

September 10, 1943

NM Mine File No. 179

PEERLESS MINE  
Grant County,  
New Mexico

Brought to our attention by H. O. Howard  
275 Coast Boulevard  
La Jolla, California

Two claims owned by C. B. Monroe of Silver City, New Mexico, and \_\_\_\_\_ Martin. These claims are located less than a mile from the town of Central, New Mexico and there is a good road from the mine to Central, and from Central to the Black Hawk mill, the road is paved.

The property is under option to New Mexico Ore Processing Company, at option price of \$60,000; royalty, 10%. Other conditions of lease and option to New Mexico Ore Processing Company not learned.

In a discussion on September 8th with Daniel W. Schmitt, P. O. Box #6, Central, New Mexico, and his associate, Parke Florea, of Central, New Mexico, the following information was obtained.

Schmitt considers that he is sufficiently in control of the New Mexico Ore Processing Company so that his recommendations will have the company's approval. The company is organized with a capital of 25,000 shares of which 18,500 shares are owned by Schmitt. Florea is also an owner of stock, amount not stated.

Some years ago the A. S. & R. Co. had an option on the Peerless claims for a reported price of \$300,000 upon which they made payments totalling \$40,000. Some underground work was done by that company and two holes were drilled. One of these holes was drilled from the 300' level and it encountered the vein fracture, but it did not contain ore. Schmitt thinks this was due to the fact that the rake of the ore shoot had not been properly taken into consideration.

The other drill hole of the A. S. & R. Co. was from the surface and was quite deep, but at a rather low angle. The drill encountered some very hard formation which kept breaking the bits so finally the A. S. & R. Co. gave up its option. They apparently freely stated that the underground drill hole encountered no ore, but would give out no information as to what was found in the long drill hole from the surface.

Schmitt came down to New Mexico from Colorado to inspect a property for Colorado people but could not give it his approval; but while in that vicinity he saw the Peerless Group and, thinking it had possibilities, an option was secured. He is in charge of operations for the company and in the work which has been done, he has opened up an ore body from which they are now shipping at the rate of about 600 tons per month. Since April 1943 they have shipped about 4,100 tons of ore, the smelter or mill returns, amounting to a little over \$106,000. Some of the earlier shipments were made to a custom mill which effected only about a 40% recovery. In the last few months the shipments have been made to the Black Hawk mill of the A. S. & R. Co. where much better recoveries have been made, and the milling charge was \$3.50 per ton. There is a 60¢ truck haul from the mine to the Black Hawk mill.

The ore being shipped is mine run and the vein width averages about 11 ft.

Due to the result of Schmitt's development work, the A. S. & R. commenced to take interest in the property and Schmitt made them an offer to sell for \$175,000, with a \$50,000 cash payment. Their engineers visited the property, but there was so much delay in their making a decision that, on account of the continuing improvement as a result of the development work, the offer was withdrawn and, as the owners felt they were entitled to a higher price. Schmitt states that they are entirely free from any obligation to the A. S. & R. and free to deal with others.

At the present time Schmitt says that the developed ore has a length of approximately 250' with a height of 90' and an average thickness of 11', and that the ore in sight can reasonably be considered to be 20,000 tons, plus. The average grade of this body of ore will probably be 7% to 9% lead, 12% to 17% zinc, .25% copper, 3 oz. in silver and .02 oz. gold.

His proposal at this time is a price of \$220,000 which includes the price of \$60,000 to be paid the owners, and any commission due H. O. Howard. Schmitt's feeling is that a cash payment of something like 25% to 30% of the purchase price is justified by the ore showing and two years or longer would be given for the payment of the balance at stated intervals.

Schmitt says that he has A, B, and C premiums. His attention was called to the fact that some of these premiums might be revoked at any time and, as the purchase price was based upon the A, B, and C premiums, there certainly should be a modification in the price when and if premiums were revoked.

Schmitt did not seem to think that such an adjustment would be unwarranted.

A reasonable time (not decided upon) will be given to permit some further prospecting of the property by drilling or otherwise, as Schmitt admitted that the purchaser would have to know of the existence of more ore than is now developed in order to justify such a purchase price and terms.

Schmitt says that Harrison Schmitt says the Peerless more nearly resembles the Groundhog Mine, about two miles distant, than anything else in the district. Perhaps some information can be gained from Harrison Schmitt, notwithstanding he does a great deal of work for the A. S. & R.

