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GEOLOGICAL REPORT

on the properties of the

{TONOPAH WESTERN CONSOLIDATED MINING COMPANY
{AND GREENWATER COPPER MINING & SMELTING COMPANY

Esmeralda County, near Tonopah, Nevada.

INTRODUCTION

At the request of Mr. Oscar Rohn of the former company, and Mr. Oscar A. Daube and Superintendent John McGee of the latter company, I visited the above properties during September and October for the purpose of making a geological survey of them.

The Tonopah Western Consolidated Mining Company is a holding companywhich includes the following subsidiary companies and their holdings.

Tonopah Comstock Mining Company.
Golden Gate Consolidated Mining Company.
Table Mountain Group of Claims.
Silver Queen Group of Claims.

The Greenwater Copper Mining & Smelting Company is also a holding company which has as subsidiaries:

Great Western Consolidated Mining Company.
Tonopah Bonanza Mining Company (Including the Desert King Mining Company.)
Tonopah Ruby Mining Company.

Sixteen days were spent at the properties. A detailed geological survey was made of all available workings on the properties above mentioned. In addition to this, an inspection of all the surface was made, and reconnaissance trips were made to the adjacent mines, including the West Tonopah Mine, Monarch Pittsburg, the Ohio worki of the West End Consolidated, and the Tonopah Extension.

Over 100 rock specimens were collected, a chemical analysis was made of a typical specimen of the single ore bearing formation found in the Great Western workings, a personal microscopic study was made of thin sections of 66 of these rocks, and Prof. A. F. Rogers of Stanford University is now making a detailed study of each of these thin sections and will report shortly.

The data obtained and the conslusion drawn from the above sources are incorporated herewith.

WORKINGS

The only work on any of the properties of the Tonopah Western Consol. Min. Co. other than superficial surface diggings, is the Golden Gate Shaft, which is said to be 650 feet deep. The workings on the holdings of the Greenwater Copper Min. & Smelting Co. consist in addition to superficial surface workings, of two shafts with drifts and crosscuts therefrom, listed as follows:

Great Western Property:

Name Working	Depth below Collar	Length Total	Length Accessible
Shaft		1150'	1133'
850 Foot Level	857'	220	220
1140 Foot Level	1133.2	600	575
	Total	1970	1928

Bonanza Mine:

Shaft		1100	1010
500 Foot Level	528'	430	430
700 Foot Level	720	780	780
800 Foot Level	822	390	380
950 Level	945	2325	940
1100 Level	?	?	?
	Total	5025	3540

The Golden Gate Shaft has been in disuse for several years, so it was considered unsafe by Mr. McGee to attempt to go down it.

Most of the workings of the Great Western Mine were available. The south crossqut from the shaft on the 1133 Level had been bulkheaded on account of having encountered a strong flow of water. The 850 Level was used as a reservoir, but it was possible to get into all of the workings on this level.

The Bonanza has very few lateral workings. The skip in the shaft could not be lowered below a point about 860 feet from the collar, on account of swelling timbers. The lower levels are under water and the upper levels were not much more than stations.

Itbwas only from these very few workings that geological data were available.

MINE WATER

There was water in the bottom of the Golden Gate Shaft, but, as it was impossible to go down it, the exact elevation was not determined.

The normal ground water level of the Great Western Shaft is about 65 feet below the 850 Level. By extending the workings below this point and and laterally from the shaft, the flow increases rapidly as each vein, fault and fissure is encountered.

In sinking the Tonopah Bonanza Shaft no water was encountered above the present bottom of the shaft, 1650 feet below the collar, withe the exception of a small amount of surface water which was caught at the 600 Level. The last drill hole driven in the bottom of the shaft encountered a very strong flow of water which had to be blocked. This accounted for the discontinuance of the shaft sinking. The work was discontinued in July of this year. The present water level was estimated at about 1400 feet, and was continuing to rise slowly. It is not known what the permanent ground water level will be. In the West Tonopah Mine the conditions were quite similar to that at the Great Western Mine adjacent to it. The ground water level is slightly below the 945' Level, which is a little higher than the ground water level in the Great Western workings. It is very evident that there is an underground connection between these two shafts, as pumping in one shaft lowers the water in the other.

