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LIBRARY
EAGLE-PICHER M. & S. CO.
REPORTS
ON
BLACK ROCK-PACIFIC MINES

By

- Jno. L. Alexander, E.M.
- F.W. Giroux, E.M.
- W. Fovote, Geologist.
- A.F. Cooper, E.M.
- J. V. McConnell, E.M.

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BLACK ROCK- PACIFIC MINE

YUMA COUNTY, ARIZONA

REPORT

By

John L. Alexander, E.M.

PRELIMINARY REPORT

BLACK ROCK - PACIFIC MINE

YUMA COUNTY, ARIZONA.

The purpose of this report is to point out the economic situation existing at present and to show the future possibilities of this mine rather than to go into the geology of the property and district. The geology of the mine has been well covered by several well known engineers, copies of whose reports are included in this folio.

LOCATION

The Black Rock - Pacific Group of mining claims are located approximately 30 miles by road north and west of the town of Dome on the Santa Fe R.R. and some 20 to 25 miles about due north of Yuma, Ariz. The mine is located at an elevation of approximately 800 feet above sea level in the low rolling hills along the east bank of the Colorado River, which is some five miles west of the mine.

SHOULD BE
S. F. R. R.

AREA AND TITLES

The Black Rock - Pacific Group consists at this time of two claims only, both of which are patented and are now owned by one man. There are several other claims in the immediate vicinity which should be included in this group by anyone desiring to operate the mine. The three principle ones are the Silver Glance, Mandan and Red Cloud. The present owner of the Black Rock - Pacific did a few years ago own several more claims but was forced to let all but the two main claims go. It is my understanding that these other claims can be had on very reasonable terms by anyone desiring them.

ACCESSIBILITY

The property is at present reached by car over some 25 to 30 miles of fair desert road from Dome. About half of this distance could be made into a very good truck road for an expenditure of not to exceed \$1000.00. The last half of the road should be relocated on higher ground further away from the Colorado River, this last section of the road could be built for not to exceed \$7000.00. There is so little rain fall in the district that little trouble would ever be experienced from washouts on the road.

Yuma County is to build a new road from Yuma to the Laguna Dam Site, which is some ten miles from the mine and the proposed road would connect with the new county road at this point.

The present road is passable for trucks and would serve until such time as the first development program at the mine was completed.

WATER

There is no water on the property at the present time and water in large quantities would not be expected until a depth of approximately 700 feet has been reached with the shaft.

One mile west of the Black Rock shaft, which is some 450 feet deep, is located the Red Cloud Mine. This mine is down to a depth of approximately 500' at which point a fairly large flow of water was encountered according to reports. The operators of this property are said to have had considerable trouble in trying to sink below this depth because of the flow of water and finally abandoned sinking. There seems no doubt but that sufficient water can be developed for camp and mine use.

The Colorado River which is located some five miles to the west of the mine is the one sure source of water at this time. The lift from the river to the Black Rock Mine would be approximately 600', which is not excessive. A pumping plant can be installed on the river and a six inch pipe line laid to the mine for a cost of not to exceed \$25,000.00. The cost of pumping water for a 300 tons per day operation should not exceed \$0.15 per ton of ore milled.

CAMP

There is no camp at this time on the property but at the Red Cloud mine there is a camp large enough to accommodate possibly 50 to 60 men. This could be rented or leased on a reasonable basis and would cut down the initial cost of erecting a camp. The buildings are in a fair state of repair and cost of rehabilitating same would not be excessive.

POWER

There has been considerable talk of power lines being built which would pass close to the mine to furnish power for the construction of the Laguna Dam, from either Yuma or Boulder Dam. If one of these is built a connection would be made for a line to the mine, which would be approximately ten miles in length. Both of these possibilities should be looked into before deciding on a power plant. With a diesel plant such as would be required, power could be made for an estimated cost of one per cent per kwh.

TIMBER

There is not timber in the vicinity of the mine and all timber must be shipped in. Based on costs at other points in Arizona, timber can be had for approximately \$25.00 per thousand for Oregon Pine in car load lots, fob Dome.

DEVELOPMENT AND ORE RESERVES

All development work to date, done many years ago was done apparently from the stand point of finding high grade ore, rather than in an attempt to block out a definite tonnage of milling ore. However the work that has been done in the past is not wasted work and by using a goodly portion of the old drifts and crosscuts together with a relative small amount of new work a definite large blocked tonnage can be had. This can be done by driving additional crosscuts and connecting the levels by raises.

The main Black Rock shaft on the Black Rock Claim is some 450' deep and is in good shape with the possible exception of the collar where some two or three sets are needed. This shaft can be very easily widened out to a main working shaft with two skip compartments and a man way. The shaft is driven on an incline dipping NE about 40 degrees from horizontal. Permission might be had from the mine inspector to use this shaft as a two compartment skipway for hoisting ore only and placing the manway in a raise near by. This shaft leaves the footwall vein at about the 270' level and is continued more or less out of the ore chute for the balance of its depth, the vein having a slightly steeper dip than the shaft.

From this shaft considerable drifting and crosscutting has been done along the footwall vein (see attached maps). The faces of all drifts are in ore and most of the crosscuts have not been driven far enough to pass thru the ore body, so the faces of most of them are in ore at the present. These drifts open up the ore body from a distance of some 175 feet along the strike of the vein and the crosscuts show ore for a width of 50 feet. Above the 270' level for a length of 225' and a width of 42' there are 215,000 tons of probable ore. A relatively small amount of drifting crosscutting and raising should assure a tonnage of from two to three times this amount, with an expenditure of not to exceed \$20,000.00. Such tonnage would then amply justify the installation of a mining and milling plant of not less than 300 tons per day capacity.

This mine has been sampled by several well known engineers whose reports show that the ore will average approximately: silver 6.7 ounces; lead, 4.85%; and zinc, 9%, their sampling and values are used as the basis of this report. The silver occurs in the form of a chloride with some argentite. The lead is found in the form of carbonate and galena, while the zinc occurs as calamine and smithsonite.

A typical partial analysis of the ore is as follows: Silica, 46.7%; lime, 15.8%; iron, 6.3%; silver, 7.8 ounces; lead, 4.8%; zinc, 9.6%.

It appears that the oxide zone will extend for a depth of 6 - 700' and that at water level a considerable enrichment of silver will be encountered.

To assure the additional tonnage mentioned, some 1,500 feet of development work, consisting of raises, crosscuts and drifting on the vein would be required and would prove up an estimated 500,000 tons of ore of a similar grade to that already proven. This work should be done for a cost of not to exceed \$9.00 per foot.

On the Silver Glance Claim (outside ownership) which adjoins the Black Rock Claim on the North end, there are several open cuts on the hanging wall vein which show a width of ore of from 10 to 30'. On the foot wall vein a shaft was sunk on the vein for a depth of approximately 250'. This shaft shows a width of approximately 30' of ore. From the bottom of this shaft a crosscut was driven, according to Medars Giroux and McConnell, for a distance of some 450' which cut two other parallel veins which showed good ore for widths of about 10' each. This crosscut supposedly connects with the surface and there is a possibility that some similar crosscut could be used as a main haulage tunnel for all the ore in this area above the 200 level, depending on the results of a survey, future development and the location of the mill.

The Silver Glance shaft is located some 800' north west of the main Black Rock shaft and the vein between these shafts apparently is mineralized for this entire distance, which will be proven by future development work.

The Pacific Claim is characterized by the very large and prominent outcrop of the Pacific Vein, which is approximately parallel to the Black Rock Vein. This outcrop apparently is all mineralized and possibly will be found to be commercial ore. The vein here apparently carries more zinc content as well as higher silver values.

This outcrop is some 400' long and from 20 to 30' wide by 150' high at its peak. At the base of the outcrop a shaft has been sunk 100' deep, which is reported to have a crosscut at the 100' level, 15' of which will average better than 10 ounces of silver. This report seems entirely authentic. This shaft was not accessible at the time of my visit. At the north end of the outcrop near its base a crosscut was started and driven in some 10'. This seems to be in good ore with the face still in ore. If the exposed portion of this outcrop was carefully sampled and several crosscuts driven through the vein near the base of the outcrop, 50,000 tons of ore of a commercial grade should be very economically proven. This ore could be mined by quarrying down and loading with a small shovel at a very low cost per ton. This body of ore is located on an abrupt turn or bend in the Pacific Vein and seems to be a very likely spot to open up a splendid ore body.

This same vein to the south shows a nice outcrop, exposing good widths of ore on the surface of the Mandan Claim (Outside ownership). Considerable surface work has been done here in an attempt to find shipping ore. This claim also offers possibilities for milling ore.

The Black Rock - Pacific ore body can be mined at a very low cost. A large portion of the ore can very probably be quarried down and loaded with shovels. This applies particularly to the large prominent outcrops along both Black Rock and Pacific Veins. There is also a good possibility that a depth of some 150 - 200' below the tops of the outcrops may be glory holed and either hoisted or trammed to the mill through a main haulage level. The walls are very solid and stand well for long distances. There is no timber in the mine and the old workings have stood open for 40 to 50 years. Below the #00 level the ore can probably be mined either through open stopes or by shrinkage methods. It will not be necessary to do much timbering.

Mining costs on the property as a whole should not exceed \$0.70 per ton if handled on a scale of not less than 300 tons per day. Development costs on the same basis should not exceed \$0.25 per ton of ore mined. The ore will probably be hard drilling but will break very well and a comparative small number of holes should break a good tonnage. A mining width of at least 40 feet is very possible and still maintain a commercial grade of ore.

MILLING

Preliminary tests run on this ore confirm my opinion that a recovery of approximately 90% of the lead silver values can be made by stage flotation with a ratio of concentration of not less than 10 to 1.

Additional tests are now being run to check the application of latest developments in this type of metallurgy and determine just what can be done with this ore today. Tests run several years ago by different engineering

firms gave good results for the practices current at that time.

Milling cost should not exceed \$1.00 per ton, when treated in a plant of not less than 300 tons daily capacity. This does not include the cost of pumping water to the mill, which has been covered under a previous heading.

CAPITAL EXPENDITURE ESTIMATE

Preliminary development work	\$ 20,000.00
Road Building	8,000.00
Pipe Line to Colorado River And Pumping Plant	25,000.00
300 Ton Mill, Equipment and Building	75,000.00
Power Plant and Building	25,000.00
Mine Equipment and Buildings	25,000.00
Property Payment	20,000.00
Camp and Domestic Water Supply	5,000.00
Operating Fund	47,000.00
Total Capital Required	\$250,000.00

RECAPITULATION * OPERATING ESTIMATE

(Based on mining and milling 300 tons per days and pumping water from Colorado River.)

Silver and Lead Recovery at Smelter Prices of 12/21/35.

COSTS PER TON OF ORE.

Mining	\$.70	
Milling	1.00	
Water	.15	
Hauling	.300	
Freight	.50	
Smelting	.50	
Overhead	.20	
Development	.25	
	Total Costs	\$ 3.60
	Gross recovered value silver and lead	6.03
	Net returns per ton of ore	2.43
	Daily net profit	729.00
	Monthly net profit	21,870.00
	Yearly net profit	262,440.00
	Profit on 215,000 tons probable ore	\$22,450.00
	Profit on 500,000 tons additional indicated ore	1,215,000.00
	Total profit on probable and indicated ore based on present development work	\$1,737,450.00

CONCLUSIONS

There is at present a considerable tonnage of assured ore which eliminates the usual mining hazard. There is undoubtedly a much larger tonnage of ore yet to be developed of a similar grade. This additional tonnage will probably run into several hundred thousand tons, which can all be comparatively inexpensively developed and mined.

The proximity to the Colorado River assures a definite supply of water for any size milling operation and eliminates the usual question of a water supply for a large mill.

A zone of enrichment of considerable extent may be found near the water level and there is a very good chance that a large tonnage of good grade zinc ore can be found with further development work.

The ore can be milled economically and a good saving of values made with a fair ratio of concentration.

At the present prices of silver and lead with the future possibilities of the zinc ores, this property should prove a very profitable mining enterprise.

Respectfully submitted

12/31/35

Signed,
Jno. L. Alexander

REPORT ON PACIFIC- BLACK ROCK GROUP
OF MINING CLAIMS

Yuma County, Arizona

BASIS OF REPORT

This report has, for its basis, a thorough and careful examination of the Pacific-Black Rock Group of Mining Claims, covering a period of 12 days on the property during which time 147 samples were carefully taken from the various openings, results of which are appended.

The author's experience in this field is amplified and backed by years of intimate contact with large and small operations and examinations of other mines on the mineral belt in question.

Signed:

F.W. GIROUX
Registered Professional
Mining Engineer.

SITUATION: The property is situated in the Silver Mining District, Yuma County, Arizona, about 33 miles in a north-easterly direction from the City of Yuma, Arizona; the same distance from Dome, Arizona, a station on the Southern Pacific Railroad. The wagon or auto road from Dome crosses the Gila River, thence over a plateau for a distance of from 15 to 16 miles, then striking the Black Rock wash which is followed to the mine.

The cost of transportation of any material, incoming or outgoing, would not be excessive.

ELEVATION: The elevation above sea level is about 500 feet. The country is typical desert, such as is found a short distance from the Colorado River. It is very warm during the months of July, August, and September, but the weather is ideal the balance of the year, allowing of outdoor work to be done the year round.

NEARBY MINES AND MINERAL BELT: The Silver district is an old district from which much mineral wealth has been produced. High grade ore has been mined and shipped from various properties since 1879. The greatest depth so far, among the mines of the district, is said to be about 600 feet, attained by the Red Cloud Mine, which joins the Pacific Black Rock on the north-west.

GEOLOGY: Located in old schistose rocks intruded by a coarsely crystalline biotite granite and later by andisitic flows and intrusions. The andesite is generally closely related to the ore bodies, and in the case of the Black Rock Group, the schist forms the footwall and the ore bodies occur at the contact, but in greatly re-organized and altered andesite, thus showing distinct movement at the contact as well as within the vein.

The strike of mineralized fractures are nearly north and south with dip to the east, considerable cross-fracturing occurs and some of these are also mineralized. The entire hill in which the Black Rock is located would indicate that longitudinal movement has resulted in both longitudinal and cross-fracturing since the blocks between fractures are roughly prismatic.

At junction of main fractures with northeast, southwest fractures, the mineralization and replacement is much greater and forms large chambers where ore has been extracted. The fracture zone on the Black Rock is several hundred feet in length and width, although the cross fractures gradually show less mineralization and generally mineralization extends 10 to 25 feet from the main north-south fracture. However, at the crosscut 225 feet northwest of the main shaft, enrichment has occurred over a width of 96 feet. 595 feet northwest from crosscut (at the Gance shaft) enrichment has occurred over a width of 30 feet with no hanging wall in sight. 900 feet northwest from the Gance shaft, at the Silver shaft, enrichment has occurred over a width of 30 feet. At this point a 450 foot tunnel, which was driven across to the main vein, cut two other parallel veins - each showing good values over a 10 foot width.

