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CONSOLIDATED COPPERMINES CORPORATION

FROM: Kenyon Richard, Asst. Chief Geologist Kimberly, Nevada

TO: C. I. Cook, General Manager February 8, 1943

SUBJECT: REPORT ON THE SILVER HILL MINE

INTRODUCTION

According to your instruction, Mr. Courtright and I spent a day and a half in examination of the Silver Hill mine at Chloride, Arizona. This time included cursory inspection of the district in general.

The following paragraphs report the essential features of the information we accumulated and express our opinions derived from study of these data.

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The Silver Hill mine presents a moderate attraction as a "chloriding" type of operation (probable origin of the name of the nearby town) in which small lenses of good ore--gold and lead with accessory silver and zinc in erratic distribution--can be mined and sold to smelters profitably without concentration and with the use of little or no mining machinery.

An option has been obtained on a nearby flotation mill of adequate size, serviceability, and adaptability, with the object in view of concentrating the Silver Hill mine ore. Admittedly, this would lower the required mining grade of ore, making more of the vein material available as ore. However, the shoots of this material would still be too small, too widely spaced, and too low in grade to support the costs of exploration, development, mining, milling, and amortization of equipment.

There is a marginal chance that larger, higher grade ore shoots occur at greater depths than reached by present mine openings. If the property were close enough to Kimberly to employ local equipment and supervision, further investigation might warrant exploration of this deeper zone by churn drill holes. Since this is not the case, it is recommended that the property is not sufficiently attractive to merit further examination by Coppermines.

It should be emphasized here that observations underground were confined to a relatively small portion of the vein structure. This limits accuracy of prediction. Consequently, theories involving extent and strength of mineralization are marked by conservatism.

GENERAL DESCRIPTION

The Silver Hill mining property is owned by Mr. William S. Segar. It is situated at the west edge of the town of Chloride in northwestern Arizona. Chloride is low on the west flank of the Cerbat

Mountains at an elevation of 4000 feet. It is reached by four miles of paved road which branches easterly from the Kingman-Boulder City highway at a point 18 miles north of Kingman.

The property comprises three patented lode mining claims and one patented millsite. These claims lie end to end and cover the vein as it is exposed by cuts and shafts for a strike length of over two thousand feet along the north-south trending crest of a ridge called Silver Hill. This ridge rises about 100 feet above the gently sloping plain flanking the Cerbat Mountains.

From the time of the district's discovery about 80 years ago until the present, some 15 veins have been explored and mined to depths averaging 400 or 500 feet. At least one mine, the Tennessee, has reached a depth of 1000 feet. All of these veins are found within a radius of two or three miles of Silver Hill and occur in two consistent systems striking north and northwest with near vertical dips. Total production figures for the district are obscure but may approach a sum of ten million dollars with gold, silver, and lead in about equal proportions by value.

The entire history of the district is one of spasmodic activity. At the present time, there is only one operating mine, the Tennessee, which produces 160 tons of ore per day. This ore contains about .20 oz. gold per ton, 4.00 to 6.00 per cent lead, and 2.00 to 10.00 per cent zinc. Ninety per cent of these metals is extracted by selective flotation.

DEVELOPMENT

The Silver Hill vein maintains a persistent strike of north 10 degrees west and dips 40 to 50 degrees east. Prior to 1898, more than 2000 feet of development work in the form of inclined shafts and drifts along the vein had been driven. Most of these old workings are now inaccessible, but maps of some of them are available and indicate that most of the work was confined to the oxidized zone with 220 feet down the dip of the vein being the maximum depth reached. At the north end of the property, there is a section of the vein 600 feet long which has been prospected by three inclined shafts with a combined footage of 400, and from these shafts there has been driven 400 feet of drifts. At the south end of the property, there are two inclined shafts which, with drifts and crosscuts, represent a similar footage of development. Evidently, some of the old exploration work is not shown on available maps.

Apparently, pockets of lead carbonate and sulphate with small supergene concentrations of silver were occasionally encountered and formed the incentive for most of this early work. The Arizona Bureau of Mines Bulletin No. 140, "Arizona Metal Production", credits the Silver Hill property with a production of 700,000 pounds of lead, $5,000 in gold, and $10,000 in silver between 1880 and 1930. The old maps indicate that this was mined from a few very small stopes.

After the property was acquired in 1936 by Mr. Segar, an adit was driven westerly from a point low on the east flank of the ridge. This crosscut the vein 90 feet from the surface, and from here the vein zone was fairly well prospected by drifts and crosscuts for a strike length of 200 feet. The vein exposures in these workings were inspected carefully and sampled.

Although there is a portion of the vein several hundred feet long in the center of the property on which there has been no underground work, there are several surface cuts which display the structure and mineralization well enough for comparison with the better explored parts of the vein.

GEOLOGIC FEATURES

General:

The rocks of the district comprise a complex group of Pre-Cambrian schists, gneisses, and granite intruded by pegmatites, younger granite, and minette dikes. The veins are mineralized fault zones which were formed later than all of the metamorphic and intrusive rocks.

Most of the wall-rock of the Silver Hill vein is normally a hard, compact crystalline schist which outcrops prominently along the crest of Silver Hill. Here it displays a uniform schistosity parallel the attitude of the vein and obviously controls the strike and dip of the vein-fault. Granite is exposed around the flanks of Silver Hill in irregular contact with the schist. In places the granite forms the footwall of the vein and slices of altered and mineralized granite are seen in the vein.

Silver Hill Vein:

The Silver Hill vein is a series of close-spaced shears composing a fault zone from five to thirty feet wide which has undergone alteration and mineralization followed by resumption of movement along the vein shears. This structure is persistent along strike for at least 2000 feet without offset. At the north end of the property, it passes under a wash. On north across the wash, several shears comparatively weak in mineralization were found which may represent the continuation of the vein structure. At the south end of the property, the vein splits into two branches which diverge from the ridge and go under the alluvium.

Due to its continuity and strength, the vein structure can be expected to continue several hundred feet in depth.

Oxidation has been thorough for at least the first 75 feet down the vein, but on the adit level there are lenses of primary sulphides (pyrite, galena, and sphalerite) untouched by oxidation, lenses

showing partial oxidation, and completely oxidized lenses. Primary gangue minerals include quartz in erratic distribution, clay, sericite, and minor amounts of pyrite.

The whole vein presents a rather complex assemblage of ore and gangue minerals, altered "horses" of wall-rock, and inter-vein structures (cross-slips, false hanging- and footwalls).

Within the vein zone, "ore" shoots occur which vary in width from three to ten feet. Within these lenses are smaller zones of stronger mineralization which vary in width from six inches to four feet. There is a tendency for the mineralization to favor the footwall portion of the vein zone, with occasional detours into the hangingwall.

Gold is more consistently present than the other metals; however, the frequent, large "horses" of soft, altered rock contain very little gold and would become a serious diluent of the ore regardless of care exercised during mining.

Sampling:

Attached is a diagrammatic representation of the samples taken showing the thickness of vein material included in the sample and its relative position within the vein. Those samples which are starred (*) were used in estimation of the probable grade of minable material. The others represent the waste diluent to be expected in mining

A precise average grade and probable tonnage calculation is not warranted due to the limited vein area exposed. Timbering prevented uniform and complete sampling of the vein. However, a rough average of the "starred" samples with adjustment of values to a minimum mining width of five feet is justified. Using premium rates for lead and zinc, a conservative expectable mining grade of $10.00 per ton is obtained.

Some of the material constituting the "starred" samples was partially or thoroughly oxidized, the lead occurring as the sulphate, anglesite, and the carbonate, cerussite. However, this condition does not affect the reliability of the calculation as being an estimate of the probable character of primary ore because no secondary enrichment of the gold and lead as a result of oxidation was observed. Supergene accumulations of silver and zinc may occur but, since the amount of these metals present is small, this factor is negligible.

ECONOMIC FACTORS AND RECOMMENDATIONS

If development and mining were to be conducted with care and purchases of equipment such as a compressor and drills be kept

at a very low figure, an operation involving mining of the higher grade lenses of ore and shipment direct to smelters without attempted concentration might be carried on with a small profit. An investment of about $5,000.00 should provide facilities for daily production of 10 or 15 tons of ore with a market value, after deduction of freight and treatment charges, of about $15.00 per ton.

Of course, this sort of operation is of no interest to Coppermines. Only the possibility of larger production of lower grade ore with concentration providing a marketable product would be attractive. A rough analysis of the ability of the property to support this type of operation follows:

Mr. Segar claims to have secured an option of $50,000.00, payable by royalty of 50 cents per ton milled, on a gold property situated one and a half miles west of Silver Hill. In addition to the mine, which was closed by litigation in 1939 and on which no accurate data was secured, the option includes the entire surface plant:-- adequate water storage and pumping facilities, office building, assay and experimental laboratories, change rooms, machine shop, hoist, and compressor (400 cu. ft.), and a flotation mill which handled 60 tons of ore per day. The mill equipment includes a storage bin, jaw crusher, ball mill, classifier, 12 flotation cells, thickener, and slime table, all of which show some wear but with replacement of minor parts would be serviceable. Obviously, the mill was stopped suddenly, but not for reason of major breakdown.

Mr. Segar plans to rehabilitate this mill for concentrating the Silver Hill ore. Since separation of lead and zinc into two marketable products is desirable, the flotation circuit will have to be revamped. Expenditure of at least $10,000.00 may be necessary to place the mill in proper condition to handle Silver Hill ore effectively.

The friable nature of the ore and enclosing rock and their erratic distribution within the Silver Hill vein zone necessitate the use of a selective mining method such as square set stoping requiring considerable timber. Six dollars per ton would be a fair estimate for this type of mining. As mining is being conducted, prospecting at close-spaced intervals within the vein for lenses of ore other than the particular one being mined would be necessary. This would add about a dollar to the mining cost. Direct milling costs and royalty payments would amount to approximately $2.50 per ton. The expected average value of millheads being $10.00 per ton, only 50 cents remains for exploration and development ahead of mining (drilling, winzing, drifting, etc.) with nothing left for return of capital investment or profit.

On the basis of these figures, the Silver Hill vein will not support a small concentrating operation. Development of sufficient ore to supply a concentrator large enough to reduce appreciably milling and mining costs is not possible.

There remains a slim chance that at greater depth than present accessible workings, larger shoots of ore of higher average grade than the material sampled may exist. This potentiality could be investigated by a half dozen churn drill holes penetrating to depths of 400 or 500 feet. If the property were close to Kimberly so that costs of detailed examination of the area, drilling, and supervision would be moderate, then such a program might be warranted. However, under existing conditions, the property is too marginal to merit further investigation.

THE CHLORIDE DISTRICT

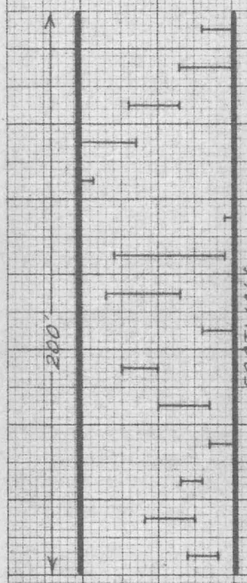
The district as a whole offers some attraction for detailed study. Many of the veins were mined to considerable depths, with but small proportions of the base metal values being extracted and these being subject to low market prices. A sizeable operation could result from combination of several prospects and small mines. This would be postulated on detailed mapping of the entire district and accessible underground workings, and search for and compilation of much old, obscure data.

KR/td

DIAGRAMMATIC SUMMARY of SAMPLING RESULTS

SILVER HILL MINE

To Accompany Report by K.R.



