thoroughly determined as in the case of the ore above, I feel that it can be conservatively estimated to be similar.

Obviously there must be further development below the 200 foot level before ore can be mined except in the two little stopes which were started by Balter but this procedure can best be conducted concurrently with a production from the upper part of the mine.

While the basis for estimating the remaining tonnage is apparent from the map I feel that some comment is in order regarding the probable value of the ore since the sampling has not been complete or speaking more accurately the complete record of the various samplings has not been preserved in such a manner that it can be recorded on the map.

Practically every one of the ore shoots now show substantial variations in width and particularly in grade and a physical examination of the showings indicate that in some cases from 1/3 to 2/3 of the

wider samples was cut in waste or very low grade ore which will not pay to break unless necessary and, if it must be broken, this material should be sorted out before shipment to a smelter or even to a mill. This practice ^{will} ~~is~~ assume be followed in the future and in line with same I have in many cases reduced the estimated width and hence the tonnage of remaining ore in order that the desired average of 3.5% copper may be maintained.

Even in the best of the shoots there are many short sections in which the vein has been impoverished and since these must be mined and the broken ore cannot always be sorted underground the individual samples must be averaged to determine the expected grade of production.

I believe that the best check on all cut samples is found in the record of the average grade produced from the stopes as these were reported, I believe quite accurately, by Kirkbride. From these figures it will be noted that from practically all of the stopes an average of slightly better than 3% ore was obtained. His figures as to the width of the stopes are somewhat misleading since in all of them a certain amount of underground sorting and backfilling was carried on, and therefore widths of ore should be reduced to some extent as I have done in estimating the remaining reserve.

FUTURE PROGRAM

The Storm Cloud Mine is now ready for the installation of proper equipment, some of which you have already procured and much of the work preliminary to actual mining has been wholly or partially completed.

The future operations will divide themselves into stoping the developed ore which includes practically ^{all} that remaining above the 200

foot level and in the further development of the mine down to the 300 foot level near the main shaft and the 270 foot level at the north winze from which both the northern half of the north drift and the entire south drift have been very stupidly run entirely off the vein. I shall not attempt to discuss the possibilities of this mine at greater depth but in this report will assume that your problem is to be limited to operations above these levels from the two winzes.

In order to proceed with both development and production you must install your large compressor at the mouth of the 300 foot level adit, run pipe lines for air and water into the workings and continue your present track from the old shaft to the end of the south stope, a distance of 300 feet.

You must also complete the timbering in the stopes and ore passes (the manways are already in excellent shape) and you must obviously provide the required drills, hoses, steel and ore cars, some of which you have already acquired. You will need a truck to haul out the ore. A rough estimate of the total cost of this procedure is \$5000 and the time involved should not exceed 60 days provided that the required material can be obtained without undue delay and that ~~the~~ fairly competent labor is available.

In order to carry on the further development and subsequent mining below the 300 foot level you will have to install a small air-driven hoist at the collar of the main or shaft winze and unwater this with a small air-driven pump. The flow of water is trivial and you will then be in a position to continue mining in the two stopes above the 300 foot level which were started by Balter and in which some 4000 tons of ore remains to be mined.

The south drift on this 300 foot level should properly be extended for 200 feet to pass under the south stope where the ore on and above the 200 foot level was wider and more consistent in value than in any other portion of the mine and here you should develop about 5000 tons if the shoot extends to the level, although I have only figured on half this tonnage in my estimate.

The above procedure will involve an expense of probably \$7000 of which \$4000 will be the cost of the last mentioned drift and a raise up in the ore shoot to the 200 foot level.

X The work below the northern section of the 200 foot level and around the 50 and 70 foot winzes can best be deferred until the above outlined development has been completed but the showings along the level and in these winzes make it probable that at least 4000 tons of ore remain here and can be developed by extending the 70 foot level from the north winze which will have to be equipped with hoist and pump and unwatered, while some clearing up and retimbering has ^{to} ~~been~~ done around the collar. The drifts on this 70 foot level should be driven on the vein for a total distance of about 200 feet and the cost of developing this last mentioned block of ore may be figured at about \$5000.

X In making the above estimates, I have assumed that the winzes, drifts and stopes are all in fairly good condition which I believe to be the fact since I frequently entered them from 1923 to 1930 and they were driven in hard ^{rock} ~~work~~ which should have stood up well, however, I have made some allowance for possible caving or rotting of timbers in the two stopes from the main winze.

SUMMARY AND CONCLUSION

To sum up, you have above the 200 foot level a total developed and available tonnage of about 5700 tons on which mining can be started after you have added to your present investment about \$5000. You have another 8500 tons of probable ore ^{below the 200' level} which can be made available by a further expenditure^c of \$12,000. From ~~all~~ the recorded samples and records of production the average content of this ore may be logically assumed to be 0.03^{.05} ozs. in gold; 2.0 ozs. in silver and 3.50% copper giving a gross value at present bonus price of ~~\$14.40~~^{15.07} per ton. On this grade of ore the smelter and/or the Metals Reserve Corporation will actually pay you approximately ~~\$7.50~~^{7.84} per ton ^{after deducting all charges & for this sum} from which you must meet the cost of mining (including sorting) which should not exceed \$2.50, ^{on the ore which is fully developed & ready to break down above the main adit level,} haulage and freight to smelter and royalty to the owner which can be closely figured at ~~\$2.50~~^{2.84}, leaving a net return of \$2.50 per ton or just about the value of the gold and silver.

You have informed me that you have already expended approximately \$11,000.00 for equipment, exploration and development, of which the greater portion was unfortunately spent at the Ten Spot shaft with very disappointing results. You are now facing an additional expense of approximately \$17,000.00 in order to fully develop and make available for mining all of the ore above the 300 or 270 foot levels in the Stern Cloud Vein. The total tonnage which you may reasonably expect to mine above these levels is conservatively estimated to be 14,200 containing 994,000 pounds of copper of which over 900,000 pounds should be ^{recovered} received as metal, plus a substantial quantity of gold and silver.

Your total returns from shipments after meeting all working costs

and royalty should be in the order of \$35,500.00 from which the preliminary investment of some \$28,000 must be deducted, leaving a surplus of \$7500 plus the salvage value of your equipment. All of this ore can be mined and shipped within a period of 18 months after active work is resumed, assuming that the development and mining are carried on concurrently and that will be advantageous from both a financial and an operating standpoint.

Of course there is a chance that the further development of this mine may prove up some ore of higher grade which would justify sinking to greater depth and permit the mine to continue operations. There is also the possibility of finding and working a much higher grade of ore in the Galena, Curtis and Ten Spot Veins which has been discussed in this report and there are a number of other veins crossing the claims which merit exploration and development.

All such new work would however involve an additional investment which must be classed as an out and out mining gamble and now that the expectation of finding high grade ore in the Ten Spot shaft has been eliminated I could not recommend this operation as a mining enterprise since the expectant profit from the Storm Cloud Vein is not commensurate with the risk which is inherent to every venture of such a nature but in view of the investment which you have already made and particularly in view of the great need for copper during the present war emergency I am sincerely hopeful that ways and means of carrying on this work may be found. I feel very confident that there will be no loss even if the final profit is comparatively small. On that basis I recommend the continuance of your operation.

Unfortunately the climatic conditions at the Storm Cloud are such that it is very inadvisable to undertake preliminary work, including the

installation of machinery between November and April so that I do not advise further work until spring by which time I sincerely trust that all financial arrangements will have been completed so that you can then promptly proceed with your original plans.

Yours very truly,

J. M. C.

^{2 copies}
Copy Original to ^{2 copies} ~~James~~ who sent copy to ~~James~~ C. B. B. B.
Copy & ~~James~~ letter letter
Check extra copy in file of reports

March 11, 1943

MEMO: For Mr. Simis

RE: Storm Cloud Mine

Mr. Kuzell, the manager at Clarkdale, is away from his office, but his assistant has replied to my letter of the 8th and ^{daily} informs me that they would be very glad to purchase 30 tons of ore from the Storm Cloud with approximately the composition which I have indicated and he sends a settlement sheet based on the analyses of .05 oz. gold, 2.00 ozs. silver, and 3 1/2% copper.

For treating such ore they would make a toll charge of \$2.87 per ton but they would bonus the excess silica over base at the rate of 1¢ per unit which would probably not amount to more than 10¢ per ton so that their actual toll charge would be about \$2.77.

On that basis the smelter would pay \$5.95 per ton of ore and the Metals Reserve Corporation would pay at least the established bonus of 5¢ per pound of copper amounting to \$3.15 making total payment \$9.10 per ton. If you could secure an additional 5¢ per pound of copper recovered or \$3.15 per ton, the payment would become \$12.25 per ton from which you would have to deduct your cost of mining and general expense, etc., plus the trucking and freight to Clarkdale and the royalty to the owner.

In round figures I figure that on the basis of the present bonus your margin of profit would be about \$2.80 per ton after making all of these payments or approximately \$5.65 per ton if the additional bonus should be allowed. I suggest that you might reply to the letter from the R. F. C. somewhat along the following lines.

Dear Mr. Hayes:

Replying to your letter of March 1st, your file 4H - MJE, I have communicated with the Clarkdale Smelter and find that they would be very glad to purchase the Storm Cloud ore which even though it would not be extremely silicious will be a valuable charge for their smelter. ^{that} and they are willing to offer favorable terms, including a bonus for excess silica contained.

On the basis of the terms proposed by Clarkdale and after making a liberal estimate for mining and transportation costs some margin of profit would be left for the shipper but if the Government will consider increasing the present bonus of 5¢ per pound of copper it would indeed be extremely helpful to my proposed operations and in the event that an extra bonus of 5¢ per pound might be allowed it seems very certain that this margin would be amply sufficient to repay the loan already granted ~~and extended~~ by the R. F. C. and the additional loan to the extent of at least \$5,000. for which I have previously applied. *10m* *JK H Sm Jymp*

It appears to me that the engineer who examined this property for the R. F. C. was somewhat confused by the fact that a large part of the

Mr. Simis, Memo - 2

Government money as well as an even larger amount of my own money had been expended ~~mostly~~ for the development work on the Ten Spot Vein which did not result in a satisfactory manner and I have no intention of attempting to operate in this portion of the property.

The ore in the copper vein to which particular reference was made by Mr. Colvocoresses in his report of December 22, 1942, of which you have a copy, is believed to contain approximately one million pounds of copper in developed or partially developed ore all of which could be mined and shipped within the course of approximately 18 months after operations were started and it would appear that this might be a valuable contribution to the production of copper which is now desired for military purposes.

I sincerely trust that you will give this matter reconsideration and favorably consider the allowance of an additional bonus price for the copper contained and in the event that it seems advisable to have another examination made by an engineer from the R. F. C. I feel very confident that such an examination by some other and more experienced engineer would sustain the estimates of tonnage and value and result in may loan application being given favorable consideration.

Because of weather conditions it is extremely important to start operations at the Storm Cloud property during the month of April and I hope that this matter will be given prompt consideration.

Yours very truly,

L. J. Simis

L. J. Simis

J. Simis

June 18, 1943

Mr. D. M. Reit
Chief, Mining Section
Reconstruction Finance Corporation
Washington, D. C.

Re: Storm Cloud Mine

Dear Sir:

This letter is written in reply to yours of June 2nd in reference to Docket No. B-ND-4643, and addressed to Mr. Richard Simis of this city.

Since Mr. Simis is at present sick in a hospital and because of my familiarity with the conditions of the Storm Cloud Mine he has asked me to reply to the last paragraph of the first page of your letter which requests information concerning the locations where expenditure of funds has been made for mining developments.

Attached to this letter is a map of the Storm Cloud Mining Claims, on which I have marked three circles with a blue pencil and numbered these 1, 2 and 3. Number 1 is the location of the copper vein and approximately \$4,000.00 has been spent here since Mr. Simis took over the lease on the property. Number 2 is the location of the "10-spot shaft" which was dewatered and reconditioned in the hope of developing a commercial showing of copper, gold and silver ore. Results of this work were entirely disappointing and approximately \$7,500.00 were spent at this location. These two items included all of the funds loaned by the R.F.C. for developing this property.

Number 3 is the location of the ore shoot which Mr. Simis has recently discovered and plans to develop at his own expense. It is in no way connected with the other showings on which the loan had been expended as well as some \$6,500.00 provided by Mr. Simis personally, and it is respectfully suggested that the section of the property included in and adjacent to circle No. 3 should properly be released from any claim that the Government may have against Mr. Simis in connection with his operations on the Storm Cloud group of claims.

Trusting that the above will serve to explain the situation, I remain,

Very truly yours,

GMC:b
Enclosure 1

August 4, 1942

Mr. John Paxton
Storm Cloud Mine
c/o Groom Creek Stage
Prescott, Arizona

Re: Storm Cloud Mine

File
Simis
Guar

Dear Paxton:

Mr. Simis has asked me to make some suggestions regarding the work which should be done on the copper vein at the Storm Cloud after you have cleaned up the road from the camp and are ready to start in that section of the property.

You have a copy of the assay map of the Storm Cloud copper workings in both plan and section and this shows the workings from the two adits which you shall call the first and second levels. Also the stopes, raises, winzes, etc. This map was made in April of 1929 and since then only a very little stoping and no development was carried on so that it should be quite accurate at present.

I suggest that first of all you clean out and drain the second level from the portal as far back as the old shaft which connects through to the surface and which is extended downward as a winze from a station where the zinc hoist was located. You will need to put in a new track for this distance of about 650' and to clean out the ditch along the side of the drift so that the water which runs in the adit and comes up from the winzes will flow out freely and leave the track firm and dry.

You should then repair the manway ladders which connect through to the first level in the stope which lies just north of the shaft and these are probably in good condition as I went through them some two years ago with no trouble. It may be easiest to trace the manway down from the first level where the ladder which I pointed out to you when we went through the workings comes up from the stope and seems to be in good condition.

You should also fix up the manway in the stope which lies further north and this is likely to be in pretty bad shape as there has been some caving along the pillar which is directly under the first level.

I am not sure as to just which of the raises shown on the map carried this manway but I think that it was the double raise which is drawn in just under the point which is marked "Fill average 0.98% copper." From the top of this manway you can probably walk over the fill to the highest point in the stope where the assays are posted on the maps as 2.7 and 3.66% copper and from there you should be able to

Mr. John Paxton-2

get through the open cave to the first level and come out directly under the north or first stope.

In this north stope above the first level you will notice that the north end right over the portal has been stoped through to the surface but working back to the south and under the rise of the hill-side slope it is my recollection that some good ore was left in the vein and this is not very wide and which is highly oxidized so that it was not suitable for treatment in Belter's Mill.

You will have to investigate and sample from this ore for yourself but I am confident that you will find that there is a fairly substantial tonnage above the south section of the stope where it was only worked up for a short distance above the level and also I believe that you can advantageously extend this stope further to the south and break quite a lot of pay ore above the first level. The back of this first level was not stoped at all for a distance of 150' between the two stopes which show on the map and while in places the vein is pinched or barren of values there are other sections from which some good samples were taken and I am quite sure that some of these can be stoped upward for a considerable distance since the surface is about 70' above the first level along this section.

You will have to figure out the best way to get this ore down to the second level through the old ore passes and it may be that you will think it best to first cut through one or more raises from the stope to the first level. These would be south of the caved pillar and there may be a chance to mine out some of the ore which is left in the pillar, a portion of which was pretty good grade although this probably does not represent any large tonnage.

Working south along the first level you can bridge across the old shaft and get over to the back of the stope which was run up from the second level just south of the shaft and there also some fairly good ore should be left for the stope was quite wide but the ore may have to be sorted in order to bring it up to grade.

I don't know much about the conditions in these workings and they may be rather bad, but I think that the ore should be trammed across the shaft and then dropped down through one of the ore passes in the stope above the second level just north of the shaft. You may find some fairly good ore in the back of that stope and in the pillar under the first level.

As to cleaning out the materials which are left in the ore shoots and will run down into them from the old workings, it is evident that this will be a mixture of ore and waste and will probably require sorting. I don't think that any large quantity of broken ore was left in any of these stopes north of the shaft although there should be a considerable tonnage of ore broken in the big stope at the south end of the workings above the first level.

The program which I have outlined above will probably keep you busy for some months to come. Later on it will be advisable to clean out the second level and lay track south of the shaft in order to get into the

Mr. John Paxton-3

stope which only goes up a short distance above the level 120' south of the shaft and also to get at the big stope further to the south where Balter was working just before he quit. It should also pay to investigate the very old stope which is caved on the west side of the main drift and which is partially accessible through a short cross cut located on the west side of the drift 280' in from the portal. Grove told me that he once climbed up into this stope which was not so badly caved in 1925 as it is today and there was some very good ore left in place but personally I do not know anything about this.

The ore which remains under the second level and along the winzes and the drifts which run out from the winzes can also be investigated later on if meantime the mine is producing in a satisfactory manner and with profit to the operator.

Wishing you the best of luck with this work, I remain,

Yours very truly,

GMC:CG

P. S. I neglected to mention that it will be well to sample the back of the second level from a point about 80' in from the portal to a point about 130' in from the portal. I have a record of some fairly good samples which were taken in that section of the vein and there might be a chance for another stope although it could not go up very far and in the intermediate level which is shown on the map no ore was found although that might have been driven off the vein.

There is another possibility of finding ore between the big stope just north of the shaft and the next large stope shown on the map but this section of the vein appears to be pretty low grade and I merely mention it as a possibility.

BLUFORD H. J. BALTER
STORM CLOUD MINE
MINE COST REPORT, AUGUST, 1928

Mill Ore Cost
Unit Ton of Ore

Basis 1030.6 tons milled

<u>ACCOUNT</u>	<u>COST</u>	<u>UNIT COST</u>
General Mine		
Service	447.00	
Supply	268.55	0.693
Power		
Service	170.50	
Supply	385.26	0.539
Tramming		
Service	525.20	
Supply	16.28	0.525
Ore Sorting		
Service	162.50	0.157
203 Stope		
Service	191.75	
Supply	66.99	0.251
204 Stope		
Service	534.65	
Supply	155.67	
Timber	130.50	0.796
206 Drift		
Service	27.50	
Supply	10.56	0.036
Assay Laboratory		
Service)		
Supply) $\frac{1}{2}$ cost	104.37	0.101
Office & Supervision		
Service)		
Supply) $\frac{1}{2}$ cost	269.20	0.261

Summary Mill Ore Cost at Mine

General Mine	715.00
Power	555.76
Tramming	541.48
Ore Sorting	162.50
203 Stope	258.74
204 Stope	820.82
206 Drift	38.06
Laboratory	104.37
Gen'l office & Supervision	269.20

Total 3466.48

Unit 3.363

BLUFORD H. J. BALTER
STORM CLOUD MINE
MILL COST REPORT, AUGUST, 1928

	Unit Ton of Ore	Basis 1030.6 tons milled	
<u>ACCOUNT</u>	<u>COST</u>	<u>UNIT COST</u>	
General Mill			
Service	212.95		
Supply	20.16	0.226	
Coarse Crushing			
Service	175.65		
Supply	32.12	0.201	
Fine Crushing			
Service	148.85		
Supply	98.47	0.239	
Flotation			
Service	148.85		
Supply	118.57	0.259	
Power			
Service	40.30		
Supply	345.84	0.374	
Concentrate Drying			
Service	119.00		
Supply	105.00	0.217	
Sample Drying			
Service	16.11	0.015	
Tailings Disposal			
Service	12.50		
Supply	1.07	0.013	
Assay Laboratory			
Service) $\frac{1}{2}$ cost	104.37	0.101	
Supply) $\frac{1}{2}$ cost			
Office & Supervision			
Service) $\frac{1}{2}$ cost	269.20	0.261	
Supply) $\frac{1}{2}$ cost			

Summary, Mill Cost

General Mill	233.11
Coarse Crushing	207.77
Fine Crushing	247.32
Flotation	267.42
Power	386.14
Conc. Drying	224.00
Sample Drying	16.11
Tailings Disposal	13.57
Assay Laboratory	104.37
Office & Supervision	269.20

Total 1969.01
Unit

1.91

TOTAL MILL ORE COST

<u>Account</u>	<u>Cost</u>
Mine	3466.48
Mill	1969.01
Ore Haulage	528.00
Concentrate Haulage	401.01
Camp Expense (wood, gas, etc)	68.58
Total	\$ 6433.08

1030.6 tons ore cost \$ 6.242 per ton
169.9 tons concentrate cost 37.93 per ton

Mine Development

South 300 Level	
Service	34.50
Supply	7.99
Total	42.49

Miscellaneous & Construction

Ore Bin Roof	11.00
Stewart House	67.88
Total	78.88

Equipment Purchased

1 - 91 Amp 110 Volt Generator	62.50
1 - 32 x 6 Wood pulley	15.45
1 - Breast Drill	7.07
1 - 36 x 6 wood pulley	14.49
1 - 77 Gardner Stoper	350.00
Total	449.51

TOTAL EXPENDITURE FOR MONTH

Mine	3466.48
Mill	1969.01
Ore Haulage	528.00
Concentrate Haulage	401.01
Camp Expense	68.58
Development	42.49
Miscellaneous & Construction	78.88
Equipment Purchased	449.51

TOTAL \$ 7003.96

DAILY TOTAL EXPENDITURE \$ 225.93

April 27th, 1941

M. J. O'Brien, Limited
Ottawa, Ontario

Attn: Mr. Alan Scott, Manager of Mines

Re: Storm Cloud
Ten Spot Workings

Dear Mr. Scott:

With further reference to your letter of April 9th and following my reply of the 11th instant I enclose herewith a copy of a letter from A. B. Peach, who was in charge of the Senator Claims for the Phelps Dodge Corporation for a number of years and who knows more about the workings in the Senator tunnel than any other party of my acquaintance.