There is very little water in the workings in the central portion of the Tonopah Camp, some mines being without any at all, but the water increases in the mines toward the west and increases rapidly with depth. Mr. McGee informs me that the Great Western Mine was making about 1000 gallons per minute when the West Tonopah was not pumping and all workings were open. By bulkheading some of the worst fissures the amount of water to handle was reduced.

The mines in this portion of the camp depended on electrical power to run their pumps. This power was intermittent, due to interruption during electrical storms, so that it was found necessary to construct an auxiliary power plant at Tonopah to furnish immediate power when the main lines went out. The flow of water was so great and the maegin of safety between the pumping capacity and the flow so slight, that the mines were frequently bothered by having their pumps flooded.

The pumping capacity at either the West Tonopah or Great Western Mines was less than 1000 gpm. This would barely hold the flow. Therefore it is quite evident, if this portion of the camp is developed on an economical scale, the ground water is a very important geological occurrence to consider in outlining the work. It is necessary to provide pumping capacity for at least twice the present flow with provisioms for an increase in this capacity should development prove that this is desirable.

GENERAL GEOLOGY

The general geology of the Tonopah District is exceedingly complicated. The central portion of the camp lies between two series of volcanic necks. Those to the northeast are represented by Mount Araret, Mount Oddie and Golden Mt. Those to the ~~southeast~~ southwest by Brougher Mt., Brock Mt., Butler Mt., and Siebert Mt., which represent the main series of the volcanic activity of the immediate vicinity. There are no sedimentary formations in the district. The rocks consist entirely of explosive, effusive, and intrusive volcanic rocks. Mr. J. E. Spurr (Economic Geology, Vol. 10, Number 8, Page 713, December, 1915) gives a synopsis of the geological history as follows:

"At Tonopah the oldest rock is a trachyte flow highly altered to quartz, sericite, and adularia. The lower part of this flow is a fine flow-banded glassy trachyte. The main body of the trachyte contains the oldest and by far the most important group of mineral veins; the glassy trachyte appears practically barren.

"Stresses subsequent to the trachyte extrusion produced horizontal fissuring near the zone of transition between the main body of trachyte and its glassy lower portion; and along here an andesite (Sandgrass Andesite) intrusion penetrated. After renewed fissuring along the same zone, a glassy trachy-alaskitic intrusion (Montana Breccia), very full of inclusions, took place, usually following along immediatedly above the andesite. Subsequent movement reopened this line of weakness, and a second trachy-alaskitic intrusion came in -- the West End Rhyolite sheet -- which penetrated along a fissure usually lying immediatedly above the Montana Breccia. At a subsequent epoch came an eruption of andesite (Midway Andesite) as a surface flow; at a still later epoch there was a series of rhyolitic and alaskitic surface flows and intrusions, of which the most important in the mine workings is a great intrusive mass called the Tonopah Rhyolite.

"The principal veins were formed after the trachyte eruption and before the Sandgrass Andesite-Montana Breccia-West End Rhyolite intrusions. They are quartz veins carrying silver and gold. A second set of veins was formed after the West End Rhyolite intrusion and before the Midway Andesite eruption. This second set is divided into four successive groups--A, large typically barren quartz veins; B, tungsten bearing veins; C, mixed quartz and adularia veins, typically barren; D, productive veins like those of the first set following the trachyte. A third set of veins was formed after the Tonopah Rhyolite intrusion. They are quartz veins carrying occasional lead, zinc and copper sulphides.

"All these veins formed at shallow depths, and the different types are held to represent various stages of temperature. The First Period veins represent the normal shallow-seated type, and followed the trachyte eruption; the Second Period B veins probably represent an abnormally intense shortly sustained temperature, following the trachy-alaskitic intrusion; the Second Period D veins a subsequent briefly-sustained stage of temperature more normal to shallow depths, the Third Period a relatively high but briefly-sustained temperature following the alaskitic (Tonopah Rhyolite) intrusion. No important vein formation followed the andesite eruption.

"The history of faulting is long and complex; important movements have taken place at every stage of the geologic history. These movements accompanied and were due to the volcanic disturbances."

The above data in tabulated form is as follows:

Rhyolite-Dacite flow (latest)
(Fourth Period - Chalcedony)

Brougher Dacite

Oddie Rhyolite

Basalt

Siebert Tuffs
(Third period - Colorless, usually translucent quartz occasionally sulphides in considerable amounts at or near contacts in Tonopah Rhyolite. Sulphides are galena, sphalerite, pyrite and chalcopyrite, little silver values when sulphides are absent the quartz has decided amesthine or rose color.)