	SAMPLE NO.	SAMPLE WIDTH	SULPHIDES	OXIDIZED	Au Oz/Ton	@ $35.00	Pb %	@ 9½¢	Ag Oz/Ton	@ 71¢	Zn %	@ 11¢	TOTAL VALUE
*	1	4'	✓	✓	.05	$1.75	Tr.		.47	$.33	.70	$1.54	$3.62
	2	7'	✓	✓	.03	1.05	Tr.		.17	.12	.60	1.32	2.49
	3	7'		✓	.03	1.05	Tr.		.21	.15	Tr.		1.20
*	4	7'	✓	✓	.04	1.40	1.90	$3.61	1.06	.75	Tr.		5.76
	5	1½	✓		.34	11.90	.60	1.14	1.36	.97	Tr.		14.01
	6	1'	✓		.12	4.20	Tr.		.32	.23	Tr.		4.43
*	7	15'		✓	.14	4.90	Tr.		.58	.41	Tr.		5.31
	8	10'	✓		.02	.70	Tr.		.06	.04	Tr.		.74
*	9	4'		✓	.24	8.40	4.40	8.36	1.42	1.01	Tr.		17.77
*	10	5'	✓	✓	.28	9.80	4.30	8.17	2.90	2.06	.50	1.10	21.13
*	11	7'	✓	✓	.08	2.80	Tr.		.26	.18	Tr.		2.98
*	12	3'	✓	✓	.02	.70	Tr.		.06	.04	Tr.		.74
*	13	3'	✓		.62	21.70	8.10	15.39	3.64	2.5	.70	1.54	41.21
*	14	7'	✓		.03	1.05	Tr.		.09	.06	Tr.		1.11
*	15	4'	✓	✓	.40	14.00	6.70	12.73	2.68	1.90	Tr.		28.63

* These samples give grade of vein material which would be minable by square set method.

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KR/td

DIAGRAMMATIC SUMMARY of SAMPLING RESULTS

SILVER HILL MINE

To Accompany Report by K.R.

	SAMPLE NO.	SAMPLE WIDTH	SULPHIDES	OXIDIZED	Au oz/ton	@ $35.00	Pb %	@ 9½¢	Ag oz/ton	@ 71¢	Zn %	@ 1¼	TOTAL VALUE
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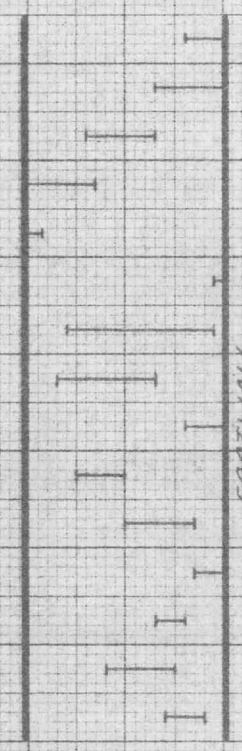
	2	7'	✓	✓	.03	1.05	Tr.		.17	.12	.60	1.32	2.49
	3	7'		✓	.03	1.05	Tr.		.21	.15	Tr.		1.20
*	4	7'	✓	✓	.04	1.40	1.90	$3.61	1.06	.75	Tr.		5.76
	5	1½'	✓		.34	11.90	.60	1.14	1.36	.97	Tr.		14.01
	6	1'	✓		.12	4.20	Tr.		.32	.23	Tr.		4.43
*	7	15'		✓	.14	4.90	Tr.		.58	.41	Tr.		5.31
	8	10'	✓		.02	.70	Tr.		.06	.04	Tr.		.74
*	9	4'		✓	.24	8.40	4.40	8.36	1.42	1.01	Tr.		17.77
*	10	5'	✓	✓	.28	9.80	4.30	8.17	2.90	2.06	.50	1.10	21.13
*	11	7'	✓	✓	.08	2.80	Tr.		.26	.18	Tr.		2.98
*	12	3'	✓	✓	.02	.70	Tr.		.06	.04	Tr.		.74
*	13	3'	✓		.62	21.70	8.10	15.39	3.64	2.5	.70	1.54	41.21
*	14	7'	✓		.03	1.05	Tr.		.09	.06	Tr.		1.11
*	15	4'	✓	✓	.40	14.00	6.70	12.73	2.68	1.90	Tr.		28.63



* These samples give grade of vein material which would be minable by square set method.

REPORT ON THE

SILVER HILL MINE

CHLORIDE MINING DISTRICT

Mohave County, Arizona

Examined October 10th to 13th, 1941

by Charles M. Heron.

SILVER HILL

Assume sulphide ore to be, without dilution,
0.30 oz. Au - 1.75 oz. Ag - 4.6% Pb - 6.0% Zn.

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100 tons crude ore will have -

	30 oz. Au	175 oz. Ag	9,200 lbs. Pb	12,000 lbs. Zn
@	$33	70¢	6½¢	8¼¢
	$990	$122.50	$598.00	$990

Gross value contents, $2,700.50.

Assume 20 tons pyrite conc. - 8 tons Pb conc. - 10 tons Zn conc. - 62 tons tailings
3@1 ratio

	Assume	Amt. in Product	Per ton Product	Value product per ton F.O.B. cars Kingman	Value of product from 100 tons crude
Pyrite -	80% of Au	24 oz.	1.2		
20 tons	50% of Ag	87.5 oz.	4.4	$35.00	$700.00
	5% of Pb	460 lbs.	1.1		
	5% of Zn	600 lbs.	1.5		
Galena	80% of Pb	7360 lbs.	46%		
8 tons	20% of Ag	35 oz.	4.375 oz.	$52.00	$416.00
	5% of Zn	600 lbs.	3.75%		
	6% of Au	1.8 oz.	0.225 oz.		
Blend -	80% of Zn	9600 lbs.	43%		
10 tons	5% of Pb	460 lbs.	2.3%	$34.00	$340.00
	15% of Ag	26.25 oz.	2.625 oz.		
	6% of Au	1.8 oz.	0.018 oz.		
Tailings-	8% of Au	2.4 oz.	0.039 oz.		
62 tons	15% of Ag	26.25 oz.	0.42 oz.		Nil
	10% of Pb	920 lbs.	0.07%		
	10% of Zn	1200 lbs.	0.10%		
					$1,456.00

* -

Mining (and Develop)	5.50
Milling	1.50
Ins. etc.	.40
Gen.	1.00
	8.40 before taxes

$14.56 net smelter returns per tons crude on 100 tons F.O.B. cars Kingman

REPORT ON THE

SILVER HILL MINE

CHLORIDE MINING DISTRICT

Mohave County, Arizona

GENERAL:

The older workings of the Silver Hill mine are caved and inaccessible, except the No. 3 shaft, which is connected with the recent work done by W. S. Segar. The extensive sampling of these older workings by R. C. Jacobsen in 1936 has been checked to a certain extent more recently by W. H. Blackburn, and seems to be fairly accurate. R. D. Leisk, who examined the property in 1934 for the United Verde Extension Mining Company, obtained an average of .37 oz. gold, 2.1 oz. silver and 1.56% lead, but made no mention of zinc. His samples were taken from the 100 foot level, along which Jacobsen obtained an average of .17 oz. gold for 9 samples.

One point which has not been made perfectly clear in the data submitted is the structure of the vein, - its lack of continuity, and the difficulty involved in mining the ore without excessive dilution. In the 220 feet of developed length shown on the map accompanying this report the ore is found, (a) on the footwall of the 30 foot crushed zone toward the north face, (b) half way between the foot and hanging walls at the centre, and (c) on both the hanging wall and the footwall, as seen at the south end of the drift.

The distribution of gold for the full length of the outcrop as shown in the shafts and test pits, is so general that one wonders why the mine has not been more fully developed. Whether the wide crushed zone exists throughout the entire length of the claims has not been brought out; however, in the open pit at shaft No. 2 this wide crushed zone is clearly shown; also the map of the 100 foot level by Jacobsen shows the drift meandering back and forth, which perhaps indicates a similar condition. The fact that the old workings are now inaccessible is probably accounted for to a great extent by the wideness of the crushed zone.

LOCATION AND PROPERTY:

The Silver Hill property comprises 4 patented claims, including a 500-foot square mill-site, and 3 full sized lode claims as follows:

Valley View	Silver Bell
Sonoma	Silver Bell Mill-site

The claims cover a length of 4500 feet, and for the full length of the three claims the outcrop can be traced intermittently by test pits and outcroppings.

The property is on the west edge of the town of Chloride, Mohave County, Arizona.

TOPOGRAPHY:

The outcrop of the Silver Hill vein forms the crest of a hill rising to a height of about 150 feet above the valley floor which surrounds it. The hill has a rolling soil-covered surface, with a sparse growth of low vegetation. The outcrop is indicated more by oxide stain and scattered quartz than by any continuous projecting rock. The hill is evidently an erosional feature of topography rather than a fault scarp.

Water for domestic purposes is obtained from a 40 foot well, on the Sonoma claim, from which it is pumped by a wind mill.

For a mill water could probably be developed and pumped from the valley floor, within a short distance. The mine would undoubtedly encounter a considerable amount of water within a hundred feet of the tunnel leve, the amount increasing with depth.

HISTORY:

The ore occurences of the Chloride district were discovered in the early sixties. The town was established in the seventies, and some mining has been carried on almost continuously since that time. While there have been two or three fairly successful operations, such as the Tennessee, the Schulkill and the Golconda, there have been many more short unsuccessful attempts to operate, and many stock promotions.

The Silver Hill vein was one of the very early discoveries of the district. Jacobsen's report quotes Schrader's report as follows: "The Silver Hill mine from 1880 to 1930 produced 700,000 pounds of lead, $5000.00 in gold and $10,000.00 in silver, a total of $50,000.00."

William S. Segar acquired the mine in 1936, and during his ownership most of the work was done on the tunnel level the adit of which is on the east side of the hill. This recent work has been connected with the old No. 3 shaft. Within the past few months Shaft No. 1, which is well timbered, caved at a depth of about 40 feet.

In 1940 Mr. Segar leased the Ruth mill, and made a test run of 300 tons of the ore from the Silver Hill; the ore was partially oxidized but the results shed some light on the problems of metallurgy.

GEOLOGY:

The predominant rock of the district is a pre-Cambrian granite, gneiss and amphibole schist. These earlier rocks have been intruded by a later granite, pegmatite, minette and rhyolite, which are very little altered. The dikes for the most part seem to have been intruded along the schistosity, or on the faults which follow the schistosity.

The Silver Hill vein occurs in a strong persistent fissure or fracture zone which follows the contact between the pre-Cambrian schist and a younger granite. The Silver Hill vein or fault has a strike of N 10°W and an average dip of 47°E.

The crushed rock appears to be chiefly a quartz porphyry or rhyolite, an intrusion along the contact which was thoroughly crushed by movements subsequent to the intrusion. The ore deposition appears to have taken place in the open fissures within the fault zone, which at the cross-cut, where it is now exposed, is over 50 feet wide horizontally, or a true width of about 32 feet measured at right angles to the deip of the fault, which is about 47°. Because this zone is so thoroughly crushed much of the drifting is timbered and lagged tightly, and the character of the material can be seen only through narrow openings in the lagging.

Throughout the fault zone are numerous slips and faults along which is formed a heavy clayey gouge, indicating substantial movements. Many of these faults do not cut the footwall, but seem to be the result of subsidence in the zone.

The fact that the lenses of ore take all sorts of positions within the crushed zone, - some even lying at right angles to the walls, - seems to indicate that their deposition was subsequent to the movement which crushed the intrusion.

Silicification is not general throughout the crushed zone, but the seams of quartz ore are fairly continuous, although varying greatly in width and in position in the zone. When the ore lies on the hanging wall the mining should be simple, but when it is in the centre of the zone or toward the footwall it will be difficult to prevent excessive dilution.

A typical section across the vein in the sulfide zone would include two or three distinct seams of well mineralized quartz (heavily impregnated with sulfides,) separated by crushed and kaolinized material.

The sulfides found are, in order of abundance, pyrite, zinc blend and galena; there is chalco-pyrite in some of the ore but this is less general. In the oxidized zone the quartz is honeycombed and heavily stained with iron oxide.

In certain parts of the vein the material is crushed almost to a powder, and contains disseminated pyrite; the powder has the appearance of being kaoline but is actually finely crushed quartz.

The lens of sulfide ore which is exposed from the south end of the stope to the point where sample No. 22 was taken, 70 feet in length, is cut off to the north by the diagonally striking fault along which samples Nos. 18, 19, 20, 21, 22, 28, 29 and 30 were taken. Beyond this fault to the north the ore is entirely exidized.