At the present time Schmitt is working 18 men, principally Mexican labor, and pays 90¢ per hour for miners, 80¢ for muckers, and 70¢ for other labor. He has had no trouble in securing all the labor necessary.

An engineer in going to the property should plan upon stopping at one of the two hotels in Silver City, which is about ten miles from the property. There is no hotel at Central.

Schmitt has a telephone at his office in Central connected with the Silver City telephone exchange and telegrams to him at Central should be marked "by telephone from Silver City" and will reach him promptly.

The obligations under the lease and option from the owners should be inquired into.

PW

PW:RC



## Report On

### P E E R L E S S   M I N E

Grant County, New Mexico

#### INTRODUCTION

The following is a brief report of an examination made on the Peerless mine and adjacent territory of the Hanover-Central District, New Mexico. It was examined on September 17th, 18th and 19th, 1943 in company with Mr. Arthur Heuck. Zinc and lead are the chief valuable metals present.

#### CONCLUSIONS

The Peerless ore body as now exposed, notwithstanding good values in lead and zinc, is not a particularly attractive venture. The ore bodies are limited in tonnage, and while similar lenses may be developed laterally, this chance is not particularly likely. The fractures are strongly persistent and would very probably intersect in depth the underlying favorably replaceable limestone members of the Oswaldo and Hanover formations. Strong mineralization occurs in the open fissure portions of the fractures in the upper part of the vein, which occurs in relatively poorly replaceable quartz diorite. Coupled with the fact that other properties in the district have discovered extensive ore bodies in these formations where vertical fractures, forming channel-ways of ore solutions, have developed in replacement deposits, these features indicate



a rather favorable chance of encountering a similar type of ore body at the intersection of the Peerless vein system and the Oswaldo and Hanover lime formations. The depth of these rocks below the level of the surface at the Peerless is approximately 1,000 feet. By drilling vertical holes from the 300-foot level the maximum depth would be lessened by 300 feet. The work could be done from the present northwest and southeast crosscuts on this level.

These geologic features indicate a remote gamble that commercial ore bodies could be proven by a fence of a minimum of six diamond drill holes at a cost of approximately \$25,000. In view of the exorbitant price and terms that Mr. Schmitt and his company are asking for the property, the expenditure and risk of this money is not justified. However, should reasonable price and terms be effected at some future time, it is my opinion that this gamble would be warranted. Similar projects in the district have proven successful, on much less underground showings than this property has. Of course, it is admitted that the six holes would give only meager information as to the size and shape of the ore body, but from these holes it is felt that sufficient evidence could be gained to determine the justification of further drilling.

#### LOCATION

The property is located about one mile east of the center of the village of Central, near the southwestern limits

of the Hanover-Central Mining District, in Grant County, New Mexico. It is reached from Central over the old Hanover road.

#### PROPERTY

The property is composed of two patented lode mining claims: the Peerless, and Peerless No. 2. These claims are adjoined on the east by the Manhattan, St. Louis, St. Louis No. 2, and the Pleasant View, all of which are patented and belong to Lewis Suchoff of Central.

On the north the Peerless claims are bounded by the Fort Bayard Military Reservation. It is understood that the policy of the Reservation has been not to grant or encourage any mineral leases within its boundaries, although Federal Statutes provide for leasing privileges based upon 10 per cent net royalty value of the ores mined, etc.

#### OWNERSHIP

The claims are owned jointly by Mr. C. B. Monroe, a furniture dealer in Silver City, New Mexico, and a Mr. Martin, a school teacher in Albuquerque, New Mexico. These men have presently leased the claims on a straight 10 per cent net royalty basis (transportation and smelting charges deducted) to the New Mexico Ore Processing Company of Colorado Springs, Colorado. Daniel W. Schmitt of Central, New Mexico, is the manager and principal stockholder of the company.

The company was organized with a capital of 25,000 shares of which Mr. Schmitt owns 18,500. Parke Florea, Mr. Schmitt's assistant at the mine, also owns some stock. Quite independently and apart from the lease, Monroe and Martin have given a

verbal option to Schmitt to purchase the property for \$60,000.00.