In commenting on Peach's letter I can only say that I do not personally believe that the tunnel and Ten Spot drift could be cleaned out and made accessible for sampling for as little as \$2500.00. I well remember that in 1928 or 29 an engineer of the Phelps Dodge Corporation, who planned to clean out the tunnel told me that he had ordered a full carload of mine timber and probably would require more before he could put the tunnel in a safe condition for sampling or any further work. Phelps Dodge decided to discontinue this investigation so that none of the timber which he had ordered was ever put in place but I am quite sure that the condition of the tunnel has gradually become worse during the last 12 years and a few days ago when passing near the portal I noticed that there was a great deal of caving around the surface although I did not attempt to enter the tunnel.

I might also mention, although it has no particular bearing on the present question, that in my opinion the Sheldon Mine never had one million dollars worth of ore developed at any time and I was very familiar with this property from its reopening in 1915 until 1932.

I don't believe that the Storm Cloud veins are a continuation of the Sheldon vein although I know that there is a mineralized zone which runs for a long distance through this country and the ore makes in certain sections but it is never continuous for any great distance. Very probably the Ten Spot and the Sheldon are located on the same general series of fracture planes and mineralized formations but we have every reason to believe that no shoot of pay ore would extend from one to the other, nor for any great distance in any part of this zone.

Mr. Alan Scott

#2

April 29th, 1941

It is a matter of record that all of the productive ore bodies in the Bradshaw Mountains have come from comparatively short ore shoots, which have very rarely had a length exceeding 300' although the vertical dimension is often much greater and ore at the Sheldon Mine was fairly continuous from the surface to the 1100' level and at the Bluebell (although this is in a different formation) from the surface to the 1500' level.

It is reasonably certain that Phelps Dodge Corporation would give permission to sample any of the showing found in the Senator tunnel but I do not personally believe that any information that you could obtain from re-opening and sampling the Ten Spot drift from the Senator tunnel would be commensurate with the expenditure and I would personally recommend that any work which you may decide to carry out on the Ten Spot should start with the dewatering of the Ten Spot shaft on the Storm Cloud claims, the sampling of the crosscuts, which are presumed to reach the Ten Spot vein on both the 80' and the 237' level, and drifting along the vein from those crosscuts. It is evident from the record of previous sampling that a shoot of ore does exist in this section of the Ten Spot vein and I would expect that it might extend from one to two-hundred feet in either direction along the strike of the vein, but you will have noted that the nearest breast of the drift from the Senator tunnel is about 1500' from the Ten Spot shaft and the intervening shoot from which Louis Milner mined his ore is about 700' from the Ten Spot shaft. In all probability these three showings represent separate ore shoots and ~~valleys~~ are not likely to be continuous between them although it is possible that such a condition may occur.

Later on, and assuming that the values should be found to extent to the southwest, it might seem advisable to negotiate for a lease on the Ten Spot claim from the Phelps Dodge Corporation and subsequent work could then be conducted from the Senator tunnel, but I presume you would prefer not to consider any such extensive program at present as this might all be carried out by some other company who would purchase or lease the Storm Cloud claims in the event that your initial development work proved encouraging.

In connection with all the above, let me call your attention to the memorandum regarding the Ten Spot which I prepared and sent to your office on January 24th, 1938, headed "Statement Re Ten Spot and Tributary Veins in Bradshaw Mountains". Also to the print of the ~~sketch~~, which I believe was sent you at the same time, showing the plan and section of the Ten Spot vein as it crossed the Phelps Dodge and Storm Cloud groups. I am enclosing herewith a print of a portion of a claim map that I obtained from the Phelps Dodge Corporation some time ago, but I don't think this is as accurate as our own claim map excepting in respect to the location of the Phelps Dodge claims, which are marked in the

Mr. Alan Scott

#3

April 29th, 1941

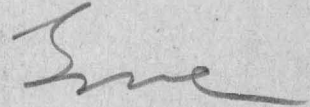
corner with an "S" (for Senator group) while the Cash claims are marked with a "C" and your claims with an "O".

In view of the lateness of the present season, I believe it would be better to defer any development work at the Storm Cloud until approximately the first of June, when the conditions, as these are described in my accompanying general monthly report, will certainly have improved and when the assessment work on the McCleure mining claim could advantageously be carried out along with any development that you may decide to undertake on the Ten Spot.

I have been keeping an eye on some second hand mining equipment which could, I believe, be leased or purchased at a very low figure and would be suitable for reopening the Ten Spot shaft and it might be helpful if you would let me know the decision of your company in regard to such development work as soon as possible even though no actual steps need be taken for another month.

Yours very truly,

GMC:at

A handwritten signature in dark ink, appearing to be 'E. M. C.', written in a cursive style.

August 22nd, 1941

M. J. O'Brien, Limited
Ottawa, Ontario

Attention: Mr. Alan Scott, Manager of Mines

Re: Storm Cloud

Dear Mr. Scott:

I am making a report on the Storm Cloud situation today instead of waiting until the end of the month because I visited the property on the 15th instant and am not likely to do so again until well on in September but I will send you a statement of timber cutting as soon after the first of that month as I can obtain it and will then add a line on more recent developments, if any.

Survey:

The survey of the outer boundary of the patented mining claims was completed on the 13th, having been repeatedly delayed by extraordinarily bad weather which permitted work on only two days during one week and four days during another. Altogether the surveyor and assistant put in 14 days time on the property and the total cost of the survey was \$284.15, which I have paid as per account to be sent September 1st.

A total of over 16,000 feet of lines were run, a large part of which had to be brushed out and markers were set or reset on 36 corners including the jogs. Along the lines laths with white rags attached were set up at frequent intervals (50 feet to 100 feet) and trees were blazed and marked wherever possible. To the best of my knowledge this is the first time that these lines have ever been re-run since the original patent surveys were made at intervals from 1878 to 1905 and practically all of the work was done through heavy timber and in places along steep slopes with much underbrush. The numerous offsets required to work around the larger trees and rocks frequently made it impossible to take a back-sight while working by compass was difficult by reason of the bands of magnetic iron which sometimes caused a variation of as much as eight or ten degrees. However, all of the old corner monuments were finally located and walking over about one half of the boundary on the 15th I was able to note that the work had been thoroughly and carefully performed and the loggers will have no excuse for failing to note the limits of the timber which can be cut under our contract with Mullen.

Timber Cutting:

Some work has been going on since July but only one to three men have been employed and few trees had been cut up to the 15th. Mullen explained that he did not dare to start any substantial operations until the claim lines were marked and has promised me to speed up promptly but another and perhaps a more compelling reason for the delay was found in the very heavy rains which would have rendered cutting difficult and roads soft and soggy. Ordinarily our summer rains are nearly over by August 25th and weather conditions are then ideal until late November or December but if we should have a wet autumn I fear that Mullen's rate of progress will be disappointing.

Mine Workings:

I entered the main adit in the copper vein although there was still a heavy flow of water, which I have never before encountered at this time of year, and was pleased to note that backs and walls of the drifts had sluffed very little and lagging above was all standing firm. Being alone I did not attempt to visit the stopes but such ladders as I tested seemed to be solid and it appears that the conditions in this mine, including the gold vein, have changed but little during the past four or five years.

The Lion Adit is also in good shape as far as I could examine but here and in the McCleure Adit small falls of rock have dammed back the water a short distance in from the portal and water continues to stand quite deep and to run out over the dams where normally these workings should be quite dry by July. The heavy rains, in washing down the hillside above the portal of the Lion Adit, have exposed a very old dump from which Louis Milner (who did this year's assessment work on the McCleure) has been screening out a few tons of fines which he will ship on royalty basis and which he thinks should run better than \$20.00 per ton in gold.

Milner also called my attention to another small dump recently exposed by the rains which apparently came from a shaft (now filled in by road embankment) that was once sunk in the Ten Spot Vein where it runs nearly parallel to the southeast line of the Bugle Claim and about 250' southwest of the Ten Spot Shaft. The outcrop of the vein at this point is heavily leached and Balter's engineers reported that values were lacking. The dump material looked somewhat more promising and I took a grab sample which was found to carry: Au - 0.06 oz., Ag - 3.00 oz. - value \$4.10 per ton. While this sample represented material which has no commercial value it may have some significance as indicating that the mineralization reported in the Ten Spot Shaft cross-cuts and again found on the Phelps Dodge Claims to the southwest also extends thru intermediate sections of the vein.

To return to the copper mine on the Storm Cloud Claim, on which you have many reports made by several engineers, I have

Mr. Alan Scott

#3

August 22nd, 1941

always felt that it would be futile to attempt to resume any work at this location unless a copper price of at least 15¢ were assured for two years or more. The lessees left this mine in poor shape from the standpoint of developed ore reserves but I think that there is but little doubt that many thousands of tons of ore remain to be developed and mined and that these should average, as in the past, about 3% copper with \$1.00 value in gold and silver.

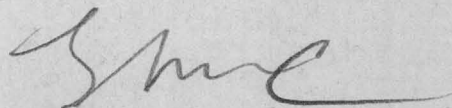
I am not referring to this mine in order to suggest that the O'Brien Company should take any action whatever or that it is likely to be any more attractive to a responsible purchaser or lessee than it has been in recent past years. However, there are many who now believe that our government will very soon be forced to make drastic steps to increase the production of domestic copper since it is likely to become more and more difficult to obtain that metal from abroad and in such event many high cost copper producers will have to be put to work in order to meet the demand.

A suggestion which is gaining considerable backing involves the expenditure of Federal funds for the development, equipment and operation of properties which are deemed meritorious, without many of the restrictions which have heretofore surrounded loans from the R.F.C. and in addition the government would guarantee to purchase the copper output at perhaps 1¢ or more per pound above the cost of production, which cost would include taxes, depreciation, etc., but perhaps not depletion of ore reserve nor interest on capital expended in acquiring and holding the mine.

I have already taken the liberty of certifying the Storm Cloud thru the Arizona Department of Mineral Resources as a property which justifies development and might become a copper producer if a 16¢ market could be guaranteed and all procedure financed by the Government and have stated that I believed that the owners would be glad to cooperate in any such procedure which would not involve mortgaging the real property. I shall be glad to have your reaction to such a program, which actually may never materialize but at the moment is commanding careful study and has some strong political and industrial backing.

Yours very truly,

GMC:at



Surface of 10 foot line along Creek,

September 13th, 1941

Storm Cloud file

Mr. Louis Milner
c/o Groom Creek Stage
Storm Cloud Mine
Prescott, Arizona

Dear Milner:

I owe you an apology for the long delay in advising you concerning the assay of the grab sample which I took from the little dump at the old shaft near the road and representing ore from the Ten Spot vein.

This sample assayed: Gold - .06, Silver - 3 ozs. total value - \$4.10 per ton, which obviously is not commercial ore but it gives some encouragement toward further prospecting at that point.

I hope that you are getting a little good ore from the dump above the Lion Tunnel and am sure that you will advise me and send royalty check whenever you make shipment.

Have been disappointed to learn that Mullen is making such slow progress in cutting the timber and so far he has not lived up to any of his promises although his son, whom I saw last week in Prescott, repeats their intention of hurrying things along and weather conditions should be favorable for perhaps two months longer this autumn.

In all probability I shall be up your way before the end of September and will hope to see you then.

Personal regards.

Yours very truly,

Sam

GMC:at

April 24, 1942

Preliminary draft of agreement proposed by G. M. Colvocoresses to M. J. O'Brien Ltd. relating to Storm Cloud Group of Mining Claims.

- (1) For a period of three years or five years (at your option) from date I will agree to act as your Agent and to personally assume the maintenance and carrying charges of the Storm Cloud Group of Claims including the payment of taxes and the performance of the annual assessment work on the McClellan unpatented claims as same ~~is~~ may be required by law and will submit satisfactory evidence that these undertakings have been performed.
- (2) I will use my best efforts to arrange for the operation of one or more portions of the property by lessees on the basis of the payment of the usual 10% royalty, as in previous leases, and I will assume all expense connected with such negotiations, collection of royalty, proper supervision of the operations and enforcement of the terms of the contract.
- (3) I will use my best efforts to effect a sale or rental of all or portions of this group of claims on the most favorable terms that may be obtainable it being understood that I shall have no authority without your express approval to make any leases or other ~~agreements~~ ^{agrees} which would extend beyond the period of this agreement nor to sell any of the real property for a price of less than \$1200 per patented or unpatented claim--if sold in parcels--or of less than \$15,000. for the entire group of claims if sold in block.
- (4) You will agree that from any or all of the net returns from royalty, rentals or sales there shall first be deducted for my account the actual out-of-pocket expenses incurred by me for the payment of taxes or other State or government imposts and for performance of the assessment work on the unpatented claim but not for any of my personal expenses incurred in connection with the leases, rentals, or sales of all or portions of the property and the supervision of such operations.
- (5) As a compensation for my time, services and personal expenses you will agree that after deducting the above enumerated expenses I shall be entitled to retain 50% of the money paid as royalty or for the rental or purchase of ore or of any of the products or for purchase of the real property with the understanding that while I propose to make every reasonable effort to effect such leases, rentals and sales on the best terms that may be obtainable you hereby authorize me to negotiate and execute leases on the basis of a 10% royalty on net smelter or mill returns and sales of all or portions of the property at prices equal to or exceeding those stipulated in Article 3, such sale to be made on terms that will provide for a cash payment of not less than 25% the purchase price with the balance payable during the three years

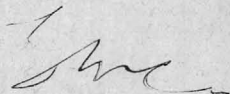
2-Preliminary draft of agreement

next succeeding and meantime guaranteed by your holding a first and prior lien upon all of the real property involved in the sale.

(6) Should I decide to lease and operate or to purchase this property myself or with associates, it is understood that I am to have the privilege of doing so provided, but only provided, that from any operations that I may conduct or any purchase that I may make you shall receive no less an amount of royalty or purchase price than that which would have accrued to you if the lease or sale had been made to a third party as per Article ^{5 or 6} 4 hereof.

(7) Should the leasing and mining operation involve the procuring of a United States government loan you will cooperate with me as may be required to meet the demands of the R. F. C. or other government agency as long as such demands do not involve the assignment of any part of your share of the royalty as stipulated above nor the execution of any mortgage or other instrument which would constitute a lien upon your real property.

(8) At the expiration of the three ^{or 5} year period of this agreement, all or such portions of this property as may still remain unsold are to revert to you without any liens or encumbrances and without any further obligation to me or others by reason of any expenditures which may have been made by me under the terms of this agreement which shall then be cancelled and become null and void excepting in respect to any unpaid royalty, rentals or purchase payment then due on account of contracts made during the term of this agreement; such sums, when and as paid, shall be divided between us in accordance with the terms of Article 4 and 5 hereof.



Storm Cloud file
G. B. Brien 1941

November 28th, 1941

Mr. Alan Scott
216 Fourth Avenue
Ottawa, Ontario
Canada

Personal

Dear Scott:

On July 3rd, 1941, you wrote me quite a lengthy personal letter in reference to the Storm Cloud situation and future prospects and possibilities. I have long intended to answer this letter quite fully and explain my own views on the subject and this would appear to be an opportune time to follow this procedure. I wish to repeat at the outset that I am sincerely anxious to work out this very difficult problem for the best interests of the O'Brien firm, and I shall have no objection whatever to your showing this letter to Mr. O'Brien or other officials of the company if you decide to do so, but I believe that a better plan would be for you to first let me have your own suggestions and thereafter I can write an official letter to the company which could be considerably shortened and would not run the risk of being misunderstood.

When I first corresponded with Senator O'Brien concerning the Storm Cloud and accepted the position of his local representative in this regard, conditions were very different than what they are today, and the leases which I was able to make effective to Grove in 1925 and later to Balter in 1927 served to produce a substantial income in royalties for the O'Brien Company and also yielded me a monthly compensation of \$100, aside from which I had an agreement that I should receive a 10% commission on any sale of the property that might be consummated. Right up until 1930 there appeared to be an excellent chance that a responsible buyer would be found who would be willing to pay from fifty to sixty thousand dollars for the purchase of the claims, and obviously, the chance to earn the commission was my principal incentive for carrying out my part of the agreement.

Ever since 1930 undeveloped mining claims have been a drug on the market in this part of the country at least, and up in the vicinity of the Storm Cloud the Phelps Dodge Corporation has held on to most of the claims in their Senator group and others in that neighborhood, making strenuous efforts to dispose of them, and in some cases selling individual claims at a very low figure. The same thing is true of most of the other mining claims around Prescott, and many of them have recently been advertised for sale in the newspapers or by putting up signs along the highway, while a large number, including some partially developed mines like the Cash, have now been taken over by the State for delinquent taxes and have been, or will be sold at auction for only a few hundred dollars.

November 28th, 1941

I shall not attempt to go over the unfortunate history of the Storm Cloud, including the lease to the Bradshaw company, which had plenty of money for a time, but wasted it in a most footless manner that led to bankruptcy, nor the various leases and options given to other parties who proved to be financially irresponsible, and finally the sale of timber to Mullen which had such an unsatisfactory outcome. As to the present situation, I understand that my employment will be discontinued at the end of this year which is perfectly satisfactory to me and undoubtedly good policy on the part of the O'Brien company. I have really expected this development for some years past, and have frequently thought of voluntarily resigning, since I realized that my services were not bringing any adequate return to the company, and for my own part, the retainer of \$30.00 per month really did not cover the time and expense involved in looking after the property with a monthly visit, and frequently, a lot of conferences and correspondence generally with wholly irresponsible people and with no real prospect of a successful outcome.

During the month of December I shall continue my best efforts to negotiate a lease and option on the property, subject, of course, to the approval of your company, but the only recent prospect has been Howard Gentry, and although this man has established a very good record elsewhere, I rather think that he has lost all interest in the Storm Cloud since he has not called on me in November as promised and while I have written him twice, I can get no answer. I believe that he is operating another mine in the northern part of the state, and probably has no intention of taking on anything else as long as he can make a living from his present activities; therefore, the chance of closing or even negotiating a deal for lease and option of Storm Cloud seems to be extremely poor, and with the timber contract cancelled, it looks as if the O'Brien company would merely have to decide as to whether or not they will hold on to the claims indefinitely, by paying the taxes and the assessment work on the McClane Claim, or otherwise, discontinue payment of taxes, and eventually allow the claims to be taken over by the State. Of course, there are other parties who might be of more assistance to them than I, and I shall be only too glad if so desired, to spread the word among various promoters and mining interests that there is a chance to deal directly with the O'Brien Company, and it may be that something might come of such a contact; or perhaps an advertisement that the properties were for sale might bring about some type of deal, although I personally feel that there is very little chance that any purchaser would pay even a few thousand dollars in cash for the Storm Cloud group of claims.

During the past few years, I have frequently considered the possibility of suggesting that I might take over these claims personally, and meet the carrying charges, including the assessment work, providing I were given an absolutely free hand in handling the property and also 50% of any return that might eventually be secured, after repaying my out-of-pocket expenses for taxes, assessment work, any development that I might carry out, and the actual expense involved in attempting to negotiate leases and sales. However, it has always been certain that such procedure on my part would involve an expense of at least some hundreds of dollars per annum, while the chances of obtaining any reward has never been very bright, and I have feared and still fear that any such proposal might give offense to the officials of the O'Brien company, who might perhaps assume

November 28th, 1941

that I had been deliberately blocking the deals which might have been made as long as I was acting as their agent in the hope of eventually obtaining an arrangement of this kind and securing a much larger commission.

Actually, my delay in making any such suggestion has principally been due to the fact that I was financially unable to meet the obligations involved, having been struggling hard ever since 1930 to hold on to my interest in other properties and to make this of tangible value. During the last six months I have been fortunate enough to improve my position to a considerable extent since other parties have now come in with me to help in financing the equipment and resumption of operations at the Blue Bell and DeSoto mines where the values are principally in copper; and also I have been able to arrange to completely finance an extensive program of diamond drilling which will serve to develop a large body of low-grade gold ore in southern California.

If you believe any such plan as I have above suggested would be favorably considered by Mr. O'Brien and deem to be advantageous to all parties concerned, I will gladly give this matter further consideration and go more into detail; but right in advance, I would say that if the property were turned over to me, I should probably reinstate the timber contract, which ought to at least provide sufficient funds to pay the taxes. I should also allow Milner and others to ~~go for~~ ^{get} a round on the surface, and make small shipments from which a 10% royalty could be collected, and I should carefully re-examine the possibility of obtaining a loan from the Federal Government which might serve to develop the Ten Spot vein at the expense of the government; ~~also~~ I should have to spend at least several hundred dollars and a considerable amount of time in order to put the proposition in proper shape, and I have no assurance that a loan could be actually secured.

Most important of all, I should let it be known that unless this mine were first developed to a point where substantial ore reserves could be measured and sampled, the entire property would be sold at what might seem a very nominal figure, for I cannot see the logic of expecting a lessee to spend from ten to twenty-five thousand dollars in order to give value to a property to which he could only take title after meeting a purchase price of fifty thousand dollars, or thereabouts. For my own part, if I felt able to gamble the money for the development, and the results of this proved to be satisfactory, I should certainly try to secure the highest possible purchase price that would in any way seem justified, but if I were only willing and able to merely meet the taxes and gradually allow the present workings to become less and less accessible, I should feel that it was a good deal better to have even two or three thousand dollars in the bank than the ownership or interest in patented mining claims which might continue to be a liability for an indefinite period of time.

Personally, I am in no position to guarantee that I would actually spend the money for development, and this could not be made a part of an agreement, but I would certainly give the Storm Cloud more personal attention than I have felt justified in giving up to the present time, and I would be willing and able to gamble a moderate amount of money in trying to bring this to the attention of other parties in the best possible manner, and in preparing the

November 28th, 1941

the necessary documents, maps, etc., to stand a chance of securing a government loan, and this is about all that I can say at present.