Tonopah Rhyolite Breccia

Fraction Dacite Breccia

Heller Dacite

Midway Andesite
(Second Period -A-Frosty lustered quartz, frequent barite, nearly barren. B - Honeycombed quartz, gypsum, hubnerite, barren. C -Quartz, adularia, barren. D - Banded or crustified gray quartz; pinkish manganese bearing carbonates carries silver sulphides like first period. Rich but narrow veins and sweetens A quartz of Second Period.)

West End Rhyolite

Montana Breccia

Sandgrass Andesite
(First Period - Main productive quartz veins. Primary minerals - white quartz, adularia, carbonates of lime, magnesium, and manganese; stephanite, polybasite, argentite, silver selenide, galena, pyrite, chalcopyrite, etc.)

Mizpah Trachyte
Glassy Trachyte

Hornblende Andesite

Granite

SURFACE GEOLOGY

The surface of the property under examination consists almost entirely of wash and Siebert Tuffs. At the Southeastern corner of the property, especially on Ruby XXXX Group, there is exposed a small amount of Fraction Dacite Breccia. Just to the north of the Great Western Shaft there is a fault block which is capped by an outlier of Brougher Dacite. Near the Golden Gate Shaft is an area of vesicular rhyolite flow breccia. Practically all the rest of the large area is covered by Siebert Tuffs and in turn by variable amounts of wash. On account of the fact that all

of these rocks are of late age and all post mineral, no attempt was made to construct a surface geological map of the property.

GREAT WESTERN MINE

As will be seen by Map No. 3, the geological log of the shaft is as follows:

From	To	Thickness	Name of Formation
Collar	32'	32'	Dump Material and Wash.
32'	258'	226'	Siebert Tuffs.
258'	750'	492'	Fraction Dacite Breccia.
750'	1067'	317'	Midway Andesite, including 850Lev.
1067'	1150'	83'	Western Latite.

Rocks:

As will be seen from Mr. Spurr's classification above, there are no rocks later than the West End Rhyolite, which carry veins of commercial value. Therefore all rocks above a depth of 1067' in the Great Western Shaft afford no possibilities of containing veins of value. Hence these are called cap rocks. The rocks shown above this point are more or less typical of the rocks in the central portion of the camp, which have been described abundantly in published literature, so that these rocks will not be re-described here.

The rock throughout most of the 1133 Level does not correspond exactly to any of the rocks described in the central portion of the camp, so this formation has been given a most thorough study. A chemical analysis was made of specimen #27, and a thorough microscopic study made of the thin sections of 12 specimens representing different phases of the formation which were taken from the 1133 Level.

This rock is light greenish gray in color, and more than half of the exposed portion shows a pronounced flow banding, the bands being light gray and light brown in color alternately. This flow structure strikes on an average N80W, and 50 to N. The flat contact between this formation and the Midway Andesite immediatedly above, shows the andesite is unconformable with this formation. There are numerous slips and faults which fault the contact, while there are others which apparently do not extend into the andesite. There is intense alteration of the formation which is not true of the above cap rocks. This alteration consists of variable quantities of silicification with kaolinization. The texture of the rock is distinctly porphyritic, but the phenocrysts have been so altered that they are recognizable with great difficulty. There were no quartz phenocrysts whatever. There were abundant feldspay phenocrysts but these are not recognizable as such in the hand specimen, although their casts are recognizable. The original biotite phenocrysts are still recognizable, but these are considerably altered to chlorite. Secondary calcite and quartz and minute quartz veinlets are common. On account of the almost complete obliteration of the original

characteristics of the rock, it was necessary to resort to chemical and petrographic means for determining its classification. The type specimen was analyzed by Booth, Garrett & Blair, of Philadelphia. They gave the following analysis of this rock:

Silicia	68.00%
Alumina	17.41
Ferric Oxide	3.40
Ferrous Oxide	.49
Lime	1.12
Magnesia	.76
Soda	.082
Potash	4.051
Titanic Acid	.42

This analysis corresponds quite closely to Mr. Spurr's average analysis of his so-called Mizpah Trachyte with two exceptions. The lime is slightly high and the soda slightly low for his average analysis, but these do not vary as much from his average as some of his definitely determined rocks of this class. Titanic acid was not reported in any of the published analyses of the trachyte, but occurs in an appreciable amount in this rock, indicating the presence of titanite.