Some years ago the Asarco (A. S. & R. Co.) had an option on the Peerless mine for a reported price of \$300,000.00. According to E. L. Walker of Central, former superintendent for Asarco at this property, the company paid a total of \$20,000.00 in payments on the purchase price, after which they dropped the property. In conversation with Mr. Philip Wiseman, Dan Schmitt stated his price to be \$225,000.00, which included the \$60,000.00 to be paid Monroe and Martin and any commission due H. O. Howard. Mr. Schmitt further stated he wanted 25 per cent to 30 per cent of the purchase price down, justified by him by the tonnage and grade of ore he claims is now developed.

Over the past year or so the New Mexico Ore Processing Company has developed the mine and has been shipping ore to the Black Hawk mill at the Ground Hog mine of the A. S. & R. Co. Due to the result of this work, Asarco became interested again, and, after an examination of the property by Harrison Schmitt of Silver City, New Mexico, considered an offer by Mr. Schmitt to sell for \$175,000.00 with \$50,000.00 cash payment. On September 10, 1943 when Dan Schmitt talked with Mr. Wiseman, he stated that because of so much delay in making a decision, he had withdrawn his offer to Asarco. He specifically stated that he was entirely free to deal with others and was under no obligation to Asarco.

Upon arriving at the property a peculiar chain of circumstances indicated that Dan Schmitt was not free of Asarco.



Mr. Hendricks of Shattuck-Denn was also in Silver City in regard to the Peerless, but presumably to pick up 500 pounds of ore for testing purposes. It appeared from this that we were being placed in an unfavorable position and were obstructing any deal Asarco may have been disposed to make. A telephone call to William H. Loerpabel, Manager of the Southwest Mining Division of the A. S. & R. Co., disclosed that on his return trip from this office Dan Schmitt had stopped in Tucson and had given Asarco ten days' additional time, as Loerpabel had not received a reply from H. A. Guess in New York as to their reaction.

Notwithstanding this mix-up, since an examination of the property had been already started by Mr. Heuck, it was continued to conclusion. After completing the examination, Dan Schmitt was informed of our knowledge of the ten-day additional option. When so confronted he made several attempted explanations but offered none that answered satisfactorily. He was informed that our company was not interested in the property and that furthermore the mine was not worth the price he was asking. Dan Schmitt finally submitted a price of \$175,000.00 with a three-month testing period, at the end of which time \$50,000.00 was to be paid with the balance in equal payments distributed over a 4-year period in the event we were interested, should Asarco drop out. He was asked to send a letter of confirmation to this effect to the office, but he has never done so.

Asarco agreed to advise us if they dropped the option. On October 10, 1943 Harrison Schmitt telegraphed us to the effect that Asarco had decided against any further consideration of the property. Dan Schmitt also advised us to this effect, and the decision later was confirmed in this office by Mr. Loerpabel.

Dan Schmitt was notified that we had not received a confirmatory letter of his proposition and was asked to forward one to us. The matter now stands at this stage. The terms and price are too steep for the long-shot geological gamble of the property, and without extremely more favorable price and terms, further interest should be suspended.

#### PHYSICAL FEATURES

The Hanover-Central Mining District is in a mountainous and structurally disordered province which incorporates the features of both the Mexican Highland Basin range and the plateau volcanics of Colorado. The Peerless group lies along the lower foothills of the mountains, just before they merge southwestwardly into a featureless desert which continues for many miles. The altitude of the region ranges from 6,000 to 6,500 feet above sea level. The topography of the Central area to the south is flat to gently rolling hills but is bordered by rugged hills of volcanic flows to the southeast.

A semi-arid climate exists with an average temperature of 55°. The rainy season continues from early July through August with local thunder storms and showers occurring almost

daily. The annual precipitation is 17 inches, and the snow-fall totals 16 inches.

Vegetation is scant in the immediate area of Central. Few scattered scrub oak and mountain mahogany occur, but good stands of aspen, oak and coniferous trees grow on the higher slopes of the region.

All streams of the district are intermittent. A few springs occur along fault lines. Water is generally obtained from wells several hundred feet deep to assure a sufficient supply. The town of Santa Rita procures its water from wells 600 to 2,000 feet deep, but elsewhere the depth of good flowing wells varies between 200 and 300 feet. Hardness of the water is 27 parts in 100,000. The ground water level approximates the same elevation as the present stream levels, water in shafts and wells rising to the general level of the nearest large arroyo.