You and Mr. O'Brien doubtless realize the many difficulties which the New Deal Administration has placed in the way of all industry, particularly a speculating industry like mining, and the very inadequate return that even the most successful speculator is permitted to retain by reason of the present tax laws, and up to the present time these conditions have steadily become worse and may become wholly prohibitive in the future; on the other hand, a tremendous need for raw materials, and particularly metals, is apparently beginning to knock some sense into the heads of some of our theorists in Washington, and if the production of copper, gold, lead, silver, and zinc, is to continue, it seems to some of us almost certain that the government will ease up on the investors and speculators and that some return on an investment can be secured and retained before we run into the slump which must almost inevitably follow the present defense program and probably, the actual fighting of a war.

It is this hope that has influenced the two parties who have recently joined me in the ventures mentioned above and while the Storm Cloud would not appeal to either of them, I think it possible that there are others among my acquaintances who might eventually be induced to come into the picture, but only after a lot of missionary work had been done by me or others.

I will close this letter by hoping that you and your family are in the best of health, and sincerely regret that it was not possible to carry out the plans that we had jointly formulated about a year ago, and therefore, that there has been no opportunity for you to revisit this part of the country and for us to renew our very pleasant personal acquaintance. My wife will join me in sincere personal regards and best wishes to you all for the approaching holiday season.

Yours very truly,

GMC:es

MEMO RE: STORM CLOUD TAILS.

Tonnage about 10,000 ^{\$}

Value Au. about 0.14

(gross) Ag. about 0.46

Cu. about .60

TOTAL 1.20

07

and 6 m t

.07

0.245

50

1137 150

Recoverable value probably not over 80¢ per ton and cost of reclaiming and milling would at least equal that figure, moreover the tonnage is too small to warrant the erection of any treatment plant.

If these tails could be sold @ 10¢ per ton they would bring in \$1000.00, but it will be good business to dispose of them at a much lower figure and if they are useful as a base for fertilizer these might be worth from 2 to 3¢ per ton, say \$200 --\$300 in place.

Probably not more than 2000 or 3000 are likely to be reclaimed.

The tailings at Humboldt probably 300,000 tons or more contain approximately -- gold, .01 oz. ; per ton; -- silver .4 oz.; copper .3%, iron 3%; sulphur 3%. The balance, say 90%, consisting principally of silica, also some magnesia, lime and alumina.

The tailings at Storm Cloud probably carry nearly twice as much iron and sulphur as those at Humboldt.

The use of these tailings for fertilizer does not seem reasonable in view of information obtained from the Chemist of the State Agricultural Dept. who tells me that practically all of the fertile soils in Arizona are highly alkaline and thus contain a large excess of sodium hydroxide, which is different from many of the soils of the East that are normally acid.

The object in conditioning ore fertilizing the Arizona soils is to render it neutral or slightly acid and for this purpose manure or some organic compound must be employed. Sulphur and iron might have some value in an acid soil where they would be soluble but in the alkaline soil of Arizona they are not soluble and hence have no value whatever unless mixed with organic material., which gives off carbon dioxide

It is for this reason that the use of ashes, bones, and scrap iron or cans around plants and bushes is of no value here and the only possible use to which the tailings might be put would be in combination with some organic fertilizer and for this purpose they would not seem to be worth the cost.

M. J. O'BRIEN, LIMITED

CABLE ADDRESS
"CALABOGIE"
OTTAWA

HEAD OFFICE
OTTAWA, CANADA

KINDLY ADDRESS
ALL CORRESPONDENCE TO
THE COMPANY

9th April, 1941.

G. M. Colvocoresses, Esq.,
Mining and Metallurgical Engineer,
1102 Luhrs Tower,
Phoenix, Arizona.

Handwritten: C 41
112
41

Dear Mr. Colvocoresses,-

Re Storm Cloud

Your letter of March 31st has been duly received, and we note that it will be the middle of April before you will be able to get up to the Mine.

Have you any information on the detailed results of the drifting carried out from the Senator Tunnel on the Ten Spot Vein? If there is an Assay Plan of this work we would be interested in seeing it, if possible, but if none was made what would the chances be of getting permission from the Phelps Dodge people to go in and sample the drifts? I believe the Tunnel itself is in very good condition, although certain preliminary safety measures would certainly be necessary. If you can secure any information along this line in the near future, it will be greatly appreciated.

Your account for the month of March has been handed to the Accounting Department for settlement, as usual.

Yours very truly,

M. J. O'BRIEN, LIMITED,

per

Handwritten signature: Alan Scott

AS:B

Handwritten: Copy in 29
7 hrs. Back

Libby

hills
Romney

John S. King's
Land

Republic & Monmouth

Eddy Slaggon

April 11th, 1941

M. J. O'Brien, Limited
Ottawa, Ontario

Attn: Mr. Alan Scott, Manager of Mines

Dear Mr. Scott:

Re: Storm Cloud

Replying to your letter of April 9th the Senator tunnel was driven to crosscut the Ten Spot and other veins prior to 1893, at which time the drifts on the Ten Spot Vein were run out for a total distance of some 1200 or 1300 feet and one shoot of ore was encountered in the easterly drift which lies in the direction of the Storm Cloud claims. I do not believe that any assay plan of this drift was ever made byt the subsidiary company of the Phelps Dodge Corporation, which carried on this work, but I have considerable general information concerning the conditions which they found and also the developments carried on nearer the surface at a later date.

As to the tunnel itself, this was reopened on several occasions but to the best of my knowledge it was last cleaned out as far as the Ten Spot Vein in about 1929 when the Phelps Dodge Corporation spent considerable money to retimber the drift and make accessible the workings on the Ten Spot and Cash Veins. Subsequently the tunnel was again allowed to cave and I think that it has been entirely inaccessible for many years and could not be entered today without the expenditure of a considerable amount of money.

However, I shall check this information by writing at once to the representative of the Phelps Dodge Corporation who has charge of these holdings and I will advise you further in this regard and also send you copies of all of the information which I have previously obtained concerning the Ten Spot Vein and any further information that I may be able to secure during the course of the next week or ten days.

Weather conditions in the vicinity of the Storm Cloud have continued to be extremely bad and this section of the state has received more rain and snowfall since the first of January than is usual for an entire year.

Mr. Alan Scott

#2

April 11th, 1941

According to weather reports there was another snowfall of more than a foot yesterday in the vicinity of Prescott and judging by weather conditions here the snow is still continuing today.

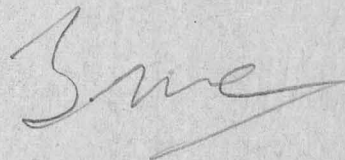
On each occasion when I make my first inspection of the Storm Cloud workings after the winter snows I have made it a point to get up to the upper workings of the property on the Copper Vein as well as the lower workings and to go through all accessible portions of the mine in order to determine their condition and that is why I have delayed any detailed investigation of the Storm Cloud during the past few weeks, but I shall hope to be able to make such an inspection before the end of this month and after I return from California, where mining work is going to occupy me all of next week.

I shall be writing you more fully as mentioned above in the course of a short time.

Personal regards.

Yours very truly,

GMC:at

A handwritten signature in cursive script, appearing to read "J. M. E.", with a long horizontal flourish extending to the right.

April 24th, 1941

Mr. A. B. Peach
Cottonwood, Arizona

Re: Storm Cloud

file

Dear Peach:

Thank you very much for your letter of April 20th with information regarding the Senator Tunnel and various ore showings in that vicinity. I shall pass this along to the O'Briens and I am sure they will be very much interested in ~~what~~ your opinion regarding the possibilities of the district ~~are~~ and I trust that this may help to persuade them to carry on the development work at the Storm Cloud, which I have been advising them to perform for some years past.

In my opinion we will be well advised to first reopen the old Ten Spot shaft on the Storm Cloud claims since this should involve merely the unwatering of the shaft and I believe that the drifts will be open and can be cleaned out at very little expense and we will then be in a position to drift on the Ten Spot vein as well as to cross-cut to the Galena and Curtis veins in which some good ore was found near the surface.

Should this work give favorable results I am quite sure that they would like to approach the Phelps Dodge Corp. with a view to reopening the Senator Tunnel and carrying on some development work from the old drift in the Ten Spot vein as this would give us additional information as to the continuance of ore at a greater depth than will be accessible from the shaft of the Storm Cloud.

Weather conditions have been so severe in the Bradshaws that I hardly imagine we shall be able to get started under any circumstances until around June 1st and also we shall have to meet the difficulties which surround the expenditure of any Canadian money in the United States under present war conditions, but I believe that this difficulty can be overcome and I shall keep you advised of any progress.

Meantime many thanks for your assistance and best personal regards.

Sincerely,

GMC:at

GMC

Cottonwood, Arizona.

April 20, 1941.

Mr. G.M. Colvacoresses,
Luhrs Tower,
Phoenix, Arizona.

A. 4/24/41

Dear Mr. Colvacoresses:

Your letter of April 11 relative to Storm Cloud and Senator properties reached me yesterday on my arrival from Wickenburg, and I am glad to note that the Storm Cloud people are interested in farther development of that area.

I do not believe there is any other information available on the Senator group other than that which you mentioned in my reports as the old maps from earlier operations seem to have been left in the old Senator office and were either destroyed by rats and mice or stored some place without any record of the storage place. When I first took over the management of the property, I had the various Phelps Dodge office try to find the old assay maps and records of the underground work there but these ~~reco~~ records were never located, and the greater proportion of the old workings are caved and inaccessible.

As to the reopening of the Senator tunnel to the Ten Spot vein, I do not believe that work would require a very large expenditure as the tunnel was driven in very hard slate formation at right angles to the veins, and will never cave only at points passing thru the veins. It is my opinion that 8 or 10 sets might be required at the portal of the tunnel, and probably 2 or 3 sets passing thru the Silver vein at about 1400 ft. from the portal of the tunnel, then perhaps 5 to 10 sets passing thru

the Senator vein at about 1600 ft. from the portal, from this point, no farther timber would be required until the Ten Spot vein was reached. The drift east on the Ten Spot vein was done in 1907 or 1908, and only a portion of it timbered, it was still open in 1925 altho quite a little sloughing had taken place at various points for a length of about 700 ft.; it is my opinion that it would not cost more than \$2000 to \$2500 to clean out and retimber the Senator tunnel and drift on the 10 Spot vein to the present breast which is not a great distance to the end of the 10 Spot claim. At my last visit to the Senator tunnel, the rails were in good shape the track needed new ties, but that was 15 years ago, so I could not even guess what the condition of it might be now.

I should certainly like to see you accomplish something in the Senator district, as I have always believed that the Senator and ^{Storm Cloud} 10 Spot combined and properly developed, that sufficient ore of commercial grade could be developed to justify a 100 or 200 ton mill, and certainly with the tunnel now 3400 ft. long, and not a great distance from the 2 upper veins on the Storm Cloud, it is certainly the logical place for deeper development of of the Storm Cloud as well as any of the other patented claims clear thru the mountain to Mt. Union. All these properties could be consolidated at prices not prohibitive, and I believe a successful operation could be carried on there for a long time.

I wonder if you are familiar with what happened at the Sheldon which is on the same mineral belt, and I strongly believe that the Storm cloud veins are the continuation of the Sheldon veins. To a depth of about 250 ft. , the Sheldon veins were operated quite profitably on oxidized gold and silver ores, at this depth, the sulfide zone was encountered with a very heavy , low grade iron pyrite and for a depth of about 200 ft. the iron pyrite was too low grade to handle, but as you no doubt recall during Charlie French's administration there, the iron pyrite was replaced by a chalcopyrite and gray copper ore again increasing in gold and silver values , until it pro-

duced a most attractive grade of milling ore down to the 950 level and the vein was approximately 70% productive for the entire length of the Sheldon claim. The same ore was exposed at the south end of the Sheldon property continuing into the 96th claim of the adjoining group in a southwesterly direction.

In order to give you a convincing idea of my opinion of the property south from the Sheldon thru the Senator and Storm Cloud properties, I quote you my endeavors in 1928 at which time I had a tentative option on ~~th~~ the Sheldon at a price of \$800,000.00 and had tentative options on all the prpperties southwest of the Sheldon to the Storm Cloud, and had recommended to the Phelps Dodge Co. that I considered it an attractive undertaking. The entire area being a distance of 3 miles, the Sheldon and 97 properties being the nucelus to the development there. There was approximately ~~\$100~~ \$1,000,000.00 worth of ore developed in the Sheldon at that time, estimated by Gerald Sherman and myself after a preliminary investigation. The whole deal was blown up immediately after our investigation by the Sheldon Company jumping the price of their property from \$800,000.00 to \$1,200,000.00 I quote you the above feeling that it might be of some assistance to you in your endeavor to get the Storm Cloud property under way. There is no reason to believe that the low grade iron pyrite in the bottom of the Storm Cloud workings will not result in about the same way as that of the Sheldon.

Very truly yours,

A. B. Beach

*(Intro. by G. M. C. Beach was in charge of the Phelps Dodge
mining property & operations in this district from about 1920
to 1935. I cannot agree with his estimate (and*

of 1,000,000 with you looked and in the
Sheldon mine with which I was very familiar &
I think that it is very doubtful that the
10 Spd vein is a continuation of the Sheldon vein.

~~In any case we know that there is no~~

However there is a distinct zone of mineralization
extending from the Sheldon to the Storm Creek
vein in which latter district the 10
Spd is by far the strongest vein.

NOTES RE STORM CLOUD

8/14/36

Ed Hussen still in charge at the mine under Prince and Williams. Morris is the bookkeeper for the Bradshaw Co. at their Prescott office.

Morris told me that the cost of hauling concentrates from the Davis-Dunkirk Mill to rail at Prescott was \$2.00 per ton. The freight had average near \$6.00 per ton to El Paso but now a new rate had been secured which was only \$6.00 per ton for freight and treatment combined.

The records of the Bradshaw Mill for June showed that 2011 tons of ore had been milled and 136.18 tons of concentrates produced giving a general ratio of nearly 14 to 1 but the ratio for the Storm Cloud was evidently much lower though it did not appear to have been definitely ascertained. The charges applicable to the Storm Cloud had therefore been based on value rather than on tonnage but a more accurate basis of figuring was to be adopted in the near future.

X At the mine work is still confined entirely to the Lion tunnel and in the Galena Vein they have stoped on an ore shoot for a length of 75' and to a height of 30' which is about 30' below the surface and they put down a winze 10' at the north end of the shoot. The ore seems to have an average width of about 2' and is rather erratic in value but contains many stringers of galena with gold and silver values.

X On the Curtis Vein the shoot has been worked for a length of 30' and to a height of 30' and a winze has been sunk 15'. The ore is about 18" wide but seems to be improving in the winze.

Production is now about 7 tons per day and last six truck loads (about 4.5 tons to the truck) assayed as follows:

Au	Ag	Value
0.82	5.32	\$32.83
0.82	5.60	33.05
0.62	3.14	24.14
0.80	4.36	31.38
0.42	8.02	20.92

Special ore in bin

0.28	25.20	29.35
------	-------	-------

If this average tonnage and grade can be maintained the August production may represent 200 tons at \$30.00 equals \$6000 gross value.

70% of this would be \$4200 and if hauling, freight and smelter charges are \$8.00 per ton and 20 tons of concentrates

are produced these would equal \$160.00 and the smelter deductions might represent another \$440.00 leaving net value in terms of contract at \$3600.00, in which case the royalty would be \$360.00 but it is more likely to be around \$200.00.

In the Lion Vein there is a wide body of crushed rock probably along the line of a shear zone or fault and this is sprinkled through with particles of sulfide and according to Hussen will run \$3.00 per ton in gold and silver. He is now cleaning out the big pile of muck in the crosscut and will do some further sampling and development on the Lion Vein.

The Bradshaw Co. plan to unwater the 10 Spot shaft after installing a head frame and hoist which they will bring over from the Bannie and they will then use a #5 Cameron pump and perhaps install a stationary compressor to replace the portable outfit which is a great fuel eater.

They will clean out the crosscuts and drifts in the 100' level and extend the crosscuts to tap all the veins mentioned as well as the McCleure and the Ten Spot to the West and they will probably do some drifting especially in the hope of finding the downward extensions of the shoots on which they are now working from the Lion Tunnel.

The shipments from the mine from July 14th to August 1st were 12 truckloads (about 54 tons) but Hussen did not have any record of the shipments for the first half of that month.

A new cabin had been erected near the McCleure tunnel and a blacksmith shop was in course of erection at the Ten Spot Shaft. The Balter boarding house is being enlarged and two or three more cabins are planned.

Results to date are on the whole encouraging.

Visited 8/21/36

Work continues on the Lion adit. The muck has been cleaned out where this cuts through the Lion vein and it is noted that a cross fault meets the vein at this point and has thrown it out of line. Samples were taken along the drag of this fault showing \$2.33 and \$3.48 in gold and some drifting will be done to the north where better values may be found. The vein is strong and wide.

On the Curtis vein the stoping continues with good results and same is true of the Galena vein, but the production is comparatively small and hardly likely to reach 150 tons for August. Last shipment carried Au. 0.52 oz. and Ag. 2.00 oz., value \$19.75 per ton and other recent shipments have varied from a low of \$6.00 to high of \$30.00 and the average for the month should, I think, be around \$20.00.

The Galena drift has been advanced and the ore is making again on the face and looks promising. Hussen is well pleased with the outlook. At the Ten Spot Shaft they have put in three sets of

3-

new timbers at the collar and will soon be ready to put up the gallows frame and hoist. The blacksmith shop has been completed.

July 15, 1936

MEMO

RE: WORK RECENTLY DONE ON THE STORM CLOUD CLAIMS, visited
July 13, 1936.

GOLD VEIN

According to Ed Hussen, foreman for the Bradshaw Co. they staged up in the old stope on the gold vein and found that practically all of the ore had been taken out right up to the surface. A few pillars had been left near the shaft which sampled around \$11.00 but it was inadvisable to mine there at present. In neither of the winzes did they find any substantial downward extension of the ore which pinched out in a V and nothing of consequence was left at the ends of the stope. Even in the most promising showings the samples gave most erratic results (as had been our own experience) and sometimes one sample would assay over \$20.00 and a check taken at the same place or very near to it would only run \$2.00.

The ~~little~~ adit which was cleaned out on the hillside and to the north of the shaft was advanced some little distance and at the point where it stopped the breast showed a narrow vein of ore which sampled \$16.00.

Hussen thinks that it will pay to continue this to hit the level under the stope as there is room for a good shoot of ore between. Also it may pay to explore further south from the shaft workings, but on the whole the outlook is not very promising.

A small dump of ore at the collar of the old shaft assayed \$11.00.

COPPER VEIN

The stope at the south end of the main adit was timbered up thru the cave until it was possible to climb over the muck and get to the fault. Some of the ore in the back sampled around \$7.00 per ton in gold and copper, but it would be hard to get at unless the drift were spilled thru the cave and fault

The general average of the ore left broken in the stopes and in places was around \$6.00 per ton at present prices of copper, which is a little too low-grade to pay, when it has to be hauled to the Davis-Dunkurk Mill. 104

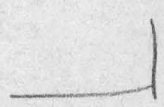
A little better grade material was found in the north winze which should be sunk deeper and the entire situation is one that calls for a comprehensive campaign of development which the Bradshaw people hope to undertake later if their finances permit. The rails, pipe etc. have all been left in place so that this work can be resumed at any time.

The total shipments of ore from the dumps, gold vein and copper vein (presumably all made during June) amounted to something over 80 tons with average value of \$7.00.

Lower Workings

The main activities of the Bradshaw Co. are now centered on the Lion and McCleure claims near the camp and here they have done some work from the two adit tunnels on both the Galena and Curtis veins. The Curtis vein in particular looks quite promising in spots and from one shoot about 20 tons had been taken, the first lot assaying \$7.77 per ton in gold and copper and the second \$10.00 per ton. A small stope had been started here and I was told that the last shipment of ore to the mill (about July 19th) ran \$11.00 per ton.

If this work continues to give satisfactory results it is the intention of the Bradshaw Management to continue drifting to the North along one or both of these veins and at the same time to unwater the so-called Ten Spot Shaft in the McCleure Claim and to continue the old crosscut on the lower levels extending then eastward to cut both the Galena and Curtis veins and perhaps some distance beyond to cut the Lion vein.



AMERICAN SMELTING & REFINING COMPANY

EL PASO SMELTING WORKS

ORE SETTLEMENT

BOUGHT OF Prince & Hussen EL PASO, TEXAS, 8-4-37
 ADDRESS Prescott, Ariz. SHIPPING POINT Prescott, Ariz. SMELTER LOT 2894
 CLASSIFICATION Ore SHIPPER'S LOT _____

CAR		WEIGHT IN AVORDUPOIS POUNDS						N. Y. METAL QUOTATIONS	
No.	Initial	Gross	SACKS		Net Weight	Moisture %	Dry Weight	Settlement Date	
			No.	Weight				B/L Date	
83263	AT				72300	1.3	71360	7-26-37	
								7-23-37	
								Silver	77 Cts. per Oz.
								Foreign Silver	.4475
								Lead	\$ 6.00 Per 100 Lbs.
								E. & M. J.	
								Copper	13.650 Cts. per Lb.
LONDON LEAD PER 2240 LBS.									
£ s d									
Exchange N. Y.									