The microscopic study of the thin sections of this rock shows very plainly the megascopic conclusion that the rock has been intensly altered. Both the groudmass and the phenocrysts are almost completely replaced, with the exception of biotite and a few other accessory primary minerals. There are few unreplaced fragments of the priginal minerals which give a clue to its original classification, but even these fragments are determined with great difficulty and the determinations are not incontrovertible. The whole rock, as it is, is composed almost exclusively of secondary products and introduced substances. The primary minerals appear to be phenocrysts of biotite and plagioclase with some apatite and other accessory minerals. The biotite and whatever other few ferro-magnesium minerals there might have been, have altered to chlorite, epidote and kaolin. The feldspars have altered to quartz and kaolin. There are so few ferro-magnesium minerals in the rock that it is evident that the primary minerals of this class were very few. The ground mass is almost completely a microcrystalline mass of secondary quartz and kaolin. In addition to the above there is considerable sericite and muscovite. These two minerals probably account for most of the potash content of the rock. These data requite a classification of this rock as biotite andesite, but the small quantity or complete absence of original ferro-magnesian minerals shows that the rock tended to a more acid variety.

On account of flow structure and other general characteristics which differ from the Mizpah Trachyte of the central portion of the Tonopah Camp, whilw its chemical and microscopic characteristics co correspond, there are still sufficient doubts about the identity of the two formations which justify me in refraining from classifying them as identically the same rock. It might be possible after an

opportunity has been had to compare the types in more detail, to identify these as the same, but in any event this rock will remain a different phase from that found in the central portion. In view of the fact that this rock has no resemblance to a trachytic texture and has the chemical and minerological characteristics of a transition rock between the trachyte and the andesite, I have classified it as a latite.

The age of this rock is of much more commercial importance than its exact name. The data bearing on this is very incomplete in the 1133 Level of the Great Western Mine. It is definitely older than the Midway Andesite, as the andesite, both in the Great Western Shaft and the north crosscut of the 1133 Level, includes fragments of the latite, and slightly intrudes at its contacts. The latite shows greater age by its greater alteration and faulting. The relative age of the West End Rhyolite has not been determined. Specimens of the West End Rhyolite were foundon the West Tonopah dump, and Mr. McGee reports that he has seen it in portions of those workings which were not accessible to me at the time of my visit. When the West Tonopah workings are all unwatered and the bad air has been removed, it is possible that the relation between the latite and West End Rhyolite can be determined. As the latite is older than the Midway Andesite it is old enough to carry the highly productive second period "D" mineralization above described, and may or may not be old enough to carry the first period quartz veins. Therefore this latite is a formation sufficiently old to carry veins of commercial mineralization.

Mineralization:

My study indicates that there was mineralization after each intrusive mentioned in the above list. So far as found, however, there are only four periods of mineralization which occur in considerable quantity, and only two of these carry appreciable metallic minerals of commercial value. These have been described beiefly above.

The first period represents the large high grade veins which have produced the majority of the values of the Tonopah Camp. They are found only in the Mizpah Trachyte which, with its glassy phase, is the only formation found in place in the district tha, is older than this first period of mineralization. Fragments of still older rocks are found in the trachyte, such as hornblende andesite, granite and limestone, but these rocks do not occur as a formation, so far as development work has gone.

The second period of mineralization occurred after the West Rnd Rhyolite intrusion. Therefore this mineralization can occur in the West End Rhyolite, Montana Breccia, and Glassy Trachyte. It characteristically occurs, however, essentially in the West End Rhyolite and Montana and Extension Breccias. The second period is represented by four distinct stages of mineralization as previously described. The first stage occurs in tremendous quantities forming veins and silicified coutry rock of many tens of feet in thickness. The "B" and "C" stages occur in relatively small quantity. The "D" stage carries practically all the values of this second period, and most frequently occurs as the deposition in re-openings of the veins of the "A" stage of the

second period. This fact has caused this "A" stage of the second period to be considered productive mineralization.