#### GENERAL GEOLOGY

Sedimentary rocks exposed include the Mississippian, Pennsylvanian, Cretaceous, Tertiary and Quarternary formations. Late Cretaceous and early Tertiary intrusive rocks, Tertiary - miocene dikes, and lava flows have invaded, cut and covered these sediments. The Tertiary dikes and flows are mineralogically nearly alike. Rocks representing the Pre-Cambrian and every system of the Paleozoic era outcrop in the surrounding territory and dip under the Peerless mine. In the vicinity of the property, quartz diorite sills constitute about 35 per cent



of the rock section above the Cambrian. They have been observed in the Devonian and underlying formations and have attained thicknesses of 750 feet. There are two ages of sills but with marked petrographic similarities, probably phases of the surge of the same parent magma.

Apparently the sills were injected into the sediments prior to a regional folding. The Central district, and the Peerless mine in particular, lies in the Western flank of a minor anticlinal fold which is part of a more pronounced regional warping. Granodiorite stocks and dikes have intruded the sediments after folding and have contributed further to their deformation.

The district is traversed by numerous faults, the greatest number of which strike northeasterly. The faults in the area of the mine consist of several strong breaks linked by zones of smaller subordinate fractures. The fault zone of the district is roughly two miles wide. These northeasterly trending faults are complementary to a set of strong regional, northwesterly striking breaks. The faults are normal and generally dip southeasterly at steep angles. Many of the faults within the area split and fray out. Displacement varies considerably, the greatest being reported as 1300 feet horizontally. There has been recurrent movement on many.

Earliest faulting occurred following the period of sill injections, and many are slightly mineralized. A second opening of the fracture zones occurred and was followed by the intrusive

granodiorite stocks and dikes. Many of the dikes followed along the previous fracture planes. The next period of faulting took place along the lines of the first zone and often followed the dike walls. The important ore deposits are in the fault fissures of this period.

Following the period of fracturing and ore deposition, the area was eroded and many of the ore deposits were truncated and oxidized. Then followed a period of explosive volcanic activity which covered the region with lavas, tuffs, etc. Re-opening of the earlier breaks ensued with injections of latite porphyry dikes. A third mineralizing surge supervened this activity. Extrusion of lavas was followed by the current period of erosion which has stripped most of the igneous rocks from the area.

The foregoing is meant to be only a brief summation of the broader geological features of the district as they are related to the geology of the Peerless mine. For a fuller description reference should be made to U.S.G.S. Bulletin No. 859; "Geology of the Santa Rita Mining Area, New Mexico" by A. C. Spencer and Signey Paige; U.S.G.S. Bulletin No. 870, "Geology and Ore Deposits of the Bayard Area, Central Mining District, New Mexico" by Samuel Lasky; and Bulletin of the Geologic Society of America, Vol. 50, entitled "The Pewabic Mine" by Harrison Schmitt.

#### ORE DEPOSITS - GENERAL

There are three periods of hypogene mineralization generally recognized within the area. The first period followed

the quartz diorite sills and is genetically related to them. The mineralization of this period consists chiefly of quartz and pyrite.

The second period followed the injection of granodiorite porphyry dikes. Except for the magnetite deposits occurring in the sill member of the Syrena formation, and which are a contact metamorphic phase, the mineralization occurs in the fissures re-opened by the second period of faulting and as replacement deposits in limestone where intersected by these fissures. Ore of this second surge of mineralization consists of zinc, lead and copper, named in order of their abundance. Practically all of the minerals are argentiferous but rarely contain more than a trace to 0.05 ounces of gold.

The third period mineralization is commercially unimportant. It is related to the Tertiary quartz latite dikes which were injected after the erosion, truncation and oxidation of the earlier periods of mineralization.

The amount of ore in the deposits of the second period is a direct function of the amount of fracturing and replaceability of the wall rock. Alteration is generally that of silification and pyritization. Replacement shows strongest in the quartz diorite and apparently weakest in the granodiorite. Occasionally there are some disseminated particles of sulphides. Veins belonging to this second period of mineralization included the Ground Hog vein in which the Ground Hog, Lucky Bill and San Jose mines are located; the Ivanhoe, the Tenderfoot,



Owl, and the San Jose Mountain veins; also those veins on the Goodyear and Osceola claims, together with the Boston and Bricket, Peerless, Bull Frog, Quitter, Manhattan and Mountain View veins, which are smaller than those first named.