There seems to be a fairly uniform relation between the lead and the silver; the gold seems to have been deposited with the quartz and the pyrite, but occurs in no uniform ratio to either the lead or the zinc. Generally speaking, where there is not a considerable amount of quartz the ore is low in each of the four metals.

The character of the sulfides, - galena, sphalerite and pyrite, - even where they occur in massive form, is not complex but such that they could easily be separated by flotation. Whether the association of metals is such that

three distinct flotation products could be made to advantage is a question to be answered by careful metallurgical tests. The assays seem to indicate that such a selective process would be justified.

DEVELOPMENT:

The recent development work done by W. S. Segar comprises:

Cross-cut adit to hanging wall	335 feet
Drifting	262 "
Cross-cutting in crushed zone	105 "
Connection with old No. 3 shaft	40 "
	742 Feet

Because of the extent of timbering which had been necessary, certain parts of this development work could not be examined or sampled, but where the vein was exposed it was sampled with a certain degree of regularity; the assays and geology were plotted on the enclosed map.

The data submitted by Mr. Segar included a report and maps by R. C. Jacobsen, mining engineer of Kingman, dated August, 1936; from these maps the following measurements were taken:

At the north end, on the Valley View claim:

Shaft No. 1	150 feet	(caved about 35 feet from cellar)
Shaft No. 2	100 "	(caved)
Shaft No. 3	60 "	(open and connected with the recent work)
Drifting on 40 feet level	110 "	
Drifting on 60 feet level	25 "	
Drifting on 100 " level	230 "	

At the south end, on the Sonoma claim:

Adit	640 feet
No. 4 Shaft	140 "
No. 5 Shaft	140 "
Intermediate level	60 "

Numerous open pits.

Between the work on the Sonoma and that of the Valley View there is an offset, apparently a fault, although the work has not been continuous enough to show whether it is the same vein displaced by a fault or two parallel veins.

The collar of No. 1 shaft is 4 feet lower than the collar of No. 3 shaft. The drift is at 100 feet of depth at the No. 1 shaft, while the new north drift in the recent work is 62 feet below the collar of No. 3 shaft. Taking into consideration the grade of the drifting, the north face of the new work is roughly 40 feet higher than the south face of the old level.

Judging from the dumps, most of the ore encountered in the older workings was oxidized.

In the Jacobsen report, while the presence of galena and zinc blend is mentioned, their commercial importance is not stressed; in fact in the three

page list of samples, the lead and zinc content is not shown in any of the assays.

EQUIPMENT:

The equipment at the mine includes:

12' x 14' blacksmith shop, with forge, anvil and hand tools.
12' x 24' compressor room
Chicago Pneumatic 210 cubic foot compressor driven by
Allis Chalmers 40 H.P. motor
4' x 8' air receiver
Water tank 4' x 6'
30 feet 4 - inch pipe
400 " 2 - " air line
460 " 1½- " " "
600 " 3/4 inch pipe
100 gallon pressure tank
550 feet track (10 pounds rails)
2 - 16 cubic foot mine cars
4-roomed house, (needing some repairs) for foreman
windmill and storage tank

Inasmuch as the mine is in the town of Chloride no provision would have to be made for living quarters for the workmen.

SAMPLING:

30 samples were taken on the Silver Hill property. This was not a complete sampling, even of the new workings, but was sufficient to correlate the results with the sampling done in the old workings by Jacobsen and the late W. H. Blackburn. The samples taken in this examination of oxidized material were assayed only for gold and silver; the samples of sulfide ore were all assayed for gold, silver, lead and zinc.

The following list of assays showsthe total value in addition to the gold, silver, lead and zinc content:

Number	Width in feet	oz. Gold	oz. Silver	% Lead	% Zinc	Total Value
1	4½	.08	.45	1.04	2.17	$ 7.46
2	5½	.04	.21	.21	1.61	$ 4.12
3	2	.01	.05			$ 0.39
4	4	.10	.80	1.46	3.84	$11.29
5	4	.03	.22	.63	2.53	$ 5.60
6	4	.04	.21			$ 1.55
7	4	.05	.55	1.25	6.36	$12.84
8	3½	1.10	7.30	12.00	5.66	$66.00
9	6	.55	.65			$19.71
10	3½	.17	.18	.21	1.67	$ 8.73
11	3½	.08	.32	.63	1.62	$ 6.10
12	2	.06	.19	.31	.50	$ 3.31
13	2½	.03	.27			$ 1.24

Number	Width in feet	oz. Gold	oz. Silver	% Lead	% Zinc	Total Value
14	3	.07	.33			$ 2.68
15	2½	.02	.05			$ 0.74
16	3½	.02	.03			$ 0.72
17	3	.14	2.46	4.18	3.94	$17.13
18	4½	.23	3.15	7.52	6.06	$27.65
19	4	.39	1.31	5.74	3.28	$25.88
20	1½	.32	5.38	9.40	8.33	$37.71
21	2	.07	.73	1.04	2.12	$ 7.23
22	2	1.08	1.68	2.40	13.52	$61.33
23	3½	.25	.50			$ 9.11
24	2	.06	1.84			$ 3.41
25	2	.58	2.87			$22.34
26	1½	.13	.27			$ 4.74
27	1	.10	.30	.31	.76	$ 5.09
28	4	.39	1.21	2.30	3.33	$21.94
29	3	.26	1.94	4.59	4.95	$22.90
30	3	.18	.92	3.86	3.38	$16.25
31	3½	.16	.79			$ 6.16

Gold @ $35 per oz.
Silver @ 71¢ per oz.
Lead @ 57¢ per pound
Zinc @ 7.25¢ per pound

MAPS:

Included with the report are two maps:

Plan and section, with geology and assays of new work, (based on Brunton survey by Heron)

Photostat of Jacobsen map, to which had been added assays of samples by Blackburn.

ORE RESERVES:

There is some basis for assuming a definite tonnage per foot of depth along a given length of a drift which has been adequately sampled; considering the lack of systematic sampling, or of development work itself, beyond the 100 foot level of the No. 2 shaft, it would seem that an assumption of a specific tonnage is not warranted.

On the north drift of the new work the 70 foot lens of sulfide ore averages 3.4 feet in width, with an average assay of $25.13, and represents 20 tons per foot of depth.

Beyond the sulfide lense for 40 feet to the north face the ore is oxidized, and the values include no lead and zinc. The average assay for the 40 feet for 2.5 feet of width is $9.56. If this 40 feet still

contained the sulfides which have been oxidized, the entire 110 feet would very probably constitute a lens of commercial ore. In other words, when the work reaches the permanent sulfide zone, as it should do within 100 feet, the continuity of the ore should be considerably greater than it is in the oxide zone.

METALLURGY:

As mentioned above, a mill test was made for Mr. Segar in 1940, on 300 tons of the Silver Hill ore. The Ruth mill was leased, and the test was conducted by William A Crowfoot. The test was made on a mixed oxidized and sulfide ore, which average $12.08 per ton in gold and silver. An extraction of 88% of the gold and 84% of the silver was obtained under difficult and unfavorable conditions.

The heads assayed $12.08 (.296 oz. gold, 2.24 oz. silver)
tails " 1.54
concentrates 40.17 plus Pb. 12.60% Zn 5.30%

(gold @ $35.00 per oz. and Silver @ .71 per oz.)

MINING METHODS AND COSTS:

Judging from what can be seen, the ore may be found anywhere in a 30 foot crushed zone. When the ore lies on the hanging wall the dilution in mining will be less, and less timbering will be required. From any other part of the zone it will be necessary to mine the ore selectively - by some sort of cut and fill system of mining, with the fill kept well up toward the back of the stope. The mining costs will be high, but if frequent bodies of ore are encountered, - 70 to 100 feet lengths of continuous ore -, as seems possible from what can be seen, the cost should not be prohibitive.

If the development program outlined below should prove productive, there should be sufficient stoping ground to furnish between 75 and 100 tons per day.

On this basis the operating costs would probably be about as follows:

Mining costs (including development)	$5.50 per ton
Milling cost	1.50 per ton
	$7.00

This figure does not include taxes, insurance, overhead or metallurgical loss; nor does it take into account the scarcity of labor or any rise in wages.

PROPOSED DEVELOPMENT:

For the most immediate results a 100 foot inclined shaft should be sunk from the Segar tunnel level on the crushed zone, following the hanging wall. At a 100 foot depth a station and pocket should be cut, and drifts run both north and south with cross-cuts at 50 foot intervals.

There is no reason to believe that the structural characteristics

of the vein should change within a few hundred feet of depth, except that it is to be hoped that the sulfide content will be fairly uniform and widely distributed, as the gold seems to have been in the oxidized zone.

CONCLUSIONS:

From the sampling done in connection with this examination there seems to be every reason to assume that the average of the Jacobsen and Blackburn sampling is reasonably correct for the part of the mine which is now inaccessible.

Granting this assumption, there appears to be a length indicated by the Segar north drift and the old 100 level of at least 200 feet of ore of mineable width of ore (at least 3 feet wide) which averages .30 oz. gold and 1.75 oz. silver in the Segar drift and .19 oz. gold and 3.22 oz. silver in the old 100 foot level; or an average value of .20 oz. gold and 2.49 oz. silver, or $9.27 in gold and silver.

Judging from the 70 feet of sulfide ore in the Segar drift, the zinc and lead content where the zone is unoxidized will be 4.62% lead and 6.01% zinc, or $13.98 per ton (lead @ .057 per pound and zinc at .0725 per pound).

In other words the zinc and lead content, which has not been seriously considered in previous examinations, is of considerably more value than the gold and silver.

Within a hundred feet the water level should be reached and the zone of oxidation bottomed. There is no apparent reason why the ore occurrence should not extend well into the sulfide zone.

RECOMMENDATION:

The program suggested above seems warranted by the probability of developing a substantial body of ore, and it is therefore recommended that this development work be done.

Respectfully submitted,

(Signed) Charles M. Heron
Charles M. Heron.

Examined October 10 to 13, 1941.

SUMMARY OF DATA

SILVER HILL MINE — CHLORIDE, ARIZONA

DESCRIPTION:

The property is located in the Wallapai Mining District of Mohave County, in northwestern Arizona; the east line of the property forms the west line of the town of Chloride, which is a mining community of some 700 people. The elevation is 4200 feet above sea level. A four-mile paved highway, which passes the north end of the property, connects with the main Kingman-Boulder Dam Highway; at the intersection of these two roads it is 18 miles south to Kingman, the County seat and rail-head (Santa Fe RR), and 50 miles north to Boulder Dam, which is the source of our electric power.

The property consists of four patented lode-mining claims - 3 full-sized claims and a 5 acre millsite claim; the three claims lay end to end, giving 4500 feet on the strike of the formation; these claims total 65 acres in all, In addition, there is a side-claim that is unpatented, from which our main crosscut tunnel enteres the mine from the east side of the hill to intersect the vein on approximately the 100-foot level. The extensions of the property on both the north and south, as well as several more desirable side-claims, can be secured on favorable terms.

Silver Hill is a long, low hill that rises above the surrounding valley about 150 feet. The hill lays almost due north-south, and the vein, running with the hill, outcrops strongly over the entire distance just below the ridge of the hill. Five inclined shafts have been sunk into the hill on the vein over a period of years, all but the northernmost one having been sunk approximately 100 feet deep, and it was sunk to 220 feet. This deepest shaft is accessible now to the 100-foot level - this is No. 1 shaft. No. 2 shaft which is 100 feet south of No. 1, is open only about 40 feet. No. 3 shaft, 420 feet south of No. 1, is open to and connects with the 100-foot level. The other two shafts at the south end of the hill connect with the 100-foot level that was driven in from the southeast end of the hill many years ago; one may go in to the point where No. 5 connects with that level; in recent years no work has been done in this section of the mine. The older lateral decelopment of the mine, by drifts and crosscuts, consists of a 200-foot drift on the 100-foot level, driven south from No. 1 shaft; on the 40-foot level in No. 2 shaft a drift was driven 100 feet, partly north, partly south; at the south end of the hill a 700-foot crosscut and drift tunnel was driven in to connect with Nos. 4 and 5 shafts.