It is a commonly observed fact, although not necessarily true in every case, that the first period of mineralization usually occurs as rather steep veing, while the common occurrence of the second period of mineralization is as flat veins varying from 50 degrees to the horizontal. The third and fourth periods, recog-i nized as such, are not found in the West Tonopah, Great Western, or Bonanza workings, nor at surface within the area under examination. The fourth period, however, is abundantly represented a short distance to the east of the Ruby group, where large quantities of chalcidonic quartz are found on rhe east side hill.

Veins:

In the Midway Andesite, especially on the 850 Level, numerous weak quartz veins are found, and at the station there is a three foot zone of silicified andesite. This mineralization is not sufficiently exposed to corollate with the mineralization above classified for the central portion of the camp, but it is known to carry no values and never can be expected to. It is later than the productive type of mineraization.

On the 1133 Level in the latite, there is one strong vein with several weaker stringers. These are definitely classified as the second period of mineralization of the "A" and "D" stages. These are shown on Map No. 3. The main vein strikes N 80 W, parallel to the flow structure, and dips 26 to the north, this flat dip being characteristic to the second period mineralization. This main vein is essentially a silicified latite zone in two parts, the upper and larger part is five feet thick, and separated from the one to two foot lower part by an unsilicified latite band. The dggree of silicification varies between wide limits, from nearly unsilicified latite to solid white quartz. This solid quartz occurs in only small quantity. The color is prevailing dark gray. There is imperfect replacement of the original latite fragments, leaving many cavities which are frequently incrusted by barite and fine pyrite. Barite will be remembered as a character-istic mineral of the second period "A" xxxx stage of mineralization. The quartz of this vein is of typical frosty variety. At a point midway in from the north crosscut in the west drift, there was a spot of sulphides in this silicified zone which ran about $50.00 per ton in gold and silver, which shows that this vein can be sweetened by the second period"D" stage of mineralization. and that the vein is well worth additional development.

The easterly end of this vein has been cut off by faults as represented on the map. Althpugh there is recent movement along the fault planes, these faults appear to have been essentially pre-mineral faults, which have caused the mineralization to pinch down at the time of deposition. This indicates that the vein will be discontin-uous and hard to follow, as is found to be the case in the West Tonopah workings at asimilar horizon. It is significant, however, that this mineralization is of the productive type, and it is to be expected that the development work will show up varying degrees

of silicifaction by barren quartz, which is locally "sweetened"by metallic minerals of commercial value.

The chararacteristics of the vein, so far as exposed, indicates that the mineralization is either far from its origin, or that the quantity of quartz was not great at this particular point. Development work alone can prove whether or not there are other and stronger veins in this portion of the district and what the productive characteristics of the veing will be.

BONANZA MINE

The geological log of the Bonanza Shaft is as follows:

From	To	Thickness	Name of Formation
Collar	25'	25'	Dump and wash.
25'	452	427	Siebert Tuffs.
452	816	364	Fraction Dacite Breccia.
816	1650	834	Midway Andesite.
1650			Western Latite.

These exposed rocks are all cap rocks and cannot carry any veins of commercial importance. The lower portion of the andesite, as developed near the bottom of the shaft and represented by the material on the dump, is quite fresh. This shows that there is relatively little faulting, leaching or ascening mineralization in this area.

The drill hole at the bottom of the shaft encountered a very different character of matefaal. The drillings were decidedly white in color, showing that a leached fault in the andesite had been encountered or that the drill hole had entered a new formation, probably the latite. As that portionof the workings is now under water, it was necessary to take Mr. McGee's data in regard to the nature of the rock encountered in this drill hole.

There is a pronounced lack of mineralization of any sort in any of the workings of the Bonanza Mine. As all the rocks are cap rocks, no important mineralization could have been found therein.

It is quite definitely proved that if this property ever develops any commercial veins, they willbbe at least 600 feet lower than those in the Great Wsetern Mine., and at the west end of the Bonanza property they will be at least 3200 feet in elevation, or 2400 feet below the surface.

This property, however, is on the main trend of the Tonopah mineralized belt. Therefore it is a property of vague potnetaalities, out on account of its position, has possibilities which might be developed at a profit at some future time. It should not be developed at present, however, an account of the depth of the favorable formation, and therefore increased costs, until after the more promising portion of the consolidated properties has been developed.