In addition to the deposits within the fissure walls, extensive replacement deposits have been found in the more easily replaced sedimentary rocks. Of these rocks the Mississippian formation appears to have been the best host. These deposits are confined generally to the coincidence of the northeast vertical fissures with the favorable lime beds, often being bounded on one side by granodiorite dikes. Small flexures and folds in the sedimentary rocks resulting from the injection of quartz diorite sills, granodiorite intrusion of the Hanover area, and resultant tilting, have localized ore bodies. The Pewabic mine is an example of the extensive replacement deposits occurring in the limestone, notably the garnetized Hanover formation and to a lesser extent the Middle Blue formation of the Pennsylvanian or Magdalena period. The Ground Hog mine is another example wherein apparent bottoming of the ore shoot within the fractured igneous rocks has developed a large replacement deposit of high-grade zinc ore within the underlying limestone. Similarly the Copper Flat mine and the Bull Frog mine have developed replacement ore bodies where these northeast trending fractures have intersected the favorable limestone beds. The extent of these replaced ore bodies is dependent upon the distance from the source of mineralization, as well

as the structural features such as folding and the degree of fracturing of any particular deposits.

#### PEERLESS MINE

The veins of the Peerless mine are northeasterly striking veins, wholly within the Upper Cretaceous, late quartz diorite sill, outcropping north and east of the town of Central. There are six or seven main fracture zones situated within the limits of the two parallel veins. These veins have a maximum length of 1800 feet in strike, but several have an outcrop of only a few hundred feet. To the southeast and to the east, outside the boundaries of the Peerless property, are numerous other northeasterly trending faults and veins which compose the southwestern tip of the greater ore zone of the Central-Hanover-Santa Rita Region. The veins of the Peerless are approaching the westward limit, as well as the southern limit of any known ore occurrence properly belonging to this province of mineralization.

None of the workings of the Peerless mine has penetrated beyond the depth of the quartz diorite sill. The geologic map accompanying this report shows the distribution of the rocks on the surface, as well as two cross sections. These sections indicate a sedimentary rock column underlying the quartz diorite sill, ranging from the Upper Cretaceous Colorado formations, Beartooth, Quartzite, Syrena and Oswaldo formation of the Pennsylvania period, to the Lower Mississippian or Hanover limestone member. The sequence of geologic units in these

map  
missing  
Rite

sections at the Peerless shaft is given in the following tabulation:

<u>Age</u>	<u>Rock</u>	<u>Thickness</u>
Upper Cretaceous	Quartz diorite sill	350 ft.
Upper Cretaceous Colorado Formation	Limy, fossiliferous sand- stone member	50 ft.
Upper Cretaceous Colorado formation	Shale member	70 ft.
Upper Cretaceous	Beartooth, Quartzite, Massive vitreous quartzite	60 ft.
Pennsylvania Syrena formation	Alternating limestone with shale	60' }
Upper Cretaceous	Earlier quartz diorite sill	70' }
Pennsylvania Syrena formation	Alternating limestone with shale	80' }
Pennsylvania Oswaldo formation	Thick shaly, fossiliferous lime with 20' to 30' basal shale (parting shale) (Constitutes host rock for some zinc ores near Hanover. Middle Blue Limestone.)	120 ft.
Mississippian	Lake Valley or Hanover lime, massive slate-gray limestone. Principal host rock zinc ores, Hanover District	200+ ft.

The principal ore deposits and workings of the Peerless property occur in the Peerless vein. This vein dips 76° to the southeast and varies from a few inches to 13 feet in thickness. The vein is developed by a steeply inclined shaft roughly following the dip of the vein to a depth of 320 feet. A second shaft located about 50 feet southwest of the main shaft connects the surface with the 65-foot level.



The 65-foot level is 197 feet long. The vein on this level contains a lens-shaped ore shoot, pinching at both ends to a tight fissure containing only a few inches of ore minerals. The lens is about 160 feet long and varies from its widest point of 12 feet to a few inches. Some small amount of stoping has been done above the 65-foot level, but none of these stopes has continued to the surface.