RECENT WORK:

In recent years' work, about 400 feet south of No. 1 shaft area, we drove a 386-foot crosscut tunnel from the east side of the hill, crosscutting the vein on approximately the 100-foot level and at its widest point so far as is known; the width from wall to wall was 58 feet (the average vein width is 15 to 20 feet). From this intersection with the vein we drove our drifts both north and south for a total in excess of 300 feet, partly in the footwall, partly in the hanging wall, with some intermittent crosscuts within the vein itself, varying our procedure in order to discover new ore-bodies. From the old 100-foot level we knew of the footwall ore, sampled by R. D. Leisk of the United Verde Extension Mining Co.,

in 1934; he is now with the great Sunshine Mine; his assay average of the ore gave .37 oz. gold, 2.1 ozs. silver and 1½% lead, zinc not assayed. From the surface indications we knew the vein width in the vicinity of No. 3 shaft was perhaps at its widest; hence centering our work at this point. Ordinarily the vein width, as shown in surface outeroppings and open-cut workings, was between 15 and 20 feet. In this widest section the engineers seem to agree that it was caused by a blowout, and they state that they would expect to find with increased depth in the mine, several hundred feet below present workings, that the width will have diminished and the ore bodies concentrated in the narrower structure. This should be all to the good.

In this wide area of the vein we found at least two parallel ore-bodies: the known footwall ore, and an even better grade of ore on the hanging wall, with sometimes another lens of ore between the walls. The average value of the ore taken out during this development maintained or exceeded the average of Leisk's former work, and additionally showed that lead and zinc were even of more value than the gold-silver. When I purchased the property in 1936 I did so because I was convinced that, after considerable check-sampling, the mine would develop into a profitable gold mine, leaving the base metals out of consideration. Since our entry into the war, in fact since the entry of the United Nations into a state of war, these metals have become increasingly valuable and strategic.

LATEST ENGINEER TO REPORT: CHAS. M. HERON:

According to the most recent report on the property by an independent engineer, Charles M. Heron of San Gabriel, California, now with the Tungsten division of the War Production Board, his sampling of the workings, made during October 1941, give an average value of the sulphide ores as follows:

Gold	.30 oz at $35	-	$ 10.50
Silver	1.75 ozs. at 71 cts	-	1.24
Lead	4.6% (92 lbs) 9¼ cts	-	8.51
Zinc	6% (120lbs) 11 cts	-	13.20
	Total		$ 33.45

(65% of the value in lead-zinc; 35% in gold-silver:

Quoting from Mr. Heron's report:

"For the most immediate results a100-foot inclined shaft should be sunk from the Segar tunnel level in the crushed zone, following the hanging wall, and at the depth of 100 feet a station and a pocket should be cut, and drifts run both north and south, with crosscuts at 50-foot intervals.

"There appears to be a length, by the Segar north drift indicated, and the old 100-foot level, of at least 200 feet of ore mineable (at least 3 feet wide) which averages .30 ozs. gold and 1.75 ozs. silver; where the zone is unoxidized the content is 4.62% lead and 6.01% zinc. In other words the zinc and lead content which has not been seriously considered in previous examinations is of considerable more value than the gold and silver.

"If the development program outlined should prove productive there should be sufficient stoping ground opened to furnish between 75 and 100 tons per day. The program seems warranted by the possibility of developing a substantial body of ore and it is therefore recommended."

RESULTS OF RECENT WORK:

My superintendent at the mine has recently started the sinking of the winze from the newer 100-foot level on the hanging wall of the vein, as suggested by Mr. Heron, and for the full width of the winze there is 6 feet width of solid ore which assays: .42 oz. gold, 5 ozs. silver, 4½% lead, and 11½% zinc - about 30% higher value than the Heron average, and for a greater width; he further reports that there is ample evidence of great tonnage of mill ore.

FORMER ENGINEERING REPORTS:

Jacobson: Shortly after I acquired the property in 1936, I employed R. C. Jacobson of Kingman, Arizona, a consulting mining engineer who had had 35 years experience with the mines of that district, to make an examination and report on the mine. Today that report is rather outdated but it is interesting to note that estimated that there were 27,000 tons of sight ore and 55,000 tons of probable ore; he further stated that from his experience he would expect deeper work to show a retention of the gold values, if not an increase, and that the sulphide ores would show from 3% to 5% lead and from 5% to 7% zinc; his estimated in these respects have already been born out.

Lawrence: Several years later, in 1938 and 1939, Willis Lawrence an old operating engineer of northern California, examined the mine and stated that "the property, if provided with competent management and comparatively small working capital, will pay for its own development below the present disturbed oxidized zone where the mines true value as a long-lived profitable producer will be demonstrated". He, like the other engineers who have visited the mine, said that there was no doubt but that this was a true fissure vein and that the indications were that it was a deep-seated vein and that the ore bodies would persist to great depth. His more than 40 years experience as a successful operator in all parts of the world and particularly his record at the Florence Mine in Nevada makes his estimates merit serious consideration.

Blackburn: In 1938 Wm H. Blackburn of the Bradley Mining staff of San Francisco (operators of the Alaska Juneau Mine) examined the mine; he stated then that if I wished to sell the property that a price of $200,000 was justified. I was not then interested in selling nor later because I was convinced that I had a fine, potentially profitable producer. Since his estimate of the value, the work that has been done has doubled the worth of the mine. As eloquent testimony as any given by Blackburn was his willingness to leave the Bradley concern after having been identified with them for some 28 years, and come with me as my superintendent on a nominal salary with a small interest in the mine; his untimely death over a year ago prevented this.

Bach: In December 1940 L. W. Bach, E. M. of southern California, another veteran mine operator, examined the mine, and his findgins generally coincided with the reports of the previous engineers; he estimated "that we had 64,000 tons of easily available ore above the 100-foot level of an average value of $18 per ton in gold-silver-lead" (zinc was not assayed). He again visited the mine last fall and said that "within 60 days I would be willing to contract to deliver to a mill 50 tons of ore a day from the mine steadily".

MILL RUN TEST:

During the month of June 1940, I leased the Ruth Reduction Co. mill at Shloride for a mill-run test on our development ore as it was coming out of the mine from the new 100-foot level. We milled some 300 tons of ore under the capable supervision of Wm. A. Crowfoot a mining a metallurgical engineer, and when the test-run was ended we were operating at 92% efficiency - saving 92% of our values; we found that while we had a complex ore we had no difficult metallurgical problems to overcome. A 5-ton mill-test in another nearby mill, made later on, returned the same results, and showed that we could capture considerable of our values in a jig which simplifies our proposed plan of flowsheet for our mill.

THE SITUATION TODAY:

As the mine stands today, with the winze started as per the recommendation of Mr. Heron, we are in a position to immediately get into operation, continue with the sinking of said winze and complete it to the 200-foot level within 60 days from the time work starts, and then proceed with the drifting both north and south on the ore on the 300 foot level; when this work is under way we will be ready to install the first unit - 50 tons capacity - of our milling plant, which should be ready for operation within 90 days after the start. We know the type of flotation mill we need with which to concentrate the metallic values out of our ores for shipment to a smelter; by the end of the first year's operation we should have enlarged this plant to 100 tons capacity, and have ore developed ahead of it to insure years of supply; our plan of development for the mine will be that of always developing ahead of the mill supply - in a word, to develop at least as much ore as we mine for the mill.

The matter of financing has been taken up with the War Production Board at Washington where Mr. Heron is now located, and with the Mine Loan Division of the R. F. C.; Mr. Heron has given his unqualified endorsement; the government engineer has examined the mine, and my superintendent reports that the government engineer's sampling would run consistently higher than Mr. Heron's average. George C. Heikes of the W. P. B. Zinc division has assured us of his complete endorsement; the officials with whom the matter was handled said that the government funds for this mine was a practical certainty. The fact that Guy C. Riddell, E. M. of New York City is to be the General Superintendent of the operation (his record of achievement in mining over the past 25 years makes him one of the outstanding operators) gives assurance that we will have as fine management as can be obtained. Despite the readiness of the government capital, we would prefer to secure private capital for a number of reasons, understandable to businessmen.

The various reports referred to in this summary of the Silver Hill mine are all available for inspection. Appended hereto are schedules of probable operating cost, probable earnings, and a proposed budget.

Respectfully submitted,

(signed) Wm. S. Segar

Box 243, Chloride, Ariz. Owner & Operator

PROBABLE COSTS

SILVER HILL MINE OPERATIONS

MINING COSTS, MONTHLY:

Salaries and wages:

Mine Supt. Hedges, salary	$250	
Clerical salary - ½ at the mine	100	
7 Miners at $8 per day - 30 days	1680	
7 Muckers " $7 per day " "	1270	
Total wages and salaries		$ 3300.00
Power - 16 hours per day - 30 days		350.00
Supplies - powder, fuse, caps, coal, timber, etc.		1000.00
Maintainence of equipment		250.00
Insurance - Workmens Comp., Soc. Sec., Unemployment,		400.00
Total direct mining costs		$ 5300.00
Per ton direct mining costs on a 50-ton daily basis		3.50
Per ton development costs - at ½ of the direct costs		1.75
Total Mining Costs - Direct and Development		$ 5.25

MILLING COSTS, MONTHLY:

Salaries and wages:

Mill Supt. Morgan, salary	$250	
Assayer - salary	200	
Clerical - salary - ½ at the mill	100	
2 Mill-men at $8 per day - 30 days	480	
3 Mill-helpers 7 " " " " " "	630	
Total wages and salaries		$ 1660.00
Power - 24 hours per day - 30 days		700.00
Supplies - chemicals, reagents, etc.		250.00
Maintainence - steel balls, liners, jaws, etc.		500.00
Insurance - Workmens Comp., Soc. Sec., Unemployment		250.00
Total Milling Costs		$ 3360.00
Per ton Milling Costs on a 50-ton daily basis		2.25

TOTAL OPERATING COSTS, MONTHLY, ON A PER TON BASIS:

Mining - direct costs - ore production	$ 3.50
Mining - development costs	1.75
Milling	2.25
Overhead and supervision	1.00
Probable total, per ton costs, 50-ton daily basis	$ 8.50

1500 tons monthly

PROBABLE EARNINGS * SILVER HILL MINE

Using the averages of the sulphide ore, as estimated by Engineer Charles M. Heron, whose examination of the mine was made in October, 1941, for a west-coast mining concern:

	PRESENT METAL PRICES	PROBABLE POSTWAR METAL PRICES
Gold - at .30 oz. at $ 35	$ 10.50	$ 10.50
Silver - 1.75 ozs. " 71 cts	1.24	at 50 cts. .88
Lead - 4.6% (92 lbs.) 9½cts	8.51	at 5 cts. 4.60
Zinc - 6% (120)lbs. 11 cts.	13.20	at 6 cts. 7.20
Total Gross Value	$ 33.45	$ 23.18
Less 20% for losses	6.70	4.63
Total Net Value	$ 26.75	$ 18.55
Net Smelter Returns, allowing 30% for smelter shgs, freight, & transport - 70% returns	$ 18.72	$ 12.98
Less operating costs of mining, milling, overhead	8.50	8.50
NET EARNINGS BEFORE TAXES	$ 10.22	$ 4.48
PROBABLE NET 1500 TONS MONTHLY -	$15,330	$ 6,720
PROBABLE ANNUAL NET	$183,960	$80,640

NOTE: Present metal prices, including the bonus on lead and zinc, were set as of Feb. 1, 1942, and guaranteed by Metals Reserve Co. of the R. F. C. for 30 months; should the war outlast that period, the need for these strategic metals would be even greater than at present, and itis logical to assume that these prices would persist. Probable post-war uses would keep the prices considerable higher than estimated in the above righthand column; post-war demands for these metals will be great for some years to even partially meet the backlog of industrial demand. In the above post-war figures, present wartime costs are used, to retain a conservative earnings viewpoint. Two other factors enter into the future picture: we contend that Heron's average of values is, if anything, low; secondly, we expect to be operating on a 100-ton basis by the end of the first year, which would double the probable earnings figures. The property's potentialities are considerably more than a 100-ton per day operation.