The andesite in the mineralized zone has been so altered that it appears as a crystalline limestone, greatly fractured and fractures filled with chalcedony, calcite with silver-lead and zinc minerals.

Lead occurs as a carbonate and galena, and zinc as a carbonate. Silver values occur as chloriderand some argentite with smaller amounts of arsenic and antimonial sulphides.

DEVELOPMENT: Consists of four incline shafts from 800 to 1000 feet apart. These shafts are 92 feet, 100 feet, 250 feet and 420 feet deep. The 82 foot shaft has a 80 foot cross-cut in bottom. The 100 foot shaft has three 20 foot cross-cuts at the 20 foot, 50 foot and 100 foot levels. The 250 foot shaft has a 450 foot tunnel with 90 feet of drifting. More development has been done at the 420 foot shaft than at any of the others - beginning with a 27 foot cross-cut over the shaft.

The other development included here consists of drifting and crosscutting on each level is as follows: 20 foot level, 255 feet; 104 foot level, 287 feet; 147 foot level, 50 feet; 171 foot level, 226 feet; 270 foot level, 88 feet; 420 foot level, 28 feet. 225 northwest of shaft is a 100 foot crosscut.

Other work done by the owners in proving the vein is considerable. The Silver Gance claim has many open cuts where all samples taken show some values. The madan claim has less development but stands out prominently for possibilities. At one point a crosscut tunnel is started on the vein showing good values. Surface samples taken just over this crosscut would indicate an enrichment of from 60 to 100 feet in width of good milling ore. 300 feet further southwest openings made show practically same conditions.

The possible ore on the Pacific Black Rock of claims is enormous. The distance between openings where ore has been proven of commercial value is more than 4000 feet. The widths in each opening show enrichments from 12 to 96 feet. Therefore, I believe we may expect an average width over the entire distance of more than 25 feet. However, I will only include in my calculations the distance between the main 420 foot shaft and the Silver 250' shaft, and a depth of 270 feet. The ore between these two shafts is from 30 to 96 feet wide. I will take as a basis a 15 foot width. These calculations lead me to the conclusion that we have above the 270 foot level 464,400 tons of ore

that will average 6.7 ozs. silver; 4.87% lead and 9.8% zinc. There are 15,000 tons of ore on the dump that samples 6.48 ozs. silver; 4.96% lead and 9.6% zinc.

Openings at the Mandan and the Pacific indicate a large and well defined ore body 800 feet long that is not included in the above estimate.

TITLES: The titles to the Pacific-Black Rock Group are perfect. The Silver Glance, Black Rock and Pacific claims being held under United States Patent. The other seven claims, West Glance, East Glance, West Glance No. 2, East Glance No. 2, Mandan, Pacific No. 2, Black Rock No. 2 are hdl by right of location. The Silver Glance and Black Rock were patented in 1891. The Pacific was patented in 1891.

CONCLUSIONS AND RECOMMENDATIONS: The limit of ore has not been found in any of the present openings. The main 420 foot shaft should be sunk to the 500 foot level or until water has been encountered. Development on the Red Cloud to the 500 foot level has proven that sufficient water exists to supply a milling plant of large daily capacity. In my opinion similar conditions will be met with at the Black Rock Shaft. While enough ore is available to supply a large milling plant, from the standpoint of a miner, I would rather recommend a development campaign of from 3 to 6 months before deciding on the kind and capacity of mill to be installed. Milling tests on ore from main shaft shows a high recovery of silver-lead by flotation, with a possible saving of 85% zinc. I believe that very large bodies of zinc ore will ultimately prove of greater value than the silver lead and this is saying a great deal.

I recommend the Pacific Black Rock Group as a property of first importance. The ore bodies are immense and depth will show larger bodies of higher grade.

Operation of the property, properly managed and financed, should make of it one of the big mines,

Signed,

F. W. GIROUX
Registered Professional
Mining Engineer.

THE BLACK ROCK PACIFIC MINE.

By

W. Tovote.

The Black Rock Pacific Mine is situated in the Silver Mining District, Yuma County, Arizona.

It is in airline about 40 miles north of the town of Yuma, and located in the relatively low but rugged mountain range, which flanks the Colorado River on the east.

The elevation at the mine is probably between 800 and 1000 feet. There is practically no vegetation in that vicinity except some ironwoods and palo verdes along the arroyos.

The climate is the typical desert climate of the southwestern Arizona, very hot in summer, but delightful in winter time.

Precipitation is very small, but liable to be torrential when it does come. There are a few scattered water holes and intermittent springs, but generally the country is extremely arid.

The water level is rather deep, but it seems very likely that water will be encountered in most places at about the level of the Colorado River.

The access to the mine is rather difficult, but not prohibitive. At present the mine is reached either by way of Dome and Castle Dome on the Arizona side of the river, or by going up the river on the California side, then ferry across and reach the mine either by trail or wagon road. I went to Picacho, California, twenty-eight miles North of Yuma by automobile, ferried across and followed easy trails for eight to ten miles to the mine. In airline the mine is about six miles N 20 E from Picacho. The best outlet for ore or concentrates from the mine would probably be a wagon road, perhaps ten miles in length to the river, then by barges down the river to the dam, from where there is a railroad spur to Yuma, as I am told. The river is navigable the greater part of the year, except during occasional periods of high water.

The property consists of two patented claims, the BLACK ROCK and the PACIFIC.

The mine was worked years ago and several thousand feet of workings were opened. The greatest depth attained is 450' of inclined shaft. Considerable quantities of probably very high grade ore were shipped and more of medium grade was concentrated in mills along the river, but the general average of the ore was too low grade and too hard to concentrate for the then milling practice. Therefore, the mine was closed down after a good sized ore-body had been proven.

At present there is an ore dump, containing about 15,000 tons of ore, on the surface, while approximately 80,000 tons of ore can be figured to be in sight underground, a tonnage which could be very materially increased by a little additional work. The average grade of this ore, according to samples taken by Mr. C. Trischka, E.M., whose samples check rather well with a few test samples taken by myself, is about 4% lead, and 7.5 to 8.0 oz silver. While this is low, it will, I believe, prove economical if a favorable method

of concentration can be developed and a good extraction attained.

The gross value of this grade of ore is about \$10.00 per ton and since the ore is found in big bodies, it can be mined easily and cheaply. The ground stands excellently without any timber. Furthermore, there is absolutely no water to be handled for considerable depth, and I consider it is more than likely that the horizon, which will bring the water, will also bring an ore of higher grade, due to a secondary concentration of silver values.

But what impresses me most in this mine is the indication of very large bodies of zinc-ore, which might ultimately prove of far greater value than the lead-silver-ore, which is at present considered the main value.

GEOLOGY: The Black Rock-Pacific Mine is in a country of old schistose and semi-schistose rocks. These were intruded later by an acid intrusive here designated as Biotite-Granite. This granite has escaped schistification entirely or nearly so. The youngest rock in immediate vicinity of the mine is an andesite, occurring both in effusive flows and intrusive dikes. This rock has apparently a very close connection with the mineralization.

The ore occurs in irregular lenticular bodies in wide zones of fissuring and rock-alteration. The main direction of these altered zones is North-South or slightly West of North. Strong fissures of this direction frequently terminate the ore-bearing belt, but occur also within this belt and usually show increase mineralization along their course. But the main ore-carriers seem to be veins or fracture zones of North-West, South-East strike and medium flat dip North-East. The relation of both fracture-system is not very clear, but probably the North-South system is slightly younger than the North-West, South-East system. While the North-South belt of altered and fissured rock is several hundred feet wide and can be traced more or less pronouncedly for over a mile and possibly several miles, the mineralized zones or vein system of NW/SE strike vary in width from a few to nearly 100' but are usually of short extent and terminate again one or the other of the N/S fissures.

Only one of these ore zones has been prospected to some extent in the black Rock Mine. It shows a penetration of the country rock by such abnormal quantities of dolomite-ankerite and calcite, that the whole mass appears like an altered and recrystallized limestone. In this altered zone was introduced later some semi-chalcedonic quartz and salts of lead and zinc with accessory silver-values.

The metallic minerals are more or less distributed through the entire altered zone. The delimitation of ore depends more upon economic consideration than upon the disappearance of metallic minerals. How wide a width of ore could be stopped, can only be ascertained by close sampling after the lowest economic grade has been established. While the higher grade material approaches generally the outlines of vein it is so irregular in detail that not even an approximate stopping width can be given, but it could be best described as a series of lenticular masses, subject to sudden swellings and contractions. The lead in the exposed material is principally in the form of cerussite with occasional residual kidneys of galena, while the zinc is only found in oxidized form as smithsonite and calamine.

The ore-shoot, explored by the 450' inclined and the main workings has a decided rake to the South and passes through the shaft between the 200' (4th)

and 300' (5th) level. Deeper down it should be looked for South of the shaft along the vein.

While the ore on the dump and in sight in the mine surely does constitute an important economic item, I base my favorable conception of the mine mainly upon the possibilities of further development work. An additional 300' of depth should surely reach the water level and with it in all probability the horizon of sulphide-ore. Modern milling methods can fairly well concentrate oxidized lead-ores, but oxidized zinc-ores are almost impossible to concentrate. Sulphide ores of both metals offer a far more favorable object for concentration. While, therefore, the same grade ore is more attractive in sulphide than in oxidized form to the miner, observations made at the adjoining Red Cloud-Mine, which operated upon the extension of the Black Rock Pacific vein belt, induced me to expect a very pronounced secondary silver enrichment at or near water-level, and that, therefore, the grade of ore in the upper sulphide horizon will not only be more amenable to concentration, but also of higher average grade. The high grade silver ore in the Red Cloud Mine is found in narrow streaks, showing a dull black metallic mineral, probably an inter-growth of altering galena with sulpho-salts of silver, in a felty decompose schistone rock. Chloritization is rather pronounced along these streaks, but no prominent gangue minerals accompany them. I was told that ore of that type would assay frequently from 1000 to 3000 ozs, of silver. There is absolutely no reason why similar ore should not occur in the Black Rock Pacific also, or it never would have been opened to such an extent in days when only high grade ore made mining attractive.

Besides the ore shoot, upon which most of the work was done in the Black Rock mine, there is indicated at least two more shoots on this claim and at least one on the Pacific Claim. This latter has been stopped in a small way and an old wagon road leading up to the mouth of the Pacific Tunnel, shows that ore was shipped from here. This suggested rich ore, even if the stopped width was only from 1' to 2' apparently. The mineralization along the whole North-South belt is so intense, that it is only reasonable to assume, that it will persist to great depth. Disregarding the ore now in sight I consider the Black Rock-Pacific Mine an attractive development proposition. The present main shaft is not adapted to serve ultimately as a main hoisting shaft. My idea would be to put this shaft in good repair and drift both North and South from its present bottom as well as to continue sinking. For development purposes very little grad building would be required. The adjoining Red Cloud Mine has succeeded to bring in over the present roads all material for their 300 ton mill and other equipment. This shows, that while haulage might be expensive, it is feasible right now.

To equip and repair the shaft for a good prospecting campaign should cost not over from \$3000.00 to \$5000.00.

Underground work should be very cheap under the local conditions and even with only a limited number of headings going the cost per foot would not be over \$15.00 for sinking and \$10.00 for drifting; in fact, I believe that it could be done for considerably less. 300' of sinking would therefore require less than \$50,000.

A total development fund of \$25,000.00 would more than cover all the needs and would demonstrate the possibilities of the mine.

There is a 100' shaft farther North on Black Rock ground and a deep shaft on Pacific Ground. This latter I suspect to be at least 250' deep, but it is too steep to climb with ladders, therefore, I was unable to explore it.

These shafts might be valuable as air connections later on. Without artificial ventilation the lower shaft levels could not be worked to advantage at present.

South of the Black Rock claim is the Black Jack claim, owned by C.E. Allen and associates of Yuma. This claim shows fairly attractive stringers of lead-silver ore, striking East-West in an altered and fractured zone of general North-South direction an extension of the Black Rock belt. This claim could be acquired very cheaply and might be considered in connection with the Black Rock Pacific Mine.

To the North adjoins the property of the Red Cloud Mining Company, now in operation. The information gained in this mine would have a very important bearing upon the Black Rock-Pacific, as conditions are practically identical. There is though, a local occurrence of wulfonite in the Red Cloud Mine which is not duplicated at present in the less developed Black Rock.

The Red Cloud has just completed the erection of a modern dry concentrator of 300 tons capacity. The operation of this should furnish very valuable clues for a possible treatment of the present ore in the Black Rock Mine. Ultimately, I believe, flotation of lead-carbonates is now attempted with good success, and deepening of the mines will supply the needed water. The Red Cloud, with an inclined depth of 750' is bottomed in water, I am told. (Average dip 45°.

The estimate of tonnage available in dumps and mine I have adopted from a report by Mr. Trischka, personally known to me as a reliable engineer, who was able to spend more time on the ground than my equipment permitted me on this trip. I also give a list of his samples and a reproduction of his sketch. Samples taken by myself are:

- No. 1. 10" streak with residual galena 4th level.
ag. 5.6oz pb. 10.9%
- No. 2. 44" vein 4th level East, ag. 8.8 oz. pb. 8.9%.
- No. 3. Composite samples of vein on 1st level,
ag. 12.2 oz. pb. 5.9%
- No. 4. Test sample from open-cut on top hill north end of
Black Rock claim, suspected to be zinc-bearing, zn. 1.24%
- No. 5. 10" streak in shallow cut on Black Jack claim, showing
galena, ag. 10.5 oz. pb. 21.88%.

There is not indicated any marked increase of silver with galena over that with cerussite in these samples, but from all information I could gather from people with the district and the officials of the Red Cloud Mine, the general experience is that the sulphide is higher in silver than the carbonate as a general rule. The total average of a great number of assays made by the Red Cloud people indicated a ratio of about 2 oz. of silver for each percent of lead, which would be very favorable. To my knowledge the district has been considered as free of zinc until now and I have no record of any zinc assays made. My impression is that zinc will prove ultimately the most important mineral. The only sample tested for zinc shows this more in evidence than the lead, but it also shows an exceptional low silver-value, which might indicate that the silver follows the lead in preference to the zinc. To arrive at final conclusions on the present ore-reserves and their average grade a thorough sampling of the mine would be unavoidable and at least 100 samples would have to be taken. I have not done this, first because I was not equipped for this

task, and secondly because even a superficial examination convinces me that the present showing is favorable enough to warrant a thorough prospecting campaign. While considerable work has been done in the early days, only scientific and extended prospecting can decide the ultimate value of the property.

That such prospecting would prove highly satisfactory is my firm conviction.

(Signed) W. Fovote,
Mining Geologist.