A second level about 275 feet long has been developed on the 165-foot horizon, of which 200 feet has exposed the lens-shaped ore body of the upper level. At a point about 100 feet southwest of the shaft the vein pinches, showing slight mineralization along tight fractures. At the shaft the vein is widened to about 13 feet, and to the northeast of the shaft at about 100 feet has similarly pinched to a tight fracture zone. The ore on the 165-foot level consists of good zinc with accompanying lead values. Shipments recently have been made from this level by the present lessee. At 65 feet northeast of the shaft, a short crosscut was driven into the hanging wall where a small vein containing pyrite, lead and zinc was cut at about 8 feet from the main vein. A winze was sunk on this ore to a depth of 45 feet where drifts northeast and southwest, totaling 55 feet, were driven on the vein which widened from 1 foot on the 165-foot level to 4 feet on the winze level. The face of the northeast winze level is in poor ore which has narrowed to the tight fissure on the level above. The southwest face of the winze level shows a good

grade of shipping zinc ore. The work has been continued in this direction.

The winze level is about 13 feet vertically above the 250-foot level, which has a total length of about 80 feet. The vein here at its maximum point at the shaft is 10 feet wide and narrows rapidly in either direction to a width of 3 feet on the southwest and 1 foot at the northeast face. The ore on this level is of good grade, and shipments are being made regularly from stopes above the level.

At the present time water stands a few feet below the 250-foot level. In conversation with Mr. E. L. Walker, it was learned that the 300-foot level is now under water and consists of 320 feet of drifting together with a crosscut to the southeast 100 feet long, and a crosscut to the northwest 350 feet long. According to Mr. Walker, the vein was encountered on this level, but it did not have any ore. Mr. Walker was rather positive in stating that he was certain the vein had been reached. However, from the fact that the winze level as driven below the 165-foot level indicates an ore body in the hanging wall, it may be that the work on the 300-foot level did not continue far enough to get the main vein of the fracture zone. On an accompanying map the workings of the various levels are shown, together with a sketch based upon the description by Mr. Walker of the 300-foot level. The exact position of the vein as cut in the southeast crosscut of the shaft is uncertain. It has been shown as approximately the distance from the shaft that he remembers, but upon further

conversation with him it appears that the crosscut could have been 40 feet less in length in this direction and 40 feet farther in a northwesterly direction.

Mr. Walker further stated that a diamond drill hole was driven at an angle of  $45^{\circ}$  from a location in the northwest crosscut. This drill hole was reported to have encountered limestone or shale, probably the shale member of the Colorado formation, at a vertical distance of 400 feet below the surface. This information roughly corresponds to the depth at which these formations might be encountered in the geologic sections already referred to.

The ore body of the Peerless mine appears to be pinching in depth, shortening rapidly laterally, and to a lesser extent in width, as it reaches the 250-foot level. However, the mineralization within this lens is strong and of very good grade. The wall rocks of the vein appear to be fairly well altered. The vein itself is bounded by a footwall and hanging wall fault gouge and occasionally is traversed through the center or one side, splitting the vein by a third fracture. It appears from the mineralization and from the vein that these fractures have been re-opened at least on two occasions, roughly fitting into the general structural and mineralization pattern of the region. The quartz diorite itself is not a good host rock for replacement deposits, and the fractures have confined a relatively narrow shattered zone in which the ore occurs. The veins do not show any tendency to horsetail out or to replace the walls of the vein but are actually a structurally



controlled feature. The fractures and all the faces of the various levels indicate a strong persistence in continuity. It would appear from this and the surface outcrop, which is 1800 feet long, that these fractures may be reasonably expected to penetrate to a depth well beyond the favorable replacement horizons of the underlying Oswaldo and Hanover lime formations.

Other veins of the Peerless mine have been worked only on the surface and these in the early days for the residual gold values. However, a few shallow surface diggings indicate a similar outcrop as the Peerless vein itself. Eastwardly the United States Smelting, Refining and Mining Company have done extensive exploration work in similar ground by diamond drilling and have been favorably disposed to purchase this ground. The nature of their findings, of course, is not known; but it is assumed from the success they have had with their Bull Frog mine in similar geologic conditions that some ore has been encountered in the Hanover lime in the vicinity of the Peerless. Northward about 2 miles, as shown on the section on the map, the Peru Mining Company developed the Copper Flat Mine from which they are producing roughly 560 tons of zinc ore per day. This Copper Flat property originally located a vein which was developed in the so-called granodiorite stock and produced only a limited scattered tonnage. Subsequent development of this mine, however, has resulted in the present tonnage output which has been developed in the underlying Oswaldo and Hanover lime formations.