TONOPAH WESTERN MINE

As has been stated above, there is no work on the Tonopah

Western Mine of importance other than the Golden Gate Shaft, which is down 650 feet. This is all in cap rocks, consisting mostly of some of the later rhyolite breccias.

At the east end of the Tonopah Western property the favorable formation I estimate to be at the probable elevation of 4600 feet, or 1180 feetbelow surface. At the southwest coener the favorable formation will be at an elevation of 3900 feet, or 1745 feet below surface. At the northwestern corner the favorable formations will be at about the elevation of 3430 feet, or 2180 feet below surface.

There is no development on this property in the favorable formation. Therefore there is no data to prove whether or not there are any veins apexing in the Tonopah Western Consolidated Mining Company's ground. Development of this area will be pioneer work, which can be done cheapest by developing the east end of the property by sinking the Great Western Shaft 500 feet deeper and crosscutting 2700 feet northerly.

WEST TONOPAH MINE

At the time of my visit the management of this property was unwatering the shaft to the 1100 foot level. The skip was very busy so that it was impossible to study the geology in the shaft. On the 945 Level the north crosscut was usedvasa sump, so was inaccessible. The south crosscut to the vein was open, but at the vein bad air was encountered, so that none of the vein workings could be studued. Therefore only a small portion of the 945 Level and the upper levels were accessible. Consequently I made only a hurried inspection of these workings. Since my visit the water was lowered to the 1100 Level and crosscutting southerly toward the known vein was started, but such a large flow of water was encountered that this crosscut had to be abandoned. When sufficient pumping facilities have been installed, it will be valuable information for the consolidated group under examination, to completely map the West Tonopah workings.

Numerous small veing were encountered in the upper workings, but all these carried very little values. It is reported that the vein 720 feet south of the shaft on the 945 Level wouodnot carry continuous mineralization. There was a strong fissure in which lenses of quartz occur, and in some of these lenses good values were found. Some of this mineralization was found on the dump. A sample of this was assayed, which ran .1 oz gold, 1.1 oz silver, or a value of 3.10 with silver at 1.00 per oz. It is reported that later development by a winze on this vein has encountered mineralization running over $30.00 per ton. The results obtained by developing this vein will have an important bearing on the possibilities of the Great Westerm vein.

ORE POSSIBILITIES

From the above data and attached maps it is evident that the West Tonopah and Great Western Shafts have already reached the favorable formations in which productive veins can be found, but these shafts have reached only the top of the favorable formations. The great Western Shaft has penetrated it for only 65 feet. As above stated, I

was unable to determine how deep the favorable formation has been developed in the West Tonopah Mine, but probably an equivalent amount. This work has exposed strong quartz veins with spotted value at or near their apexesp I have concluded that the main veins in these two workings are the same.

It is considered in this district that the main vein of these two mines is tha same as that found in the Monarch Pittsburgh Mine to the east, but the M. P. Vein is further considered to be an extension of the Murray Vein of the Ton. Ext. property. They have similar strikes and a flat northerly dip and carry similar mineralization, so it is possible that the general impression is true. If development proves that these exposures are all one and the same vein, thisvein has a remarkable continuity for the Tonopah District. It cqannot bemexpected that commercial mineralization or even quartz will be continuous throughout this fissure, but if the fissure continues for that distance it will be encouraging for the future of this Western District.

The Merger Vein of the Ton. Ext. trends toward the consolidated group under examination, but no development work has been done on the Merger Vein within 6000 feet of the property. This intervening area will need to be developed before any definite conclusions regarding its extensions can be made. This vein has a westerly strike and a northerly dip similar to that of the Merger Vein. Murray?

These facts combined with the intense alteration of the favorable formation found in the West Tonopah and Great Western workings, are the pribcipal data encouraging development work of this western area.

The unfavorable features of this district are that the faulting is less intense although present in this portion of the district. It is one to two miles from the volcanic necks, and therefore regions of volcanic activity, and the relative weakness of replacement of country rock by silicified solutions so far as developed.

CONCLUSIONS

My conclusion is that, although the geology of this portion of the Tonopah District, so far as developed, indicate that veins will not be such big producers as those of the central portion of the Tonopah Camp, the veins are of sufficient strength and contain enough high grade spots and silicified barren material to warrant the development of this area.

Respectfully submitted,

WILBUR H. GRANT.

San Francisco,
October, 1918.