Wm S. Segar

Owner and Operator

FORM 2A 20M 1-42 CAIRNS

AMERICAN SMELTING AND REFINING COMPANY
EL PASO SMELTING WORKS

ORE SETTLEMENT

EL PASO, TEXAS. 6-3-42

BOUGHT OF Sterling M. Hedges,
ADDRESS Box 243, Chloride, Arizona.
SHIPPING POINT Kingman, "

SMELTER LOT 1370
SHIPPER'S LOT
CLASSIFICATION Ore

CAR NO.	CAR INITIAL	WEIGHT IN AVOIRDUPOIS POUNDS: GROSS	SACKS NO.	SACKS WEIGHT	NET WEIGHT	MOISTURE %	DRY WEIGHT
173106	AT				46440	1.0	45976

N. Y. METAL QUOTATIONS

Settlement Date 5-27-42
B/L Date 5-21-42

Silver	.70625	Cts. per oz.
F'gn Silver	.35125	
Lead	$ 6.50	Per 100 lbs.
E. & M. J. Copper	.11650	Cts. per lb.

Payable Metal Content
Lead 3290 Lbs

PAYMENTS FOR METALS

ELEMENTS	ASSAY PER TON 2000 LBS.		DEDUCTED	NET ASSAY	EQUIVALENT IN LBS.	PER CENT PAID FOR	NET PAID FOR		RATE	VALUE AMOUNT PER TON	VALUE AMOUNT TOTAL
Gold	.915	oz.					.915	oz.	32.31825	29.57	
Silver	5.15	oz.	1.0	4.15			4.15	oz.	.69125	2.87	
Lead	9.45	%	1.5	7.95	159.0	90	143.1	lbs.	.049	7.01	
Copper	.65	%	1.0					lbs.			
TOTAL PAYMENTS FOR METALS											39.45

DEDUCTIONS

	DEBITS	CREDITS
BASE CHARGE: F. O. B. El Paso, for Metal Payments, not exceeding 15.00 per ton	3.50	
10 % of $ 24.45 excess over $ 15.00 per ton	1.50	
Handling Sacks		
Copper Deficiency		

ANALYSIS			DEDUCTION	NET		RATE			DEBITS	CREDITS
Insoluble	33.8	%			%	@		Cts.		
Silica	29.0	%			%	@		Cts.		
Iron	19.0	%			%	@		Cts.		
Mn		%			%	@		Cts.		
Lime	.1	%			%	@		Cts.		
Zinc	6.2	%	5.0	1.2	%	@	.30	Cts.	.36	
Sulphur	25.2	%	2.0	23.2	%	@	.25	Cts.	2.50 Max	
Alumina	2.5	%			%	@		Cts.		
As	1.25	%			%	@		Cts.		
Sb	.17	%			%	@		Cts.		
Bi		%			%	@		Cts.		
TOTAL DEDUCTIONS									7.86	7.86
NET VALUE PER TON										31.59

				DEBITS	CREDITS
Total Value on	22.988	Dry Tons @ 31.59	Per Ton		726.19
Less Freight on	23.220	Wet Tons @ 5.57	Per Ton	129.34	
Less Demurrage		Hauling Charge	1.50	34.83	
Less Representation		Switching			
Less Duty and Brokerage		Umpires			
Amount withheld pending receipt of Silver Affidavit				33.79	
Royalty					
		BALANCE DUE SHIPPER		528.23	
				726.19	726.19

Valuation for freight per wet ton $ 31.27

Made by _____ Checked _____ Correct _____ Approved _____

FORM 2A 20M 1-42 CAL.INC

AMERICAN SMELTING AND REFINING COMPANY
EL PASO SMELTING WORKS

ORE SETTLEMENT

EL PASO, TEXAS. 7-30-42

BOUGHT OF Sterling Hedges, Silver Hill
ADDRESS Chloride, Arizona
SHIPPING POINT Kingman, Arizona

SMELTER LOT 1910
SHIPPER'S LOT
CLASSIFICATION Ore

CAR NO.	CAR INITIAL	WEIGHT IN AVOIRDUPOIS POUNDS: GROSS	SACKS NO.	SACKS WEIGHT	NET WEIGHT	MOISTURE %	DRY WEIGHT
175277	AT				82520	1.0	81695

N. Y. METAL QUOTATIONS

Settlement Date 7-27-42
B/L Date 7-21-42

Silver	.70625	Cts. per oz.
F'gn Silver		
Lead	$ 6.50	Per 100 lbs.
E. & M. J. Copper		Cts. per lb.

Payable Metal Content
Lead 3603 lbs.

PAYMENTS FOR METALS

ELEMENTS	ASSAY PER TON 2000 LBS.		DEDUCTED	NET ASSAY	EQUIVALENT IN LBS.	PER CENT PAID FOR	NET PAID FOR		RATE	VALUE AMOUNT PER TON	VALUE AMOUNT TOTAL
Gold	.565	oz.					.565	oz.	32.31825	18.26	
Silver	3.4	oz.	1.0	2.4			2.4	oz.	.69125	1.66	
Lead	6.4	%	1.5	4.9	98	90	88.2	lbs.	.049	4.32	
Copper	.36	%	1.0					lbs.			
TOTAL PAYMENTS FOR METALS											24.24

DEDUCTIONS

	DEBITS	CREDITS
BASE CHARGE: F. O. B. El Paso, for Metal Payments, not exceeding 15.00 per ton	3.50	
10 % of $ 9.24 excess over $ per ton	.92	
Handling Sacks		
Copper Deficiency		

ANALYSIS			DEDUCTION	NET		RATE			DEBITS
Insoluble	50.4	%	40.0	10.4	%	@ .05	Cts.		.52
Silica	43.4	%			%	@	Cts.		
Iron	13.1	%			%	@	Cts.		
Mn		%			%	@	Cts.		
Lime	.1	%			%	@	Cts.		
Zinc	5.3	%	5.0	.3	%	@ .30	Cts.		.09
Sulphur	15.5	%	2.0	13.5	%	@ .25	Cts.		2.50
Alumina	5.3	%			%	@	Cts.		
As	.40	%			%	@	Cts.		
Sb	.17	%			%	@	Cts.		
Bi		%			%	@	Cts.		
TOTAL DEDUCTIONS									7.53
NET VALUE PER TON									16.71

				DEBITS	CREDITS
Total Value on	40.8475	Dry Tons @ 16.71	Per Ton		682.56
Less Freight on	41.260	Wet Tons @ 4.51	Per Ton	186.08	
Less Demurrage		Hauling Charge	1.50	61.89	
Less Representation		Switching			
Less Duty and Brokerage		Umpires			
Amount withheld pending receipt of Silver Affidavit				34.72	
Royalty					
BALANCE DUE SHIPPER				399.87	
				682.56	682.56

Valuation for freight per wet ton $ 16.54

Made by _____ Checked _____ Correct HHC Approved _____

FORM 2A 20M 7-42 CAIRNS

AMERICAN SMELTING AND REFINING COMPANY
EL PASO SMELTING WORKS

ORE SETTLEMENT

EL PASO, TEXAS. 10-3-42
SMELTER LOT 2454
SHIPPER'S LOT
CLASSIFICATION Ore
NAME OF MINE Valley View Claim Silver Hill Mine

BOUGHT OF Sterling Hedges,
ADDRESS Box 243, Chloride, Arizona.
SHIPPING POINT Kingman, "

CAR No.	CAR INITIAL	WEIGHT IN AVOIRDUPOIS POUNDS GROSS	SACKS No.	SACKS WEIGHT	NET WEIGHT	MOISTURE %	DRY WEIGHT
173612	AT				56980	4.1	54644

N. Y. METAL QUOTATIONS

Settlement Date 9-26-42
B/L Date 9-21-42

Silver	.70625	Cts. per oz.
F'gn Silver	.4475	
Lead	$ 6.50	Per 100 lbs.
E. & M. J. Copper	.11650	Cts. per lb.

PAYABLE METAL CONTENT

Lead 3221 lbs.
Copper lbs.

PAYMENTS FOR METALS

ELEMENTS	ASSAY PER TON 2000 LBS.		DEDUCTED	NET ASSAY	EQUIVALENT IN LBS.	PER CENT PAID FOR	NET PAID FOR		RATE	VALUE AMOUNT PER TON	VALUE AMOUNT TOTAL
Gold	.5725	oz.					.5725	oz.	32.31825	18.50	
Silver	4.9	oz.	1.0	3.9			3.9	oz.	.69125	2.70	
Lead	8.05	%	1.5	6.55	131.0	90	117.9	lbs.	.049	5.78	
Copper	.07	%						lbs.			
TOTAL PAYMENTS FOR METALS											26.98

DEDUCTIONS

	DEBITS	CREDITS	
BASE CHARGE: F. O. B. El Paso, for Metal Payments, not exceeding 15.00 per ton	3.50		
10 % of $ 11.98 excess over $ 15.00 per ton	1.20		
Handling Sacks			
Copper Deficiency			

ANALYSIS			DEDUCTION	NET		RATE			DEBITS	CREDITS
Insoluble	52.8	%	40.0	12.8	%	@ .05	Cts.		.64	
Silica	48.0	%			%	@	Cts.			
Iron	11.1	%			%	@	Cts.			
Mn		%			%	@	Cts.			
Lime	.4	%			%	@	Cts.			
Zinc	.1	%			%	@	Cts.			
Sulphur	6.0	%	2.0	4.0	%	@ .25	Cts.		1.00	
Alumina	1.0	%			%	@	Cts.			
As	2.30	%	2.00	.30	%	@ .50	Cts.		.15	
Sb	.17	%			%	@	Cts.			
Bi		%			%	@	Cts.			
TOTAL DEDUCTIONS									6.49	6.49
NET VALUE PER TON										20.49

			DEBITS	CREDITS
Total Value on	27.322	Dry Tons @ 20.49 Per Ton		559.83
Less Freight on	28.490	Wet Tons @ 5.04 Per Ton	143.59	
Less Demurrage		Hauling Charge 1.50	42.74	
Less Representation		Switching		
Less Duty and Brokerage		Umpires		
Amount withheld pending receipt of Silver Affidavit			27.60	
Royalty				
		BALANCE DUE SHIPPER	345.90	
Valuation for freight per wet ton $ 19.65			559.83	559.83

Made by _____ Checked _____ Correct _____ Approved _____

FORM 2A 20M 1-42 CAIRNS

AMERICAN SMELTING AND REFINING COMPANY
EL PASO SMELTING WORKS

ORE SETTLEMENT

EL PASO, TEXAS, 4-2-42

BOUGHT OF Sterling M. Hedges,
ADDRESS Box 243, Caloride, Arizona.
SHIPPING POINT Kingman, "

SMELTER LOT 842
SHIPPER'S LOT
CLASSIFICATION Ore

CAR No.	CAR INITIAL	WEIGHT IN AVOIRDUPOIS POUNDS: GROSS	SACKS No.	SACKS WEIGHT	NET WEIGHT	MOISTURE %	DRY WEIGHT
174929	AT				85740	2.1	83939

N. Y. METAL QUOTATIONS

Settlement Date 3-25-42
B/L Date 3-19-42

Silver	.70625	Cts. per oz.
F'gn Silver	.35125	
Lead	$ 6.50	Per 100 lbs.
E. & M. J. Copper		Cts. per lb.