ORE VALUES

No attempt was made to sample the ore body of the mine. However, a copy of recent shipments to the Black Hawk mill of the A. S. & R. Co. has been obtained, a tabulation of which follows

<u>Date</u> <u>Received</u>	<u>Lot Number</u> <u>Mine</u> <u>Mill</u>		<u>Wet Pounds</u>	<u>Dry Pounds</u>	<u>Dry Tons</u>	<u>Moisture</u>
8-9-43	1	209-C	221,345	210,720	105,360	4.80
			<u>Zinc</u> 26,550 lbs. <u>Lead</u> 15,172 lbs.			
8-15-43	2	213-C	243,325	233,592	116,796	4.00
			<u>Zinc</u> 28,848 lbs.	<u>Lead</u> 16,466 lbs.		
8-22-43	3	215-C	484,075	466,514	233,257	3.63
			<u>Zinc</u> 73,942 lbs.	<u>Lead</u> 43,012 lbs.		
8-30-43	4	228-C	352,975	339,914	169,957	3.70
			<u>Zinc</u> 57,895 lbs. <u>Lead</u> 33,991 lbs.			

ANALYSIS

	<u>Mine</u>	<u>Oz.</u> <u>Au.</u>	<u>Oz.</u> <u>Silver</u>	<u>%</u> <u>Lead</u>	<u>%</u> <u>Copper</u>	<u>%</u> <u>Zinc</u>	<u>Assay Office</u>
Hanover Milling Unit	1		3.28	7.15	.30	12.45	G H
Shipper			3.18	7.25	.38	12.90	Wright
Umpire Settlement			3.23	7.20	.34		C & F
Han. M. Unit	2	.04	2.82	7.35	.30	12.50	G H
Shipper		.02	2.98	7.05	.32	12.20	Wright
Umpire Settlement		.03	2.90		.31	12.35	Burlingame
Han. M. Unit	3	.05	3.75	9.50	.35	15.90	G H
Shipper		.03	3.84	0.15	.30	15.80	Wright
Umpire Settlement		.04	3.795		.325	15.85	Burlingame
<u>Estimated assays</u>							
H. M. Unit	4	-	4.00	10.00	.25	17.00	Estimated

The above tabulation will serve to indicate the grade of ore being mined. This ore has come entirely from the 165-foot

level, the winze level and the 250-foot level stopes, and on casual inspection underground appears to be of similar tenor on each of these levels. The average of all samples upon these shipments is trace gold, 4 ounces silver, 10% lead, 0.25% copper and 17% zinc. This average, of course, represents ore from which has been carefully eliminated by hand picking as much waste rock as possible. The grade of ore generally, if properly mined within the limits of the vein walls, should be somewhat below this average but fairly well in its accord. At the time of the examination the present lessee was receiving a B and C premium upon his zinc. The A. S. & R. Black Hawk mill was effecting only about a 50 per cent recovery. The milling charge was \$3.50 per ton. The truck rate from the mine to the mill is sixty cents per ton.

#### TONNAGE

In his conversation with Mr. Wiseman, Dan Schmitt indicated that he had blocked out some 20,000 tons of ore in a shoot which would average 250 feet long by 90 feet high, with an average thickness of 11 feet. This ore was estimated to have a grade of 7 to 9 per cent lead and 12 to 17 per cent zinc. Eliminating the areas of the ore shoot already stoped, and giving full benefit of the narrower margins of the vein, the ore shoot as now exposed has a possible 6,500 to 7,000 tons of ore which will have an average grade very close to



Dan Schmitt's figures. It has been determined that the ore shoot before mining did not contain more than 11,000 tons of ore.

Respectfully submitted,

Blair W. Stewart  
CORONADO COPPER AND ZINC COMPANY

BWS:ep

Dated: November 16, 1943

cc: BWS  
HSM  
PW  
JLB

(Maps attached to original report)