PAYMENTS FOR METALS									VALUE	
ELEMENTS	Assay per Ton 2000 Lbs.		Deducted	Net Assay	Equivalent in Lbs.	Per Cent Paid For	Net Paid For		Rate	Amount Per Ton
GOLD	.59	oz.					.59	oz.	32.31825	19.07
SILVER	7.0	oz.	.5	6.5			6.5	oz.	.755	4.91
LEAD	3.2	%	No	Pay				Lbs.		
COPPER	1.50	%	.4	1.10	22.0	95	20.9	Lbs.	.1115	2.33
TOTAL PAYMENTS FOR METALS										26.31

DEDUCTIONS						DEBITS	CREDITS
BASE CHARGE: F. O. B. El Paso, for Metal Payments, not exceeding \$ 25.00 per ton						3.50	
... 10 % of \$ 1.31 excess over \$ 1.31 25.00 per ton						.13	
Handling Sacks							
Copper Deficiency							
ANALYSIS			Deduction	Net		Rate	
Insoluble	72.4	%			%	@	Cts.
Silica	61.4	%			%	@	Cts.
Iron	5.6	%			%	@	Cts.
Lime	.2	%			%	@	Cts.
Zinc	2.1	%			%	@	Cts.
Sulphur	8.1	%			%	@	Cts.
Alumina	6.0	%			%	@	Cts.
As		%			%	@	Cts.
Sb	.20	%			%	@	Cts.
Bi		%			%	@	Cts.
TOTAL DEDUCTIONS						3.63	3.63
NET VALUE PER TON							22.68

				DEBITS	CREDITS
Total Value on	35.680	Dry Tons @	22.68 Per Ton		809.22
Less Freight on	36.150	Wet Tons @	4.75 Per Ton	171.71	
Less Freight on Sacks Returned		Hauling Charge	1.50	54.23	
Less Demurrage		Switching	10 Tons = 163.48 Value		
Less Umpires			419.80		
Less Duty and Brokerage					
Amount withheld pending receipt of Silver Affidavit					
Royalty	(80% on 163.48	=	130.78	74.93	
	(10% 419.80	=	41.98	172.76	
			172.76		
BALANCE DUE SHIPPER				335.59	
				809.22	809.22

MADE BY

CHECKED

CORRECT

APPROVED

STORM CLOUD 9/11/36

From the Lion adit a drift has been run on the Lion vein about 30' in a northerly direction. This follows the cross-fault and the gouge shows quartz with sulfids and continues to assay around \$3.00 in gold. It is hoped to soon find the continuation of the vein beyond the fault when a better grade of ore may be expected.

The stope in the Curtis vein is just about worked out and in the Galena vein there is only a little ore left in the back and south end of the stope and production has now been reduced to about 2 tons per day. Recent shipments have varied from \$5.00 to \$15.00 per ton but the average has held up around \$10.00--\$12.00.

The northward extension of the Galena drift quickly passed thru the small ore shoot which was found last month and the face of the drift is now in nearly barren porphyry.

No attempt will be made to do any mining under the drifts now to deepen the winzes as all ore below this level should be accessible from the Ten Spot Shaft.

At the Ten Spot Shaft the water has now been pumped down 70'. A thirty foot head frame has been brought over from the Bannie Mine and is almost completely erected and during the next two weeks the guides and cage should be installed and the Cameron pump will quickly lower the water to the 1st (80' level) which can then be reopened. It is proposed to extend the old crosscut east to cut the McClellur, Galena and Curtis veins and probably also the Lion and Treadwell

Production of ore will probably be light while this development is in progress, say during the next two or three months.

No new buildings have been erected since last visit but it is proposed to cut back into the bank east of the Ten Spot Shaft and put in a concrete room for the hoist and compressor.

STORM CLOUD 9/29/36

From Lion crosscut the drift on the Lion Vein has been advanced to a total length of 40' but still follows the crossfault and gouge and last samples are said to run only \$2.00 or less per ton.

A little additional stoping was done on the Curtis vein and some ore was taken from the ends of the winze which still shows good ore in the bottom. It is probable that no further production will be made from this shoot until it can be reached by a raise from the proposed crosscut from the first level of the Ten Spot shaft.

On the Galena vein no further advance has been made in the drift but the stope was lengthened by 25' at its south end and total stoping length is about 100'. The stope has holed thru to the surface at the north end but considerable ore still remains in other parts of the stope and the southern 25' has been worked up only a short distance above the drift. The vein holds a width of 18" to over 2' and some of the ore recently mined is said to have good values in gold and silver and it shows quite a lot of galena. About two tons of ore are broken in the drift and another 8 tons are in the loading choot.

The Ten Spot shaft is now fully equipped for operation and well timbered down to the first (80') level. The head frame is complete and a gas engine hoist (20 H.P.) has been set up on timbers. Shaft is equipped with bucket and crosshead which is to be replaced by a cage that is on the ground. The #5 Cameron pump is hanging by the hoist cable in the shaft and the portable compressor is located close by while drills, etc. are locked up in the blacksmith's shop. All is left in good order.

Taylor the watchman tells me that the water was taken down below the first level and that some good ore was noted there in the east crosscut,--probably in the McCleur vein, but no work was actually done the the water rose rapidly after the shut down.

All work was discontinued by the Bradshaw Co. about Sept. 24th and all the crew except the watchman and including Ed Hussen, foreman, were laid off at that time. They evidently intend to resume operations in the near future.

NOTE RE STORM CLOUD from talk with Ed Hussen
10/3/36

Last truck samples before shut down ran about \$9.00 per ton, but ore being mined from south end of Galena vein stope was much better than this and some of the samples ran \$32.00 per ton in gold and silver. About 15 tons of good ore is broken in the drift or in the ore chute at portal of tunnel.

In cutting out for the foundation of the hoist at the Ten Spot Shaft the outcrop of the McCleur vein was found 22' from the shaft and it was 18" wide and a sample ran \$36.00 in gold and silver and also contained some lead. ✓

On the first level from the shaft the station was in good shape but the west crosscut was closed by a bulkhead a few feet from the shaft and water was backed up in the drift to a depth of 4' so that this was not examined.

The east crosscut was found to have a length of only about 12' and no vein or ore was noted but judging from the location of the outcrop and the dip of the McCleur vein this should be encountered by advancing the crosscut some 20' further.

On the Galena Vein an ore shoot has been stoped for a length of 75' and to a height of over 30' which brings the back of the stope less than 30' below the surface and connection has been made with an old shaft so that the stope is well ventilated. The ore has an average width of about 2' and gold and silver values are somewhat erratic but seem to have averaged better than \$15.00 per ton and there is also considerable galena in portions of the vein which later on may justify an attempt to recover the lead, although this could not be done with the present equipment of the Bradshaw mill.

The drift on the Galena vein has been extended somewhat to the north and after passing through a certain distance of barren ground a new shoot of ore has been entered and the face at the time of my last visit a week ago assayed about \$19.00 per ton, but the extent of this shoot had not been proven and will only become apparent through subsequent work.

From the maps which I believe are in your possession you will note the relative location of the Ten Spot shaft which has been partially cleaned out during the month of August, and three new sets put in at the collar. A headframe is now being brought over to this shaft and will shortly be set up together with a hoist after which the shaft will be unwatered at least below the 80' level and it is the intention of the Bradshaw Co. to extend the old crosscuts both to the east and west (northeast and southwest) and the former crosscut which will pass about 100' below the Lion Adit should first intersect the McCleure Vein, which probably has little or no value and then if carried sufficiently far should develop the Galena, Curtis and Lion Veins and may eventually be pushed out as far as the Treadwell. I am very much in favor of this development and trust that it will give excellent results and should such prove to be the case the Bradshaw people will then unwater and clean out the Ten Spot shaft down to the 235' level and extend the crosscut in like manner. There is obviously a chance to develop a fairly substantial tonnage of ore in all of these veins if the ore shoots should prove to persist with depth and even if they do not go down to the 235' level a very nice production might be made from the 80' level to the surface.

The west crosscuts from the shaft penetrate the Ten Spot Vein both on the 80' and 235' levels and this vein is wide and strong but notoriously spotty in values. I believe, however, that drifting on the vein may reasonably be expected to open some shoots of pay ore and the Bradshaw people seem determined to make a mine from this section of the Storm Cloud and so far I feel that they are doing excellent work and are much to be commended for their courage and persistence.

This is one of the developments which I strongly urged upon Balter several years ago, but he paid no attention to my advice.

2- M. J. O'Brien

I regret to advise that the statement of shipments for July, together with the royalty check has not yet been received. I have twice requested personally in Prescott that this matter should be hurried up and a few days ago wrote to Mr. Williams calling his attention to the fact that their contract obliged them to send in these returns by the 15th of the next succeeding month.

In explaining the delay Mr. Williams and his bookkeeper have told me that some of the July shipments were sent to the Magma Smelter which closed down for repairs before they had been sampled and hence tied up the returns for several weeks. I also understand that their head bookkeeper is away on a vacation but a letter received this morning from Mr. Williams promises that the statements and check will be sent without fail during the current week and that they will do better in future.

In view of all the conditions I am sure you will agree with me that it would not be advisable to make an issue of this delinquency on the part of the Bradshaw Co. just at present and I feel that as their operations become more settled and are worked into a better routine subsequent statements and royalties will be forwarded more promptly.

Needless to say I shall send you this information and royalty check just as soon as it is received. I herewith enclosed my regular account for the month of August.

Yours very truly,

S. M. C.

CMC:DF

ACCOUNT

August 31st, 1936

M. J. O'Brien, Limited
Ottawa, Ontario
Canada

RE: STORM CLOUD

to: G. M. Colvocoresses
1102 Luhrs Tower
Phoenix, Arizona

Services for month of August, 1936

\$100.00

File

MEMO RE STORM CLOUD TIMBER

Charles Mullen, 115 Granite St., Prescott, Phone 897 will look over the claims with me by appointment and if satisfied will pay for large timber (10" logs or bigger) at \$2.50 per 1000' board measure.

For timber 4" to 10" diameter will pay \$0.01 per running foot and less than 4" diameter @ $\frac{1}{2}$ cent per running foot.

Would only make payment as lumber was cut but might be able to make joint arrangement with Valley Bank to secure a loan and thus make a cash payment in advance.

Wants to look over this timber as quickly as possible so as to get as much of the lumber as possible cut and dried before winter.

Would take Yellow Pine, Red and White spruce (balsam) and might take oak for firewood. Probably not interested in the quaking aspen. My rough guess as to the value of the stand of timber on say 200 acres which might be cut over is as follows:

Average per acre:

(a) Larger timber

Each tree 60' high x 12" diameter - $60 \times 12 \times 1 = 720'$ B.M. x
5 trees - $3600'$ B.M. x 2.50 p.m. - \$9.00 and call \$10.00

(b) Medium trees, say 100 with average length 30' - $100 \times 30 \times 0.01$
- \$30.00

(c) Small trees (less than 4") say 100 trees.

$100 \times 20 \times 0.005 = \10.00

Total of above equals \$50.00 per acre or \$10,000 for the claims to which might add \$1000 to \$2000 for the oak, etc.

See how Mullen's estimate will compare with this figure and try to get offer, - which will approach his estimate and then to arrange with bank for loan and cash payment against Bill of Sale for timber of at least \$2000 or more if possible with balance of payment, less interest, to be made after the timber has been cut and milled.

Storm Cloud

Car - 36 tons

Shipped by Prince and Hussen from Curtis
and Galena Veins - August 1937

	Gross Value Per Ton	Gross Value 1938
Au. 0.59 oz.	\$20.65	\$20.65
Ag. 7.0 oz. @ 77.5	5.43	4.50
Cu. 1.5% @ 13.6	4.08	2.70
Pb. 3.2 (no pay. quotation 6¢)	3.84	2.55
	<hr/>	<hr/>
	\$34.00	\$30.40

Zn. - 2.1 %

Fe. - 5.6

As,Sb,Bi. - 0.2

Insol. - 72.4

SiO₂ - 61.4

S - 8.1

CaO - 0.2

Al₂O₃ - 6.0

9/11 '40.
Lyle & Bathrick
Pay
456.

GEORGE M. COLVOCORESSES
MINING AND METALLURGICAL ENGINEER
1102 LUHRS TOWER
PHOENIX, ARIZONA

November 19th, 1940

Mr. A. Scott
c/o M. J. O'Brien, Limited
Ottawa, Canada

Re: Storm Cloud

Dear Sir:

Without attempting to go into details, which has been done in previous letters and reports, I wish to express my sincere opinion that the Storm Cloud Group of Claims is not likely to prove attractive to any responsible prospective purchaser or lessee unless and until the owner will unwater the Ten Spot Shaft and expose and partially develop the reported ore-showings in the Ten Spot Vein on both the 80' and the 235' levels.

The development should be sufficient to indicate the probable length, width and value of the ore shoots which are reported to have been found in the old crosscuts.

The best information now available, but which I cannot personally verify, indicates that the 80' level crosscut some 4' of ore having a value of from \$12.00 to \$15.00 per ton in gold and silver. No drifting was done on this showing.

The crosscut on the 235' level is reported to have cut a width of 3' of ore assaying over \$30.00 per ton in gold, silver and copper. Here again no drifting was done.

The Ten Spot shaft was cleaned out and retimbered to below the 235' level in 1928 and the upper section down to below the 80' level was put in good shape in 1936.

The shaft is therefore believed to be in good condition and while there has doubtless been some caving in the crosscuts, it should not prove expensive to clean these out and catch up the timbers. The drifts along the crushed and broken vein should be easy driving but will doubtless require timber. The cost of such drifting may be liberally estimated at \$15.00 per foot or say \$3000.00 for 200 feet of drifts which might serve to develop a length of 100' of ore on each level.

The water in the shaft now stands about 30' below the collar and dewatering to below the 80' level will be an easy matter but at a depth of about 150' the flow into the shaft is much heavier and to reach the 235' level it may be necessary to install a pump with capacity of some 60 gallons per minute.

November 19th, 1940

There is no equipment at the shaft and therefore pump, hoist and compressor must all be provided but these items can probably be rented with option to purchase. Also drills, blacksmith equipment, drill steel, pipe, rails, buckets, ore cars, etc., would have to be purchased.

The camp building now belonging to Louis Milner can doubtless be rented for a small sum and should prove adequate for housing of the small crew required for this development work.

In the Storm Cloud district ore must have a gross value of at least \$12.00 per ton in order to stand shipment to a smelter assuming a charge of \$0.80 per ton for hauling to railroad, \$2.40 freight to Hayden or Magma, \$3.00 treatment charge, \$1.00 for smelter losses and deductions, \$2.50 cost of mining and \$0.50 for overhead and taxes. Thus the total costs will be about \$10.20 per ton and a margin of \$1.80 would be left for the operators or only about \$1.00 per ton if the ore is mined by a lessee paying a usual royalty to the owner of the property.

During the progress of the development work outlined above, it is to be hoped that some pay ore will be mined and that the proceeds of same will somewhat reduce the total expenditure involved in carrying out this program which I should estimate at approximately \$10,000.

While the shaft is open and equipped for operation, it might also seem advisable to crosscut on the 80' level to the Galena Vein, a distance of about 140' and to drift on the ore shoot if this should be found at that depth. A similar procedure might be repeated on the 235' level and the crosscuts later extended to tap the Curtis Vein.

However, it is my present opinion that the development of ore in the Ten Spot Vein is of paramount importance and that this work, unless it is done by the owner, is likely to be postponed indefinitely.

Should the proposed drifts open up a length of 100' of pay ore on either or both of these levels, I consider it altogether probable that other parties would be glad to take over the operation and further development of the property and might eventually complete the purchase of same on terms that would be considered satisfactory.

Should little or no pay ore be found by the work which I have suggested, the situation of the property would actually be no worse than at present except for the increase in the

Mr. A. Scott

-2-

November 19th, 1940

owner's investment but in view of the discouraging outlook for the future it might then be well to consider a sale of the property on any terms that might be obtainable with due regard to its remaining but somewhat remote possibilities as a producer of copper and to the value of the stand of timber on the patented claims for which timber a market is likely to develop at some time in the future.

Yours very truly,

S. H. Colman

GMC:MF

LABOR REQUIRED FOR PROPOSED WORK AT STORM CLOUD

Wages per Mo.

(a) Preliminary expenses all absorbed in estimate of cost of installing equipment, time required, probably two weeks.

(b) Dewatering shaft and cleaning drifts (3 shifts)

1 Working foreman, would drive truck, sharpen steel, keep time and make minor repairs to equipment.	200.00
3 Top men while shaft being unwatered, also framing timber, etc.	360.00
3 Pump men while shaft being unwatered, (also mucking and catching timbers)	360.00
1 Mucker and timbermans helper	120.00
1 Cook and general handyman	120.00
	<hr/> 1160.00
Fuel, timber & other supplies	340.00
	<hr/>
Total cost dewatering shaft and cleaning and timbering drifts, estimated time, - one month	\$ 1500.00

(c) Drifting, etc. Two shifts and possibly pumping on third shift, might require two months if much timbering is required.

1 Foreman as above	200.00
2 Miners	300.00
2 Muckers	240.00
2 Hoistmen	280.00
1 Cook, etc.	120.00
	<hr/> 1140.00
Timber, explosives & other supplies	360.00
	<hr/>
	\$ 1500.00

PRELIMINARY ESTIMATE OF EXPENSES FOR
PROPOSED DEVELOPMENT WORK ON TEN SPOT VEIN AT STORM CLOUD

Equipment to be purchased second-hand if possible and installed at following expense:

1 Hoist and cable	\$400.00
1 Compressor	1200.00
1 Pump (Cameron type)	400.00
2 Drills, steel, hose, etc.	700.00
Blacksmith equipment & small tools	150.00
Shed over hoist & compressor	100.00
Small head frame with sheave	200.00
Piping, rails, ore bucket & cars, etc.	250.00
Pick-up truck (2nd-hand)	600.00
Camp equipment, small tools & miscellaneous	400.00
	<hr/>
	\$4400.00
Rental of bunk house & repairs	100.00
*Dewatering shaft to 235' level, labor, fuel & supplies	1200.00
*Catching up timbers and cleaning crosscuts	300.00
200' of drifting on vein, labor, fuel & supplies	3000.00
Insurance, general supervision, ^{taxes} sampling, etc.	<hr/>
	1000.00
	<hr/>
TOTAL	\$10,000.00

*Will vary widely depending on flow of water and other conditions which cannot be judged at present

Salvage value of equipment may be figured at \$1500-\$2000. If larger items can be rented, cost of equipment might be reduced by as much as \$2000 and salvage value by \$1000.

Borrowed
HIGHWAY BOND

August 31st, 1936

M. J. O'Brien, Ltd.
Ottawa, Ontario
Canada

ATTENTION: J. G. DICKENSON
RE: STORM CLOUD

Dear Mr. Dickenson:

This brief report will cover August operations of the Storm Cloud property now under lease to the Bradshaw Mines, Inc.

I twice visited the mine during August and went through all of the lower workings where mining and development are now in progress. Nothing was done during the month on the Storm Cloud claim either in the copper or gold veins, but the conditions there are quite satisfactory and active work can be resumed at any time and no doubt will be resumed if the price of copper continues to improve.

August development was confined practically to the Lion adit from which work was conducted on the Lion, Galena, and Curtis Veins.

The Lion Vein is quite wide but comparatively low grade and just where it is intersected at the end of the Lion adit it has been badly cut up by a cross fault and displaced to some extent. The work in August consisted principally in cleaning out of the tunnel something over a hundred tons of muck which had been left there by previous operators (some of it back in 1908) and in starting to drift on the Lion Vein both north and south. The first samples obtained from the Lion Vein over a width of about 5' gave gold values in the order of \$3.00 per ton which is not commercial, but the grade seemed to be improving to the north and during the month of September some interesting results may be expected.

On the Curtis Vein one shoot of good ore was followed upwards by a stope for a length of 30' and to the height of about 40'. This vein is about 18" wide and judging by ~~true~~ *truck* samples the ore runs better than \$20.00 per ton in gold and silver values. Since the Lion tunnel is comparatively close to the surface a winze was started in this ore shoot and sunk about 15' with the ore holding strong in the bottom and slightly improving in grade, but further development of this ore shoot can best be conducted from the Ten Spot Shaft and the Bradshaw people do not intend to winze down any deeper just at present.

September 30th, 1936

M. J. O'Brien, Ltd.
Ottawa, Ontario
Canada

ATTENTION: J. G. DICKENSON, Gen'l. Mines Mgr.
RE: STORM CLOUD

Dear Mr. Dickenson:

A few days ago I was greatly surprised to hear that the Bradshaw Mining Co. had suddenly discontinued all of their operations and yesterday I visited Prescott and the Storm Cloud Mine and obtained as much information on the subject as was possible. Apparently the local management received orders during the latter part of last week to immediately discontinue all expenditure for the time being and accordingly they closed down the Davis-Dunkirk Mill and Mine, also the Tillie Starbuck, Big Pine, and Storm Cloud, which they were operating under lease, and paid off all of their employees, some one hundred and ten men excepting a few who were kept as caretakers. I was unable to see Mr. Williams who was away from Prescott, but according to his associate, Mr. Walter, and their Chief Accountant, Mr. Morris, this suspension of operations is only temporary and was due to the fact that the available funds did not permit them to continue their present policy and Mr. Smith, the President in Kansas City, felt that they must stop all unnecessary expenses until they had made further progress with their financial program. I am given to understand that the stock of this company is being listed on the Exchange of five different cities in the United States and also in Toronto and that it is expected that the brokers handling this offering will soon be in a position to supply the company with ample funds so that the interrupted program can be resumed sometime during the month of October.

The Bradshaw Co. paid off their employees in full but according to Mr. Morris this left them short of local funds to pay the royalties due on shipments from the leased properties, but Morris assured me that additional money would be coming from Kansas City very shortly so that the royalty check for the Storm Cloud August shipments would be sent during the next few days. I shall certainly keep after them in this regard.