REPORT ON
THE BLACK ROCK MINE
SILVER DISTRICT, YUMA COUNTY, ARIZONA

By

A. F. Cooper, E.M.

LOCATION. The Black Rock Mine is located in the Silver Mining District, about 33 miles northwest of Yuma, Yuma County, Arizona, (52 miles by wagon road) and 32 miles north of Dome, Arizona, a station on the main line of the Southern Pacific Railway. Dome is the nearest post office.

CLAIMS AND AREA. The property consists of three patented claims covering about 60 acres, and six claims held by right of location covering about 120 acres. These claims fully cover the mineral showing; which is about 2000 feet in length.

HISTORY. The patented claims, The Pacific, The Silver Gance, and the Black Rock have been held for about 50 years in one family. They are now held by one of the heirs.

The past development work was done many years ago by the original owner. This development work consists of a tunnel 450 feet in length and connects with an incline shaft about 200 feet deep. Three other incline shafts the deepest being 485 feet deep with drifts and crosscuts at varying depths. Beside this there are several shallow shafts, tunnels and cuts. They at this time had a good camp, office and plant. There is hardly a sign left of these past buildings.

NEARBY PROPERTIES: The Red Cloud Mine is located about one half mile north of the Black Rock Mine. It has an incline shaft about 550 feet deep to water level, with levels at 100 foot intervals. Stopping has been carried on for the greater part of the depth, and most of the ore was treated in a dry mill. Even though they had poor extractions the mine has had a good production. This property is preparing to resume operations in the near future according to the management.

FACILITIES: Transportation: A desert road from Dome to the mine a distance of 33 miles, crosses the Gila River (a new bridge is being constructed by the county), follows a mesa for about 18 miles over a fairly good road, the balance of the way is through washes that are usually dry. The trip from Dome takes about two hours. With a little work a good road can be made to connect the new county road at not an excessive cost.

POWER: Power will have to be generated by use of fuel oil engines.

WATER: Water will have to be pumped from wells near the Colorado River, a distance of four miles where an ample supply is available for both mill and domestic purposes.

TIMBER: There is no timber in this region. All lumber and timber for mine, mill and camp use will have to be imported from outside sources.

LABOR: Labor can be secured in Yuma, and will come in from other Arizona

camps. Wages paid are comparable with the copper camps.

CLIMATE: The climate is very arid. Never any snow or frost, a little rain during the winter and an occasional cloud burst in the summer. The summers are hot, but not oppressive as there is practically no humidity. The condition here is very similar to Ajo where they work all the year with no climate delays.

TOPOGRAPHY: The hills around the mine are low and rolling with cliffs along the harder vein. The heights are too low to allow any development work by other than shafts.

GEOLOGY: General: The Silver District lies in a crystalline schist area, with scattered blocks of granite. This area was later intruded and partly covered by andesitic flows.

LOCAL: On the Black Rock property is a large block of granite in contact with the schist on the south and west sides, and with andesite on the east side. The granite has been shattered and in a great many places has been completely replaced by quartz and calcite. Along the contacts this replacement is complete for a distance of about 2000 feet. It is probable that the ore deposits were formed following the andesitic intrusions.

ORE OCCURRENCES: The ore occurs mainly in the replacement zone along the contact between the granite and the schist. This replacement material is quite hard and is a mixture of white quartz and calcite well fractured and seamed. Near the surface the lead and zinc values occur mainly as cerussite and calamine. At a depth of 50 feet there are small bunches of galena mixed with the carbonates probably the remains of the primary ore. The vein though is fairly well oxidized to the bottom of the shaft, a vertical depth of 252 feet.

The vein has an average dip of 40 degrees to the east. All work to date seems to indicate that the ore is going to exist in the footwall vein. There are numerous cross veins making a net work of veins between the footwall and the hanging sections; this width being better than 200 feet wide. Work has not been done to prove whether these cross veins are valuable or not. Where small cross fractures break the main vein in the workings it is usual to have better value around this point. The west or footwall vein section varies in width from 30 feet to better than 80 feet, and has a continuous length of about 2000 feet.

The main development work was confined to an incline shaft located at the south end of the deposit, and was sunk so that at a depth it was driven so as to completely leave the footwall vein and come into the hangingwall or east vein. This east or hanging wall has had no work on it on the surface, so it is to be assumed that little value is to be expected from this vein. During the examination no value was noted in this vein. This will probably account for the little to no value existing on the 5th level, as the strike of the vein on this level is parallel to the east vein.

It is probable that if this incline has been sunk deeper in its present direction it would completely leave the vein.

Ore apparently occurs well distributed through the west or foot-wall vein over a width of from 30 to 80 feet and for its full length. The stopes favored the footwall where high grade ore was mined and shipped.

DEVELOPMENT: The development on the Black-Rock Claim consists of an incline shaft 520 feet deep with 5 levels, an old incline to the 2nd level, a short tunnel and another incline shaft at the line of the Silver Glance Claim about 100 feet deep.

Near the center of the Silver Glance Claim a crosscut tunnel 450 feet in length connects with an incline shaft 200 feet in depth.

Near the center of the Pacific Claim is an incline shaft about 50 feet deep.

EQUIPMENT: There is no equipment on the property.

PRODUCTION: There has been a small production from the property in the early days. No record is available to show just what this production amounted to, or when it was shipped.

SAMPLING: Seventeen (17) 50 pound samples were cut from the different levels in the deep incline shaft to check the results of Mr. Giroux sample map.

ORE RESERVES: The development work is such that only a small tonnage of low grade ore can be estimated. The check samples were scattered to make it possible to calculate an average value. It is estimated that 15,000 tons of low grade carbonate ore is on the dump. The dump was not sampled during this examination.

RECOMMENDATION: Further development should be either sink the old incline to a total depth of at least 600 feet or deeper until the sulphide zone has been reached at somewhere near water level, with drifts and crosscuts from the lower levels to prove the size and value of the vein. Or drift about 200 feet north west on the 4th level then sink a winze to the same depth as is recommended for the incline shaft. The drift and winze would probably cost almost as much as sinking the old incline when you figure the cost of drifting and the double handling of the materials.

CONCLUSIONS: This property has a very large vein with a fair grade of carbonate near the surface. The spots that show the unaltered galenz ore are good grade lead and silver values. Deeper development in the ore zone could make a very large mine, as the showing in the upper levels is exceptional and good enough to warrant the expenditure to equip and do the necessary development.

The carbonate ores are one problem and should be treated so in planning a mill. Therefore it would be better to do the necessary deep development before planning any kind of a treatment plant. Though it is possible that tonnage enough of carbonate ore could be developed from the present workings to make a large tonnage available for a good sized mill and have a long life.

Respectfully submitted:

Signed

A. F. Cooper,
Mining Engineer.

March 1929.

REPORT ON THE PACIFIC-BLACK
GROUP OF MINING CLAIMS

Yuma County, Arizona

For Chas. E. Batton

This report is made after a personal but limited examination of the mining property known as the Pacific-Black Rock Group. Due credit is herewith given to Messrs. Frank W. Giroux, E.M., W. Tovote, E.M., and Carl Trischka, E.M., for measurements of workings, ore samplings and mapping. These I found to check very favorable with my examinations of November, 1926.

Signed: J.V. McConnell,
Mining Engineer

Dated: Dec. 15, 1926
Prescott, Arizona.

GEOGRAPHY: The Pacific-Black Rock mine is situated in the Silver Mining District, Yuma County, Arizona, and is about 35 miles northeasterly from the town of Yuma, and approximately the same distance from Dome, a station of the Southern Pacific Railroad. The road to the mine crosses the Gila river at Dome, thence over a level plateau of some 15 miles to the Yuma Wash, up the wash to the Black Rock Canyon and to the mine. This property can also be reached by a good road from Yuma, viz Picacho, crossing the Colorado river by boat and then about five miles over a good road to the mine. Either route is approximately the same distance. The roads are little used and would require some work for economic transportation, however, there are no long or excessive grades so the cost of repairing the roads would be light.

The mine is about four to five miles from the Colorado River and is at an elevation of approximately 350 feet above sea level.

GENERAL DESCRIPTIONS: The Pacific-Black Rock Group consists of ten mining claims, totaling approximately 200 acres, which is mostly mineral bearing ground. The Silver Glance, Black Rock and Pacific Claims are held under U.S. Patents. The West Glance, East Glance, West Glance #2, East Glance #2, Mandan, Pacific #2 and the Black Rock #2, are held by right of location and annual assessment work. The Silver Glance and Black Rock were patented in 1881 and the Pacific was patented in 1891.

All claims show strong mineralization. There are no surface improvements, such as camp buildings or machinery on the property. No extensive work has been done here for many years except annual assessments. All openings are in fair to very good condition.

The country here is typical desert, being very warm during the months of July, August and September, while the balance of the year the weather is ideal. There is no water or timber on the property. The future water situation for mining and milling purposes can be solved in two ways. There is every indication that ample water will be encountered between the five and six hundred foot levels or it is possible to secure unlimited water from the Colorado River. Either plan is feasible.

HISTORY: The Silver Mining District is an old one with a large and profitable production to its credit. It has been worked for many years for the high grade silver and silver-lead ores. These ores were mostly handled by a local smelter a few miles away and by a mill situated on the Colorado River. I have been unable to get definite figures as to the total value of ores extracted from the Pacific-Black Rock property or other mines in the district, however this production must have been considerable judging from the amount of work done. I am informed that the better grade silver ores ran up to around 1000 ozs. and over to the ton. The cost of mining is said to have been around \$4.00 to \$5.00 per ton - this cost varying with conditions. Transportation was \$20.00 per ton. This information is obtained from Messrs. C.E. Batton and J. McNeal.

GEOLOGY: The country rock of the district and at the Pacific-Black Rock Group is an old schist metamorphic in proximity to the fractures but retaining its schistosity to a marked degree. The schist has been cut by a medium crystalline granite and later by andesite dikes and flows. Much faulting and cross-faulting has taken place. There are two and possibly three principal ore bearing fracture systems. The north-south system with medium steep dip to the east is several hundred feet wide and traceable over the surface for at least two miles. The northwest-southeast system with a somewhat flat dip to the northwest appears to be the principal ore carrier and is from 15 to 150 feet wide and usually short in extent - terminating in one of the north-south fractures.

The andesite is closely associated with the ore bodies and is the youngest rock of the district as is shown by its persistence in cutting all the other formations. At the Pacific-Black Rock claim the ore occurs mostly at the contact fracture. The schist being the footwall and a highly altered andesite is the hanging wall. Considerable movement has taken place at the contact and also within the vein fracture.

At the Black Rock claim the rough prismatic blocks, the deep scored walls and the brecciated zones would indicate considerable longitudinal as well as cross movement. The mine also are found granite and intrusions of porphyry. While the workings have not exposed any great amount of granite. I am inclined to believe that granite will form one of the walls and in places will have considerable bearing on the ore bodies. In places andesite gives every indication of being the principal mineralizing agent.

The ore occurs in a series of large, irregular lenticular bodies along the strike of the fracture systems and alterations showing at the surface in the form of prominent outcrops (see views attached) which have filled the wide fractures along the contact - mineralization extending far into the highly altered zone of the wall rocks.

The andesite along the system of fractures is altered so that it appears as a recrystallized limestone, great penetration of large quantities of lime carbonates (dolomite and calcite) has occurred which has been greatly fractured and these fractures filled with calcite, some semi-chalcedonid quartz and silver, lead and zinc minerals. The silver, lead and zinc minerals are distributed through the entire mass of the altered zone, showing concentration within the wall lines of the main and cross fractures. The limit of ore depending upon economic consideration than the disappearance of the metallic contents.

At the junction of the north-south fracture and the north-east-south-west fracture the mineralization was very great. Here considerable ore has been extracted. At the Black Rock claim where most development work has been done the fracture zone is several hundred feet in length and width. The mineralization extends from 15 to 25 feet along the cross fractures.

A crosscut 225 feet northwest of the main shaft shows a mineralized zone 96 feet wide with the face in ore. 600 feet northwest of crosscut (Glance shaft) shows 30 feet of ore with no hanging-wall in sight. 900 feet north west of this point (Silver shaft) shows 30 feet of ore cut with no limit in sight. At this point a 450 foot tunnel has cut two other parallel fractures or veins showing good values for over a width of 10 feet each.

In the mineralized zones so far exposed the lead occurs as a carbonate (smithsonite) and the oxide (Calamine). Silver occurs as a chloride and some sulphide (argentite).

The mean water level of this property is between 500 and 600 feet vertical depth as determined from the workings of the Red Cloud Mine, which joins this property on the north and is an extension of the same system of fractures.

A partial analysis of a composite sample of these ores gives: Silica 46.7%, lime 15.3%; iron 6.3%; silver 7.8 ozs; lead 4.8% zinc 9.6%.

Development work; The Pacific-Black Rock Group has been opened up by over 200 feet of underground work, which consists of four incline shafts, tunnels, drifts and crosscuts as follows. 82 foot shaft with 30 foot crosscut in bottom; 100 foot shaft with 20 foot cross-cuts at the 20 foot, 50 foot and 100 foot levels; 250 foot shaft; 450 foot tunnel with 90 feet of drifting - at 420 foot level, 28 foot cross-cut. The 420 foot shaft passes through the ore at the 300 foot level. 225 feet northeast of this shaft is 100 foot cross-cut.

The property has been further opened up by many open cuts on the various claims. The Mandan has the least development but the ore exposed by the outcrop and in a crosscut that has been started would indicate that a good grade of mill ore could be expected for some 40 to 75 feet in width and several hundred feet in length.

ORE IN SIGHT AND PROSPECTIVE: The estimation of positive ore of the Pacific Black Rock Group will be confined to the Black Rock claim. Here there is in sight, approximately 20,000 tons of carbonate ores that average 6.7 ozs. silver; 4.8% lead and 9.8% zinc. There are also some 15,000 tons of ore on the dumps averaging 5.43 ozs. silver; 4.96% lead and 9.6% zinc.

The possible or probable ores of the entire group in the horizon of the oxidized zone alone are very great. Ore of a commercial value has been proven along the strike of the fracture system for a distance of over 4000 feet with a width of from 12 to 96 feet. As a basis of computation, take only a depth of 250 feet and an average width of 25 feet (the openings show this to be very conservative), and there are hundreds of thousands of tons of ore of mill grade. For a more concrete example take the 1500 foot distance between the 420 foot and 250 foot shafts and assume an average width of only 15 feet and a depth of 270 feet, allowing 12 cubic feet to the ton, there are over 500,000 tons of ore in this one block which gives every indication of being profitable will grade ore. Taking into consideration the ores exposed and indicated at the Mandan, Pacific and various other claims of this group, the tonnage of possible ore is enormous.

That even the lower grade carbonate ores are amenable to profitable treatment is shown by the metallurgical report of the Southwestern Engineering Co., (The same is attached). Zinc was not taken into consideration at the time the Southwestern Engineering Co. made tests of these ores, however subsequent preliminary tests on the extraction of the zinc values have been very satisfactory, proving that these ores yield to treatment by table and flotation methods with a very high extraction of the metallic values at low cost.