PAYMENTS FOR METALS

ELEMENTS	ASSAY PER TON 2000 LBS.		DEDUCTED	NET ASSAY	EQUIVALENT IN LBS.	PER CENT PAID FOR	NET PAID FOR		RATE		VALUE AMOUNT PER TON	VALUE AMOUNT TOTAL
Gold	.78	oz.					.78	oz.	32.31825		25.21	
Silver	3.7	oz.	1.0	2.7			2.7	oz.	.69125		1.87	
Lead	5.25	%	1.5	3.75	75.0	90	67.5	lbs.	.049		3.31	
Copper	.435	%						lbs.				
TOTAL PAYMENTS FOR METALS												30.39

DEDUCTIONS

	DEBITS	CREDITS
BASE CHARGE: F. O. B. El Paso, for Metal Payments, not exceeding 15.00 per ton	3.50	
10 % of $ 15.39 excess over $ 15.00 per ton - Max	1.50	
Handling Sacks		
Copper Deficiency		

ANALYSIS			DEDUCTION	NET		RATE			DEBITS	CREDITS
Insoluble	58.2	%	40.0	18.2	%	@ .05	Cts.		.91	
Silica	50.6	%			%	@	Cts.			
Iron	12.2	%			%	@	Cts.			
Mn		%			%	@	Cts.			
Lime	.4	%			%	@	Cts.			
Zinc	3.2	%			%	@	Cts.			
Sulphur	5.8	%	2.0	3.8	%	@ .25	Cts.		.95	
Alumina	5.0	%			%	@	Cts.			
As	.85	%			%	@	Cts.			
Sb		%			%	@	Cts.			
Bi		%			%	@	Cts.			
TOTAL DEDUCTIONS									6.36	6.86
NET VALUE PER TON										23.53

			DEBITS	CREDITS
Total Value on	41.9695	Dry Tons @ 23.53 Per Ton		987.54
Less Freight on	42.870	Wet Tons @ Per Ton		
Less Demurrage		Hauling Charge 4.77	204.49	
Less Representation		Switching		
Less Duty and Brokerage		Umpires		
Amount withheld pending receipt of Silver Affidavit			40.29	
Royalty				
Payable Metal Content Lead 2833#				
BALANCE DUE SHIPPER			~~742.76~~	
			987.54	~~987.54~~

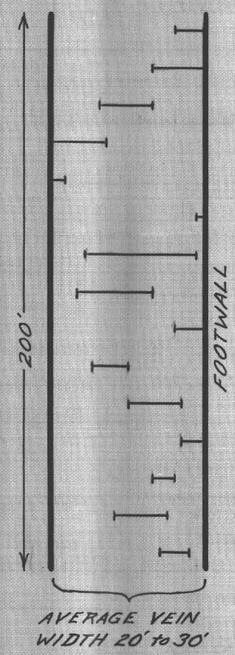
Valuation for freight per wet ton $ ~~23.04~~

Made by _____ Checked _____ Correct _____ Approved _____

DIAGRAMMATIC SUMMARY of SAMPLING RESULTS

SILVER HILL MINE

To Accompany Report by K.R.



	SAMPLE NO.	SAMPLE WIDTH	SULPHIDES	OXIDIZED	Au Oz/Ton	@ $35.00	Pb %	@ 9½¢	Ag Oz/Ton	@ 71¢	Zn %	@ 11¢	TOTAL VALUE
*	1	4'	✓	✓	.05	$1.75	Tr.		.47	$.33	.70	$1.54	$3.62
	2	7'	✓	✓	.03	1.05	Tr.		.17	.12	.60	1.32	2.49
	3	7'		✓	.03	1.05	Tr.		.21	.15	Tr.		1.20
*	4	7'	✓	✓	.04	1.40	1.90	$3.61	1.06	.75	Tr.		5.76
	5	1½'	✓		.34	11.90	.60	1.14	1.36	.97	Tr.		14.01
	6	1'	✓		.12	4.20	Tr.		.32	.23	Tr.		4.43
*	7	15'		✓	.14	4.90	Tr.		.58	.41	Tr.		5.31
	8	10'	✓		.02	.70	Tr.		.06	.04	Tr.		.74
*	9	4'		✓	.24	8.40	4.40	8.36	1.42	1.01	Tr.		17.77
*	10	5'	✓	✓	.28	9.80	4.30	8.17	2.90	2.06	.50	1.10	21.13
*	11	7'	✓	✓	.08	2.80	Tr.		.26	.18	Tr.		2.98
*	12	3'	✓	✓	.02	.70	Tr.		.06	,04	Tr.		.74
*	13	3'	✓		.62	21.70	8.10	15.39	3.64	2.5	.70	1.54	41.21
*	14	7'	✓		.03	1.05	Tr.		.09	.06	Tr.		1.11
*	15	4'	✓	✓	.40	14.00	6.70	12.73	2.68	1.90	Tr.		28.63

* These samples give grade of vein material which would be minable by square set method.

CONSOLIDATED COPPERMINES CORPORATION

ASSAY CERTIFICATE

Geology Department

KIMBERLY, NEVADA, Jan.19.1943 194

NO.	DESCRIPTION	OZS. GOLD	OZS. SILVER	PER CENT COPPER	PER CENT INSOL	PER CENT IRON	PER CENT CAO	PER CENT Al_2O_3	PER CENT S	PER CENT Pb	PER CENT Zinc	PER CENT
	551	.05	.47							Trace	.70	4
	52	.03	.17							Trace	.60	2.5
	53	.03	.21							Trace	Trace	
	54	.04	1 .06							1.90	Trace	5.5
	55	.34	1 .36							.60	Trace	14.0
	56	.12	.32							Trace	Trace	3.7
	57	.14	.58							Trace	Trace	5
	58	.02	.06							Trace	Trace	
	59	.24	1 .42							4.40	Trace	17.0
	60	.28	2 .90							4.30	.50	20.0
	62	.08	.26							Trace	Trace	3.5

CHIEF CHEMIST

CONSOLIDATED COPPERMINES CORPORATION

ASSAY CERTIFICATE

Geology Department

KIMBERLY, NEVADA, Jan.19.1943 194

NO.	DESCRIPTION	OZS. GOLD	OZS. SILVER	PER CENT COPPER	PER CENT INSOL	PER CENT IRON	PER CENT CAO	PER CENT Al_2O_3	PER CENT S	PER CENT Pb	PER CENT Zinc	PER CENT
	551	.05	.47							Trace	.70	
	52	.03	.17							Trace	.60	
	53	.03	.21							Trace	Trace	
	54	.04	1 .06							1.90	Trace	
	55	.34	1 .36							.60	Trace	
	56	.12	.32							Trace	Trace	
	57	.14	.58							Trace	Trace	
	58	.02	.06							Trace	Trace	
	59	.24	1 .42							4.40	Trace	
	60	.28	2 .90							4.30	.50	
	62	.08	.26							Trace	Trace	

R. D. Lawson

CHIEF CHEMIST

CONSOLIDATED COPPERMINES CORPORATION

ASSAY CERTIFICATE

Geology Department

KIMBERLY, NEVADA, Jan.19.1943 194

NO.	DESCRIPTION	OZS. GOLD	OZS. SILVER	PER CENT COPPER	PER CENT INSOL	PER CENT IRON	PER CENT CAO	PER CENT Al_2O_3	PER CENT S	PER CENT Pb	PER CENT Zinc	PER CENT
	551	.05	.47							Trace	.70	
	52	.03	.17							Trace	.60	
	53	.03	.21							Trace	Trace	
	54	.04	1 .06							1.90	Trace	
	55	.34	1 .36							.60	Trace	
	56	.12	.32							Trace	Trace	
	57	.14	.58							Trace	Trace	
	58	.02	.06							Trace	Trace	
	59	.24	1 .42							4.40	Trace	
	60	.28	2 .90							4.30	.50	
	62	.08	.26							Trace	Trace	

R. H. Johnson

CHIEF CHEMIST

CONSOLIDATED COPPERMINES CORPORATION

ASSAY CERTIFICATE

Geology Department

KIMBERLY, NEVADA, Jan.19.1943 194

NO.	DESCRIPTION	OZS. GOLD	OZS. SILVER	PER CENT COPPER	PER CENT INSOL	PER CENT IRON	PER CENT CAO	PER CENT Al_2O_3	PER CENT S	PER CENT Pb	PER CENT Zinc	PER CENT
	51	.05	.47							Trace	.70	
	52	.03	.17							Trace	.60	
	53	.03	.21							Trace	Trace	
	54	.04	1 .06							1.90	Trace	
	55	.34	1 .36							.60	Trace	
	56	.12	.32							Trace	Trace	
	57	.14	.58							Trace	Trace	
	58	.02	.06							Trace	Trace	
	59	.24	1 .42							4.40	Trace	
	60	.28	2 .90							4.30	.50	
	62	.08	.26							Trace	Trace	

CHIEF CHEMIST

CONSOLIDATED COPPERMINES CORPORATION

ASSAY CERTIFICATE

Geology Department

KIMBERLY, NEVADA, Jan.19.1943 194

NO.	DESCRIPTION	OZS. GOLD	OZS. SILVER	PER CENT COPPER	PER CENT INSOL	PER CENT IRON	PER CENT CAO	PER CENT Al_2O_3	PER CENT S	PER CENT Pb	PER CENT Zinc	PER CENT
	563	.02	.06							Trace	Trace	
	64	.62	3 .64	.06						8.10	.70	40.50
	65	.03	.09	.04						Trace	Trace	
	66	.40	2 .68							6.70	Trace	32.4

CHIEF CHEMIST

CONSOLIDATED COPPERMINES CORPORATION

ASSAY CERTIFICATE

Geology Department

KIMBERLY, NEVADA, Jan.19.1943 194

NO.	DESCRIPTION	OZS. GOLD	OZS. SILVER	PER CENT COPPER	PER CENT INSOL	PER CENT IRON	PER CENT CAO	PER CENT Al_2O_3	PER CENT S	PER CENT Pb	PER CENT Zinc	PER CENT
	563	.02	.06							Trace	Trace	
	64	.62	3 .64	.06						8.10	.70	
	65	.03	.09	.04						Trace	Trace	
	66	.40	2 .68							6.70	Trace	

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	563	.02	.06							Trace	Trace	
	64	.62	3 .64	.06						8.10	.70	
	65	.03	.09	.04						Trace	Trace	
	66	.40	2 .68							6.70	Trace	

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	63	.02	.06							Trace	Trace	
	64	.62	3 .64	.06						8.10	.70	
	65	.03	.09	.04						Trace	Trace	
	66	.40	2 .68							6.70	Trace	

CHIEF CHEMIST

Notes from Segar's Data on Silver Hill

Jacobsen's Report:

3 pat. claims & 5 acre pat. millsite also 4 unpat claims & 1 frac.
Elev. 4000'
Water at 150' - #1 shaft. — Plentiful supply 400 to 600' in all other mines

U. S. G. S. Bull. #397 "Mineral Deposits of Mohave Co." by F. C. Schrader, pub. 1907

Chloride on flanks of Cerbat Mts. 20 mi. NNW of Kingman - Sacramento Valley
E-W vein system encountered in old mines — not seen surface — abruptly enriched at intersect.

Hualpai Dist.

2000 pop. in 1900
Still active during Schrader's visit

Mine Depths:

Juno	600	Tanoan 300	Distaff 180
Elkart	500	Pinkham 230	
Penn.	600	Midnight 200	
Schuylkill	500	Alota 200	
Minnesota	Connor 530	Payroll 400	
Smoky Boy	400	Mollie Gibson 200	

Goleonda Mine opened to 1400'
then closed by fire
Banner shaft to 900'
Diana mine not in Schrader's paper

Prod. of Dist. 1880 to 1930:
1,900,000 # Cu, 41,850,000 # Pb
$715,000 Au, $2,223,000 Ag.
Silver Hill: 700,000 # ~~Pb~~, ~~$~~5,000 Au,
$10,000 Ag (from Arizona Bureau
of Mines Bull. #140 - "Ariz.
Mital Production".

Silver Hill mine over 2000'
level. prior to 1898 — closed
1908 — Dump shipments 1917 —
no further work.

Merrimac mine down to 200 or 400
Diana to 400' — Lucile, Jack-pot
west of Silver Hill.

Vein lowering grade in such
workings — 4 or 5 shafts, & tunnel

Vein contains 3 pay leaves.

1000' lat. level from 5 shaft.

#1 shaft 200'

≈ 7,243.3 tons ore blocked out by
Sh. #143 to 150 level – 7.42' wide
@ 8.07/ton

North tunnel to #1 sh. – 150 level
a. 8' wide – 12,750 tons @ 6.72.

120' South sh. #5 to 140' north
sh. #4 to crsng. depth 150' –
5.15' wide – 14,162 tons @ 6.34 –

Segar's Summary:

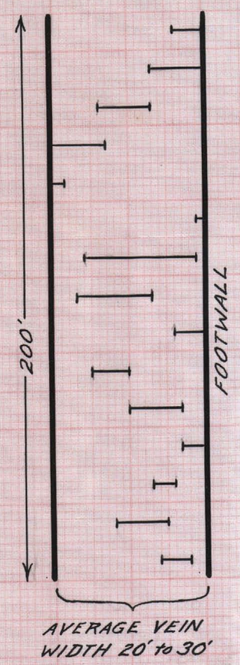
Eldoride 2½ mi. N King. – 4 mile
off main high.