2- J. G. Dickenson

Assuming that the operations continue along the same lines as in the past I believe that it is going to be difficult for the Bradshaw Co. to complete their Storm Cloud royalty statements by the 15th of the month succeeding that in which the shipments are made since it takes sometime for the ore to go through the mill and a longer period for the concentrates to go to the smelter at El Paso, and with your approval I think that it will be proper to insist that from this time forward the minimum royalty as provided in the contract should be paid on the 15th of each month and an adjustment made later when the actual returns are available. The Bradshaw people have a credit on minimum royalty which can apply for September and probably for October as well and I think that there will be no difficulty in obtaining their agreement to such a plan.

While no statements have yet been sent me covering shipments and royalty for August I obtained the following figures from their accountant yesterday:

Total shipments----115.68 tons with gross value of \$1869.31, of which 70% equals \$1308.51, and after deducting the charges for freighting and treatment of the concentrates amounting to \$126.66, the net returns as defined in the contract were \$1181.85, so that the royalty should amount to \$118.18 for August. I am hoping to be able to forward check for this amount very shortly.

The shipments during the month of September fell off considerably as the work at the mine was mostly development but preliminary figures indicate that a total of 60.76 tons were shipped with a gross value of \$475.53. I do not have the figures on the freight and smelting but it would appear that the royalty payment on account of these shipments will only amount to some \$25.00. However, the Bradshaw Co. will actually be liable for the minimum royalty of \$100.00 but will be entitled to take credit for payments made on account of shipments prior to September 1st.

At the Storm Cloud Mine I found only the caretaker, W. A. Taylor by name, and he was unable to give me much information concerning the recent operations. I found however, that the Ten Spot shaft had been completely equipped with an excellent headframe and well timbered down to the first (80') level. Equipment had been provided consisting of a gas engine hoist (20 H. P.) a bucket with crosshead, which

3- J. G. Dickenson

it is intended to replace by a cage that was also on the ground, a Number 5 Cameron pump which was suspended in the shaft ready to be lowered and some pipe, although the pipe fitting had not yet been completed. The portable compressor had been moved to the vicinity of the shaft and the drills and steel, etc., were locked up in the blacksmith shop.

I was informed that the water in the shaft had actually been lowered to a point just below the first level and that an inspection of the east crosscut showed some good ore presumably in the McCleure vein, but the water had risen rapidly after the shut down and I was unable to check this information in person and am considerably annoyed that the Bradshaw People did not advise me of their intentions and give me a chance to visit these workings, which I am very anxious to see.

The work in the Lion Tunnel was continued during September until the shutdown at the end of last week and on the Lion Vein a drift had been run some 40' in a northerly direction, but the vein was still badly broken by the fault and only averaged about \$2.00 per ton.

On the Curtis Vein some additional stoping was done and the length of the stope was increased slightly beyond the 30 feet mentioned in my report for August. Also some additional ore was taken from the ends of the winze but the production in both cases was comparatively low grade.

Most of the mining during September was done on the Galena vein where the length of the stope was increased to 100' and the width of the vein continued to vary from 18" to slightly over 2', and the value held around \$15.00 per ton with some truckloads running considerably higher. At the north end of this stope connection has been made to the surface and practically no ore remains but there is still a small tonnage at the south end of the stope and work was in progress here at the time of the shutdown.

A few tons of ore remain broken in the drift and on the floor of the stope. Much of this ore contains galena and it could be sorted up to a fair value in lead, but there is as yet no provision for making a lead concentrate in the Bradshaw Mill.

The ore produced during September came from the Curtis and Galena Veins and it does not appear to have been sorted as closely as might have been advised judging by the average grade mentioned above. In the ore shoot at the mouth of the tunnel there were left some 8 or 10 tons of ore.

Everything at the mine was left in good shape and the indications all point to a resumption of active operations in the near future. Needless to say that I shall watch the

40 J. C. Dickenson

situation carefully and advise you further as soon as there are any developments, but up to the present the Bradshaw Co. have lived up to all of their obligations under the lease agreement except in respect to the payment of the last royalty and there is ample security for such payment in the equipment which they have left on the property, although I do not believe that there will be any reason to attach any of this material.

Yours very truly,

J. C.

GMC: DF

Storm Cloud, file

July 22, 1936

M. J. O'Brien, Limited
Ottawa
Canada

Attention: J. G. Dickenson, General Mines Manager

RE: STORM CLOUD

Dear Mr. Dickenson:

Am replying to your letters of the 6th, 7th and 14th inst. and apologize for not having done so sooner but I have been away from Phoenix a great deal during the last few weeks.

I trust that you duly received the Storm Cloud lease as the same had been rewritten and signed by Mr. Smith and the Bradshaw Company and I hope that this was found to be entirely in order and will be executed and returned to me promptly as the Bradshaw people are naturally anxious to have this lease in their possession particularly in view of their plans for the future. I believe that the lease as written meets with all of your criticisms and you will note that they agreed to all my changes which, in my opinion makes the instrument satisfactory and advantageous to your company.

In further reference to the Bradshaw people, I am really not in a position to give you a great deal of information since the concern is a comparatively new one.

Mr. H. L. Williams, the general manager, has been operating in this country for a number of years with a varying degree of success, but some two years ago he associated himself with a man named Joseph Walton from Philadelphia and M. R. Smith from Kansas City and both of these last named gentlemen brought him substantial financial support. The three purchased the old Hillside gold mine, reconditioned the same and provided excellent equipment including a concentrating mill and last year they were the largest gold producer in the state of Arizona and from all accounts, which I believe to be correct, their development work has

been very successful and their operations continue to be profitable and give promise of permanence.

More recently Smith, Walton and Williams organized the Bradshaw Mines Inc. and started operation on the Davis Dunkirk in which Williams had been previously interested and they have been securing under lease and option a number of other properties in that vicinity including the Storm Cloud. They are operating the mill at the Davis Dunkirk but hope to develop enough ore in their various mines to justify the erection of a 300 ton mill at some more suitable location in that locality and they are at present arranging to market a substantial amount of stock which I understand has been conditionally underwritten to the extent of \$400,000. With this money they plan to conduct an extensive campaign of development and will probably proceed to purchase the more promising of the mining properties which they now hold under lease and option.

I have always considered, and I believe you will agree with me, that the Storm Cloud merited such development work even though the present ore reserves are extremely small and some of the past work has proved rather disappointing, and I am very hopeful that the program which the Bradshaw Company is now carrying out will have a favorable outcome and will therefore lead them to exercise their option and take the Storm Cloud Claims entirely off Mr. O'Brien's hands. In any event, I feel that this is an opportunity which should not be lost, for the Storm Cloud in its present condition does not appeal to any of the larger mining companies while it is too big for the smaller fry and in my judgment the very best chance of disposing of the mine lies in interesting such people as the Bradshaw Company who are ambitious for the future and willing to take longer chances with their money than would be the case with more conservative mining people.

I have recently had a couple of conferences with Williams and Smith, (the last one yesterday) and they are very anxious, as mentioned above, to actually have the lease in their possession as this forms an integral part of their setup.

On the 13th inst. I again visited the claims and went over some of the work which has recently been done concerning which, I submit the following notes:

GOLD VEIN

According to Ed Hussen, foreman for the Bradshaw Company they staged up in the old stope on the gold vein and

found that practically all of the ore had been taken out right up to the surface. A few pillars had been left near the shaft which sampled around \$11.00 but it was inadvisable to mine there at present. In neither of the winzes did they find any substantial downward extension of the ore which pinched out in a V and nothing of consequence was left at the ends of the stope. Even in the most promising showings the samples gave most erratic results (as had been our own experience) and sometimes one sample would assay over \$20.00 and a check taken at the same place or very near to it would only run \$2.00.

The adit which was cleaned out on the hillside and to the north of the shaft was advanced some little distance and at the point where it stopped the breast showed a narrow vein of ore which sampled \$16.00. Hussen thinks that it will pay to continue this to hit the level under the stope as there is room for a good shoot of ore between. Also it may pay to explore further south from the shaft workings, but on the whole the outlook is not very promising. A small dump of ore at the collar of the old shaft assayed \$11.00.

COPPER VEIN

The stope at the south end of the main adit was timbered up through the cave until it was possible to climb over the muck and get to the fault. Some of the ore in the back sampled around \$7.00 per ton in gold and copper, but it would be hard to get at unless the drift were spilled through the cave and fault.

The general average of the ore left broken in the stopes and in places was around \$6.00 per ton at present prices of copper, which is a little too low-grade to pay, when it has to be hauled to the Davis-Dunkirk Mill.

A little better grade material was found in the north winze which should be sunk deeper and the entire situation is one that calls for a comprehensive campaign of development which the Bradshaw people hope to undertake later if their finances permit. The rails, pipe etc. have all been left in place so that this work can be resumed at any time.

The total shipments of ore from the dumps, gold vein and copper vein (presumably all made during June) amounted to something over 80 tons with average value of \$7.00.

LOWER WORKINGS

The main activities of the Bradshaw Company are now centered on the Lion and Mc Cleur Claims near the camp and here they have done some work from the two adit tunnels

Page 4 - Mr. J. G. Dickenson

on both the Galena and Curtis veins. The Curtis vein in particular looks quite promising in spots and from one shoot about 20 tons had been taken, the first lot assaying \$7.77 per ton in gold and copper and the second \$10.00 per ton. A small stope had been started here and I was told that the last shipment of ore to the mill (about July 10th) ran \$11.00 per ton.

If this work continues to give satisfactory results it is the intention of the Bradshaw management to continue drifting to the North along one or both of these veins and at the same time to unwater the so-called Ten Spot Shaft in the Mc Cleur Claim and to continue the old crosscut on the lower levels extending them eastward to cut both the Galena and Curtis veins and perhaps some distance beyond to cut the Lion vein.

When I saw Mr. Williams yesterday he apologized for the delay in sending me a statement as to the exact amount and value of the ore which had been taken from the mine in June as well as the small payment which will be due for royalty but he has promised to give this matter prompt attention and I hope to be able to forward you his figures during the course of the next week. Meantime, I hope that the lease will have been approved and returned to me, duly executed.

Yours very truly,

Jmc

GMC:HM

COPY

STATEMENT OF ORE PRODUCED AT STORM CLOUD MINE AND SHIPPED
TO BRADSHAW MILL *****JULY, 1936.

Date	Tons Produced	Truck Assay Value
July 1 to 15	63.870	\$576.21
July 16 to 31	<u>62.825</u>	<u>712.16</u>
	1126.695	
	Total	\$1288.37
70% of Truck Assay Value		\$901.86
Less Smelting and Hauling Charges against concentrates amounting to 14.92% of \$901.86		<u>134.56</u>
	Net Total	\$767.30
	Royalty of 10%	\$76.73

VERDOLPH
DODGE & SONS
66 EX

C O P Y

DUDLEY C. LUNT
Attorney

COLLECTED OF 1938

\$48.42

NET LOSS

\$48.42

AMOUNTING TO 14.88% OF \$301.88

124.20

LESS AMOUNTS AND PAYMENTS RECEIVED AGAINST CONCENTRATED

LOSS OF BLACK WAGON LOST

\$301.88

LOSS

\$1339.34

1739.93

98.83

173.10

1934 12 31

1934 1 31

92.840

\$249.87

DATE

LOSS PROCEEDS

BLACK WAGON LOST

TO BEYONDIVA WITT ***** LUNA 1939
EVIDENCE OF ONE PRODUCED BY GLOBE STONE WITT AND SHIPPED

COPY

DELORO SMELTING & REFINING CO. LIMITED

SILVER - COBALT - NICKEL - ARSENIC

STELLITE

M. J. O'BRIEN, PRESIDENT
J. A. O'BRIEN, VICE PRESIDENT
S. F. KIRKPATRICK, MANG. DIRECTOR
S. B. WRIGHT, GENERAL MANAGER
F. A. BAPTY, SECRETARY TREASURER

HEAD OFFICE & WORKS, DELORO
EXECUTIVE OFFICES, OTTAWA

CABLE ADDRESS {"DELORO", MARMORA
"DELORO", OTTAWA
FREIGHT & EXPRESS. ADDRESS; MARMORA

DELORO, ONTARIO,

August 13th. 1930.

Mr. George M. Colvocoresses,
1108 Luhrs Tower,
PHOENIX, Arizona.

A 7/11
30

Dear Sir:-

Referring to the sample of Ore which you sent to us a short time ago we would advise that the following are the results of our analysis:-

Ag.	7.9 ozs. per ton,
Au.	\$3.60 per ton,
Pb.	1.25%
Zn.	1.65%
Cu.	3.75%

A copy of this letter is being sent to our Ottawa Office as usual for M. J. O'Brien, Ltd.

Yours very truly,

DELORO SMELTING & REFINING CO. LIMITED,

S. B. Wright

General Manager.

SBW.M

DELORO SMELTING & REFINING CO. LIMITED

SILVER - COBALT - NICKEL - ARSENIC

STELLITE

M. J. O'BRIEN, PRESIDENT
J. A. O'BRIEN, VICE PRESIDENT
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EXECUTIVE OFFICES, OTTAWA

CABLE ADDRESS {"DELORO," MARMORA
"DELORO," OTTAWA
FREIGHT & EXPRESS ADDRESS; MARMORA

DELORO, ONTARIO,

July 16th. 1931.

Mr. George M. Colvocoresses,
Mining and Metallurgical Engineer,
1108 Luhrs Tower,
PHOENIX, Arizona.

Dear Colvo:-

Further to ours of the 30th. ultimo.
The following are our assays of the two samples
from the Storm Cloud Mine:-

		No. 1.	No. 2.
Ag.	Ozs.	12.8	3.60
Au.	\$	6.00	6.00
Pb.	%	23.88	16.00
		23.77	
Zn.	%	0.64	
		0.63	
Cu.	%	1.55	
		1.55	

These results are being sent to M. J.
O'Brien, Limited at Ottawa also.

With kindest regards and hoping that
you and your care are all well.

Yours sincerely,

S. B. Wright

SBW.M

25.00 3.00
1.00 5.00
1.00 3.00
11.00

10% of the
Payable 2.00 to
Y to 100 to
S. B. Wright

August 11, 1928.

M.J.O'Brien, Ltd.,

Ottawa, Ontario.

Gentlemen:

Re: RANGER CHIEF AND MC CLEUR MINING CLAIMS.

I have had an extended conference with Mr. Waara relative to the situation at the McCleaur and Ranger Chief, which Waara has recently surveyed, as per blue prints recently sent you. I have also gone over the lines of these claims as reestablished by Waara, and have noted particularly that the assessment work done during the past years on the Ranger Chief is actually within the limits of that claim (although very near the side line) and not on the Big Four property as claimed by the parties who had located the Anaconda, the lines of which are in conflict with the Ranger Chief.

The McCleaur claim is probably only valuable on account of the improvements which have been made on the surface, comprising the concentrating mill and camp buildings erected by Balter, but it is also in close proximity to the Ten Spot shaft, and some of the veins from the Ten Spot and Lion ~~possibly~~ extend over into the McCleaur ground. There is no ~~special~~ dispute regarding the limits of this claim, and Waara found only slight reason to correct the original location notice.

In respect to the Ranger Chief, there is one vein extending in a North-easterly direction close to the Northwest boundary of the Ranger Chief which is also the Southeast side line of the Big Four patented claim. The Northwest portion of the Ranger Chief, as same was originally located, is in conflict with the Big Four, and since the latter is patented this will have to be changed whenever applica-

August 11, 1928.

tion is made for a patent, although there is a small fraction located between the Paw Paw and the Big Four which could be included in patenting the Ranger Chief.

The vein mentioned above contains a considerable quantity of mineral, chiefly galena and gray copper and a picked sample taken by Kirkbride from the dump of one of the old workings showed some \$10.00 value in gold and silver and 12% copper. This however is in no sense an average sample, as the showings in the old workings and along the surface are pockety. The vein on this claim is undoubtedly worth developing and Kirkbride plans to do some work there at a later date.

The difficulty in connection with the location notice on the Ranger Chief is due to the fact that the original locator, John A. Twiggs, posted a notice at the discovery shaft claiming certain boundaries but when making out the duplicate notices for record in the Recorder's office, forgot just what boundaries had been claimed and the description or "calls" on the notices recorded in Prescott were accordingly incorrect.

This situation can be remedied by filing an amended notice of mining location with proper description and Waara has made out such an amended notice in the case of both the McClellan (where the discrepancy was only slight) and in the case of the Ranger Chief, where the discrepancy is quite substantial.

The filing of this amended location in the Recorder's office will clear up all the difficulty and in any event the location notice as posted on the property should govern, provided the record is eventually straightened out before patent is applied for.

Waara is of the opinion, in which I concur, that considering

August 11, 1928.

the red tape involved in straightening out this location notice (by reason of the owner not being an American citizen) that the whole matter can be left as at present for the time being without any danger of your losing any of your rights or weakening your position when patent is applied for, or in any contest that may come up with the owners of the so-called Anaconda claim.

Considering especially that Balter seems likely to take over this property I believe it will be best to take no further proceedings for the time being for should he acquire all these claims he could then go ahead and file the amended notice of location and proceed to patent without any complications, and I shall follow this policy unless you instruct otherwise.

In reference to the Anaconda claim, which is in conflict with the Ranger Chief, these people have no legal rights unless they can prove that assessment work was not done on the Ranger Chief claim, and we now have positive proof that the recent assessment work was done on that claim, as the lines have been clearly established by Waara, and I am quite sure that they will not cause us any serious trouble, although possibly some legal steps may be required in order to oust them from the property.

Here again, in view of the probability of Balter's exercising his option we think it best to let matters remain in statu quo for the time being, but if Balter should not proceed as expected, I will officially advise the Chase Mining Company, owners of the Anaconda claim, to the effect that they are trespassing and should remove their stakes from the Ranger Chief mining claim, as same is your property

M.J.O'Brien, Ltd., - 4.

August 11, 1928.

and in absolutely good standing.

Trusting that the above has made the situation clear,
and that you will approve of my recommendations, I remain,

Yours very truly,

GMC-s

RECORD OF STORM CLOUD MILL OPERATIONS - 1928-29

[illegible]

TEN SPOT SHAFT

3 A (Kirkbride) 1928

The Ten Spot Shaft has a reported depth of 267 feet.

Unwatering is underway at this time and the water has been removed to a depth of 180'. The water is used in the mill as pumped from the shaft. At a depth of 80' there are two crosscuts. The southeasterly crosscut is 30' long and cuts a small vein of no value. The north-westerly crosscut is about 80' long and cuts the Ten Spot Vein which appears to be about 30' in width, although only 20' could be sampled on account of timbers. The vein is badly broken up at this depth and composed of a banded quartz conglomerate. Samples taken assayed as follows:

WIDTH	LOCATION	AU.OZ.	AG. OZ.	CU%	PB. %
2 ft. North Hard Band		0.16	2.3	0.24	1.5
Narrow Vein	Hanging wall	0.01	1.5	0.12	0.4
1 1/2 ft. S. Drift hard band		0.06	4.6	1.06	3.8
14 in. Hard quartz in large vein		0.01	0.5	0.08	---
20 ft. Vein sample north		0.01	0.2	0.12	---

SAMPLES FROM SURFACE OF SAME VEIN

			VALUE
4 ft. Near South tunnel	0.08	1.5	\$ 2.50
3 ft. 200 N--near No. 1	0.50	16.7	20.02
2 ft. 100 N--near No. 2	0.17	17.9	14.14
3 ft. 200 No.--North of No.3	0.37	1.4	8.24
7 ft. General Sample	0.16	0.6	3.25

A report on the Senator Group shows the Ten Spot as being about 22' in width and gives an assay of \$8.20 Gold; 7.1 oz. Silver 1.2% Cu.

This was probably one of the bands in the conglomerate. The dump of the Ten Spot on the Senator shows very good lead-silver ore

Galena
which was evidently encountered in the bottom of the workings. The Galena Vein to the east has good grade lead-zinc copper ore and should be cut by the lower crosscut in the Ten Spot shaft at a depth of 237 feet. A sample of this ore gave \$24.00 in gold, \$7.47 Silver 2% copper, 14% zinc. 2% lead.

Water will be lowered below this level soon. A crosscut tunnel southeast from the bottom of the Ten Spot Shaft would cut several veins that have excellent surface showings.

The Cash veins crossing the Storm Cloud property show some very good sulphide ore bodies, quartz with pyrite sphalerite, chalcopryite and galena. There are a good many veins paralleling the StormnCloud that would be worked at a profit through a crosscut from the lower level of the Ten Spot Shaft. Among the veins which have proven to carry large ores of commercial value on adjoining properties are: The Galena, Curtis, Lion, Treadwell and Cash. The Snoozer Vein, which was the best producer on the Senator Group, should cross the Storm Cloud property thru the Johnny or Hoot Owl Claims.

Frank (KENNEDY) 1928

The Ten Spot Vein, together with the Storm Cloud appear to be the two strongest veins on the entire property. The Ten Spot surface indications show it to be a wider and stronger vein, apparently than the Storm Cloud Vein. It has been developed, according to the survey map of the underground workings, on the Senator Mine, for some 750' in length. The nearest breast of this vein toward the Ten Spot Shaft is some 900' from the boundary line of the Storm Cloud group. It is reported that the Ten Spot Vein is from 40 to 60' in width on the Senator Property. This appears to be true, for the surface shows the vein to be a very wide highly mineralized vein. Considerable work has been done recently by leasors on this vein, and direct shipping gold

ore has been mined and shipped this season. Five surface samples on the Ten Spot Vein were taken just south of the Bugle Claim line. The following results show very good gold and silver content on three of the samples taken.