RECOMMENDATIONS AND CONCLUSIONS: The ore on the dumps and in sight in the mine, together with the possibilities of great tonnages of ore of the same character being developed on the various claims; the limits of the ore bodies not being found in the present workings and the yielding of these ores to profitable treatment all go to constitute a property of merit and one that is well worthy of consideration. I base my favorable impression of this property on the possibilities further explorations should show. Sinking should be continued on one or more of the shafts to the permanent water level or to the sulphide zone. This zone should be encountered between the 500 and 600 foot levels.

Observations made at an adjoining property (the Red Cloud) indicate that pronounced silver and lead enrichments will occur at or near the water level. I am informed that high grade silver ores are found in streaks often running through the galena. These streaks often carry values from 1000 to 3000 ozs. of silver to the ton. There is every reason to believe that similar ore will be found at the Pacific-Black Rock Group. Both of these properties were worked in the early days for the high grade silver ores.

In conclusion, I will say that a short and intensive systematic campaign of exploration of the ore bodies above and to the water level would soon prove their economic possibilities. This exploration need not be expensive and it would regulate the size of reduction plant and the best mode of treatment adapted to the ores. The ores of the oxidized zone should pay for the full development of the sulphide zone and leave a nice profit besides, as they alone constitute a sufficient tonnage to make a mine of considerable importance.

I strongly recommend the Pacific-Black Rock group as a mining property of great merit and properly financed and managed, it has great possibilities of developing into one of the country's great mines.

Signed:

J.V. McConnell,
Mining Engineer

Dated:

December 15, 1926
Prescott, Arizona.

THE BLACK ROCK-PACIFIC MINE.

The Black Rock-Pacific Mine is situated in the SILVER Mining District, Yuma County, Arizona.

It is in airline about 40 miles North of the town of Yuma, and located in the relatively low but rugged mountain-range, which flanks the Colorado River on the East.

The elevation at the mine is probably between 800' and 1000'. There is practically no vegetation in that vicinity except some ironwoods and palo verdes along the arroyos.

The climate is the typical desert-climate of Southwestern Arizona, very hot in summer, but delightful in winter-time.

Precipitation is very small, but liable to be torrential, when it does come. There are a few scattered water-holes and intermittent springs, but generally the country is extremely arid.

The water-level is rather deep, but it seems very likely that water will be encountered in most places at about the niveau of the Colorado River.

The access to the mine is rather difficult, but not prohibitive. At present the mine is reached either by way of Dome and Castle Dome on the Arizona side of the river, or by going up the river on the California side, then ferry across and reach the mine either by trail or wagonroad. I went to Picacho, California, twenty-eight miles North of Yuma by automobile, ferried across and followed easy trails for eight to ten miles to the mine. In airline the mine is about six miles N 20 E from Picacho. The best outlet for ore or concentrates from the mine would probably be a wagonroad, perhaps ten miles in length to the river, then by barges down the river to the dam, from where there is a railroad spur to Yuma, as I am told. The river is navigable the greater part of the year, except during occasional periods of high-water.

The property consists in two patented claims, the BLACK ROCK and the PACIFIC,

The mine was worked years ago and several thousand feet of workings were opened. The greatest depth attained is 450' of inclined shaft.

Considerable quantities of probably very high grade ore were shipped and more of medium grade was concentrated in mills along the river, but the general average of the ore was too low grade and too hard to concentrate for the then milling practice. Therefore, the mine was closed down after a good sized ore-body had been proven.

At present there is an ore dump, containing about 15,000 tons of ore, on the surface, while approximately 20,000 tons of ore can be figured to be in sight underground, a tonnage which could be very materially increased by little additional work. The average grade of this ore according to samples taken by Mr. C. Trischka, E. M., whose samples check rather well with a few test-samples taken by myself, is about 4.0% lead, and 7.5 to 8.0 oz. of silver. While this is low, it will, I believe, prove economic if a favorable method of concentration can be developed and a good extraction attained.

The gross value of this grade of ore is about \$10.00 per ton and since the ore is found in big bodies, it can be mined easily and cheaply. The ground stands excellently without any timber. Furthermore there is absolutely no water to be handled for considerable depth, and I consider it more than likely that the horizon, which will bring the water, will also bring an ore of higher grade, due to a secondary concentration of silver values.

But what impresses me most in this mine is the indication of very large bodies of zinc-ore, which might ultimately prove of far greater value than the lead-silver-ore at present considered the main value/

GEOLOGY.

The Black Rock-Pacific Mine is in a country of old schistose and semi-schistose rocks. These were intruded later by an acid intrusive, here designated as Biotite-Granite. This granite has escaped schistification entirely or nearly so. The youngest rock in immediate vicinity of the mine is an andesite, occurring both in effusive flows and in intrusive dikes. This rock has apparently a very close connection with the mineralization.

The ore occurs in irregular lenticular bodies in wide zones of fissuring and rock-alteration. The main direction of these altered zones is North-South or slightly West of North. Strong Fissures of this direction frequently terminate the ore-bearing belt, but occur also within this belt and usually show increased mineralization along their course. But the main ore-carriers seem to be veins or fracture-zones of North-West, South-East strike and medium flat dip North-East. The dip of the North-South fractures is normally medium-steep to the East. The relation of both fracture-systems is not very clear, but probably the North-South system is slightly younger than the North-West, South-East system. While the North-South belt of altered and fissured rocks is several hundred feet wide and can be traced more or less Pronouncedly for over a mile and possibly several miles, the mineralized zones or vein-systems of NW/SE strike vary in width from a few to nearly 100' but are usually of short extent and terminate against one or the other of the N/S fissures.

Only one of these ore-zones has been prospected to some extent in the Black Rock Mine. It shows a penetration of the country-rock by such abnormal quantities of dolomite-ankerite and calcite, that the whole mass appears like an altered and recrystallized limestone. In this altered zone was introduced later some semi-chalcedonic quartz and salts of lead and zinc with accessory silver-values.

The metallic minerals are more or less distributed through the entire altered zone, but are concentrated along numerous fissures and cross-fractures. The delimitation of ore depends more upon economic consideration than upon the disappearance of metallic minerals. How wide a width of ore could be stoped, can only be ascertained by close sampling after the lowest economic grade has been established. While the higher grade of material approaches generally the outlines of veins, it is so irregular in detail, that not even an approximate stoping width can be given, but it could be best described of a series of lenticular masses, subject to sudden swellings and contractions. The lead in the exposed

material is principally in the form of cerussite with occasional residual kidneys of galena, while the zinc is only found in oxidized form as smithonite and calamine.

The ore-shoot, explored by the 450' incline and the main-workings has a decided rake to the South and passes through the shaft between the 200' (4th) and 300' (5th) level. Deeper down it should be looked for south of the shaft along the vein.

While the ore on the dump and in sight in the mine surely does constitute an important economic item, I base my favorable conception of the mine mainly upon the possibilities of further development work. An additional 300' of depth should surely reach the water level and with it in all probability the horizon of sulphide-ore. Modern milling methods can fairly well concentrate oxidized lead-ores, but oxidized zinc-ores are almost impossible to concentrate. Sulphide ores of both metals offer a far more favorable object for concentration. While therefore the same grade of ore is more attractive in sulphide than in oxidized form to the miner, observation made at the adjoining Red Cloud Mine, which operates upon the extension of the Black Rock-Pacific vein-belt, induce me to expect a very pronounced secondary silver enrichment at or near water-level, and that therefore, the grade of the ore in the upper sulphide horizon will not only be more amenable to concentration, but also of higher average grade. The high-grade silver ore in the Red Cloud Mine is found in narrow streaks, showing a dull black metallic mineral, probably an intergrowth of altering galena with sulpho-salts of silver, in a felty decomposed schistose rock. Chloritization is rather pronounced along these streaks, but no prominent gangue-minerals accompany them. I was told that ore of that type would assay frequently from 1000 to 3000 oz. silver. There is absolutely no reason, why similar ore should not occur in the Black Rock-Pacific also, because certainly the mine must have contained very high grade ore, or it never would have been opened to such an extent in days when only high grade ore made mining attractive.

Besides the ore-shoot, upon which most of the work was done in

Black Rock Mine, there are indicated at least two more shafts on this claim and at least one on the Pacific claim. This latter has been stoped in a small way and an old wagonroad leading up to the mouth of the Pacific Tunnel, shows that ore was shipped from her. This suggests rich ore, even if the stoped width was only from 1' to 2' apparently. The mineralization and rock-alteration along the whole North-South belt is so intense, that it is only reasonable to assume, that it will persist to great depth. Disregarding the ore now in sight I consider the Black Rock-Pacific Mine an attractive development proposition. The present main shaft is not adapted to serve ultimately as a main hoisting shaft, but with little repair it will serve very well for a prospecting shaft. My idea would be to put this shaft in good repair and drift both North and South from its present bottom as well as to continue sinking. For development purposes very little road building would be required. The adjoining Red Cloud Mine has succeeded to bring in over the present roads all material for their 300 ton mill and other equipment. This shows, that while haulage might be expensive, it is feasible right now.

To equip and repair the shaft for a good prospecting campaign should cost not over from \$3,000.00 to \$5,000.00.

Underground work should be very cheap under the local conditions and even with only a limited number of headings going the cost per foot should not be over \$15.00 for sinking and \$10.00 for drifting, in fact I believe that it could be done for considerable less. 300' of sinking would therefore require less than \$5,000.00.

A total development fund of \$25,000.00 would more than cover all the needs and would demonstrate the possibilities of the mine.

There is a 100' shaft farther North on Black Rock ground and a deep shaft on Pacific ground. This latter I suspect to be at least 250' deep, but it is too steep to climb without ladders, therefore, I was unable to explore it. These shafts might prove valuable as air connections later on. Without artificial ventilation the lower shaft levels could not be worked to advantage at present.

South of the Black Rock claim is the Black Jack claim, owned by C. H. Allen and associates of Yuma. This claim shows fairly attractive stringers of lead-silver ore, striking East-West in an altered and fractured zone of general North-South direction, an extension of the Black Rock belt. This claim could be acquired very cheaply and might be considered in connection with the Black Rock-Pacific Mine.

To the North adjoins the property of the Red Cloud Mining Company, now in operation. The information gained in this mine would have a very important bearing upon the Black Rock-Pacific, as conditions are practically identical. There is though, a local occurrence of wulfenite in the Red Cloud Mine, which is not duplicated at present in the less developed Black Rock.

The Red Cloud has just completed the erection of a modern dry concentrator of 300 tons capacity. The operation of this should furnish very valuable clues for a possible treatment of the present ore in the Black Rock Mine. Ultimately, I believe flotation might be perhaps prove the best milling method, as flotation of lead-carbonates is now attempted with good success, and deepening of the mines will supply the needed water. The Red Cloud, with an inclined depth of 750' is bottomed in water, I am told. (Average dip 45°)

The estimate of tonnage available in dump and mine I have adopted from a report of Mr. Trischka, personally known to me as a reliable engineer, who was able to spend more time on the ground than my equipment permitted me on this trip. I also give a list of his samples and a reproduction of his sketch. Samples taken by myself are:

No. 1. 10" streak with residual galena 4th level

Ag 5.6 oz. Pb 10.9%

No. 2. 44" vein 4th level East Ag 2.6 oz. Pb 7.1% Zn 11.43%

No. 3. Composite sample of vein on 1st level Ag 12.2 oz. Pb 6.9%.

No. 4. Test-sample from open cut on top of hill North-end of Black Rock claim, suspected to be zinc-bearing Zn 1.24%.

No. 5. 10" streak in shallow cut on Black Jack claim, showing galena Ag 10.5 oz.

Pb. 21.88%.

There is not indicated any marked increase of silver with galena

over that with cerussite in these samples, but from all information I could gather from people familiar with the district and the officials of the Red Cloud Mine, the general experience is that the sulphide is higher in silver than the carbonate as a general rule. The total average of a great number of assays made by the Red Cloud people indicate a ratio of about 2 oz. of silver for each per cent. of lead, which would be very favorable. To my knowledge the district has been considered as free of zinc until now and I have no record of any zinc assays made. My impression is that zinc will prove ultimately the most important mineral. The only sample tested for zinc shows this more in evidence than the lead, but it also shows an exceptional low silver-value, which might indicate that the silver follows the lead in preference to the zinc. To arrive at final conclusions on the present ore-reserves and their average grade a thorough sampling of the mine would be unavoidable and at least 100 samples would have to be taken. I have not done this first because I was not equipped for this task and secondly because even a superficial examination convinces me that the present showing is favorable enough to warrant a thorough prospecting campaign. While considerable work has been done in the early days, only scientific and extended prospecting can decide the ultimate value of the property.

That such prospecting would prove highly satisfactory is my firm conviction.

(Signed) W. Tovote

Mining Geologist.

Sketch of Dr. ...
Bill 134 - Mr. Bowen of ...

Report On
Black-Rock Pacific Mine,
Near Yuma, Arizona.

For.

Leon Jacobs, Captain Surgeon, U. S. A.

Ownership, Location and General.

This property, known as the Black Rock Pacific Mine, and consisting of two patented claims is the property of Leon Jacobs, at present located at Camp Kearney, Linda Vista, California. The claims are named the Black Rock and the Pacific.

The property is located in the Silver Mining District in Yuma County, Arizona, and is approximately thirty-six miles north of Yuma, in the same county, and State. To reach the property it is necessary to follow a wagon road located along the east bank of the Colorado River. Following this road from Yuma for about twenty-six miles, we come to Nortons Landing where a smelter was operated in the early '80's, four miles further up the River we come to a road which takes us to the Mine which is about six miles inland. The mine may also be reached by a road on the California side of the Colorado and which terminates at Picacho. It is necessary to ferry the River at this place and then by trail over the mountains in a northeasterly direction for about eight miles and we arrive at the mine.

The country is typical desert, common in the southwestern States, a short distance from the Colorado.

No mining has been done at the mine since 1887, nevertheless, the workings are in good repair and accessible with the exception of the lowest level, which could be reached by the aid of a stout rope. No machinery, equipment, or camp buildings of any kind are at the mine and the road leading to the mine from the Colorado is in poor shape, needing extensive though not necessarily expensive repairs to make it passable for wagons or machines. The road is located mainly in a gravelly wash, but rain is so uncommon that a road once put in shape would be easily kept in repair. This is proven by the fact that the

roads built thirty years ago are still traceable.

The road goes right up to the main mine workings and all the necessary supplies could be brought in by way of Railroad to Laguna, about twelve miles from Yuma, then by steamer to the River terminal of the mine road, and then by wagon to the mine. This would of course necessitate the purchase of a Steamer as no boats ply the River above Laguna Dam at this time, though the River is navigable the year around.