328' cross cut to vein – new work

DIAGRAMMATIC SUMMARY of SAMPLING RESULTS

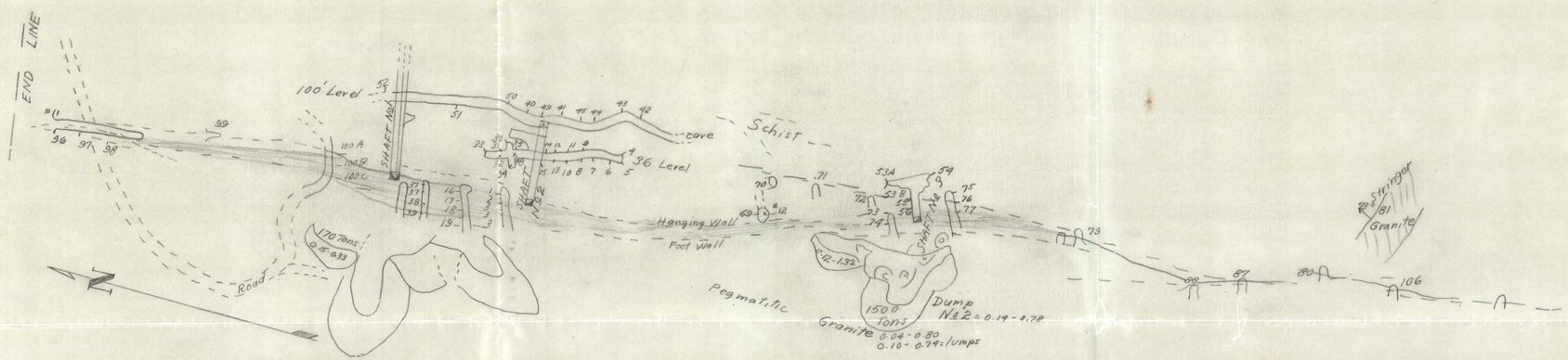
SILVER HILL MINE

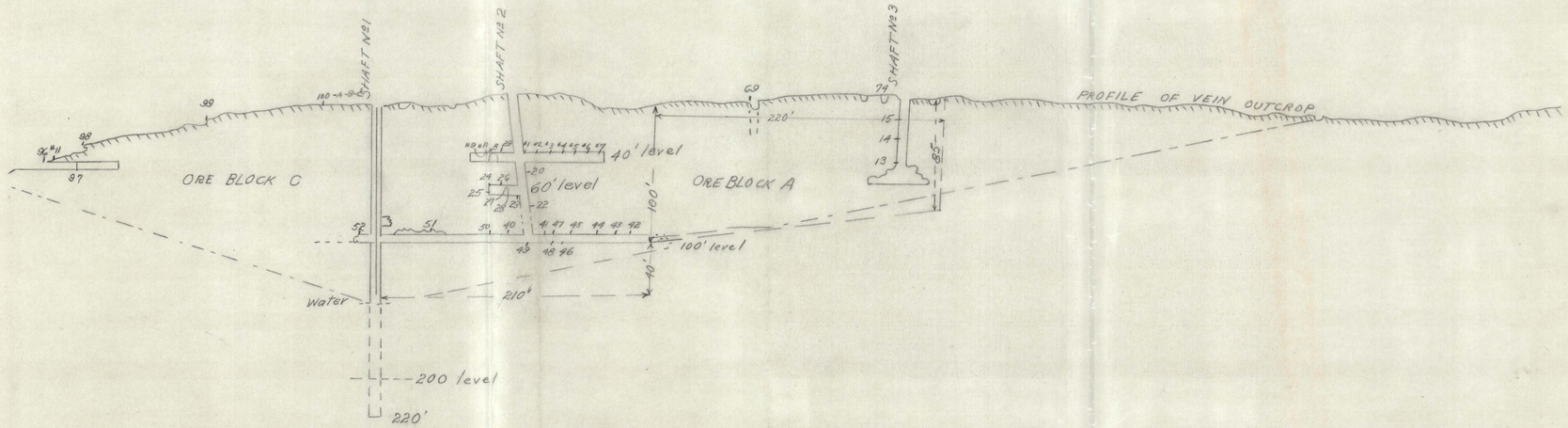
To Accompany Report by K.R.



	SAMPLE NO.	SAMPLE WIDTH	SULPHIDES	OXIDIZED	Au Oz/Ton	@ $35.00	Pb %	@ 9½¢	Ag Oz/Ton	@ 71¢	Zn %	@ 11¢	TOTAL VALUE
*	1	4'	✓	✓	.05	$1.75	Tr.		.47	$.33	.70	$1.54	$3.62
	2	7'	✓	✓	.03	1.05	Tr.		.17	.12	.60	1.32	2.49
	3	7'		✓	.03	1.05	Tr.		.21	.15	Tr.		1.20
*	4	7'	✓	✓	.04	1.40	1.90	$3.61	1.06	.75	Tr.		5.76
	5	1½'	✓		.34	11.90	.60	1.14	1.36	.97	Tr.		14.01
	6	1'	✓		.12	4.20	Tr.		.32	.23	Tr.		4.43
*	7	15'		✓	.14	4.90	Tr.		.58	.41	Tr.		5.31
	8	10'	✓		.02	.70	Tr.		.06	.04	Tr.		.74
*	9	4'		✓	.24	8.40	4.40	8.36	1.42	1.01	Tr.		17.77
*	10	5'	✓	✓	.28	9.80	4.30	8.17	2.90	2.06	.50	1.10	21.13
*	11	7'	✓	✓	.08	2.80	Tr.		.26	.18	Tr.		2.98
*	12	3'	✓	✓	.02	.70	Tr.		.06	,04	Tr.		.74
*	13	3'	✓		.62	21.70	8.10	15.39	3.64	2.5	.70	1.54	41.21
*	14	7'	✓		.03	1.05	Tr.		.09	.06	Tr.		1.11
*	15	4'	✓	✓	.40	14.00	6.70	12.73	2.68	1.90	Tr.		28.63

* These samples give grade of vein material which would be minable by square set method.





Width - Au, Ag, Pb, Zn. (Blackburn)

#1 - 5.3' - 0.20 - 2.90 - 3.62 - 0.59
#2 - 5.6' - 0.41 - 7.59 - 5.13 - 1.03
#3 - 2.8' - 0.09 - 1.21 - 0.03 - 0.98
#4 - 2.6' - 0.015 - 0.19 - 0.10 - 1.00
#5 - 5.0' - 0.12 - 0.48 - 0.10 - 0.94
#6 - 2.6' - 0.035 - 0.07 - xx - 0.69
#7 - 3.0' - 0.22 - 0.68 - 0.70 - 1.63
#8 - 5.0' - 0.12 - 1.18 - 2.11 - 0.69
#9 - 5.0' - 0.025 - 0.38 - xx - 0.74 F.W.
#10 - 5.0' - 0.15 - 0.14 - xx - 1.13 H.W.
#11 - 8.0 - 0.09 - 0.51 - 0.93 - 0.99
#12 - 9.0' - 0.17 - 0.83 - 1.51 - 1.33
#13 - 9.0' - 0.42 - 2.98 - 2.26 - 0.79
#14 - 5.5' - 0.10 - 2.98 - 0.28 - 0.55
#15 - 4.5' - 0.58 - 1.91 - 3.27 - 0.53

Width - Au - Ag (Jacobsen)

1 - 9.0' - 0.8 - Tr
2 - 3.0' - .43 - .38
3 - 9.5' - .12 - 9.08
3 - 7.0' - .14 - 1.14
3 - 5.0' - .20 - 1.12
4 - 2.33' - .16 - Tr
5 - 1.83' - .13 - 1.65
6 - 3.5' - 0.2 - Tr
7 - 3.66' - .10 - .66
8 - 3.0' - .16 - Tr
9 - 5.66' - .85 - 0.13
10 - 8.83' - .06 - .30
11 - 2.33' - .13 - 1.91
12 -
13 - 3.58' - .27 - 1.63
14 - 4.58' - .11 - 2.89
15 - 5.33' - .08 - 2.33
16 - 7.0' - .06 - .11
17 - 5.25' - .36 - .60
18 - 3.0 - .09 - .55
19 - 5.17 - .09 - Tr
20 - 2.5' - .25 - 5.86
21 -
22 - 3.5' - .11 - .21
23 - 3.75' - .09 - 18.98
24 - 3.5' - .17 - 1.75
25 - 1.0' - .06 - .62
26 - 9.0' - .22 - 5.78
27 - 3.0' - .26 - 2.22
28 - 6.5' - .14 - 3.76
29 - 9.0' - .19 - .26
30 - 2.0' - 0.2 - .26
31 - 9.0' - .05 - .67
32 - 7.0' - .03 - .65
33 - 3.0' - .03 - .73
34 - 6.0' - .07 - .63
35 - 1.0' - .57 - 1.11
36 -
37 - 5.5' - Tr - .20
37 - 5.0' - Tr - .20
38 - 9.0' - .12 - 17.0
39 - 9.2' - .33 - .77
40 - 5.0' - .10 - .98
41 - 8.0' - .14 - .62
42 - 3.0' - .10 - .72
43 - 3.0' - .31 - 9.97
44 - 3.25' - .53 - 1.20
45 - 5.0' - .29 - 2.11
46 - 7.0' - .19 - 12.7
47 - 6.8' - .26 - 9.15
48 - 5.6' - .06 - .13
49 - 5.0' - .11 - .65
50 - 7.0' - .02 - .20

51 - 6.5 - .27 - .81
52 - 5.2 - .10 - .96
53A - 7.0' - .05 - .95
53B - 7.0' - .02 - .110
54 - 8.0' - .11 - 1.05
55 - 5.5' - 0.9 - 1.03
56 - 6.0' - .18 - 1.46
68 - 9.0' - .15 - 2.18
70 - 3.0' - .108 - 1.56
71 - 4.0' - Tr - 1.09
72 - 3.0' - Tr - 1.28
73 - 4.0' - .10 - .50
74 - 3.0' - .20 - 1.28
75 - 8.0' - Tr - .99
76 - 6.0' - .02 - 2.35
77 - 6.5' - .04 - .20
78 -
79 - 3.0' - .09 - 1.20
80 - 6.5' - .09 - .89
81 - 2.0' - .02 - Tr

87 - 3.0' - .06 - .96
88 - 9.0' - .08 - Tr

96 - 6' - .11 - 18.69
97 - 9.0' - .09 - 1.32
98 - 6.0' - .01 - .97
99 - 7.0' - .01 - .59
100A - 5.5' - .02' - .58
100B - 9.5' - .02 - .39
100C - 9.0' - .01 - .97

106 - 10' - .06 - 1.66

REFERENCES	DWG. No.	DESCRIPTION

REFERENCES	DWG. No.	DESCRIPTION

REVISIONS	No.	BY	DATE	DESCRIPTION

REVISIONS	No.	BY	DATE	DESCRIPTION

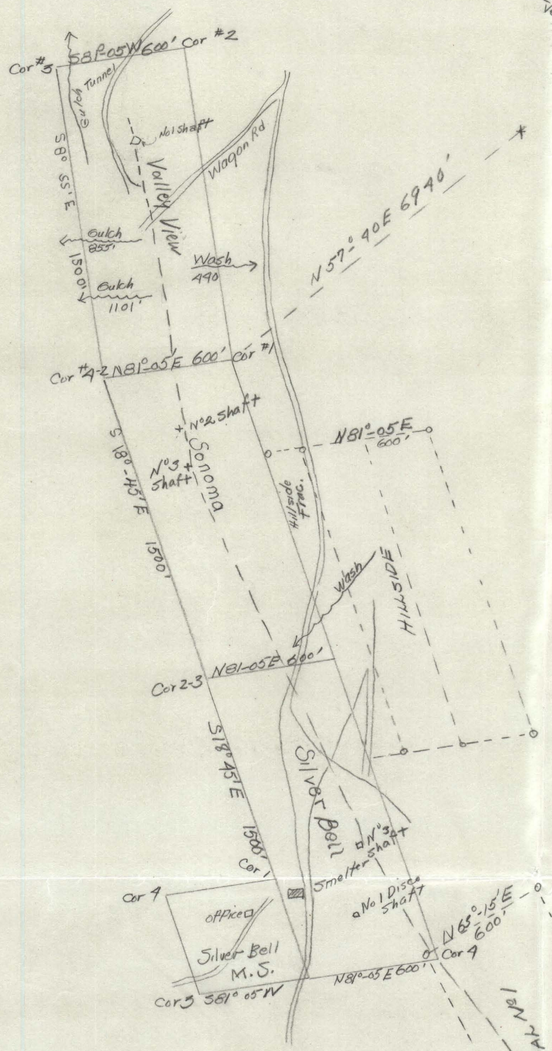
	DATE
DRAWN	
TRACED	
CHECKED	
APPROVED	

CONSOLIDATED COPPERMINES CORPORATION

KIMBERLY NEVADA

SCALE:

POST 6041—100—8-41



Scale – 1" = 500'

Survey M° 1273 A+B
Prescott Sand District
Surveyed Mar 10-14-1898
By O F Kueneer
US Dep Mine Surveyor
Traced by R C Jacobsen 8/25/36
Note Appended in dotted lines are shown in relative position the Centennial + Hillside claims adjoining Survey #1273.