No.	WIDTH	LOCATION	OZ. AU.	OZ. AG.	VALUE
1	4'	Near S. tunnel	0.08	01.50	\$ 2.50
2	3'	200' N. of #1	0.50	16.67	20.02
3	2'	100' N. of #2	0.17	17.90	14.14
4		200' N. of #3	0.37	01.40	8.24
5	7'	General N. of 4	0.16	00.60	3.25

The Galena Vein runs parallel to the Ten Spot and as stated before, has been crosscut by a level at the 80' station in the shaft, also by a shallow tunnel and the vein followed some distance. Further development on this lead vein may develop sufficient tonnage to warrant milling

Harry L (SEARES) 1928

On the McCluer Claim 3600' northerly from the Storm Cloud a shaft has been sunk 267' with crosscuts to the Ten Spot Vein.

This work is not accessible at present but it is reported that the 300' of work done from this shaft has cut the Ten Spot Vein on two levels and that assays from here ran from a few dollars up to \$40.00 per ton in gold, silver and copper. From the Senator Tunnel a long crosscut on the Phelps-Dodge property joining this ground on the west 1000' of drifting has been done on the Ten Spot vein and good values are reported in this work with the vein better than 20' wide in places. Samples reported from these workings show values over 2 to 7' widths of from \$2.00 to \$20.00 per ton. This part of the property should be carefully investigated and I believe that intelligent development will open important ore bodies here. Between the Ten Spot and Storm Cloud there are a number of veins on which only a small amount of work has been done. This work, however, has shown that this entire section of the property is worthy of careful investigation with excellent possibilities for commercial bodies of ore.

VON ROSENBERG

(1907)

The development work in the northeasterly portion of the property on the McCluer claim consists of a shaft which was sunk to a depth of 267' several crosscuts were run from this shaft to intersect the various veins in that part of the property. ~~*****~~
THE MCCLUER, LION OR TEN SPOT WORKINGS.

This part of the property will form a mine in itself, when more fully developed. The "Paw Paw" might also be included in this series. The shaft on the "McCleur" known as the Ten Spot is now 267' deep at a depth of 80' there are two crosscuts which were not accessible during my examination. I am informed that the southeasterly crosscut is 30' long, cutting a small vein, 20' from the shaft. The northwesterly crosscut is about 110' long, cutting the Ten Spot, vein within 68' from the shaft. The vein is 40' thick. It is described to consist chiefly of "porphyritic" matter with bands of quartz. The values reported ranged from several to forty dollars per ton.

At a depth of 237' two crosscuts were driven. The southeasterly is about 80' long, showing two quartz veins, each about 12 inches thick. The northwesterly crosscut is 70' long. At a point 45' from the shaft the Ten Spot vein was encountered in this crosscut. A sample taken across three feet of quartz matter yielded:

\$9.40 in gold and silver and 4.4 per cent copper.

In this connection it may be stated here that the Ten Spot vein has been developed for a length of 9000' from the Senator tunnel (on the Commercial mining Company's property) which intersected this vein at a point about 2300' from its portal. The vein has drifted on for 580' southwesterly and for 420' northeasterly from the tunnel. The breast of the northeasterly drift is not about 1550' from the Ten Spot shaft or about 900' from the boundary line of the Storm Cloud

group. (The Storm Cloud group covers about 1100' ~~and~~ on the Ten Spot vein which courses through the Bugle, Fraction, and the McCleure Claims.)

The vein is in good shape in the drift running from the Senator tunnel, showing 6 to 8% of quartz, which, I am informed, carries good values. The width of the entire vein is from 40 to 60'.

About 250' south of the Ten Spot shaft, on the Lion claim, ^(Lion Adit) is a crosscut about 200' long; it intersects three or four veins as shown on the accompanying maps. Most of these veins should eventually be cut at much lower depth by the crosscuts to be extended southeasterly from the Ten Spot shaft, as indicated in plan and section on the maps.

The veins cut in the Lion Crosscut may be identified as the Galena, Curtis, and Lion. These veins are from a foot to several feet in thickness in the various drifts. The Lion, which is at the face of the crosscut is a large vein being over 4' thick. The values, however, are low at this point.

The Galena Vein showed good values. a sample taken yielded \$24.00 in gold 00\$7.47 in silver and 1.5% copper. The map shows the extent of drifting done on these veins. Some stoping has been done in the southwesterly drift on the Galena vein.

However, this working is too shallow to prove the veins. They will be more effectively developed by the lower crosscuts from the Ten Spot shaft and the drifts to be run on them from the crosscuts.

By extending the lower crosscuts far enough the Treadwell and a number of other veins will be encountered.

16287
melner shipped from Ten Spot line ~~2800~~ with 4m
Ass = 0.4475% Ag 13.39% + 2.53% Cu.

M. J. O'BRIEN, LIMITED

CABLE ADDRESS
"CALABOGIE"
OTTAWA

HEAD OFFICE
UNION BANK BUILDING
OTTAWA, CANADA

KINDLY ADDRESS
ALL CORRESPONDENCE TO
THE COMPANY

OFFICE OF THE SECRETARY

14th August 1922.

G. M. Colvocoresses Esq.,
General Manager,
Southwestern Metals Company,
HUMBOLDT. ARIZ., U.S.A.

Dear Sir:-

As both President and Vice-President are just now absent from the city, I wish to acknowledge your letter of 5th instant regarding our Storm Cloud Property.

We have here, one or two reports on the Storm Cloud Group, and the existence of a mill near the property makes these reports all the more interesting reading.

One of the reports, by Lee Von Rosenberg of New York City, speaks most glowingly of the property, but mentions in his report the necessity for a mill of about 100 tons capacity.

Another report, by J.B. Woodworth, Mining Engineer, speaks very favourably of the Group, and I quote herewith an extract:

"With a mill of sufficient size to handle 100 tons or more per day the property will pay good profit over operating expenses. When several of the gold veins have been developed the gold contents of the ore will form the main source of revenue".

Woodworth places the value of the tonnage at an estimated amount of \$500,000.00 and says, further:

"It must be borne in mind that this particular block of ore referred to, forms a very small part of the mineable areas of the veins".

These reports have, from time to time, inclined Senator O'Brien to the idea of commencing work on the property, but he has always hesitated at the expense of putting up a mill of proper capacity

Handwritten note: A. J. 23 22

Handwritten mark: (2)

SHEET No.

2

DATE

14th Aug. 1922

TO

G.M. Colvocoresses Esq.

in this locality. However, this obstacle has now been removed and it looks as if, with this Group of Mines and a mill in suitable proximity, we have the right combination on which to make a deal.

The Storm Cloud property is in our opinion a first-class gamble and our only reason for not developing it sooner is that we have been kept busy with other mining properties nearer home.

My main reason for writing you at this length is that apparently our last proposition does not appeal to you, and I thought it might expedite matters if you made some definite counter-proposal to us, which I will place before Senator O'Brien as soon as he returns, for his earnest consideration.

Yours very truly,



JNR/H.

Secretary.

Storm Cloud Report file

GENERAL NOTES RE: STORM CLOUD

During 25, 26 and 27

Grove mined and sorted the best ore that he could find, mostly from above the upper adit (1st level) and shipped: *Feb 1926*

1830 tons assaying	Au - 0.05 ^{0.065} ———	2.27
	Ag - 4.50	3.45
	Cu - 8.50 %	15.30
		<u>21.02</u>

The present gross value of this ore would be about \$18.70 per ton.

Balter, in 28 and 29 mined and milled about 12,000 tons of ore (including some fill from the old stopes) and this averaged about

Au - 0.05 oz.	—	1.75
Ag - 2. oz.		1.55
Cu - 3%		5.40
		<u>8.70</u>

Present gross value, say \$7.00 per ton.

The present costs of shipping and treating ore from Storm Cloud may be estimated as follows:

Trucking	- - - - -	\$2.50	
Freight to Mayer	- -	3.50	
Treatment	- - - - -	4.00	
Smelter deduction	- -	3.00	(average)
		<u>\$13.00</u>	
Add, mining cost (say)		5.00	
Total Exp.		<u>\$18.00</u>	

Therefore, it is apparent that it would not pay to attempt to mine any ore which would average less than \$20.00 per ton, and apparently there is no such ore left in the mine, unless it may be found in the gold vein where it would cost about \$1200 to make a thorough examination and sampling.

If any work were to be done on the copper vein it would seem best to go back into No. ⁽¹⁾ adit and look for pillars and extensions of the high grade shoots mined out by Grove and perhaps robbing the pillars

Memo re possibilities of mining ore from Galena Vein, to accompany sketch.

- - - -

Analysis, last shipment of ore from GALENA vein at Storm Cloud:

Gold	0.59 oz.
Silver	7.00 "
Copper	1.5%
Lead	3.2%
Zinc	2.1%
Iron	5.6%
Sulphur	8.1%
Lime	0.2%
Alumina	6.0%
Silica	61.4%

Vein was mined from 2 to 3' wide but shipping ore was hand sorted. Smelter would probably pay regular terms but no bonus. Clarkdale would pay nothing for lead and zinc.

I suggest a Crosscut on 85' level to vein (130') then drift on vein (if found) for 100' thru length of shoot, making total development cost about \$3000.00 less net value of ore produced from drift.

By mucking waste from crosscut into shaft cost might be reduced by some \$500.00 but this would greatly add to cost of mining any ore that might be developed below the 85' level. If shoot of ore holds length and grade from Lion Adit level to 85' shaft level it should be possible to then mine after careful sorting from 1000 to 1200 tons of ore of similar grade to that of last shipment for which Clarkdale Smelter would pay for gold, silver and copper contained about

\$27.00 per ton with no payment for lead and zinc.

Assume that treatment charge, trucking and freight would amount to \$7.00 per ton and that mining and sorting cost plus royalty and overhead might run to \$10.00 per ton, the operating ~~net~~ profit on the ore should be in the order of \$10.00 per ton or from \$10,000 to \$12,000 from which the development cost of \$3,000.00 would have to be repaid.

There is no assurance that this grade of ore or any ore at all extends down from the adit level to the 85' shaft level but the fact that there is good ore in the floor of the adit drift and the underhand stope below and the factual evidence of an old stope at the end of the crosscut from the 235' shaft level certainly make it probable that such is the case.

If good ore should be found along the floor of the drift on the 85' level I suggest that a winze should be sunk in the vein to connect with the back of the old stope and avoid the necessity of spilling thru the caved material on the 235' level.

It must be recognized that there is a possibility that this old stope will be found to extend upward to or above the 85' level, perhaps even up to within a few feet of the adit level, but this, in my opinion is highly improbable and the chances are that the old stope is not over 40 or 50' in height.

J. H. Colverman

4/
23
143

EVERETT E. ELLINWOOD
JOHN MASON ROSS
WILLIAM A. EVANS
NORMAN S. HULL

FRANCIS J. RYLEY
JOS. S. JENCKES, JR.
DENISON KITCHEL

LAW OFFICES OF

Ellinwood & Ross

8TH FLOOR TITLE & TRUST BUILDING

Phoenix, Arizona

*We announce that William H. MacKay, long a member of this firm,
has withdrawn therefrom to enter the practice of law at San Francisco, California.*

*William H. MacKay announces that he has opened offices for the
general practice of law at Suite Number 1420, Mills Tower, 220 Bush Street,
San Francisco, California, telephone Exbrook 6949.*

PHOENIX, ARIZONA

NOVEMBER 1, 1937

Ellinwood & Ross

Note re Storm Cloud

Elevation of main (200' ~~at~~)

Adit on copper vein is

630' above the collar of
the Ten Foot Shaft.

Horizontal distance is

3244.86 ft.

[These figures given by Kuthada
should be checked. I question the diff. in

which does not differ more than 450-500'

just under this adit. The chances of making any money here are very poor.

There are no indications of any pay ore below the #2 (main) adit, altho some good ore should be found above the northern section of this drift, - between the portal and the first stope, but the higher grade of ore which alone would pay under present prices is apparently only to be found in the zone of secondary enrichment and this has apparently been pretty well cleaned out by Grove and previous operators.

To attempt to resume operations on the basis of 50 tons production per day would involve a preliminary expenditure:

For mine plant and camp - - - -	\$15,000
" mill and water supply - - -	35,000
" proper development and production of stopes - - -	<u>20,000</u>
	\$70,000

The working costs might then be figured:

	Per ton ore
Mining and development - - - -	\$ 3.50
Milling - - - - -	1.50
Shipping and treating ore - - -	1.75
Mill and smelter losses - - - -	<u>1.25</u>
TOTAL - - - - -	8.00
Royalty, say - - - - -	<u>1.00</u>
	\$ 9.00

If we assume that gold and silver remain at present levels the value of these metals in ore such as Balter milled would be 3.35 per ton and if copper went to 15¢ per lb. the gross copper value in a 3% ore would be 9.00 per ton, making total value 12.35.

On this basis, the reopening of the mine might appear to be a good speculative chance yielding a profit of over \$3.00 per ton, - but at least 25,000 tons of this grade would have to be mined to repay the initial investment.

At present one cannot say that even 5,000 tons of this grade ore

is proved in the mine and in view of the unsatisfactory results of the development from the main winze and the faulting or cutting off of the vein at the south face of the adit the future prospects do not look bright unless one can be found south of the fault or cross dyke or to the north of the portal of the tunnel, at both of which locations I think that further exploration is justified.

As to other locations for present operations, the following should be noted:

(1) The surface pits on the copper vein north of Jersey Gulch and 300' north of the portal of the main adit, where it is reported that some very good gold and copper assays were obtained. (The gold vein should have intersected the copper vein before this point was reached, but a search should be made to the east for the outcrop of the gold vein on the chance that they run parallel).

(2) The copper shaft in the Dakota Claim, where a sample gave Au - trace; Ag - 3 oz.; Cu - 16.2%; Present value \$27.00

(3) The tunnels and pits near Jersey Gulch on the Paw Paw where some good lead silver ore was found and worked by some sub-leasers for Grove.

(4) The pits on the main copper or gold vein on top of hill and south of ravine which marks the fault or dyke, (on Palmetto or Betsy Ann claims).

Some good copper ore with gold values said to have been found here.

(5) Outcrops of the Cash vein where it crosses the Johnny claim (see Rosenberg's map).

(6) The Lion crosscut adit tunnel. (a) Stopes and

showings in drift on Galena (first) vein on both sides of crosscut. Samples from east side showed 3% cu and some au and ag, and samples from pockets of ore in west drift gave gold values of \$3.00 to \$60.00 per ton with lead and zinc.

(b) In the Curtis vein (2nd vein) some stringers of gold-silver-lead-zinc ore were found in the west drift. (No body of ore of any size has yet been found in either the Galena or Curtis veins, and the work here would merely be in the nature of gophering in the best pockets and stringers. There is always a chance that some really high grade shoot might be found and would yield quite a nice little profit. These veins might be cut by extending the little crosscut in the McCleur Claim which starts near the site of Balter's mill.)

(7) There are several cuts and pits on the northeast side of Jersey Gulch on the Hoot Owl, Ginger and Pamitha claims which should be casually investigated.

(8) The showings on the Ranger Chief do not appear promising, altho Kirkbride reported some high silver assays from picked samples. It might pay to look over the openings and try to follow up any stringers in which iron and copper or lead sulphides are noted.

To pick and choose among the above, a careful surface reconnaissance should first be made and several samples taken. From present information it looks as if the Galena and Curtis veins were the best points for immediate attack, as per samples attached, to map and it seems to be very important to pick out the ore which shows the most copper, as the gold and silver seem to follow the copper rather than the lead or zinc.

November 1940

MEMO RE TEN SPOT SERIES OF VEINS

McCleur Vein

Outcrops at excavation for hoist at Ten Spot Shaft 22' southeast from shaft, and 15' southeast from Shaft Vein which is not believed to be of any importance.

Strike northeast, dip nearly vertical but probably 80° to southeast.

At southwest end first noted back of shaft as mentioned above and in surface trench Hussen reported width of 18" and sample ran \$36.00 per ton. Some other samples did not check this and high grade ore was evidently confined to a small pocket.

In July 1938, Milner took sample which gave fair values but was only able to find a few hundred pounds of pay ore.

Vein shows strong in McCleur adit with width about 18" and has been followed for length of 150 feet and a little good ore, (said to have value of \$20.00 or more per ton) was taken out of pockets by Bradshaw Company but no continuous shoot was found.

In Ten Spot shaft east crosscut on 80' level was reported by Hussen to be only 12' long and if this is true it has probably not reached the McCleur vein but should be within 20 to 30 feet of it, assuming a dip to the east.

Cross-cut on 235' level has also probably not reached the vein.

On surface the outcrop is lost under the overburden

going northeast but it appears to outcrop again on the Jersey Claim and Milners water adit may be on this vein while its further extension probably represents one of the veins on which he has worked on the Sacramento Claim .

Vein has possibilities although shoots are probably small and pockety; could best be developed from Ten Spot Shaft.

Galena Vein.

The Galena Vein is about 50' from the portal of the Lion adit and 60' from the Curtis.

It appears to be the best mineralized small vein in this section and contains more galena than the others. The outcrop shows along the hill above the Lion adit and can be traced for some distance, it may be that this vein rather than the Curtis is the one on which Milner has tunneled on the Jersey Claim and if it has been faulted or changed directions its extensions may be one of the veins which have been worked on the Sacramento.

The width will average 2' or better.

From the Lion Adit the drifts run 250' to the northeast and 60' to the southwest but there is no ore in the latter. The ore shoot in the northeast drift has a length of just about 100' and has been mined up to the surface, about 30', and connects with an old shaft and pit which was reopened by Milner and yielded some good ore. The total production of sorted ore from this vein has probably been around 300 tons and the grade must have been close to \$25.00 per ton.

A winze was sunk from the drift and to a depth of about 10' and the vein shows strong in the bottom and is said to carry good values.

This vein can readily be developed and worked from the Ten Spot shaft as a 140' crosscut should pass through it directly under the stope and it might be expected to yield (if the shoot goes down) a total of over 1000 tons to the 80' level and an additional 1500 tons to the 230' level, say 2500 tons of \$25.00 ore with profit by direct shipment of \$25,000 or close to \$40,000 if a local mill were provided.

Curtis Vein.

Sixty feet southeast of Galena and parallel.

Strike northeast with dip nearly vertical or slightly to southeast. A fairly strong vein with quartz and sulfide filling, shows pyrite, chalcopryite, galena and sphalerite.

Outcrop noted near Lion Adit and short distance further northeast then lost but perhaps crops out again on Jersey Claim. Narrow vein with values in pockets or short pay shoots. Shipments better than \$20.00 in value.

From Lion adit has been drifted on for 80' to northeast and 85' to southwest, latter drift is barren. In northeast drift found one ore shoot width 2' and length 30' and stoped up about 50' nearly to surface also underhand stoped to depth 12'. A probable production of some 100 tons of sorted

ore has been made from this stope with value say \$20.00 per ton. Beyond the stope going northeast, the vein is poor and narrow but other shoots may well be found. The floor of the drift shows good ore for the length of the shoot and there is every reason to expect that the ore will go down. Vein should be crosscut on 80' level from Ten Spot shaft (100' below Lion adit) at about 230' from shaft but some distance north of the ore-shoot. This development would involve small expense after proper equipment has been installed and the shaft unwatered and crosscut driven through the Galena Vein.

If shoot goes down it should contain about 400 tons of ore to 80' level and additional 600 tons to 230' level, say 1000 tons @ \$20.00 on which if shipped crude would net profit of at least \$5.00 per ton, might be expected say \$5000.00 for this block of ore. If mill were provided profit should be at least \$10.00 per ton = \$10,000 total.

Lion Vein.

The Lion Vein lies 125' southeast of the Curtis and again strikes slightly more to the east so that it is not quite parallel, dip is nearly or quite vertical. The filling is quartz and crushed wall-rock and in places it follows along the gouge of a fault so that true course and character are sometimes difficult to recognize.

This is a strong vein with width of 3 to 8' and can be traced from Cash Gulch across the Lion adit and for some dis-

tance beyond but outcrop near Jersey Gulch is obscured and the vein is probably faulted at this point. Its extension may run across the Paw Paw and Johnnie Claims and possibly over to the Ranger Chief but this last is not probable.

The southwest showing on the Lion is developed by an adit from Cash Gulch on the Lion Claim and in this tunnel some ore is reported to have been found.

The vein is cut at the breast of the Lion adit along a zone of faulting and has been followed here for a distance of 40' but is still broken up by the fault and filling badly leached. Several samples were taken by Kirkbride and the Bradshaw Company but none of them gave an assay of over \$3.50 per ton and iron sulphide is the only metallic mineral noted.

Further development on this vein does not appear to be justified at present but if any extensive corsscutting should be done from the levels off the Ten Spot Shaft it would be interesting to determine its character and value at greater depth.

The Treadwell Vein.

The Treadwell Vein (developed and worked on Phelps Dodge Claims) may be the southwest extension of the Lion or it may parallel the Lion a short distance to the southeast. It has no recognized outcrop on the Storm Cloud Claims and calls for no special exploration or development.

The Cash Vein.

The Cash Vein appears to lie some 850' southeast of the

Lion and to strike somewhat more to the East, its outcrop has probably been traced by pits put down at intervals from the Cash Claim along the H. J. Glenn and Yavapai Claims belonging to the Cash Company and if so it probably extends on to the Dakota and Hoot Owl claims of the Storm Cloud Group.

On the latter claim there are several shafts and pits which may represent the extension of the Cash but little can be seen in these workings at present.

The other branch veins shown by Von Rosenberg on his rather fantastic maps are nothing more than stringers or at least have never been developed to a point where they can be described in any detail. It is possible, perhaps probable, that a long cross cut to the southeast from the Ten Spot Shaft would intersect many veins in depth but on the other hand, I think that most of those showings which are merely represented by one or more surface outcrops will prove to be gash-veins petering out a short distance below the surface and there is no reason to assume that any of them will make ore, only a gamblers chance that they may do so.