The water problem always a big one in the desert country could most likely be solved by drilling to the depth of several hundred feet. This would supply the camp needs and those of the mine. It is doubtful if sufficient water could be developed for a mill, which seems to make it necessary that the Mill be located at the River, or that water be pumped from the Colorado to the mine.

The property is a low grade silver-lead proposition as will be seen from the following more comprehensive remarks.

Geology.

The basic rock in the district and at the mine is a mica schist, into which granite has been intruded. Blocks of limestone included in the granite, lead to the assumption that sedimentary rocks once covered the schist. Andesite and Porphyry are found in the mine and with the granite make up the walls of the ore bearing vein. The Andesite and Porphyry which were later than the granite were the mineralizers and responsible for the ore deposits. Much faulting and cross-faulting that has taken place at the time of mineralization gives the veins the effect of being wider than it really is. The cross-faults are mineralized but only for an average length of about twenty-five feet from the main veins and then only in thin seams. This gives the vein an apparent width of about fifty or sixty feet, as a matter of fact the vein has the average width of ten feet.

The vein of ledge from which the material was taken which is to be found on the dump, is traceable on the surface for about

six-hundred feet. Of this distance about three-hundred feet has been found to contain valuable mineral. Tunnels and incline shafts in the other portion of the vein have opened up unmineralized country.

Workings

On the surface, at the main workings, there is a tunnel-like open cut on the main ledge, from which considerable material has been removed. This may be called the first level. The drifting or tunneling was done along the main ledge which strikes about N. 60 W. and dips toward the northeast. Here as elsewhere in the mine lead carbonates, Galena, and some silver chloride was seen. The width of the vein filling is on the average about ten feet, the vein pinching and swelling.

From this upper or sub-surface working, two inclined shafts lead to the lower three levels. (See sample Map.) at sixty feet, eighty feet, and one-hundred ten feet respectively. The smaller of these shafts connects with the sixth foot level on one of the cross fractures which it follows. Drifting on the sixty foot level has followed the main vein and some of the cross fractured. The other workings on the other levels are of much the same character and have developed the same conditions of the main vein and the cross fractures. The principal vein filling is a siliceous breccia which has been re-cemented by calcite. The lead and silver values are found in the cementing material.

The total length of the workings is estimated at about seven-hundred feet, of which about ninety feet in length and about one-hundred twenty feet in depth have been of value in exploring the main vein. The rest of the work was done on the thin but rich cross-fracture stringers.

The dump was measured and computation shows that it contains about 15,000 tons of ore. The amount of material taken from the workings closely approximates the tonnage on the dump, from which it may be assumed that very little ore was taken from the mine which was

of shipping grade.

The workings have developed about 20,000 tons and possibly 25,000 tons more could be developed with greater depth and further exploration of the main vein. We may thus assume approximately 60,000 tons to be in sight.

Samples were taken throughout the mine as per sample map. A large dump sample weighing six-hundred pounds was also taken and quartered down. These samples were assayed and gave the following results.

Assay Record.

Dump Sample - Silica 47.7% - Lime 14.8% Iron 6.3, Silver 6.8 oz. Ton.

No. 1 Mine Sample	Silver 5.0 oz, ton	Lead 4.1%
No. 2 " "	" 2.2 "	Lead 5.5"
No. 3 " "	" 8.3 "	2 " 3.5"
No. 4 " "	" 8.1 "	" 8.1"
No. 5 " "	" 14.7 "	" 7.3"
No. 6 " "	" 8.3 "	" 12.7"
No. 7 " "	" 9.9 "	" 1.1"
No. 8 " "	" 27.0 "	" 3.4"
No. 9 " "	" 3.2 "	" 3.5"
No. 10 " "	" 3.8 "	" 2.0"
No. 11 " "	" 5.1 "	" 2.6"
No. 12 " "	" 4.6 "	" 1.3"
No. 13 " "	" 4.4 "	" 2.3"
No. 14 " "	" 2.4 "	"
No. 15 " "	" 3.9 "	" 4.9"
Average of Above	Silver 7.3 "	" 3.8"

Conclusion:

From the foregoing it is evident that 60,000 tons of ore, assaying as a general average, 7 oz. silver and 4% Lead, are in sight and that further development might double this tonnage. If this is so we have in this property a low grade, milling proposition. With silver at a dollar and lead at 7¢ per pound, the gross value of the ore is \$12.50 per ton. With recovery of 85%, which is possible we still have \$10.60 per ton. The factors which will determine whether the property is sufficiently rich to become profitable are: Costs of all kinds, such as machinery, mill equipment, transportation, road repairs, fuel, water for mill and camp purposes, and haulage.

Investigation of a treatment process is advisable.

The property is recommended as a prospect meriting extensive investigation.

Respectfully Submitted,

(Signed) Carl Trischka,

E. M.

*Sketch of mine workings
Plan 134 - Aug. Bureau of Mines*

SILVERSPAR MINERALS INC.
(formerly Silver Glance Resources Inc.)

INTERIM CONSOLIDATED FINANCIAL STATEMENTS

ENDED APRIL 30, 1992

SILVERSPAR MINERALS INC.
(Formerly Silver Glance Resources Inc.)

CONSOLIDATED BALANCE SHEETS - APRIL 30, 1992 AND 1991
(Unaudited)

	1992	1991
ASSETS		
CURRENT ASSETS:		
Cash	\$ 414,049	\$ 249
Miscellaneous receivables	3,887	291
TOTAL CURRENT ASSETS	\$ 417,936	\$ 540
MINERAL PROPERTIES AND CLAIMS, at cost	\$ 7,519,400	\$ 7,519,400
DEFERRED EXPLORATION EXPENDITURES	1,867,430	1,333,030
FIXED ASSETS, net	-	529
	\$ 9,804,766	\$ 8,853,499
LIABILITIES AND SHAREHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Trade accounts payable	\$ 172,065	\$ 32,529
Payables to/advances from a related party	13,425	22,089
Preproduction royalties payable	-	35,740
TOTAL CURRENT LIABILITIES	\$ 185,490	\$ 90,358
LIABILITIES TO BE SETTLED BY ISSUE OF SHARES	-	39,574
	\$ 185,490	\$ 129,932
SHAREHOLDERS' EQUITY		
Share capital (Note 2)	\$ 11,760,815	\$ 10,764,791
Contributed surplus	77,218	77,218
Deficit-		
Balance, beginning of period	(2,143,224)	(2,073,887)
Net loss	(75,533)	(44,555)
Balance, end of period	\$ (2,218,757)	\$ (2,118,442)
	\$ 9,619,276	\$ 8,723,567
	\$ 9,804,766	\$ 8,853,499

APPROVED BY THE DIRECTORS:

DIRECTOR

DIRECTOR

(See accompanying notes)

SILVERSPAR MINERALS INC.
(Formerly Silver Glance Resources Inc.)

CONSOLIDATED STATEMENTS OF OPERATIONS

FOR THE NINE MONTHS ENDED APRIL 30, 1992 AND 1991
(Unaudited)

	1992	1991
EXPENSES:		
Legal, accounting and audit	\$ 28,362	\$ 13,264
Advertising and promotion	19,892	-
Filing and transfer fees	11,044	7,789
Shareholder communications	7,855	2,678
Directors fees	6,906	13,750
Office and miscellaneous	5,590	5,809
Consulting	1,600	-
Depreciation	-	125
	\$ 81,249	\$ 43,415
INTEREST INCOME	(2,006)	-
FOREIGN EXCHANGE (GAIN) LOSS	(3,710)	1,140
	\$ 75,533	\$ 44,555
NET LOSS	\$ 75,533	\$ 44,555
NET LOSS PER SHARE	\$ 0.05	\$ 0.04

(See accompanying notes)

SILVERSPAR MINERALS INC.
(Formerly Silver Glance Resources Inc.)

CONSOLIDATED STATEMENTS OF CHANGES IN CASH RESOURCES

FOR THE NINE MONTHS ENDED APRIL 30, 1992 AND 1991
(Unaudited)

	1992	1991
OPERATING ACTIVITIES:		
Net loss	\$ (75,533)	\$ (44,555)
Items not involving a cash outlay-		
Depreciation	-	125
	\$ (75,533)	\$ (44,430)
Increases (decreases) in -		
Trade accounts payable	161,172	(1,824)
Preproduction royalties	-	35,740
Advances from related parties	777	(370)
(Increases) decreases in -		
Miscellaneous receivables	(3,062)	397
	\$ 83,354	\$ (10,487)
FINANCING ACTIVITIES:		
Issue of common shares for cash	\$ 727,200	\$ 30,000
Issue of common shares for debt	23,000	167,245
Shares subscribed for but not yet issued	-	(18,000)
Liabilities to be settled by issue of share capital	(23,000)	(124,587)
	\$ 727,200	\$ 54,658
INVESTING ACTIVITIES:		
Deferred exploration expenditures	\$ (528,185)	\$ (49,269)
INCREASE (DECREASE) IN CASH	\$ 282,369	\$ (5,098)
CASH, BEGINNING OF PERIOD	131,680	5,347
CASH, END OF PERIOD	\$ 414,049	\$ 249

(See accompanying notes)

SILVERSPAR MINERALS INC.
(Formerly Silver Glance Resources Inc.)

CONSOLIDATED STATEMENTS OF DEFERRED EXPLORATION EXPENDITURES

FOR THE NINE MONTHS ENDED APRIL 30, 1992 AND 1991
(Unaudited)

	1992	1991
SILVER DISTRICT		
Drilling	\$ 196,159	\$ 76
Project salaries	99,899	5,400
Claim costs and maintenance	74,514	40,704
Roadwork	48,827	-
Assays	29,113	-
Automobile	17,923	-
Travel	14,848	-
Accommodation and board	13,788	-
Field office	7,618	363
Field supplies	7,021	-
Freight	4,968	-
Metallurgical	4,749	-
Maps & reproductions	2,419	-
Consultants	2,046	-
Storage	1,845	-
Drafting	1,115	641
Filing fees	282	-
Equipment rentals	-	1,760
	-----	-----
Current period expenditures	\$ 527,134	\$ 48,944
	-----	-----
NADIRA		
Claim costs and maintenance	\$ 951	\$ -
Drafting	100	-
Project salaries	-	325
	-----	-----
Current period expenditures	\$ 1,051	\$ 325
	-----	-----
BALANCE, BEGINNING OF PERIOD	1,339,245	1,283,761
	-----	-----
BALANCE, END OF PERIOD	\$ 1,867,430	\$ 1,333,030
	=====	=====

(See accompanying notes)

SILVERSPAR MINERALS INC.
(Formerly Silver Glance Resources Inc.)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

APRIL 30, 1992
(Unaudited)

1. MINERAL PROPERTIES AND CLAIMS AND DEFERRED EXPLORATION EXPENDITURES

The recoverability of the Company's investment in mineral properties, claims, and deferred exploration expenditures is dependent upon the confirmation of economically recoverable reserves, the ability of the Company to obtain necessary financing to complete its development plans, and upon future successful operations.

2. SHARE CAPITAL

(a) Authorized share capital is 20,000,000 common shares without par value.

(b) Issued and outstanding

	Shares	AMOUNT
Balance, July 31, 1991	1,507,648	\$ 11,010,615
Issued for cash-		
Exercise of directors' options	110,000	226,000
Exercise of employees' options	148,000	501,200
Settlement of liabilities	9,200	23,000
	267,200	750,200
Balance, January 31, 1992	1,774,848	\$ 11,760,815

(c) Options

TO WHOM	NUMBER OF SHARES	OPTION PRICE	DATE GRANTED	EXPIRY DATE
Director	10,000	3.60	12-Dec-91	12-Dec-93
Employee	40,000	3.60	12-Dec-91	12-Dec-93
Employee	10,000	3.60	1-Feb-92	1-Feb-94
Employee	13,000	3.60	17-Feb-92	17-Feb-94
Employee	4,000.	4.00	18-Feb-92	18-Feb-94

During May 1992 a director and two employees exercised options on 55,000 shares for cash proceeds to the Company of \$199,250.

(d) Warrants

Private placement	125,000	1.50	17-July-91	17-July-92
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3. SUBSEQUENT EVENT

At an Extraordinary General Meeting on June 2, 1992 the shareholders approved a name change to Silverspar Minerals Inc..

Schedule B: Supplementary Information - Silverspar Minerals Inc.

Securities Issued during the Third Quarter Ended April 30, 1992

Date	Type of Security	Type of Issue	Number	Price	Total Proceeds	Type of Consideration	Commission
Feb. 17, 1992	Common	Options	50,000	3.60	\$ 180,000	Cash	0
Feb. 18, 1992	Common	Options	10,000	3.60	\$ 36,000	Cash	0
Feb. 20, 1992	Common	Options	20,000	3.60	\$ 72,000	Cash	0
Mar. 2, 1992	Common	Options	25,000	3.60	\$ 90,000	Cash	0
Mar. 17, 1992	Common	Options	12,000	3.85	\$ 46,200	Cash	0
Mar. 17, 1992	Common	Options	5,000	3.60	\$ 18,000	Cash	0
April 22, 1992	Common	Options	5,000	3.85	\$ 19,250	Cash	0
April 24, 1992	Common	Options	11,000	4.00	\$ 44,000	Cash	0
April 27, 1992	Common	Options	10,000	3.85	\$ 38,500	Cash	0
April 28, 1992	Common	Options	5,000	8.05	\$ 40,250	Cash	0

Options Granted During the Third Quarter Ended April 30, 1992

Security	Number or Amount	Exercise/Convertible Price	Expiry Date
Common	10,000	\$ 3.60	January 31, 1994
Common	40,000	\$ 3.85	February 17, 1994
Common	15,000	\$ 4.00	February 18, 1994
Common	5,000	\$ 8.05	March 6, 1994

Authorized and Issued Share Capital at as April 30, 1992

Class	Par Value	Authorized Number	Issued Number	Issued Amount
Common	N.P.V.	20,000,000	1,774,848	11,760,815

Options, Warrants and Convertible Securities Outstanding as at April 30, 1992

Security	Number or Amount	Exercise/Convertible Price	Expiry Date
Options	50,000	\$ 3.60	December 12, 1993
Options	10,000	\$ 3.60	February 1, 1994
Options	13,000	\$ 3.85	February 17, 1994
Options	4,000	\$ 4.00	February 18, 1994
Warrants	125,000	\$ 1.50	July 17, 1992

There are no flow-through shares or shares in escrow or subject to pooling as at April 30, 1992.

Schedule C: Management Discussion

At an Extraordinary General Meeting on June 2, 1992, the name of the Company was changed to Silverspar Minerals Inc. This change was made to reflect the importance of acid spar, the technical term for acid grade fluorite, in the future of the Company.

PROPERTIES

The Company's drilling program on its Silver District property was completed in April. The program consisted of 84 reverse circulation holes comprising 13,645 feet. The holes drilled were 37 on the Black Rock-Silver Glance, 18 on the Pedro Keno, 14 on the Princess, 13 on the Silver King and one each on the Maxie II and State deposits.