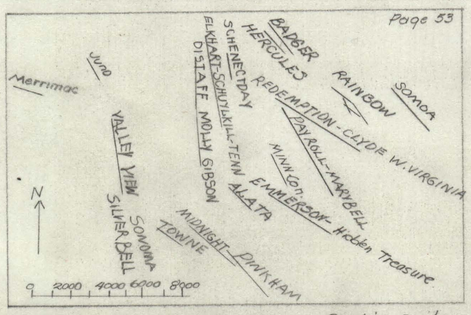
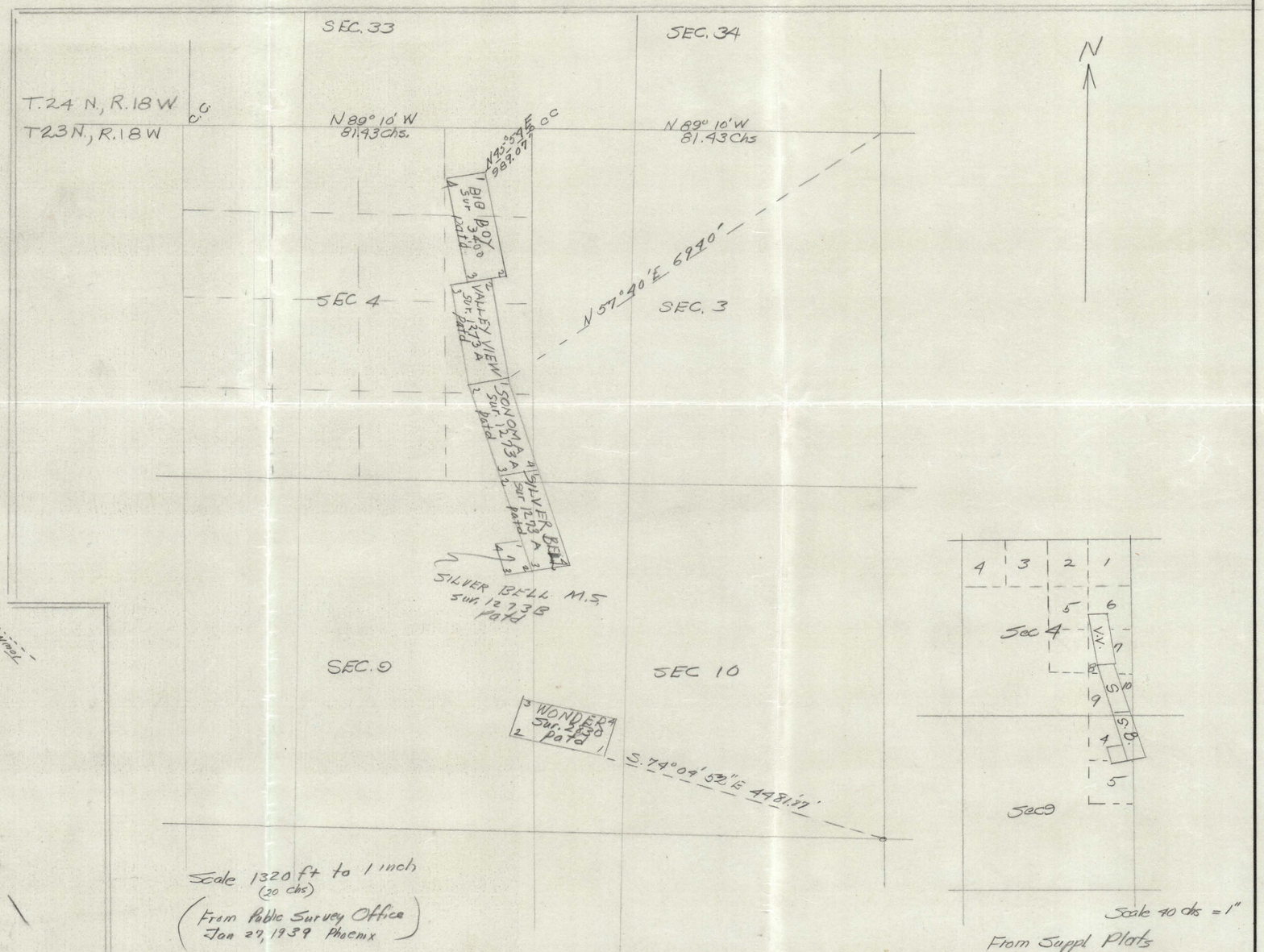


FIGURE 4 - Diagram showing Trend + Relative Position of principal veins of the Chloride District
Traced from U.S.G.S. Bull. 397. by F.C. Schrader
Jacobson



Scale 1320 ft to 1 inch (20 chs)
(From Public Survey Office Jan 29, 1939 Phoenix)

From Suppl Plats Aug 12, 1909 + April 15, 1892

REFERENCES	REVISIONS	NO.	BY	DATE	DESCRIPTION
					Tracings of Survey maps Silver Hill Property Chloride, Ariz.

	DATE
DR.	1-19-39
TR.	J.H.C
CKD.	
APPR.	

CONSOLIDATED COPPERMINES CORPORATION

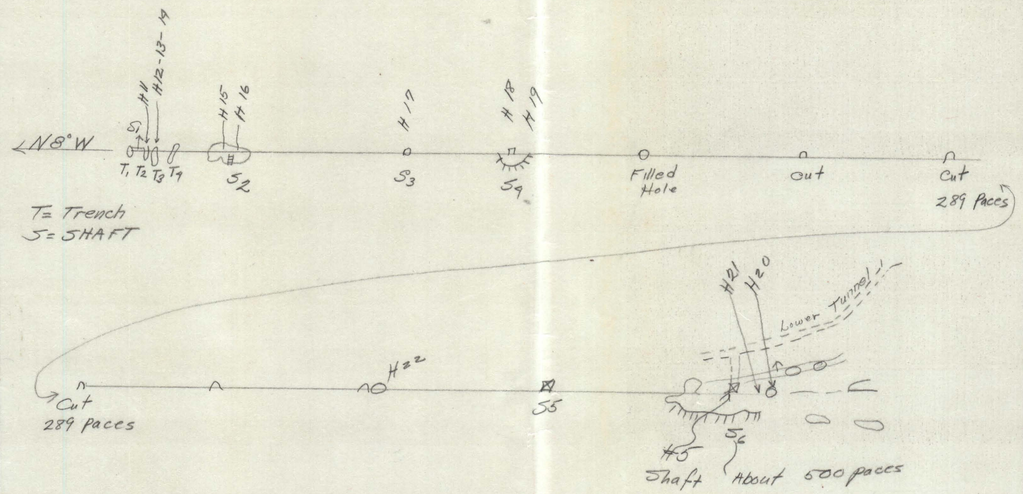
KIMBERLY NEVADA

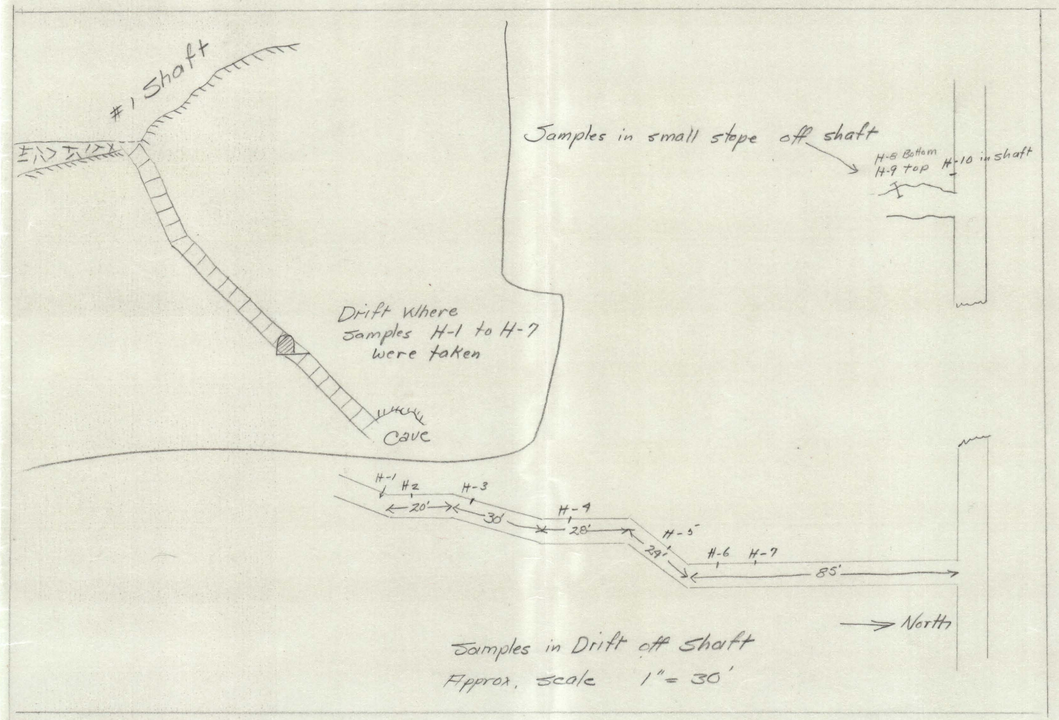
SCALE

SILVER HILL - CHLORIDE, ARIZ.

Scale Approx. 1" = 100'

Based on 1 Pace = 3'





Nov 23, 1939
Sampled by R D Leisk ASSAYS -

	Cut	Au	Ag	Pb	Zn
H-1		.29	2.58	2.9	
H-2		.32	1.12	0.9	
H-3		.39	1.10	1.5	
H-4		.26	2.14	2.9	
H-5		.17	.73	0.5	
H-6		.52	.78	0.5	
H-7		.50	1.70	.95	
H-8		.79	2.79	2.9	
H-9		.26	1.92	1.2	
H-10	27'	tr	1.00		
H-11	6'	Nil	Nil		
H-12	7'	.09	tr		
H-13	3'	.09	Nil		
H-14		.19	5.26		
H-15		.10	1.19		
H-16		.56	2.72		
H-17	4'	.12	1.45		
H-18	6'	.36	3.84		
H-19	15'	.08	2.70		
H-20	3'	.29	36.58		
H-21		.09	.56		
H-22	3'	.09	.76		

Av. .37 Au
2.10 Ag
1.5% Pb

REFERENCES

REVISIONS

NO.	BY	DATE	DESCRIPTION
			Sketch Maps & assays from surface & 100 levels Silver Hill Prop Chloride Ariz.

DR.
TR.
CKD.
APPR.

DATE 1-19-43

CONSOLIDATED COPPERMINES CORPORATION

KIMBERLY NEVADA

SCALE