Ten Spot Vein.

Before discussing the Ten Spot Vein I wish to suggest that all of the veins described above and any others in their immediate vicinity are really branches splitting off from the Ten Spot which may be considered as the parent vein in this district.

In support of this theory one need only note the strike of these veins as far as it can be determined on the surface. The strike of the Ten Spot is just about N 45° E, while that of the Cash is N 63° E and the veins between them all form the ribs of a fan and as they extend to the southwest each in turn must intersect with and be absorbed by the Ten Spot for none of them seem to continue through to the southwest side of that vein.

The exact course and length of the Ten Spot is not known, some think that it extends southwest over the crest of the Bradshawz and into the district of Venezia and Slate Creek and northeast to represent the Sheldon Vein at Walker. This would give it a length of 7 or 8 miles but except that the veins at Venezia and Walker correspond to the Ten Spot in general direction and character there is no proof that they are the same and conditions in the vicinity of the Storm Cloud make surface tracing impossible while underground it is only surely known to extend for about 3000' as developed by the Senator Tunnel and drifts on Ten Spot Shaft and another shaft sunk between these two locations.

Without any question the Ten Spot is a fault fissure generally following along the line of Maple Gulch in this particular vicinity but cutting through the various formations including the schist, diorite, amphibolite, rhyolite and granite. It does not mark the line of any contact but apparently represents a movement which took place much later than the rhyolite

intrusions which seem to mark the latest geological event in this locality.

No careful geological study of this vein has ever been made and I have never been able to make any underground examination but it is reliably reported to represent a zone of broken and crushed rock fragments with gouge and breccia from 10 to 40' in width and there are seams or bands of quartz or silicified material of varying width, mineralized mainly with iron pyrite but sometimes with sulphides of copper, lead and zinc with all of which gold and silver values are associated.

The best values have been found in such quartz seams from 2 to 6' in width which seems to make in shoots of varying length and to occur at varying intervals.

From only two sections of this vein has any substantial production of ore been made, as follows.

The Phelps Dodge many years ago mined some few hundred tons of \$20.00 ore in stopes above the northeast drift from the Senator Tunnel and according to reliable statements left a two foot or wider face of similar ore in the end of the drift, they also mined a larger tonnage of lower grade ore but it was very complex and a poor recovery of values was effected in their old mill.

About 1932 and '33 Louis Milner leasing on the Ten Spot Claim but some 500' further to the northeast worked down from an old shaft and shipped 1628 tons of ore that would have had an average value of over \$31.00 per ton at present

prices of gold, silver and copper. All of this ore came from one shoot or pocket and Milner was not in a financial position to continue any extended development or search for other shoots.

In both of the instances cited above only high grade shipping ore was sought or could be mined with profit but to my mind the main value of the Ten Spot lies in the possibility of finding lower grade ore in fairly large quantity which could be mined at reasonable cost and for treatment in a local mill.

Obviously the development of any large tonnage of ore will be a lengthy and expensive procedure which need not be given immediate consideration but from the standpoint of the owner of the Storm Cloud property and in order to put this mine in such shape that it might appear attractive to a leaser or purchaser or be developed and operated with advantage by the owner himself, I do make the following definite recommendations.

(1) Purchase or if possible rent a pump jack with engine, dewater the Ten Spot Shaft to below the 2nd (235') level and sample all ore showings in the Ten Spot or other veins.

The cost of this work is hard to estimate but it will probably involve an expense of \$1000 to \$2000.


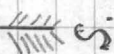
(2) Assuming that the good ore reported in the Ten Spot Vein is actually found to exist, install a hoist, portable compressor, blacksmith equipment, drills, etc., and drift along this vein on both levels as far as the pay shoots hold out up to a maximum of 200' on each level.

Most of the required equipment can pretty surely be

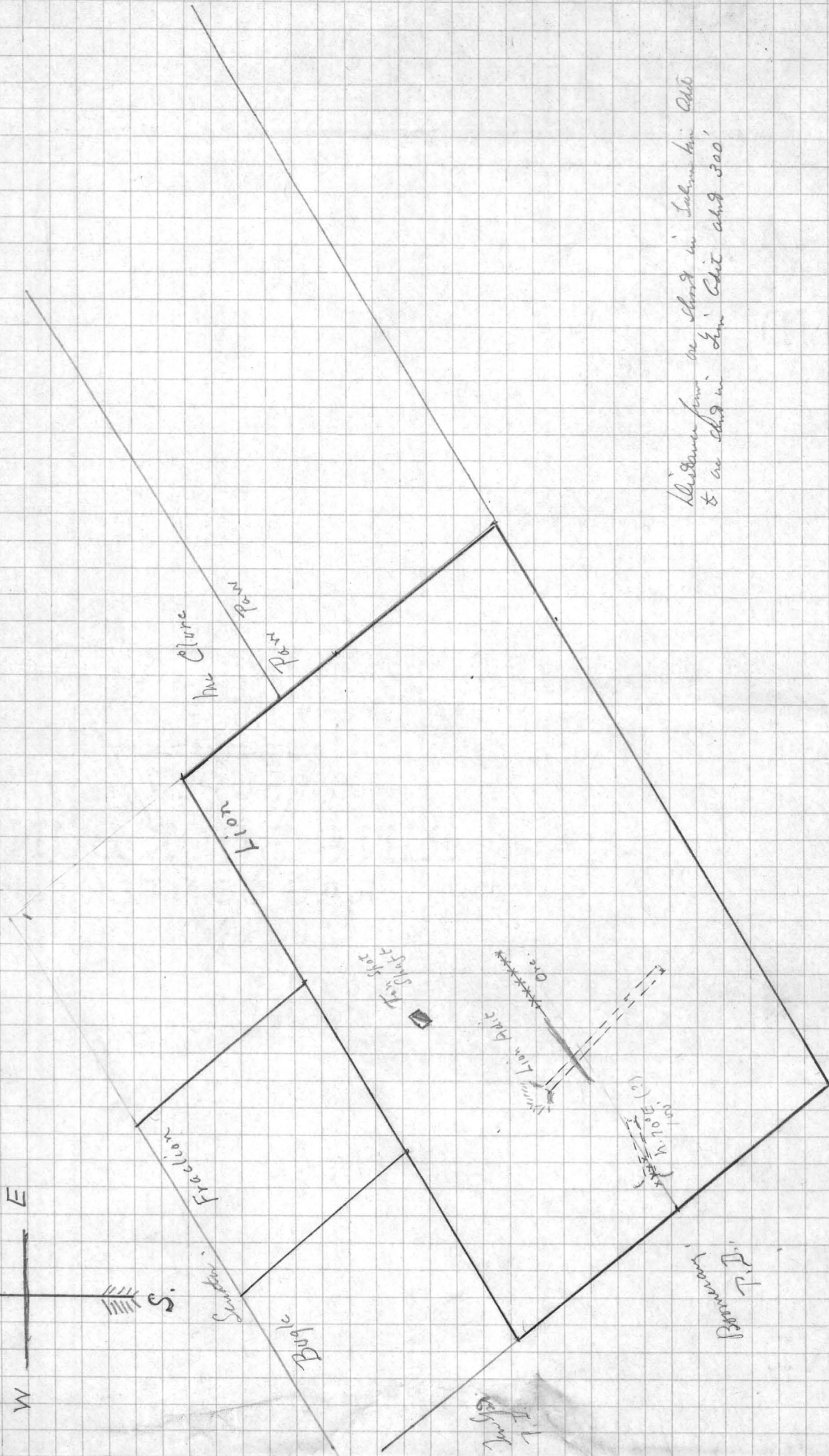
rented by the month and assuming that this work will require three months time the expense of this procedure may be tentatively figured at \$8000.00, making a total outlay of \$10,000.00 or less if the ore should fail at a shorter distance than anticipated.

Optionally a cross cut might be driven 140' to the Galena vein on the 80' level (100' below the Lion Adit) and if good ore was found here a similar cross cut might be run on the 235' level making say a total of 300' of cross-cuts at additional cost of \$5000.00.

E. H. Colverson

N.  Scale 200' = 1"  S.

W ——— E



Distance from the shore in Lake to the
to the shore in Lake 300'

STORM CLOUD MINE

May, 1936,

15 Patented and 2 Unpatented Claims, *about 220 acres*

Gold Ore Mined----1875--1899 About 2000 tons.

Average 1.00 oz. per ton.

RESERVE

Positive---Nil

Probable --Small

Good chances to develop considerable additional ore with average value in excess of \$15.00 per ton.

COPPER ORE MINED:

1900-1925, not known, probably some 6000 tons.

1925-1929, 14,000 tons of which 12,000 milled.

Average value:

Au.---0.055 oz.

Ag 2.50 oz.

Cu 3.75%

RESERVES Copper Ore

Positive 5000 tons (about)

Probable 10,000 tons (about)

Good chance to find and develop additional ore especially to south of fault. Grade should be about:

Au .05 oz.

Ag 2.00 oz.

Cu 3.00%

\$ 1.75

1.40

16.20

13.35

Say ~~\$9.00~~ gross value per ton at present prices.

Also some very promising showings on other portions of the property which merit exploration, notably in the Lion Tunnel where shoots in the Galena and Curtis Veins assay better than \$30.00 in gold and silver.

Also the Ten Spot Vein which crosses on to the Bugle Claim.

2---

High Values in copper are reported from a shaft on the Dakota Claim and elsewhere.

Plenty of good timber, some water in Jersey Gulch on Trapezoid Claim and more water (poor quality) on McCleure Claim in Jersey Creek and Ten Spot Shaft.

June 14th, 1937

M. J. O'Brien, Ltd.
Ottawa, Ontario
Canada

RE: STORM CLOUD MINE

Attention: Mr. J. G. Dickenson

Dear Mr. Dickenson:

Your last letter reached me Saturday morning and being a short day I answered very hurriedly as I was anxious to send you the revised sheets of the proposed Lease and Option. I now have time to go into matters somewhat more fully and furnish you with additional information, which I trust will be of interest.

I am enclosing herewith a copy of the proposed new Letter Agreement with the lessees covering the personal property and modifying the terms of the Lease in respect to minimum royalty and sales of some of the equipment. The lessees were not willing to bind themselves to the minimum royalty for June and July and of course there is some delay involved in starting any operations of this nature and under the circumstances it did not seem advisable to insist on this point.

I am also enclosing an inventory of the personal property and of the permanent equipment left on the claims by the Bradshaw Co. The prices which I have set opposite the various items are those which I hope to obtain from the lessees if they decide to purchase the personal property, since this material should have a substantial value to any one resuming operations at the mine, although much of it is in rather poor condition and I shall wait until an agreement is reached regarding these figures before inserting the option price in the Letter Agreement, of which copy is enclosed.

If this material or the material which is listed among the items of permanent equipment should have to be sold to a junk man and removed from the property it would not be possible to obtain similar prices since much of the material is not at all in demand, although there is at present a fairly good

2- J. G. Dickenson

market for both rails and pipe and I hope to dispose of a sufficient quantity of these to bring in perhaps \$200.00 and thus cover some of the expenses which I have recently incurred.

My fear is that Prince and Hussen may not be able to obtain sufficient financial backing to proceed with their operating program, to which I shall refer below, and in this event they may become discouraged and discontinue their work in the course of a few months time, in which event unless I can find some other and better financed lessee there may be no alternative but to promptly dispose of all of the salable material for whatever it will bring since the cost of maintaining a watchman on the property would be at least \$100.00 per month and without such protection the moveable equipment would rapidly disappear and the rest of the stuff would probably be damaged.

I am also enclosing a print of a rough sketch which purports to show the lower workings and the general location of the veins and this will probably give you a better idea of the situation than has been conveyed by letter.

Neither the surface showings nor the Ten Spot and Lion workings appears to have ever been surveyed unless this may have been done by Von Rosenberg in 1907, but his maps do not appear to be in accordance with the facts. Balter's men did some work here in 1928 but never made any maps and neither did the Bradshaw Co. when they mined here last autumn following up the reopening of some of these old workings which I had done in the spring as part of the assessment work on the McCleur Claim.

At some time in the near future I will try to find the opportunity to have a rough survey made with a Brunton Transit and will then prepare a more accurate drawing showing the plan as well as the section and the location of the ore shoots in the various veins.

The best chances for developing ore are as follows:

A. The McCleur Vein, which outcrops in a surface cut a short distance from the collar of the Ten Spot Shaft where some samples taken by the Bradshaw people are said to have run about \$24.00 per ton in gold and silver. This same shoot of ore is cut in the McCleur adit some 30' lower down and a short distance further to the north. The back of the drift at this point did not sample satisfactorily but a cut was made along the floor of the drift for a length of over 20' and the ore was mined over a width in excess of 2', which is said to have run close to over \$30.00 per ton. The crosscut from the 80' level of the Ten Spot Shaft should reach this vein if extended eastward only 15 or 20 feet and this is one of the first things which the present lessees hope to accomplish.

3- J. G. Dickenson

B:--In the Galena Vein where this was drifted on from the Lion Adit a shoot of ore was opened up for a length of over 100' with a width of 2' and this carried gold and silver values in excess of \$20.00 per ton, also 6 to 10% of lead. The vein was stoped up to the surface and a winze was sunk to a depth of some 15' in which the values were equally good so that there is every reason to hope that this ore may extend downwards to the 80' level of the Ten Spot Shaft which should be nearly 100' below the showing in the Lion Adit. (The scale on the attached print seems to be inaccurate having been taken from Von Rosenberg's report and showing the 80' level on the Ten Spot shaft only 60' below the collar.)

The cross-cut from the Ten Spot Shaft on the 80' level should reach this vein if extended about 100', which the lessees hope to do after having crossed the McClellan Vein.

(C) The showing of ore in the Curtis Vein is similar to that in the Galena except that there is not so much lead in the ore and the length of the shoot is not quite so great. This also has been stoped up to the surface so that in these two veins not more than 20 or 30 tons of ore remain above the Lion Adit.

A further extension of the crosscut from the 80' level for about 60' beyond the Galena Vein would probably reach the Curtis, although it is possible that the Curtis Vein may dip more to the east than is shown on the map, in which event the crosscut would be longer.

From the above you will ^{above the 80' level} gather that one may consider as possible ore in these three veins approximately 5000 tons with a value in excess of \$20.00 per ton, this possibility being based on the assumption that the shoots as found near the surface and in the Lion Adit extend downward with similar length, width, and value. The net profit on mining and shipping ore of this grade would be better than \$10.00 per ton so that there is a possibility that the lessees might be in a position to realize a profit of \$50,000 after they have crosscut from the 80' level of the Ten Spot Shaft, a distance of some 200' and completed say 400' of drifting along these various veins. The total expense of this working being estimated at approximately \$10,000, excluding the initial cost of equipment.

I have not mentioned the Lion Vein because the drift from the Lion adit which extended along this vein for about 40' never showed up any ore which exceeded \$3.00 per ton in value, but the vein has a width of 4' or more and there is a chance that some shoots of higher grade material might be found, by additional drifting.

4- J. G. Dickenson

As to the Ten Spot vein this is crosscut by both the 80' and the 235' level from the Ten Spot Shaft and according to Von Rosenberg the upper portion of the vein is leached, but some good values were obtained from the lower level where his sample at the present price of gold, silver, and copper would have a value of about \$40.00 per ton.

The Ten Spot is an exceptionally strong vein which can be traced for many thousand feet and the Phelps-Dodge Co. many years ago mined some excellent ore from this vein on claims which are less than half a mile from the Storm Cloud. The vein is often over 20' in width and in my opinion the average value would be comparatively low so that no very large tonnage could be mined without sending it to a mill but it is probable that there are some shoots of high grade and possibly a width of 3 or 4 feet of shipping ore might be found on the Storm Cloud and extend over a considerable distance.

The 235' level also cut the McCleure Vein, ^{where} but comparatively low values were reported but there would always be a chance that some of the good ore as found near the surface might extend downwards in the McCleure, Curtis and Galena Veins and thus very substantially increase the tonnage mentioned above.

In any event I think you will agree with me in feeling that this situation opens up some very attractive possibilities and it is by far the most favorable location to continue exploration and development at the Storm Cloud since both the sampling which I conducted and the development which the Bradshaw people carried on last summer at the gold vein gave extremely disappointing results and it would not be possible to resume mining operations on the copper vein without building a mill which the probable tonnage by no means justifies.

There are some other good surface showings on the Storm Cloud, particularly up Jersey Gulch and on the Hoot Owl and Ginger Claims where some high grade samples have been obtained but no appreciable amount of tonnage has ever been opened up. These represent future possibilities, but the Ten Spot and Lion workings seem to be of immediate importance and if Prince and Hussen are able to continue the development outlined above I have good hopes that something worthwhile will be found on the Storm Cloud property ~~and~~ developed into a profitable producer and ^{thus} present a picture that might make it really attractive to prospective purchasers of a reliable character.

Yours very truly,

J. G. Dickenson

P. S. Check from your accounting department covering May services was received this morning. Many thanks.

GMC: DF

NOTE RE STORM CLOUD

10/4/38

Ten Spot Vein:-

Milner shipped from this vein 2800 tons with average value 0.95 oz. Au. per ton.

Great Divide Mine at top of hill are working on the Snoozer Vein.

Sykes and Prince et al have taken a lease on the Dans-Dunkirk but may not be able to work it because the creditors are taking away so much of the machinery and equipment. Probably will be further litigation.

*not correct
and Prince*

Storm Cloud Ore

Shaved mine & ship 20 tons per day

Cost of equip^y & land
oper^y 10 - 15,000 (hrs)

	Price Shipment	10 Gt upper level	10 Gt 237' level (Kirkland's)	Copper min shipment 14000 t.	Proposed mixture 1:1 for 10 Gt Copper
Cu	0.59 g	0.35	1.2	0.035	0.22
Ag	7.00	3.00	12.0	2.50	3.0
Cl	1.5	2.0	2.0	3.75	3.0
Pb	3.2	2.0	2.0	—	?
Zn	2.1	5.0	14.0	—	?
Fe	5.6	5.0	—	—	—
S	8.1	10.	—	—	—
Al ₂ O ₃	6.0	6.	—	—	—
Ca O	0.2	—	—	—	—
Si O ₂	61.4	—	—	65.	—

Net value of metals paid for
at Copper Smelter

17.00

Less Charges:

Trucking & Clarkdale 2,50

Smelter toll 3,50

Royalty 1.00

Mining (4) 4,00

11.00

Net profit & shipping

(gross)

11.00

6.00

M. J. O'BRIEN, LIMITED

CABLE ADDRESS
"CALABOGIE"
OTTAWA

HEAD OFFICE
OTTAWA, CANADA

KINDLY ADDRESS
ALL CORRESPONDENCE TO
THE COMPANY

OFFICE OF THE PRESIDENT

900 Victoria Building,
Ottawa, Canada,
May 19, 1949.

Dear Mr. Colvocoresses,-

I have just learned, from a recent copy of MINING
ENGINEERING, of your father's death last December, and I
hasten to extend to you my most sincere sympathy.

The magazine states also that you are carrying on
your father's business and it is my pleasure to wish you
the greatest measure of success.

Yours very truly,


President.

J. A. O'Brien P.

Mr. Alden P. Colvocoresses,
Box 537,
Superior, Arizona.
U. S. A.

CUSTOM ORE BUYERS

MECHANICAL SAMPLING PLANT

H. C. SMOOT, Owner

505 Miller Street

PRESCOTT, ARIZONA

CUSTOM ASSAY OFFICE
219 WEST GURLEY STREET
PRESCOTT, ARIZONA



Date 12/4/39 Class Am. Ag. Lot No. 574

Settlement for Ore Seller Chapman + Walker

Address B. 1377 Title lessee

Name of Owner O'Brien Mines Ltd. Name of Claim Storm cloud

Mining District Hassayampa County Yavapai

WEIGHTS:—

Gross weight of shipment as delivered 13459 lbs.

Less tare or empty sacks _____ lbs.

Net weight of shipment _____ lbs.

MOISTURE 10.0 % (minimum 2%) 1345 lbs.

Net Dry Weight of Shipment 12114 lbs.

NET DRY TONS 6.057

ASSAYS AND VALUES:—

Per Ton Ore

Gold .97 oz. @ \$ _____ per oz. \$ 31.16

Silver 0.4 oz. less ozs. @ _____ % of c less c \$ _____

Lead % less % @ _____ % of c less c \$ _____

Copper % less % @ _____ % of c less c \$ _____

Total Value Per Ton of Dry Ore \$ 31.16

DEDUCTIONS:—

Per Ton Ore

Treatment or smelting charges \$ 5.12

Freight to Smelter (per dry ton plus moisture) \$ 2.31

Deductions per ton of dry ore \$ 7.43

NET SMELTER VALUE PER TON ORE (In Car Lots) \$ 23.73

Less our 10% margin of purchase (minimum \$1.50 per ton) \$ 2.37

Net per ton of dry ore \$ 21.36

LIQUIDATION ON SHIPMENTS:—

Total value of 6.057 tons @ \$ 21.36 per ton \$ 129.38

Less Sampling charge \$ 6.00 Assaying \$ _____ Commission \$ 6.00

Balance due shipper \$ 123.38

Remarks: Royalty 10% - ok 14.37 Less 40.15

Hauling ok 11.78 83.23

Assay acct 14 40.15

Mail Address
219 W. Gurley
Prescott, Arizona

CUSTOM ORE BUYERS

By H. C. Smoot

had better be 23.95, instead of 24

Letter will follow —

E. Y. Chapman

Control	20	10	10	10	10
1000	20	10	10	10	10
2000	20	10	10	10	10
3000	20	10	10	10	10

1000	20	10	10	10	10
2000	20	10	10	10	10
3000	20	10	10	10	10
4000	20	10	10	10	10

1000	20	10	10	10	10
2000	20	10	10	10	10
3000	20	10	10	10	10
4000	20	10	10	10	10

1000	20	10	10	10	10
2000	20	10	10	10	10
3000	20	10	10	10	10
4000	20	10	10	10	10

GEORGE M. COLVOCORESSES
MINING AND METALLURGICAL ENGINEER
1102 LUHRS TOWER
PHOENIX, ARIZONA

Statement Re Ten Spot and Tributary Veins in Bradshaw Mountains

It is my opinion that the Ten Spot is the main vein in this section although there are many other nearly parallel veins which appear to belong to the same series striking NE-SW and nearly vertical in dip. Some of these are likely to form junctions with the Ten Spot.