Assay results released in May are very encouraging. New reserve calculations have not been completed, but the assay results indicate an over-all increase in geological reserves relative to the original estimates. A fill-in drill program comprising 3,000 feet of reverse circulation has been completed subsequent to the quarter-end. Assay results of this program have not been announced.

A 100-pound bulk sample has been submitted to Lakefield Research in Mississauga for preliminary metallurgical tests. This work is still underway and no results are available.

As of April 30, 1992, the Company believes it has fulfilled the expenditure requirements under the option agreement between New Jersey Zinc Exploration Company and the Company for the Silver District property. This option agreement required the Company to incur, by February 28, 1993, U.S. \$500,000 of approved expenditures relative to the maintenance, exploration and development of the property. To April 30, 1992 the Company had incurred approximately U.S. \$685,000 of approved expenditures.

FINANCING

During the third quarter, the Company received cash proceeds of \$584,200 from the issue of 153,000 common shares pursuant to the exercise of directors and employee options.

Subsequent to April 30, the Company received \$199,250 from the issue of 55,000 common shares pursuant to the exercise of options by one director and two employees.

OUTLOOK

The Company expects it has sufficient drilling information to allow it to proceed with a prefeasibility study. This report which will include new geological reserve calculations and preliminary metallurgical results should be completed by August, 1992. Once this is complete, the Company expects to proceed with a feasibility study with completion in January, 1993.



Philip J. Rogers, CA
President
June 25, 1992

Directors of the Company

Philip J. Rogers
North Vancouver, B.C.
President/Director

President of the Company; Self-employed
Chartered Accountant (1983 to present).

Peter E. Fox
West Vancouver, B.C.
Director

Consulting geologist, Fox Geological
Consultants Ltd. (a non-reporting British
Columbia company) 1971 to date.

John W. Fisher
Delta, B.C.
Director

Chemical Engineer, Metallurgist; Rea
Gold Corporation.

Jan Van Der Weij
North Vancouver, B.C.
Director

Businessman.



INSTRUCTIONS

This report is to be filed by Exchange Issuers within 60 days of the end of their first, second and third fiscal quarters and within 140 days of the end of their fourth fiscal quarter. Three schedules (typed) are to be attached to this report as follows:

SCHEDULE A: FINANCIAL INFORMATION

Financial information prepared in accordance with generally accepted accounting principles for the fiscal year-to-date, with comparative information for the corresponding period of the preceding fiscal year. This financial information should consist of the following:

For the first, second and third fiscal quarters:

An interim financial report presented in accordance with Section 1750 of the C.I.C.A. Handbook. This should include a summary income statement (or a statement of deferred costs) and a statement of changes in financial position. A summary balance sheet is also to be provided.

For the fourth fiscal quarter (year end):

Annual audited financial statements.

SCHEDULE B: SUPPLEMENTARY INFORMATION

The supplementary information set out below is to be provided when not included in Schedule A.

1. *For the current fiscal year-to-date:*

Breakdown, by major category, of those expenditures and costs which are included in the deferred costs, exploration and development expenses, cost of sales or general and administrative expenses set out in Schedule A. State the aggregate amount of expenditures made to parties not at arm's length from the issuer.

2. *For the quarter under review:*

(a) Summary of securities issued during the period, including date of issue, type of security (common shares, convertible debentures, etc.), type of issue (private placement, public offering, exercise of warrants, etc.) number, price, total proceeds, type of consideration (cash, property, etc.) and commission paid.

(b) Summary of options granted, including date, number, name of optionee, exercise price and expiry date.

3. *As at the end of the quarter:*

(a) Particulars of authorized capital and summary of shares issued and outstanding.

(b) Summary of options, warrants and convertible securities outstanding, including number or amount, exercise or conversion price and expiry dates.

(c) Total number of shares in escrow or subject to a pooling agreement.

(d) List of directors.

SCHEDULE C: MANAGEMENT DISCUSSION

Review of operations in the quarter under review and up to the date of this report, including brief details of any significant event or transaction which occurred during the period. The following list can be used as a guide but is not exhaustive:

Acquisition or abandonment of resource properties, acquisition of fixed assets, financings and use of proceeds, management changes, material contracts, transactions with related parties, legal proceedings, contingent liabilities, default under debt or other contractual obligations, special resolutions passed by shareholders.

ISSUER DETAILS		ISSUER TELEPHONE NO.	FOR QUARTER ENDED	DATE OF REPORT
NAME OF ISSUER SILVERSPAR MINERALS INC. (formerly Silver Glance Resources Inc.)		669-5737	APRIL 30, 1992	Y M D 92 06 25
ISSUER'S ADDRESS 1409 - 409 GRANVILLE STREET, VANCOUVER, B.C.		PROVINCE	POSTAL CODE	
			V 6 C 1 T 8	
CONTACT PERSON PHILIP J. ROGERS	CONTACT'S POSITION PRESIDENT	CONTACT TELEPHONE NO. 980-8604		

CERTIFICATE

The three schedules required to complete this Quarterly Report are attached and the disclosure contained therein has been approved by the Board of Directors. A copy of this Quarterly Report will be provided to any shareholder who requests it.

DIRECTOR'S SIGNATURE 	PRINT FULL NAME PHILIP J. ROGERS	DATE SIGNED Y M D 92 06 25
DIRECTOR'S SIGNATURE 	PRINT FULL NAME PETER E. FOX	DATE SIGNED Y M D 92 06 25

SILVER GLANCE RESOURCES INC.

ORBEX RESOURCES INC.

INTERIM CONSOLIDATED FINANCIAL STATEMENTS

ENDED JANUARY 31, 1992

SILVER GLANCE RESOURCES INC.

CONSOLIDATED BALANCE SHEETS - JANUARY 31, 1992 AND 1991
(Unaudited)

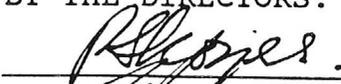
ASSETS

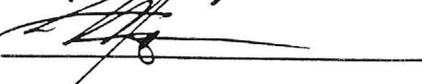
	<u>1992</u>	<u>1991</u>
CURRENT ASSETS:		
Cash	\$ 20,247	\$ 508
Miscellaneous receivables	3,391	1,006
	-----	-----
TOTAL CURRENT ASSETS	\$ 23,638	\$ 1,514
	-----	-----
MINERAL PROPERTIES AND CLAIMS, at cost	\$ 7,519,400	\$ 7,519,400
DEFERRED EXPLORATION EXPENDITURES	1,522,216	1,330,724
FIXED ASSETS, net	-	529
	-----	-----
	\$ 9,065,254	\$ 8,852,167
	=====	=====

LIABILITIES AND SHAREHOLDERS' EQUITY

CURRENT LIABILITIES:		
Trade accounts payable	\$ 8,545	\$ 64,218
Payables to/advances from a related party	-	15,744
Preproduction royalties payable	-	36,050
	-----	-----
TOTAL CURRENT LIABILITIES	\$ 8,545	\$ 116,012
LIABILITIES TO BE SETTLED BY ISSUE OF SHARES	-	167,246
	-----	-----
	\$ 8,545	\$ 283,258
	-----	-----
SHAREHOLDERS' EQUITY		
Share capital (Note 2)	\$ 11,176,615	\$ 10,597,546
Contributed surplus	77,218	77,218
Deficit-		
Balance, beginning of period	(2,143,224)	(2,073,887)
Net loss	(53,900)	(31,968)
	-----	-----
Balance, end of period	\$ (2,197,124)	\$ (2,105,855)
	-----	-----
	\$ 9,056,709	\$ 8,568,909
	-----	-----
	\$ 9,065,254	\$ 8,852,167
	=====	=====

APPROVED BY THE DIRECTORS:

DIRECTOR 

DIRECTOR 

(See accompanying notes)

SILVER GLANCE RESOURCES INC.

CONSOLIDATED STATEMENTS OF OPERATIONS

FOR THE SIX MONTHS ENDED JANUARY 31, 1992 AND 1991
(Unaudited)

	<u>1992</u>	<u>1991</u>
EXPENSES:		
Legal, accounting and audit	\$ 18,722	\$ 7,859
Advertising and promotion	11,364	-
Filing and transfer fees	8,020	4,037
Shareholder communications	7,491	2,617
Directors fees	4,031	12,100
Office and miscellaneous	2,126	3,854
Consulting	1,600	-
Depreciation	-	125
	-----	-----
	\$ 53,354	\$ 30,592
FOREIGN EXCHANGE (GAIN) LOSS	546	1,376
	-----	-----
NET LOSS	\$ 53,900	\$ 31,968
	=====	=====
NET LOSS PER SHARE	\$ 0.04	\$ 0.03
	=====	=====

(See accompanying notes)

SILVER GLANCE RESOURCES INC.

CONSOLIDATED STATEMENTS OF CHANGES IN CASH RESOURCES

FOR THE SIX MONTHS ENDED JANUARY 31, 1992 AND 1991
(Unaudited)

	<u>1992</u>	<u>1991</u>
OPERATING ACTIVITIES:		
Net loss	\$ (53,900)	\$ (31,968)
Items not involving a cash outlay-		
Depreciation	-	125
	-----	-----
	\$ (53,900)	\$ (31,843)
Increases (decreases) in -		
Trade accounts payable	(2,348)	29,866
Preproduction royalties	-	36,050
Advances from related parties	(12,648)	(6,716)
(Increases) decreases in -		
Miscellaneous receivables	(2,566)	(318)
	-----	-----
	\$ (71,462)	\$ 27,039
	-----	-----
FINANCING ACTIVITIES:		
Issue of common shares for cash	\$ 143,000	\$ 30,000
Issue of common shares for debt	23,000	-
Shares subscribed for but not yet issued	-	(18,000)
Liabilities to be settled by issue of share capital	(23,000)	3,085
	-----	-----
	\$ 143,000	\$ 15,085
	-----	-----
INVESTING ACTIVITIES:		
Deferred exploration expenditures	\$ (182,971)	\$ (46,963)
	-----	-----
INCREASE (DECREASE) IN CASH	\$ (111,433)	\$ (4,839)
CASH, BEGINNING OF PERIOD	131,680	5,347
	-----	-----
CASH, END OF PERIOD	\$ 20,247	\$ 508
	=====	=====

(See accompanying notes)

SILVER GLANCE RESOURCES INC.

CONSOLIDATED STATEMENTS OF DEFERRED EXPLORATION EXPENDITURES

FOR THE SIX MONTHS ENDED JANUARY 31, 1992 AND 1991
(Unaudited)

	<u>1992</u>	<u>1991</u>
SILVER DISTRICT		
Claim costs and maintenance	\$ 55,514	\$ 40,704
Drilling	42,580	76
Project salaries	37,668	4,119
Roadwork	18,795	-
Automobile	5,870	-
Assays	5,579	-
Travel	5,491	-
Accommodation and board	4,182	-
Field office	4,053	-
Maps & reproductions	1,405	363
Storage	789	-
Field supplies	763	-
Filing fees	282	-
Equipment rentals	-	1,073
Drafting	-	628
	-----	-----
TOTAL CURRENT PERIOD EXPENDITURES	\$ 182,971	\$ 46,963
BALANCE, BEGINNING OF PERIOD	1,339,245	1,283,761
	-----	-----
BALANCE, END OF PERIOD	\$ 1,522,216	\$ 1,330,724
	=====	=====

(See accompanying notes)

SILVER GLANCE RESOURCES INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

JANUARY 31, 1992

(Unaudited)

1. MINERAL PROPERTIES AND CLAIMS AND DEFERRED EXPLORATION EXPENDITURES

The recoverability of the Company's investment in mineral properties, claims, and deferred exploration expenditures is dependent upon the confirmation of economically recoverable reserves, the ability of the Company to obtain necessary financing to complete its development plans, and upon future successful operations.

2. SHARE CAPITAL

(a) Authorized share capital is 20,000,000 common shares without par value.

(b) Issued and outstanding

	<u>Shares</u>	<u>AMOUNT</u>
Balance, July 31, 1991	1,507,648	\$ 11,010,615
Issued for cash-		
Exercise of directors' options	40,000	64,000
Exercise of employees' options	65,000	79,000
Settlement of liabilities	9,200	23,000
	-----	-----
Balance, January 31, 1992	<u>1,621,848</u>	<u>\$ 11,176,615</u>
	=====	=====

(c) Options

<u>TO WHOM</u>	<u>NUMBER OF SHARES</u>	<u>OPTION PRICE</u>	<u>DATE GRANTED</u>	<u>EXPIRY DATE</u>
Directors	80,000	3.60	12-Dec-91	12-Dec-93
Employees	80,000	3.60	12-Dec-91	12-Dec-93

(d) Warrants

Private placement	125,000	1.50	17-July-91	17-July-92
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Schedule B: Supplementary Information - Silver Glance Resources Inc.

Securities Issued during the Second Quarter Ended January 31, 1992

Date	Type of Security	Type of Issue	Number	Price	Total Proceeds	Type of Consideration	Commission
Nov. 22, 1991	Common	Shares for Debt	9,200	2.50	\$ 23,000	Royalties	0
Dec. 12, 1991	Common	Options	50,000	1.10	\$ 55,000	Cash	0
Dec. 12, 1991	Common	Options	45,000	1.60	\$ 72,000	Cash	0
Jan. 31, 1992	Common	Options	10,000	1.60	\$ 16,000	Cash	0

Options Granted During the Second Quarter Ended January 31, 1992

Security	Number or Amount	Exercise or Convertible Price	Expiry Date
Option	160,000	\$ 3.60	December 12, 1993

Authorized and Issued Share Capital at as January 31, 1992

Class	Par Value	Authorized Number	Issued Number	Issued Amount
Common	N.P.V.	20,000,000	1,621,848	11,176,615

Options, Warrants and Convertible Securities Outstanding as at January 31, 1992

Security	Number or Amount	Exercise or Convertible Price	Expiry Date
Options	160,000	\$ 3.60	December 12, 1993
Warrants	125,000	\$ 1.50	July 17, 1992

There are no flow-through shares or shares in escrow or subject to pooling as at January 31, 1992.

Schedule C: Management Discussion

PROPERTIES

The second quarter was highlighted by the announcement of a new fluorite discovery on the Silver District Property near Yuma, Arizona. The 1991 drill program produced significant fluorite assays from the Princess area, a vein system mined for silver in the 1870's. Three of the eight reverse circulation holes (#287, 288 and 290 at the extreme north end) returned assays averaging 5.6% fluorite over 10 feet, 14.9% fluorite over 30 feet and 14% fluorite over 30 feet respectively. The zone remains untested for a further 1,000 feet north as far as the Old Hamburg Mine. The Company believes considerable tonnage could be added to the over-all fluorite inventory between the Old Hamburg Mine and holes 288 and 290.

Subsequent to the quarter-end, the 1992 drill program was commenced on the Silver District. The program will consist of approximately 8,000 feet of reverse circulation drilling in over 30 holes and has three objectives - (1) define the Princess zone; (2) firm-up reserves on the Black Rock deposit; and (3) test possible extensions of the Silver King, Maxie #2 and Padre Keno zones all of which are currently open.

With the completion of the 1992 program, the Company will have fulfilled the \$500,000 expenditure requirement to earn a 100% interest in the Silver District Property, subject to a 1.5% net smelter return.

FINANCING

The Company received \$143,000 from the exercise options for 105,000 common shares by two directors and two employees. Regulatory authorities approved the issue of 9,200 common shares to settle 1990 property payments totalling \$20,000 U.S. on certain claims within the Silver District.

Subsequent to the quarter end, the Company has received \$426,800 from the exercise of options for an additional 118,000 common shares by three directors and three employees.

OUTLOOK

The Company received invaluable assistance in January when the earth's Ozone Layer attracted worldwide headlines. The U.S. National Aeronautics and Space Administration announced startling findings from atmospheric studies which showed record-high concentrations of chlorine monoxide over the skies of the Northern Hemisphere. Chlorine monoxide is a chemical by-product of the chlorofluorocarbons (CFC's) known to be the chief agents of Ozone destruction. This announcement has motivated governments in developed countries to review the timetable for the total phase-out of the production of CFC's. Total phase-out which was scheduled for the year 2000 is now being considered for the mid 1990's. Germany has announced total phase-out by the end of 1993.

The shift from CFC's to Ozone-benign products, hydrofluorocarbons (HFC's) and hydrochlorofluorocarbons (HCFC's), is expected to at least double the worldwide demand for acid grade fluorite (acid spar) the chief feedstock of HFC's and HCFC's.

The Company's Silver District Property is the only open-pittable acid spar deposit in the United States and is potentially the only domestic producer to supply fluorite to consumers in the U.S. market.

Upon the completion of the 1992 drill program, the Company is planning to proceed with a development process that will result in a feasibility report by January, 1993. The financing for this development process will be indirectly assisted by the worldwide concerns about Ozone depletion.



Philip J. Rogers, CA
President
March 31, 1992

Directors of the Company

Philip J. Rogers North Vancouver, B.C. President/Director	President of the Company; Self-employed Chartered Accountant (1983 to present).
Peter E. Fox Vancouver, B.C. Director	Consulting geologist, Fox Geological Consultants Ltd. (a non-reporting British Columbia company) 1971 to date.
John W. Fisher Delta, B.C. Director	Chemical Engineer, Metallurgist; Rea Gold Corporation.
Jan Van Der Weij North Vancouver, B.C. Director	Businessman.



INSTRUCTIONS

This report is to be filed by Exchange Issuers within 60 days of the end of their first, second and third fiscal quarters and within 140 days of the end of their fourth fiscal quarter. Three schedules (typed) are to be attached to this report as follows:

SCHEDULE A: FINANCIAL INFORMATION

Financial information prepared in accordance with generally accepted accounting principles for the fiscal year-to-date, with comparative information for the corresponding period of the preceding fiscal year. This financial information should consist of the following:

For the first, second and third fiscal quarters:

An interim financial report presented in accordance with Section 1750 of the C.I.C.A. Handbook. This should include a summary income statement (or a statement of deferred costs) and a statement of changes in financial position. A summary balance sheet is also to be provided.

For the fourth fiscal quarter (year end):

Annual audited financial statements.

SCHEDULE B: SUPPLEMENTARY INFORMATION

The supplementary information set out below is to be provided when not included in Schedule A.

1. *For the current fiscal year-to-date:*

Breakdown, by major category, of those expenditures and costs which are included in the deferred costs, exploration and development expenses, cost of sales or general and administrative expenses set out in Schedule A. State the aggregate amount of expenditures made to parties not at arm's length from the issuer.

2. *For the quarter under review:*

(a) Summary of securities issued during the period, including date of issue, type of security (common shares, convertible debentures, etc.), type of issue (private placement, public offering, exercise of warrants, etc.) number, price, total proceeds, type of consideration (cash, property, etc.) and commission paid.

(b) Summary of options granted, including date, number, name of optionee, exercise price and expiry date.

3. *As at the end of the quarter:*

(a) Particulars of authorized capital and summary of shares issued and outstanding.

(b) Summary of options, warrants and convertible securities outstanding, including number or amount, exercise or conversion price and expiry dates.

(c) Total number of shares in escrow or subject to a pooling agreement.

(d) List of directors.

SCHEDULE C: MANAGEMENT DISCUSSION

Review of operations in the quarter under review and up to the date of this report, including brief details of any significant event or transaction which occurred during the period. The following list can be used as a guide but is not exhaustive:

Acquisition or abandonment of resource properties, acquisition of fixed assets, financings and use of proceeds, management changes, material contracts, transactions with related parties, legal proceedings, contingent liabilities, default under debt or other contractual obligations, special resolutions passed by shareholders.

ISSUER DETAILS		ISSUER TELEPHONE NO.	FOR QUARTER ENDED	DATE OF REPORT
NAME OF ISSUER	SILVER GLANCE RESOURCES INC.	669-2428	January 31, 1992	Y M D 92 03 31
ISSUER'S ADDRESS	1409 - 409 Granville Street, Vancouver, B.C.	PROVINCE	POSTAL CODE	
			V 6 C I T 8	
CONTACT PERSON	Philip Rogers	CONTACT'S POSITION	CONTACT TELEPHONE NO.	
		President	980-8604	

CERTIFICATE

The three schedules required to complete this Quarterly Report are attached and the disclosure contained therein has been approved by the Board of Directors. A copy of this Quarterly Report will be provided to any shareholder who requests it.

DIRECTOR'S SIGNATURE	PRINT FULL NAME	DATE SIGNED
	Philip J. Rogers	Y M D 92 03 31
DIRECTOR'S SIGNATURE	PRINT FULL NAME	DATE SIGNED
	Peter E. Fox	Y M D 92 03 31

BLAC. ROCK MINE
La Paz County (file)

SILVER GLANCE RESOURCES INC.

1991 ANNUAL REPORT

REPORT TO THE SHAREHOLDERS

On behalf of the Board of Directors of Silver Glance Resources Inc., I am pleased to present the audited financial statements for the year ending July 31, 1991.

Overview

During the year, the Company continued exploration and development of the silver-fluorite-lead reserves on its Silver District property near Yuma, Arizona. Fluorite continues to increase in importance as hydrofluorocarbons (HFC's) gain greater acceptance as an alternative to ozone-depleting chlorofluorocarbons (CFC's).

While equity markets remained quiet, the Company was successful during the fourth quarter in completing a private placement. The proceeds were used to fund a drilling program on the Silver District property. The Company also responded to reduced equity capital by restricting administrative expenses.

The Company has signed an amended agreement with New Jersey Zinc Exploration Company for the Silver District property. The date by which the Company must expend \$500,000 U.S. to acquire the mineral rights has been extended to February 28, 1993. At the time of printing, the Company had expended approximately \$317,000 U.S. of this amount. The amended agreement also requires the Company to make annual royalty payments as follows: September 1, 1991 - \$10,000 (paid), March 1, 1992 - \$15,000, March 1, 1993 - \$20,000, March 1, 1994 - \$25,000

Properties

On the Silver District, financial constraints resulted in limited work. Subsequent to year-end, phase one of a two-phase drilling program was completed. The program consisted of fifteen reverse circulation holes totalling 3,500 feet, designed to further delineate silver-fluorite-lead reserves on the Padre Keno, Silver King, Princess and Black Rock deposits. Assay results are not yet available.

Future exploration and development objectives on the Silver District consist of finishing delineation drilling on the Black Rock and Papago silver zones and the Silver King, Princess and Padre Keno fluorite deposits, and completion of on-going feasibility test work.

Financial

The Company was able to raise share capital totalling \$443,069 as follows:

- \$156,250 from a private placement in July, 1991 for 125,000 units. Each unit consisted of one share and one warrant. Each warrant is exercisable to purchase one common share at \$1.50 for a period of one year.
- \$30,000 from warrants being exercised as part of the December, 1989 private placement.
- \$50,000 from the exercise of directors options for 35,000 shares.
- \$206,819 from the settlement of creditors liabilities through the issue of common shares.

Subsequent to year-end, certain Silver District claim holders agreed to accept 9,200 common shares in settlement of 1990 royalty payments.

Outlook

With the positive outlook for fluorite, the Company's potential continues to improve. Hydrofluorocarbon and automobile manufacturers are beginning to make announcements of the shift to environmentally friendly HFCs. Dupont has announced the construction of \$100 million facility in Corpus Christi, Texas to annually produce 70 million pounds of HFC-134a and HFC-124, both of which are non-ozone depleting CFC alternatives. BMW will make the change with the 1992 model year for certain models. General Motors has announced this change for the 1993 model year.

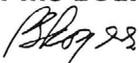
The impact of changing from CFC to HFC/HCFC products is already influencing the fluorite market. Increased fluorite demand should result in higher fluorite prices.

Silver has been a depressed market for several years due to excess supply, however silver forecasters have predicted this situation will change in the mid-1990's. The Company remains optimistic.

The Company's management is enthusiastic about the Company's future as worldwide environmental considerations gain momentum and become increasingly important.

The Board of Directors wish to thank all our shareholders for their continued support.

On Behalf of the Board of Directors



Philip J. Rogers, CA, President, October 28, 1991

SILVER DISTRICT PROPERTY

Recent increases in price and demand for fluorite have added a significant new dimension to the Silver District property. Silver Glance can earn a 100% interest in this property subject to a 1 1/2% net smelter return. The Silver District property consists of a series of silver-fluorite deposits occupying an area of approximately twelve square miles in La Paz County, Arizona, about five miles east of the Colorado River and 50 miles north of the city of Yuma, Arizona. Access from Yuma is by means of a two-lane highway north to the village of Martinez Lake, a distance of about 35 miles, then by a gravel and dirt county road 15 miles to the property.

Reserves

The silver-fluorite deposits occur as a series of tabular veins controlled by brecciation and dilation zones along three northerly-trending fault structures. Fourteen discrete deposits all within two miles have been identified to date, of which ten appear to have current economic potential. Preliminary open pit reserves for silver, lead and fluorite are tabulated below.

The reserve calculations are based on exploration comprised of 300 drill holes (39,500 feet), 37 bulk samples (10 to 30 tons each), a pilot mill operation and extensive bench scale metallurgical tests by the New Jersey Zinc Exploration Company.

Fluorite — Uses, Economic and Background

Fluorite, and its commercial analogue fluorspar, is marketed in three major grades: acid, (referred to as acidspars), ceramic and metallurgical. All of the deposits at the Silver District are of acidspars quality. Acidspars (contains a minimum of 97% fluorite) is an industrial mineral with a broad spectrum of uses. It is considered a strategic and critical commodity by virtue of the United States' dependence on foreign supply. About half the world's production of acidspars is used in the manufacture of hydrofluoric acid, which has a variety of uses, the most important of which is in the chemical industry where the manufacture of fluorocarbons such as solvents, resins, plastics, films, refrigerants and aerosol propellants consume large quantities of hydrofluoric acid. There is only one United States producer of acidspars, Ozark Mahoning Co., which produces about 66,000 tons per year.

The growing acceptance worldwide that the chlorine content in chlorofluorocarbons (CFC's) leads to serious ozone layer depletion and the demand for replacement products such as hydrofluorocarbons (HFC's) has enhanced the fundamentals for acidspars. Both DuPont and Atochem (Paris) are in the planning stages of building large HFC manufacturing facilities, especially HFC-134a, the replacement refrigerant to CFC-12. HFC-134a uses twice the amount of fluorite for its manufacture than the CFC-12 which it replaces. Most industry experts predict large increases in hydrofluoric acid production to replace CFC's over the next few years. The U.S. Bureau of Mines in their recent review report that the outlook for acidspars is good in the short term and excellent in the long term. Accordingly, many producers plan to increase production. Demand for fluorite and current prices of \$140 per ton are expected to increase over the long term as CFC replacements move into full production.

Preliminary Project Economics (U.S.\$)

* Proven Reserves:	3 million tons, 4.95 oz/ton silver	
	1.8 million tons grading 14% fluorite	
* Recoverable Metals:	10 million ounces of silver	
	200,000 tons of acid-grade fluorite	
	5 million pounds of lead	
* Estimated Capital Cost:	\$20 million	
* Production Rate:	1,200 tons per day	
* Minimum Project Life:	Seven years	
* Metal Value Per Ton:	Silver @ \$4.25/ounce	\$12.45
	Fluorite @ \$140 per ton	15.68
	Payable Lead @ \$0.40/lb.	3.64
Total Metal Value Per Ton:		<u>\$31.77</u>

Ore Reserve Table

Zone	Silver (opt)	% Lead	% Fluorite	Tons
Proven:				
Clip	7.53	-	-	400,496
West Clip	5.83	-	-	149,182
Amelia	6.95	-	-	205,634
Revelation	4.52	-	-	656,818
Black Rock	2.60	1.00	10.9	1,043,500
State	6.05	-	-	126,030
Geronimo	4.92	-	-	193,000
Maxie	4.99	-	-	231,364
Padre Keno	1.10	-	20.8	318,100
Silver King	-	-	17.4	416,300
Silver Reserves	4.61	-	-	3,006,024
Fluorite Reserves	-	-	14.19	1,777,900
Possible:				
Papago	4.13	-	-	240,000
Maxie	2.16	-	-	270,000
Mendivil	2.01	-	-	114,300

* Operating Costs	Mining @ 3.4:1 stripping ratio	\$6.00
Per Ton:	Milling @ 1,200 tons per day	8.40
	Administration	1.00
Operating Costs Per Ton:		<u>\$15.40</u>
* Estimated Capital Payback:	Three Years	
* Mining Method:	Open Pit by Contractor	
* Milling:	Heavy Media-Flotation-Cyanidation	
* Estimated Recovery Rates:	Silver - 65%	
	Fluorite - 80%	
	Lead - 65%	
* Royalties:	1 1/2% NSR to Vendor	

SILVER GLANCE RESOURCES INC.
Consolidated Balance Sheet
July 31, 1991

	1991	1990
ASSETS		
CURRENT ASSETS		
Cash	\$ 131,680	\$ 5,347
Miscellaneous receivables	825	688
	<u>\$ 132,505</u>	<u>\$ 6,035</u>
MINERAL PROPERTIES AND CLAIMS, at cost (Note 3)	7,519,400	7,519,400
DEFERRED EXPLORATION EXPENDITURES (Note 3)	1,339,245	1,283,761
FIXED ASSETS, net of accumulated depreciation of \$4,615 (1990 - \$3,961)		654
	<u>\$ 8,991,150</u>	<u>\$ 8,809,850</u>