The two Senator veins lie respectively 600 and 720' to the northwest of the Ten Spot. The Lion vein is about 300' to the southeast and the Cash vein is about 800' further to the Southeast. Between the Ten Spot and the Lion are three smaller or feeder veins known as the McCleur, Curtis and Galena in which shoots of commercial ore have been found and mined to a small extent from the McCleur and Lion adit tunnels.

The old production from the Senator veins is given as \$530,000 and some shipments have been made by lessees during the past few years. Practically all the better grade ore, - carrying \$30.00 in gold and silver at old price, - was found in or near one shoot in the Senator Claim which seems to have been bottomed above the tunnel level some 600' below the collar of the Senator shaft. At the portal of this tunnel was located the old mill in which lower grade ore from various sections of the property was treated.

The Cash Mine is said to have produced about 10,000 tons of high grade ore with a value of \$200,000 at old prices and

also a considerable tonnage of lower grade which was milled before 1912. The high grade portion of this vein averages only $2\frac{1}{2}'$ in width but the ore in addition to gold and silver values carries substantial percentages of lead, copper and zinc sulphides. This vein was cut in depth by the Senator tunnel where it was reputed that good values still existed but it has been opened twice during the past 15 years and resampled by Engineers who presumably made unfavorable reports as no further work was done.

The outcrop of the Cash Vein can be traced across the J. H. Glenn and Yavapai Claims to the Dakota Claim of the Storm Cloud Group where no pay values were found unless in some old workings on the Hoot Owl Claim which may be on an extension of the Cash vein although the connection is by no means clear.

The Treadwell and Snoozer claims have both produced substantial quantities of good ore some of which was shipped to Humboldt by lessees and carried values in gold, silver and copper. The shoots were comparatively small and values generally did not hold up with depth. Veins mined on these claims should extend over into the Storm Cloud Group and they are very possibly extensions of the Lion, Galena and Curtis veins where the ore is similar but generally carries a smaller percentage of copper.

Development work on the Lion Claim, except as noted below, has all been done within 100' of the surface from the Lion and McClellan adits, and small shoots of pay ore have been

found in the McCleaur, Galena and Curtis veins and appear to be holding strong below the level of the adits. The width of pay ore is rarely over 2' and the longest shoot yet worked (on the Galena vein) has a length of about 100' but both underground work and surface showings indicate that there are other shoots which should be developed.

The Lion vein where cut by the adit has a width of 4 to 8' but the filling is badly leached and values,- nearly all in gold,- are less than \$3.00 per ton. This is a strong vein and seems to merit further development in depth.

The production from the McCleaur, Curtis and Galena has only amounted to a few hundred tons most of which had to be sorted by reason of the heavy costs of transportation and treatment.

Individual lots and cut samples have shown a wide variation but a fair idea of the average content of the oxidized shipping ore from near the surface may be gained by quoting the complete analysis of the last car load shipped to El Paso in the summer of 1937, as follows:

Au.	-	0.59 oz.	Insol.	-	72.4
Ag.	-	7.00 oz.	SiO ₂	-	61.4
Cu.	-	1.50%	CaO	-	0.2
Pb.	-	3.2 %	Al ₂ O ₃	-	6.0
Zn.	-	2.1	As.)	-	0.20
Fe.	-	5.6	Sb.)		
S	-	8.1	Bi.)		

The gold and silver in this ore have a value of \$25.00 per ton in round figures at present prices.

In all of the veins mentioned above, it appears from the records and from what personal investigations I have made that there is much low grade ore which could be mined with profit if a local mill were operating in this district and I think that the aggregate tonnage would prove to be considerable, even though very little ore can be considered as blocked out at present.

The Ten Spot vein is without doubt the strongest, largest and most persistent in this entire district. Since it lies below the wash of a creek for a long distance and elsewhere is often covered with heavy timber and brush the outcrop can only be noted at intervals but it has been definitely traced on the surface and underground for a length of about 4000'. Cross-cuts show a width of from 20 to 60', averaging well over 30'. Some claim that the workings of the Tillie Starbuck Mine over two miles further to the southwest are on the Ten Spot vein but this seems unlikely.

The strike of this vein is northeast-southwest and it is very nearly vertical, apparently it was formed in a fault fissure, the fault having cut through the older rocks in comparatively recent geologic times. Much of the filling consists of crushed fragments of various types of wall-rock, i.e. schist, granite, diorite, etc., with bands of quartz in conjunction with which the precious metals were deposited from solution. Copper, lead, zinc and iron were also deposited as sulphides with subsequent oxidation taking place to a varying depth below the

present surface. The metals are distributed with much irregularity mixed with gouge and crushed rock and the best values occur, as is usual, in shoots of varying length and width.

Neither the geology nor ore occurrence has ever been studied with any degree of care but it seems probable that the ore-bearing solutions originated in a deep seated magma and that the present conditions represent several different types and periods of deposition with a probability that the metallic minerals will extend to a substantial but unknown depth.

The main production from this vein was made prior to 1912 by the Phelps Dodge Co. operating at various points on the surface and from the Senator Tunnel on the Treadwell, Ten Spot and West Point Claims and while I have no detailed records of this output I have been informed that it represented a small percentage of high grade ore with a much larger tonnage of lower grade material which was milled while the great bulk of the ore developed in the vein would not then pay to mine.

My information comes from J. S. Douglas who was in charge of this work from 1891 to 1899, from the late Major A. J. Pickrell who succeeded him until about 1914 and from A. B. Peach who represented the Phelps Dodge Co. in this section until 1928.

Mr. Douglas has repeatedly expressed the opinion that the Ten Spot vein could produce a large tonnage of milling ore which should be profitably worked with the present price of gold.

Major Pickrell was equally encouraging and I quote below from a letter which he wrote me in 1927:

"About the best values I know of in the Senator country at the present time and might justify your sampling the same is in the Senator tunnel, which is one of the Phelps Dodge properties, and this development is on the Ten Spot vein, which was cut by the tunnel during my administration and a long drift has been run on the vein to the left as you enter the tunnel. If my memory serves me right, the breast at this point of the Ten Spot will average \$12.00 to \$15.00 per ton without figuring zinc or lead values; at least it will pay you to go and look at it."

Note by G. M. Colvocoresses:

"These values were figured at the old price of gold. The Senator Tunnel was partly caved at that time and so could not be inspected."

Mr. Peach expressed a similar opinion and these have been checked by conference with several of the former engineers for the Phelps Dodge Co. and with a number of the miners and mine-operators of that district.

Kirkbride who was in charge at the Storm Cloud in 1928 claimed to have seen a report by one of the Phelps Dodge Engineers which described a section of the Ten Spot vein in the drift from the Senator Tunnel as having a width of 22" in ore with average value of 0.4 oz., Au., 7.1 oz. Ag., and 1.2% Cu. representing a gross value of over \$21.00 per ton at present metal prices.

Kirkbride took several samples along the outcrops of this vein just south of the Storm Cloud line over a length of some 500' which gave values varying from \$4.00 to \$28.00 in gold and silver over widths of from 2 to 7', the average width

being about 4' and the average value about \$14.00 but the surface of the vein is so badly leached that I attach but little importance to these samples except as showing a continuous mineralization.

Where the Ten Spot vein is cut on the 80' level from the Ten Spot Shaft, on the Lion Claim, it is reported that the total width between walls is about 30' partly masked by old timbers and that the filling is largely composed of crushed wall rock and banded quartz conglomerate. Only certain narrow sections of this vein were sampled by Kirkbride and his results were generally disappointing the best assay being Au. 0.16, Ag. 2.3, Cu. 0.24, Pb. 1.5, Value say \$8.00.

In 1937 this level was again unwatered and a sample taken by Hussen over a width of 6' showed Au., 0.36, Ag. 2.0, value about \$14.00 per ton.

From the crosscut on the 237' level, I have a record of a sample taken prior to 1907 over a width of 3' which carried \$9.40 in gold and silver (about \$15.00 at present gold price) and 4.4% copper.

In 1928, this crosscut was again unwatered and Kirkbride reports a sample (which was evidently picked ore) as carrying 1.2 oz. Au., 12. oz. Ag., 2% Cu., 2% Pb., and 14% Zn., present value over \$50.00 per ton.

The depth of the Senator Tunnel below the collar of the Ten Spot shaft is given by Von Rosenberg and others as about 317' but the surface of the Ten Spot where cut by the tunnel

is close to 500' above the tunnel level. (see map)

The breast of the northeast drift from the tunnel is 1550' from the Ten Spot shaft or 900' from the line of the nearest Storm Cloud Claim (Bugle) and the total length of the vein in the Storm Cloud Group is 1100'.

Considering the district as a whole and in particular the Ten Spot vein as likely to be the largest tonnage producer, I am firmly of the opinion that further development is in order and if this opinion should be confirmed by a further investigation, steps might be taken to secure options on the Storm Cloud Group of Claims whose owner I represent, and others in their immediate vicinity which these veins traverse. This, I believe, can be done at very small expense.

The Ten Spot shaft was well retimbered down to the 80' level in 1936 and is believed to be in good condition right to the bottom as it was in 1928. ~~It is equipped with a serviceable head frame and suitable camp buildings are close by, all~~

It is located on the Senator Highway 13 miles from Prescott.

Because of the central location of this shaft and the showings in the other veins cut by the adits, I suggest that the first work should consist in dewatering the shaft and continuing a crosscut to the southeast on the 80' level at the same time starting to drift on the Ten Spot vein on either the same level or preferably on the 237' level.

The cross-cut in advancing for a distance of about 400' should cut the McCleure vein,- in which there is a short shoot

of good ore directly above; the Galena vein in which there is a 100' shoot of ore slightly to the southwest; the Curtis vein, in which the surface ore shoot is similarly located; and the Lion vein, in which the oxidized zone should have bottomed above this level and where pay ore may very likely be found. This same cross-cut can be further extended to cut the Cash and other veins.

The drift on the Ten Spot vein should be carried both to the northeast and southwest and for an indefinite distance depending on results. Later, if good values are found to extend to the southwest, the Senator Tunnel could be cleaned out and work done on that level would gain an additional 80' of depth on the vein.

While it is not to be expected that any of these veins will show continuous ore shoots over any long distance and only the Ten Spot and Lion are likely to have substantial width, I believe that there are excellent probabilities that this work, at very moderate expense, will prove up a considerable tonnage of shipping ore with average value in excess of \$20.00 per ton and a much larger tonnage of say \$12.00 ore which can be mined and milled locally with a fair margin of profit.

Sufficient water for a 100 ton mill can be obtained from the Ten Spot shaft helped out by wells in Jersey and Cash Gulches, and a much larger supply of water is available at the mouth of the Senator Tunnel.

The gold and silver content of the ore may very possibly

be found to decrease in depth but there is much evidence indicating a probable increase in the content of copper, lead and zinc, all of which are found as primary sulphides below the oxidized zone.

It will be noted that practically all of the exploration and development work on these veins was done prior to 1912 when complex sulphide ore could not be efficiently concentrated and when transportation charges from this district were very high and there was no incentive to continue the development of non-commercial ore.

During recent years the improvement of the Senator Highway, modern truck transportation, development of new metallurgical processes and the advance in the price of gold have all combined to increase the value of such ore as is found in the Ten Spot and neighboring veins and an attempt to prove up and work the ore reserves in this district would seem to constitute a logical and attractive venture.

Any mill erected in this district would not only be able to handle the ore from the veins mentioned in this statement but would be well situated for the treatment of ore from the Storm Cloud Copper vein, one mile distant and the Tillie Starbuck some two miles distant, while some miles further to the south, ore might be drawn from the mines around Venezia and Crook Canyon where the Bodie Mine in particular seems likely to develop into a fairly large producer of gold-silver-lead ore which at a later date may justify a mill of its own.

--January 24th, 1938

HUMBOLDT SMELTER

SOUTHWEST METALS COMPANY
HUMBOLDT, ARIZONA

SMELTER LOT NO. 8.

SHIPPER'S LOT NO. 2.

ORE SETTLEMENT

TO W.F. Grove and Sons,
c/o Groom Creek Stage,
Prescott, Arizona.

("Storm Cloud")

RECEIVED: May 16, 1925.

SAMPLED: May 20, 1925.

E. M. & J. QUOT. FOR	week	ENDING	May 13, 1925	CAR INITIAL	CAR NO.	WET WEIGHT LBS.	% MOIST	DRY WEIGHT LBS.
SILVER:	67.604	C PER OZ						
COPPER:	13.367	C PER LB.						
LESS:	3.000	C PER LB.		A.T.	79614	93,240	2.4	91,002
PAY AT:	10.367	C PER LB.						

CHARGES

PAYMENTS

EXCESS INSOLUBLE:	% @	C \$
TREATMENT:		5.00
5% OF GROSS VALUE OF SILVER		
3C PER OZ. SILVER PAID FOR		
SMELTING TOLL		
EXCESS LIME & IRON:	% @	C CR.
TOTAL CHARGES PER TON		\$ 5.00

GOLD:	.03	OZS. @	\$19.00	\$.57
	2.89 @ 95%				
SILVER:	2.75	OZS. @	67.604 C		1.86
COPPER:	11.31	% =	226.2	LBS.	
	(92%)	LESS		LBS.	
		PAY FOR	208.1	LBS.	10.367¢
					21.57
		TOTAL PAYMENTS PER TON		\$	24.00
		TOTAL CHARGES PER TON		\$	5.00
		NET VALUE PER TON		\$	19.00

GROSS PROCEEDS:	45.501	TONS AT \$	19.00	PER TON	\$	864.52
FREIGHT:	46.62	TONS AT \$	1.00	PER TON		46.62
SAMPLING CHARGE:						

AMOUNT DUE SHIPPER \$ 817.90

FIGURED:

FFH

CHECKED:

OFJ

Storm Cloud Mine

The Storm Cloud Group of 15 patented and one unpatented lode mining claims (about 240 acres) is located on the Senator Highway (improved but only partly paved) 14 miles south of Prescott in Yavapai County, Arizona, at an elevation of from 6,000' to 6,800'.

The Storm Cloud Mine is an old producer of gold, silver and copper ore the first work having been done in the 1860's when the high grade free-milling gold ore was largely worked out. Additional operations mainly for the production of copper were carried on from 1905 to 1910 and from 1920 to 1930 during the latter part of which period a 60 ton mill was operated and 14,000 tons of ore were mined from the Copper Vein (hereinafter described) which had an average content of 0.055% of gold, 2.50% of silver and 3.75% copper, a gross value of \$16.45 per ton at present prices of these metals. This copper ore could not be mined and milled with profit from 1930 until the present bonus price for that metal was established. A small production was made during 1935, '36, and '37 partly from the copper vein but mostly from the gold-silver veins in the vicinity of the Ten Spot workings from which the ore averaged about \$19.00 in gold and silver with 2.00% copper, say a gross value of \$26.00 per ton at present prices.

For the past 30 years this property has been owned by Mr. M. J. O'Brien Ltd. of Ottawa, Canada. Senator M. J. O'Brien (now deceased) acquired it through a transaction with a personal friend and was not disposed to operate it himself so far away from his home. I have acted as Engineer and representative for the owner from 1922 to the end of 1941 and am therefore personally very familiar with all of the recent operations and with all of the workings excepting some of the older ones which have not been accessible since 1920.

The geology, origin of the ore and details of the showings have been carefully studied and fully discussed in lengthy reports by the writer and a number of other engineers all of whom are in general accord as to the value of this property as a comparatively small mine. Complete reports are available by Leo Von Rosenberg, George A. Kirkbride, Harry L. Seares, and Frank A. Kennedy, all men of standing in their profession.

Briefly the veins are true fissures cutting through the Yavapai Schist and the various dykes of igneous rocks and the mineralizations has generally been classed as of the replacement type, the minerals having risen in solutions which probably had their origin in deep seated magmas.

The primary ore and much of the secondary ore consists of sulphides of iron, copper, lead and zinc and secondary enrichment took place in the upper sections of the copper vein, mostly above the main or 200' adit level while the lowest explored workings in the gold vein (235' below the collar of the Ten Spot Shaft) still show the effects of

2-Storm Cloud Mine

secondary enrichment.

The depth to which this ore may extend is not of importance in the present instance since it is proposed that all of the ore from the copper vein will be mined from above the main adit and the existing winzes and all the ore from the gold vein will be mined from above the 235' level from the Ten Spot Shaft.

There are several branch veins in this vicinity some of which have been developed and mined near the surface from the Lion Adit but it is not proposed to develop or mine from these veins at present.

The Ten Spot Shaft on the gold vein was last opened to the bottom in 1928 and to a depth of 100' in 1936 when the collar and upper sets were retimbered. It is believed to be in good shape right to the bottom although some slight repairs and retimbering may be necessary and probably will be required in the cross cuts.

The copper vein is located one mile from the gold vein and is reached by a steep mountain road in good condition. The main adit and the upper adit (100' level) as well as the stopes were well timbered and up to about 6 months ago when I last went through most of them they were in excellent shape and would require only minor repairs. I believe that this is their present condition.

There is no equipment on the property and no buildings belonging to the owner but the old mess house which has been sold to a neighbor could be rented for a nominal figure and living quarters could be cheaply provided.

In the autumn of 1940 I advised the O'Brien Company to reopen and operate the Ten Spot workings and after the property had been examined by their Chief Engineer, Mr. Alan Scott of Ottawa, my program was approved but this plan was balked by the refusal of the Canadian Government to permit the export of the necessary funds or for any purpose excepting the payment of taxes.

Since the entry of the United States into the war the situation has been complicated by a number of different factors for even with the present bonus price for copper it is unlikely that the developed ore remaining in the copper vein, which probably will not contain an average gross value of over \$15.00 per ton could be mined and shipped to a smelter with a net profit of over \$1.50 per ton and the tonnage developed is insufficient to justify the erection of a mill.

On the other hand the government does not encourage the production of gold-silver ore unless this has a fluxing value to a copper or lead smelter and it was only very recently that I was able to satisfy myself that by mixing the gold ore with the copper ore the Storm Cloud could produce a very desirable fluxing ore and by meeting the government requirements obtain a priority rating for equipment and supplies which will be sufficient for all practical purposes.

The product of the mine would thus consist of a mixture of approximately an equal tonnage of gold, and of copper ore with content of 0.22% gold, 3.00% silver and 3.00% copper also some lead and zinc for which the smelter will not pay. The gross value of this ore would be about \$20.00

\$1 Storm Cloud Mine

per ton and the net payments by the smelter would be \$16.10 per ton. The total cost of mining, trucking, smelter toll charges and royalty--all based upon contract terms which are actually offered, except for the mining which is very liberally estimated--aggregate less than \$11.00 per ton leaving a net profit to the operator of \$5.00 per ton.

It is proposed that these operations should be conducted at the outset on a scale of 20 tons per day which can later be increased if, as and when it may seem desirable to do so.

Assuming that the mine is operated 25 days per month with a profit of \$100.00 per day the monthly return would be \$2500.00 and during an operating period of two years the total profit would be \$60,000.00 from which one should deduct the net cost of the equipment estimated at \$12,000.00 and any taxes on operating profits that may be assessed, which cannot be accurately forecast at present.

In order to operate as above for the period of two years it would be necessary to mine a total of 12,000 tons i.e. 6,000 from each of the two veins and I can say without the slightest hesitation that a much larger tonnage of ore is already definitely exposed in the workings of the copper vein without requiring any additional exploration or development whatever.

In the gold vein only a small tonnage of ore can actually be classed as developed since the Ten Spot Vein is merely crosscut from the shaft on both the 80' and 235' levels and drifting on the lower of these two levels must be carried on in order to determine the length of the ore shoot. Given a vertical height or back of 150' and an average width of 6' it would only be necessary that this shoot should have a length of 70' in order to supply the quota from the gold vein. While it cannot be positively stated that this ore is actually proven all of the showings and indications both on the surface and underground make it extremely probable that it will be found.

The main point in favor of reopening this mine is the fact that a sufficient tonnage of pay ore is already positively developed or very definitely indicated to assure at least a two year production and the only development work contemplated (drifting on the 235' level at the gold vein) would start off and should continue in pay ore thus producing a substantial tonnage as it progressed.

There are several other veins on the Storm Cloud Group of claims and also there are obviously excellent chances of producing a much larger tonnage than has been estimated from the two veins which have been briefly described but this presentation has been intentionally confined to the proposed operations during the next two year period which, according to the calculation and estimates given above, should result in the repayment of an investment of \$15,000 (including \$3000.00 for working capital) with a wide margin of profit to the investors.

To amplify and substantiate this report exhibits will be furnished as follows:

- A Map of Claims
- B Map of copper vein (plan and section)
- C Map of gold vein (plan and section)
- D Terms from Clarkdale smelter
- E. Terms from Hayden
- F Letter from War Production Board in reference to
priority
- G Main items of plant and equipment required with
approximate cost

Respectfully submitted,

G. H. Colverson
Phoenix, Arizona

April 22, 1942