LIABILITIES AND SHAREHOLDERS EQUITY

CURRENT LIABILITIES		
Trade accounts payable	\$ 10,892	\$ 34,352
Advances from related parties (Note 5)	12,648	22,459
	<u>\$ 23,540</u>	<u>\$ 56,811</u>
LIABILITIES TO BE SETTLED BY ISSUE OF SHARES	23,000	164,161
	<u>\$ 46,540</u>	<u>\$ 220,972</u>
SHAREHOLDERS' EQUITY		
Share capital (Note 4)	\$ 11,010,615	\$10,567,546
Shares subscribed for, not yet issued		18,000
Contributed surplus	77,219	77,219
Deficit		
Balance, beginning of year	(2,073,887)	(1,476,967)
Net loss	(69,337)	(596,920)
Balance, end of year	<u>\$ (2,143,224)</u>	<u>\$ (2,073,887)</u>
	<u>\$ 8,944,610</u>	<u>\$ 8,588,878</u>
	<u>\$ 8,991,150</u>	<u>\$ 8,809,850</u>

APPROVED BY THE DIRECTORS:

DIRECTOR



DIRECTOR



(See accompanying notes)

SILVER GLANCE RESOURCES INC.
Consolidated Statement of Operations
For the year ended July 31, 1991

	1991	1990
EXPENSES		
Legal, accounting and audit	\$ 26,197	\$ 36,654
Directors' remuneration (Note 5)	18,016	16,504
Investor promotion (Note 5)	12,712	32,501
Shareholder communication	7,003	9,957
Office and miscellaneous	3,311	5,720
Depreciation	654	1,420
Write off of claim cost and deferred exploration expenses on Salt Chuck property whose option expired		471,281
Property investigation costs		10,534
Rent (Note 5)		9,927
Automobile		185
Travel		20
	<u>\$ 67,893</u>	<u>\$ 594,703</u>
OTHER EXPENSE		
Foreign exchange loss	\$ 1,444	\$ 2,217
NET LOSS	<u>\$ 69,337</u>	<u>\$ 596,920</u>
NET LOSS PER SHARE	<u>\$ 0.06</u>	<u>\$ 0.57</u>
WEIGHTED AVERAGE NUMBER OF SHARES OUTSTANDING	<u>\$ 1,203,166</u>	<u>\$ 1,048,815</u>

Consolidated Statement of Deferred Exploration Expenditures
For the year ended July 31, 1991

	1991	1990
SILVER DISTRICT (United States)		
Preproduction royalties (Note 4)	\$ 40,394	\$
Other	9,280	27,028
Project salaries (Note 5)	5,396	28,218
Drilling	89	15,749
Assays		1,220
	<u>\$ 55,159</u>	<u>\$ 72,215</u>
NADIRA PROPERTY (Canada)		
Project salaries (Note 5)	\$ 325	\$ 1,125
Other		719
Accommodation and board		387
Assays		366
	<u>\$ 325</u>	<u>\$ 2,597</u>
SALT CHUCK PROPERTY (United States)		
Travel		\$ 16,343
Project salaries (Note 5)		10,535
Accommodation and board		4,166
Other		1,745
Automobile expenses		1,100
		<u>\$ 33,889</u>
TOTAL CURRENT YEAR EXPENDITURES	<u>\$ 55,484</u>	<u>\$ 108,701</u>
BALANCE, BEGINNING OF YEAR	1,283,761	1,646,091
WRITE OFF OF SALT CHUCK PROPERTY		(471,031)
BALANCE, END OF YEAR	<u>\$ 1,339,245</u>	<u>\$ 1,283,761</u>

(See accompanying notes)

SILVER GLANCE RESOURCES INC.
Consolidated Statement of Changes in Cash Resources
For the year ended July 31, 1991

	1991	1990
OPERATING ACTIVITIES		
Net loss	\$ (69,337)	\$ (596,920)
Items not involving a cash outlay		
Depreciation	654	1,420
Write off of deferred exploration expenses and mineral claims		471,281
	<u>\$ (68,683)</u>	<u>\$ (124,219)</u>
Increase in current assets		
Accounts receivable	(137)	(688)
Decrease in current liabilities		
Trade accounts payable	(23,460)	(7,695)
Preproduction royalties payable		(42,036)
Advances from related parties	(9,811)	(55,493)
	<u>\$ (102,091)</u>	<u>\$ (230,131)</u>
FINANCING ACTIVITIES		
Issue of common shares	\$ 443,069	\$ 162,000
Shares subscribed for but unissued	(18,000)	18,000
Increase (decrease) in liabilities settled by issue of shares	(141,161)	64,161
	<u>\$ 283,908</u>	<u>\$ 344,161</u>
INVESTING ACTIVITIES		
Deferred exploration expenditures, net	\$ (55,484)	\$ (108,701)
INCREASE (DECREASE) IN CASH	\$ 126,333	\$ 5,329
CASH, BEGINNING OF YEAR	5,347	18
CASH, END OF YEAR	<u>\$ 131,680</u>	<u>\$ 5,347</u>

(See accompanying notes)

AUDITORS' REPORT

To the Shareholders of Silver Glance Resources Inc.:

We have audited the consolidated balance sheet of Silver Glance Resources Inc. as at July 31, 1991 and the consolidated statements of operations, deferred exploration expenditures and changes in cash resources for the year then ended. These financial statements are the responsibility of the company's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with generally accepted auditing standards. Those standards require that we plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In our opinion, these consolidated financial statements present fairly, in all material respects, the financial position of the company as at July 31, 1991 and the results of its operations, deferred exploration expenditures and the changes in its cash resources for the year then ended in accordance with generally accepted accounting principles.

McLean Majdanski
Chartered Accountants
Vancouver, B.C.
October 17, 1991

SILVER GLANCE RESOURCES INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
JULY 31, 1991

1. BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS OF A DEVELOPMENT STAGE ENTERPRISE

The Company was incorporated on July 18, 1979, under the Company Act of B.C., for the purpose of exploring and developing various mineral, oil and gas claims. Substantially all of the Company's assets consist of mineral properties and claims and deferred exploration expenditures, described further in Note 3. The Company is still a development stage enterprise because its activities have been restricted to the development of mineral properties and it has yet to develop one of its properties into a producing mine. The recoverability of the Company's investment in mineral properties and claims and deferred exploration expenditures is dependent upon the confirmation of economically recoverable reserves, the ability of the Company to obtain necessary financing to complete its development plans and upon future successful operations.

The consolidated financial statements are prepared on a going concern basis which assumes the Company will realize its investment in its assets and discharge its liabilities through the normal course of its operations. As indicated above, there is uncertainty over the Company's ability to realize its investment in its assets, and discharge its liabilities through the normal course of its operations and, if this uncertainty is not resolved, the basis of presentation of the consolidated financial statements may no longer be appropriate.

2. SIGNIFICANT ACCOUNTING POLICIES

(a) Principles of Consolidation

The consolidated financial statements include the accounts of Silver Glance Resources Inc. and its wholly-owned U.S. subsidiary, Orbex Resources Inc.

(b) Deferred Exploration Expenditures

The Company follows the policy of deferring all exploration expenditures (net of recoveries) until such time as production in commercial quantities commences or the interests in the properties are sold or abandoned. There has been no adjustment for abandoning individual claims that are part of a larger property being explored. Amounts are recorded at cost to the Company except when the cost is reduced by the related income tax benefits realized by investors.

(c) Income Taxes

The Company uses the tax allocation method to account for income taxes. Under this method, provision for taxes is made in the year of recognition of accounting income as opposed to when such items are recognized for income tax purposes. The difference between the provision for taxes and taxes currently payable is reflected as deferred income taxes.

Since inception, the Company and its subsidiaries have incurred a net loss for income tax and financial reporting purposes. Accordingly, no provision for income taxes has been recorded in the accompanying consolidated financial statements. Further, no benefit for the utilization of net operating losses has been recorded in the accompanying consolidated financial statements.

(d) Foreign Currency Translation

Monetary assets and liabilities denominated in foreign currencies are translated at the rates of exchange prevailing at the balance sheet date. Non-monetary items are translated at rates in effect at the dates the assets were acquired or obligations incurred. Revenue and expense items are translated at the average rate during the year. Gains and losses arising from changes in exchange rates are included in operations.

(e) Net Loss per Common Share

Basic net loss per common share has been computed using the weighted average number of common shares outstanding during the year. The conversion of all obligations and the exercise of all share options would be antidilutive.

(f) Depreciation

The Company depreciated furniture, fixtures and equipment on the declining balance basis at the following annual rates:

Furniture and fixtures	20%
Equipment	30%

The fixed assets are now fully depreciated.

3. MINERAL PROPERTIES AND CLAIMS AND DEFERRED EXPLORATION EXPENDITURES

Properties	1991		1990	
	Mineral Properties and Claims	Deferred Exploration Expenditures	Mineral Properties and Claims	Deferred Exploration Expenditures
Silver District	\$ 7,394,400	\$ 1,256,436	\$ 7,394,400	\$ 1,201,277
Q.R. Properties	112,500	15,569	112,500	15,569
Nadira	12,500	15,697	12,500	15,372
Gold Dyke		51,543		51,543
	<u>\$ 7,519,400</u>	<u>\$ 1,339,245</u>	<u>\$ 7,519,400</u>	<u>\$ 1,283,761</u>

(a) Silver District

A significant portion of the Company's assets is the investment in the Silver District mining property in Arizona. Management is of the opinion that this project contains economically recoverable ore reserves and intends to proceed with further development plans, primarily in the form of a feasibility study.

The Company acquired its interest, which originally consisted of a lease entitling the Company to mine the property, from The New Jersey Zinc Exploration Company ("NJZEC"), a subsidiary of Gulf & Western Industries, Inc., on May 31, 1983. The acquisition of the mining property was recorded at an appraised value of U.S. \$6,000,000 (Cdn. \$7,394,400) and was satisfied by the issuance of 110,000 common shares (22,000 common shares after the 1990 share restructuring) and assuming minimum royalty obligations.

Effective March 1, 1988, the lease agreement was replaced by an option agreement which was further amended on August 23, 1991. Under the terms of the amended agreement, the Company can acquire the mineral rights from NJZEC if they incur, by February 28, 1993, U.S. \$500,000 of approved expenditures relating to the maintenance, exploration and development of the property. They have incurred U.S. \$208,170 of such expenditures to July 31, 1991. The Company can terminate this agreement without any further liability at any time, providing they are current on any maintenance payments such as taxes and preproduction royalties.

In addition, the option agreement requires the Company to pay:

- (i) preproduction royalty obligations to the claim holders, which are subject to negotiation on a claim-by-claim basis, and which management estimates will not exceed U.S. \$35,000 annually;
- (ii) the Company has also agreed to make annual royalty payments to NJZEC as follows:

September 1, 1991	\$10,000
March 1, 1992	15,000
March 1, 1993	20,000
March 1, 1994	25,000

which will be applied against the minimum royalty payable for any year subsequent to the commencement of commercial production, but do not qualify as authorized expenditures;

- (iii) annual production royalties, payable to NJZEC, which will commence with the earlier of commercial production or March 1, 1995, and which are equal to the greater of:

- U.S. \$150,000, as long as production is sustained once commercial production is achieved,
- the greater of:
 - (1) 1 1/2% of the gross value of production, and
 - (2) 10% of the net operating profits derived from the production of silver at a price up to U.S. \$11 per ounce,
- and
- additional royalties equal to 25% of the excess of silver value received over U.S. \$11 per ounce and 25% of the excess of gold value over U.S. \$500 per ounce;
- and

- (iv) an annual production royalty on the Maxie claims, which represent less than 10% of total estimated reserves, of a minimum of \$50,000 annually or 5% of net smelter returns.

In 1990, the Company negotiated the settlement of a \$100,000 preproduction royalty obligation by issuing 10,000 common shares which had a market value, at the time of issuance, of \$1.05 per share or \$10,500. These preproduction royalties are recorded in deferred exploration costs based upon the market value of the Company common shares on the dates those shares were issued. Current year preproduction royalty payments of \$23,000 were settled by issue of 9,200 common shares at \$2.50 per share subsequent to the year end.

(b) Other Properties

The Company's other properties are in the exploration stage and, based on the information available to date, the Company is unable to determine whether these properties contain economically recoverable ore reserves.

4. SHARE CAPITAL

(a) Changes to Authorized Share Capital

As of January 23, 1990, the Company's shares were consolidated on a basis of five to one. The post consolidation authorized share capital of the Company was then increased from 4,000,000 to 20,000,000 common shares without par value.

(b) Issued and Outstanding

	Shares	Amount
Balance, July 31, 1989	4,756,952	\$ 10,405,546
Issued for cash on exercise of a director's option	100,000	33,000
Issued for cash (Also issued were 450,000 warrants to purchase shares at \$0.20 per share of which 290,000 have been exercised.)	450,000	67,500
Balance, January 23, 1990	<u>5,306,952</u>	<u>\$ 10,506,046</u>
Consolidation of share capital by exchanging five outstanding shares for one new share on January 23, 1990	1,061,390	\$ 10,506,046
Issued for cash on exercise of director's options	11,000	11,000
Issued for cash on exercise of warrants	40,000	40,000
Issued to satisfy certain trade liabilities in March, 1990	10,000	10,500
Balance, July 31, 1990	<u>1,122,390</u>	<u>\$ 10,567,546</u>
Issued for cash on exercise of warrants	30,000	30,000
Issued to satisfy certain payables	195,258	206,819
Issued for cash on exercise of options	35,000	50,000
Issued for cash by private placement (Also issued were 150,000 warrants to purchase shares at \$1.50 per share of which none have been exercised)	125,000	156,250
	<u>1,507,648</u>	<u>\$ 11,010,615</u>

(c) Options and warrants

1. Option

To whom	Number of Shares	Option Price	Date Granted	Expiry Date
Directors	40,000	\$1.60	June 17, 1991	June 17, 1993
Employee	15,000	1.60	June 17, 1991	June 17, 1993
Employee	50,000	1.10	April 25, 1990	April 25, 1992

2. Warrants

Employee	112,000	1.50	July 17, 1991	July 17, 1992
Supplier	13,000	1.50	July 17, 1991	July 17, 1992

5. RELATED PARTY TRANSACTIONS

The following is a summary of the cost of services provided to the Company by related parties:

	1991	1990
Directors' remuneration	\$ 18,016	\$ 16,504
Accounting services provided by a director	8,100	8,250
Geological consulting services by a company controlled by an officer of the Company	5,396	45,500
Office space sublet from a company controlled by a director		9,927
	<u>\$ 31,512</u>	<u>\$ 80,181</u>

Related companies also pay expenses on behalf of the Company for which they are subsequently reimbursed. In addition, they advance monies to the Company to allow it to pay other expenses. The advances from related parties shown on the balance sheet represents the amounts owing for services performed as well as advances made in excess of expense reimbursements.

6. SEGMENTED INFORMATION

The Company operates principally in the United States in the mining industry.

CORPORATE INFORMATION

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Secretary

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LISTING

Vancouver Stock Exchange
Symbol: SXG